REMEDIAL ACTION WORK PLAN

for

44-30 PURVES STREET
Block 268, Lot 1
Long Island City, Queens County, New York
NYSDEC BCP No. C241162

Prepared For:

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November 7, 2014
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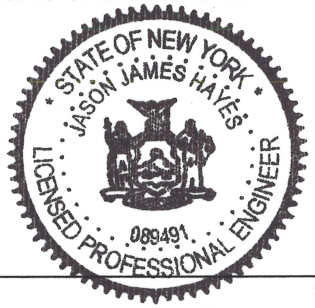
CERTIFICATION

I, Jason Hayes, P.E., certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.



NYS Professional Engineer 089491-1	Date	Signature
	11/7/2014	

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
ASP	Analytical Services Protocol
AST	Aboveground Storage Tank
AWQS	Ambient Water Quality Standards
BCP	Brownfield Cleanup Program
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Program
C/D	Construction/Demolition
CFR	Code of Federal Regulations
CQAP	Construction Quality Assurance Plan
COC	Certificate of Completion
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbon
CSUL	Comprehensive Subsurface Utility Location
CVOC	Chlorinated Volatile Organic Compound
DER	Division of Environmental Remediation
DMM	Division of Materials Management
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Approval Program
EM	Electromagnetic
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ESI	Environmental Site Investigation
FER	Final Engineering Report
FINDS	Facility Index System/Facility Registry System
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
IRMWP	Interim Remedial Measures Work Plan
LNAPL	Light, Nonaqueous-Phase Liquid
MTBE	Methyl Tert Butyl Ether
NYCRR	New York Codes, Rules and Regulations
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	Department of Transportation
ORC	Oxygen Release Compound
OSHA	United States Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbon

Acronym	Definition
PBS	Petroleum Bulk Storage
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PID	Photoionization Detector
PPE	Personal Protective Equipment
ppm	Parts per million
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
QHD	Queens Highway Datum
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCA	Recycled Concrete Aggregate
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SEQRA	State Environmental Quality Review Act
SMD	Sub-membrane Depressurization System
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SQG	Small Quantity Generator
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Purves Street Owners LLC (the owner) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on July 1, 2014, to investigate and remediate a ±0.62-acre property located at 44-30 Purves Street in Long Island City, New York (the Site). Purves Street Owners LLC is a Volunteer in the Brownfield Cleanup Program. Restricted Residential Use is proposed for the property. When completed, the Site will be developed as a 36-story residential apartment building with frontage along Purves Street and a one-story retail building with frontage along Thomson Avenue and 44th Drive.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Phase II Environmental Site Investigation (ESI), performed between February 19 and 28, 2014, the Remedial Investigation (RI) performed between April 15 and 24, 2014, and supplemental soil sampling performed on September 23, 2014. The RAWP identifies and evaluates remedial action alternatives, including a Track 1 remediation, and recommends a Track 4 cleanup for addressing impacted soil, groundwater, and soil vapor within the Site boundaries. The remedy described in this document is consistent with the procedures defined in DER-10 and complies with applicable standards, criteria and guidance. The remedy described in this document also complies with applicable Federal, State and local laws, regulations and requirements. The RI for this Site did not identify fish and wildlife resources.

Site Description/Physical Setting/Site History

The Site is located at 44-30 Purves Street in Long Island City, New York and consists of an irregularly shaped lot (Block 268, Lot 1; formerly lots 1, 24, 25, and 26). In a survey prepared by Apple Surveying, dated April 11, 2014, the Site area was reported to be 27,095 square feet. The Site is bounded by Purves Street to the east, Lot 31 with a two-story brick building to the southeast, Thomson Avenue to the southwest, 44th Drive to the west, and lots 4 (vacant one-story building) and 23 (vacant) to the north. The Site has approximately 175 feet of frontage along Purves Street, 150 feet of frontage along Thomson Avenue, and 60 feet of frontage along 44th Drive. The Site has been a vacant lot for nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes. A Site Location Map and Site Plan are provided in Figures 1 and 2, respectively.

Ground surface elevations were obtained from the April 11, 2014 survey drawing by Apple Surveying (included as Appendix A). All elevations (el) presented herein are measured in feet

and referenced to the North American Vertical Datum of 1988 (NAVD88), which is 1.095 feet above the National Geodetic Vertical Datum (NGVD29) at Sandy Hook, New Jersey.

Based on survey data, Site grade ranges from el 9.73 in the northwest to 11.90 in the northeast. The sidewalk grade of Thomson Avenue and 44th Drive is elevated above site grade, and slopes upward from north to south from el 23.46 to el 30.66. A retaining wall supports the Thomson Avenue and 44th Drive sidewalks. The sidewalk grade of Purves Street slopes upward from south to north from el 9.64 to el 10.82.

For depth references in this RAWP, an average elevation of 11.0 feet NAVD88 was assumed for a "Site-wide" elevation.

The Site is located in an area of historical industrial usage and has been used for manufacturing purposes since as early as the 1940s. Past uses of the Site include a chemical laboratory, automobile repair, storage, paper embossing, private garage, a contractor's yard, controller manufacturing, fine chemicals manufacturing, and welding and repair services. Sanborn maps, dated 1947 and 1950, indicate two underground storage tanks (UST) in the central portion of the Site, and geophysical anomalies were identified in this area of the Site during the February 2014 Phase II ESI.

Summary of the Remedial Investigation

RI findings and conclusions are as follows:

1. Stratigraphy: Beneath the partial Site surface cover (i.e., concrete), overburden at the Site includes a historic fill layer, which extends to depths of up to approximately 11 feet below grade surface (bgs). The historic fill layer generally consists of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Underlying the fill is a layer of gray-brown and brown/tan fine- to medium-grained sand, which is underlain by layers of brown silt, gray clay and peat. Bedrock was not encountered during this investigation; however, based on Langan's previous geotechnical investigations, depth to bedrock at the Site ranges from approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast.

2. Hydrogeology: Synoptic groundwater level measurements were collected on February 28, 2014 and April 24, 2014. Groundwater was encountered between approximately 4 and 6.4 feet bgs (el 4.89 feet to el 6.09 feet NAVD88) during the February gauging event and between approximately 5 and 7 feet bgs (el 4.24 feet to el 5.32 feet NAVD88)

during the April gauging event. The groundwater elevation is highest in the western portion of the Site and appears to slope toward the east/northeast across the majority of the Site. Groundwater flow appears to be locally influenced by the sewer beneath the Purves Street sidewalk.

3. Suspected USTs: Two USTs were identified on the Site in the 1947 and 1950 Sanborn Maps and there is no record of UST removal. The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Boring SB05, advanced at the geophysical anomaly, encountered refusal at 3 feet bgs, which may be related to the presence of UST structures. Borings in the vicinity of the UST found petroleum staining, odors, and elevated photoionization detector (PID) readings. A spill was reported to NYSDEC based on the observation of petroleum impacts. Petroleum impacts were also found in the western and northeastern parts of the Site and may be related to potential site USTs or potential off-site sources. Petroleum impacts are further described below.

4. Soil Impacts:

    a. Historic Fill – The historic fill layer contains concentrations of semivolatile organic compounds (SVOC), metals, pesticides, and polychlorinated biphenyls (PCB) at concentrations that exceed their respective Unrestricted Use or Restricted Residential Use Soil Cleanup Objectives (SCO).

        i. SVOCs were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site at levels considered typical of historic fill found in New York City.

        ii. PCB and pesticide concentrations above the Unrestricted Use SCO, but below the Restricted Residential Use SCOs, were detected in the fill.

        iii. Metals were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site. Anomalously high and potentially hazardous concentrations of lead were detected in samples from five borings, with the highest concentrations found in the shallow fill of borings SB08 and SB12 located in the northeastern corner of Lot 1, and the shallow and deep fill of boring SB02 in the northwest corner of

Lot 1. An anomalously high concentration of barium was detected in the shallow fill of boring SB02, and an anomalously high concentration of mercury was detected in the shallow fill of boring SB04, located in the southeastern portion of the Site.

b. Petroleum-Impacted Soil: Petroleum impacts, evidenced by odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, SB05, SB13 and SB14. Odors and elevated PID readings were observed in the northeast corner of the Site (boring SB01 and off-site boring SB13), and sheen was observed on groundwater during purging and development of off-site monitoring well MW13. Odors, staining, and elevated PID readings were observed straddling the water table in borings SB03 and SB14 in the western portion of the Site. There was no free product observed in any of the monitoring wells. Potential sources of petroleum-impacted soil on the Site include the various historical industrial and manufacturing uses, the on-site USTs and off-site sources.

c. Chlorinated VOC (CVOC)-Impacted Soil: CVOCs were detected at concentrations above Unrestricted Use SCOs, but below the Restricted Residential Use SCOs, within the native layer of on-site borings SB20 and SB21, and off-site boring SB13.

5. Groundwater Impacts: Groundwater volatile organic compounds (VOC), SVOC, metal, and pesticide concentrations exceeded Class GA AWQS.

a. CVOCs (1,1,1-trichloroethane, PCE, TCE, cis-1,2-dichloroethene, vinyl chloride) were found at concentrations above Class GA AWQS on the northeastern and southeastern parts of the Site, with the highest concentrations in northeastern well MW01 and off-site well MW13. Groundwater data obtained from an investigation at adjacent Lot 23 (NYSDEC BCP Site No. C241164) revealed a total CVOC concentration in groundwater in an off-site well on the Purves Street sidewalk (to the northeast of the Site) that was greater than concentrations in samples collected for this RI. Additionally, CVOC concentrations were detected in soil in off-site boring SB13 at concentrations above Unrestricted Use SCOs, indicating the CVOC impacts are likely originating from an off-site source.

b. Sodium and selenium impacts to groundwater are consistent with regional groundwater quality. Manganese impacts along the western part of the Site are consistent with regional groundwater quality or off-site sources.

c. SVOC and pesticide contaminants were only detected in off-site well MW13, and do not appear to be impacting Site groundwater.

6. Soil Vapor Impacts: Soil vapor sampling results indicate the presence of several VOCs, including CVOC and petroleum-related compounds, above the range of ambient air concentrations. The highest concentrations of TCE and PCE were identified along the eastern boundary of the Site along Purves Street and the southeastern boundary of the Site adjacent to Lot 31. VOCs may be due to historic releases of petroleum and chlorinated solvents originating from former off-site manufacturing/industrial processes.

7. Sufficient analytical data were gathered during the RI to establish site-specific soil cleanup levels and to develop a remedy for the Site. The remedy is described and evaluated in this RAWP, which has been prepared in accordance with NYS BCP guidelines. The remedy will address petroleum-impacted soil, historic fill impacted with metals and SVOCs, the potential for soil vapor intrusion, groundwater impacted with chlorinated VOCs from an off-site source, and a contingency for the removal and closure of unknown USTs.

Qualitative Human Health Exposure Assessment

Based upon the conceptual site model and the review of environmental data, complete on-site exposure pathways appear to be present, in the absence of institutional and engineering controls, in current, construction and remediation, and future conditions. The complete exposure pathways indicate there is a risk of exposure to humans from Site contaminants via exposure to soil, groundwater, and soil vapor if institutional and engineering controls are not implemented.

Current Conditions

Contaminant sources include historic fill with varying levels of SVOCs, metals, pesticides, and PCBs, two potential USTs, CVOCs in groundwater, and PCE, TCE, and other VOCs in soil vapor.

Contaminant release and transport mechanisms include contaminated soil transported as dust and volatilization of contaminants from the soil and groundwater matrices to the soil vapor phase, and existing soil vapor contaminants. Approximately 55% of the Site is covered with a

concrete slab, and the remaining 45% is covered with overgrown vegetation. In areas where human exposure to contaminated soil is possible, the potential migration pathway is likely complete for dermal absorption, inhalation and ingestion. The Site is surrounded by construction fencing and locked, which limits activity within the Site boundary to authorized guests. All five elements exist; therefore, the potential for completed exposure pathways is present. However, the risk can be avoided or minimized by applying appropriate health and safety measures during investigation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate personal protective equipment (PPE).

In accordance with a Health and Safety Plan (HASP) and Community Air Monitoring Program (CAMP), measures such as conducting an air-monitoring program, donning PPE, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

Construction/Remediation Activities

Construction and remediation activities may result in potential exposures to Site contaminants in the absence of a Health and Safety Plan (HASP) and a Community Air Monitoring Plan (CAMP). Soil contains SVOCs and metals at concentrations that exceed Unrestricted and Restricted Residential Use SCOs, and PCBs and pesticides at concentrations that exceed Unrestricted Use SCOs. Construction and remedial activities include construction of foundation components and excavation and off-site disposal of impacted soil. In the absence of a HASP and CAMP, this scenario presents the potential for exposure of soil COCs to construction and remediation workers via dermal absorption, ingestion, and inhalation of particulate matter. In the absence of CAMP, activities may result in exposure to the public adjacent to the Site through potential generation and off-site migration of dust containing Site COCs.

Site groundwater contains VOCs and metals at concentrations that exceed their respective Class GA AWQS. Groundwater will be encountered during excavation activities by workers, and there is potential for exposure to groundwater COCs, in the absence of a HASP, to construction workers via dermal absorption, ingestion, or inhalation.

Soil vapor results indicated the presence of petroleum-related and CVOCs. During site development, construction and remediation workers may be exposed to soil vapor COCs via inhalation in the absence of a HASP. In the absence CAMP, activities may also result in

exposure to the public adjacent to the Site through volatilization of vapors into the air and potential off-site migration.

Proposed Future Conditions

The proposed development will include residential use. Upon completion of the new development, the entire Site will be capped with the concrete building foundation. These barriers will prevent direct human exposure to impacted soil and groundwater.

In the absence of engineering controls (e.g., vapor barrier and/or depressurization system), the presence of VOCs in the groundwater and soil vapor creates potential for VOCs to volatilize and accumulate in the proposed building, completing an exposure pathway for future users. In the absence of engineering controls, routes of exposure may include inhalation of vapors that accumulate in the building.

There is no risk of ingesting groundwater COCs because the Site and surrounding areas obtain their drinking water supply from surface water reservoirs located upstate and not from groundwater; groundwater is not intended for consumption.

The following conclusions were developed from the human health exposure assessment:

1. Under current conditions there is a moderate risk to exposure. Contaminated soil transport off-site as dust is limited by the site cover consisting of a concrete slab and vegetation. The exposure risks can be avoided or minimized by maintaining site security and limiting access to authorized guests, and by following the appropriate health and safety and vapor and dust suppression measures during investigation activities.

2. In the absence of institutional and engineering controls, there is a moderate risk of exposure during the construction and remediation activities. This risk can be avoided or minimized by following the appropriate health and safety, vapor and dust suppression, and site security measures.

3. The existence of a complete exposure pathway for Site contaminants to human receptors during proposed future conditions is unlikely, as a large quantity of soil will be excavated and transported to an off-site disposal facility, groundwater is not used as a potable water source in New York City, and the potential pathway for soil vapor

intrusion into the building would be addressed through the use of soil vapor mitigation measures (e.g., vapor barrier and depressurization system).

4. It is unlikely that a complete exposure pathway exists for the migration of site contaminants to off-site human receptors for current, construction phase, or future conditions. Monitoring and control measures would be used during investigation and construction to prevent completion of this pathway. Under future conditions, the site will be remediated and engineering controls can be implemented to prevent completion of this pathway.

Summary of the Remedy

The RAWP would be executed by accomplishing the following tasks:

- Excavation (to the extent practical) and off-site disposal of soils exceeding Track 4 site-specific SCOs (Restricted Residential Use SCOs) and grossly-impacted soil, if encountered;
- Removal of USTs, if encountered, and closure of NYSDEC Spill No. 1310949, which was opened during the February 2014 Phase II ESI;
- Due to the planned excavation of two elevator pits into the ground water table, dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system;
- Collection and analysis of documentation soil samples to document removal of targeted materials;
- Backfilling of excavated areas to development grade with certified-clean material (meeting the lower of the Protection of Groundwater SCO or the Protection of Public Health SCO for Restricted Residential Use in Part 375-6.7(d)(ii)(b)), recycled concrete aggregate (RCA) or virgin, native crushed stone (RCA will not be used for backfill in the upper 2 feet of any exposed, landscaped areas);
- Any enclosed subgrade parking garages that are included for any future on-site building(s) are required by the New York City Mechanical Code to provide ventilation;
- Installation of a vapor membrane under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion into Site buildings;
- Installation of a submembrane depressurization (SMD) system under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion;

- Development and execution of plans for the protection of on-site workers, community, and environment during remediation and construction activities;
- Installation of a site cover system consisting of either of the structures such as buildings, pavement, sidewalks comprising the site development or a minimum 2 foot thick clean soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs; and
- Implementation of long-term Institutional Controls in the form of a Site Management Plan (SMP) and an Environmental Easement.

1.0 INTRODUCTION

Purves Street Owners LLC (the owner) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on July 1, 2014, to investigate and remediate a ±0.62-acre property located at 44-30 Purves Street in Long Island City, New York (the Site). Purves Street Owners LLC is a Volunteer in the Brownfield Cleanup Program. Restricted Residential Use is proposed for the property. When completed, the Site will be developed as a 36-story residential apartment building with frontage along Purves Street and a one-story retail building with frontage along Thomson Avenue and 44th Drive.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Phase II Environmental Site Investigation (ESI), performed between February 19 and 28, 2014, and Remedial Investigation (RI) performed between April 15 and 24, 2014. The RAWP identifies and evaluates remedial action alternatives, including a Track 1 remediation, and recommends a Track 4 cleanup for addressing impacted soil, groundwater, and soil vapor within the Site boundaries. The remedy described in this document is consistent with the procedures defined in DER-10 and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The RI for this Site did not identify fish and wildlife resources.

1.1 Site Location and Description

The Site is an irregularly-shaped, 27,095-square-foot (0.62-acre) vacant lot located at 44-30 Purves Street in the Long Island City neighborhood of Queens, New York (Block 268, Lot 1; formerly lots 1, 24, 25, and 26). The Site is bounded by Purves Street to the east, Lot 31 with a two-story brick building to the southeast, Thomson Avenue to the southwest, 44th Drive to the west, and lots 4 (vacant one-story building) and 23 (vacant) to the north. The Site has approximately 175 feet of frontage along Purves Street, 150 feet of frontage along Thomson Avenue, and 60 feet of frontage along 44th Drive. The Site has been a vacant lot since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes. A site location map is included as Figure 1.

Ground surface elevations were obtained from the April 11, 2014 survey drawing by Apple Surveying (Appendix A). All elevations (el) presented herein are measured in feet and referenced to the North American Vertical Datum of 1988 (NAVD88), which is 1.095 feet above the National Geodetic Vertical Datum (NGVD29) at Sandy Hook, New Jersey.

Based on survey data, Site grade ranges from el 9.73 in the northwest to 11.90 in the northeast. The sidewalk grade of Thomson Avenue and 44th Drive is elevated above site grade, and slopes upward from north to south from el 23.46 to el 30.66. A retaining wall supports the Thomson Avenue and 44th Drive sidewalks. The sidewalk grade of Purves Street slopes upward from south to north from el 9.64 to el 10.82.

For depth references in this RAWP, an average elevation of 11.0 feet NAVD88 was assumed for a "Site-wide" elevation.

1.2 Redevelopment Plan

The proposed project will include the construction of a 36-story residential apartment building with frontage along Purves Street and a one-story building with residential amenity space and retail along Thomson Avenue and 44th Street. A ventilated parking garage will span an area of approximately 14,000 square feet below the retail building. The parking garage will be below grade along Thomson Avenue and 44th Street and approximately at-grade along Purves Street. The 36-story residential building will not have a basement.

The general excavation cut required for development is assumed to be at approximately el 7.5 feet for the one-story retail building and el 8.5 feet for the residential tower. The development depths correspond to between approximately 2.5 and 3.5 feet below grade surface (bgs) on the Site. Additional deeper excavations will be required for an elevator pit, foundation elements, and to achieve the remedial goals as described in section 3.0 of this RAWP. Proposed development plans are provided in Appendix B and a development plan view is provided as Figure 3.

1.3 Description of Surrounding Property

The Site is located in an urban setting historically characterized by industrial and commercial development, and has recently undergone residential and commercial development due to rezoning. Surrounding properties are summarized in the following table:

Direction	Adjoining Properties	Surrounding Properties
North	Lot 4 (vacant one-story building) and lots 22 and 23 (vacant) followed by one- and two-story industrial buildings	Multiple-story residential, commercial and industrial buildings
East	Purves Street followed by a 14-story residential building and under-construction residential building	
Southeast	Lot 31 (vacant two-story building) followed by Thomson Avenue	

Direction	Adjoining Properties	Surrounding Properties
Southwest	Thomson Avenue followed by a five-story residential and commercial building	
West	44th Drive followed by multiple one- and two-story commercial buildings	

The surrounding area is highly urbanized and characterized by major infrastructure, including subway tunnels and elevated subway lines, underground utility lines, storm drains, and sewers. The presence of underground infrastructure may influence contaminant migration from potential up-gradient sources. The New York City Metropolitan Transit Authority (MTA) M and E subway lines extend underneath Jackson Avenue approximately 250 feet northwest of the Site.

Sensitive receptors within a half mile of the Site are listed in the following table:

NUMBER	NAME (Approximate distance from Site)	ADDRESS
1	Frank Sinatra High School (1,373 feet southeast)	30-20 Thomson Avenue, Long Island City, New York 11101
2	Information Technology High School (1,636 feet northwest)	21-16 44th Road, Long Island City, New York 11101
3	LaGuardia Community College High School (1,901 feet southeast)	45-35 Van Dam Street, Long Island City, New York 11101
4	Laguardia Community College Pre-School (1,901 feet southeast)	31-10 Thomson Avenue, Long Island City, New York 11101
5	Academy of American Studies High School (2,000 feet northeast)	28-04 41st Avenue, Long Island City, New York 11101
6	Robert F. Wagner Secondary School (2,006 feet southeast)	47-07 30th Place, Long Island City, New York 11101
7	Newcomers High School (2,164 feet northeast)	28-01 41st Avenue, Long Island City, New York 11101
8	YMCA of Greater New York (2,534 feet east)	32-23 Queens Blvd., Long Island City, New York 11101

1.4 Site History

1.4.1 Past Uses and Ownership

The Site is located in an area of historical industrial usage and has been used for manufacturing purposes since as early as the 1940s. Past uses of the Site include a chemical laboratory, automobile repair, storage, paper embossing, private garage, a contractor's yard, controller

manufacturing, fine chemicals manufacturing, and welding and repair services. Sanborn maps, dated 1947 and 1950, indicate two underground storage tanks (UST) in the central portion of Lot 1, and geophysical anomalies were identified in this area of the Site during the February 2014 Phase II ESI.

Adjacent and surrounding properties were historically used for industrial and manufacturing purposes. Sanborn maps indicate surrounding properties were used for chromium plating, multiple auto body/repair shops, a photochemical warehouse, steel and machine part storage, and textile printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the Site across Purves Street.

1.4.2 Previous Environmental Reports

Previous environmental reports were reviewed as part of the preparation of this RAWP. Copies of these reports are provided in Appendix C. Environmental reports prepared for the Site include the following:

- *April 27, 2006 Phase I Environmental Site Assessment (ESA) Report, prepared by Middleton Environmental, Inc.*
- *November 5, 2006 Phase II Environmental Site Investigation (ESI) Report, prepared by Environmental Business Consultants*
- *December 9, 2011 Phase I ESA Report, prepared by IVI Assessment Services, Inc.*
- *March 18, 2014 Phase II ESI Report, prepared by Langan*
- *July 2014 Remedial Investigation Report by Langan*
- *October 20, 2014 Supplemental Soil Sampling Letter Report by Langan*

These reports are summarized below:

1.4.2.1 April 27, 2006 Phase I Environmental Site Assessment (ESA)

Middleton Environmental, Inc. prepared a Phase I ESA Report for the property located at 44-26/30 Purves Street (Block 268, Lots 24, 25, and 26), and a Phase I ESA update that included 44-32/38 Purves Street (Block 268, Lot 1). The Phase I ESA reports concluded the following:

- No recognized environmental conditions (REC) were identified.

- At the time of this Phase I ESA, two buildings were present at the Site. The buildings were vacant, and had most recently been used for automobile repair and carpet storage. The site was previously used by a chemical laboratory, a filter cleaner company, a hardware warehouse, a paper embossing company, a taxi repair facility, a controller manufacturing company, a pine chemical company and an air freight company.

- At the time of this Phase I ESA, surrounding property usage included a welding company, an automobile repair facility, a construction site, and vacant industrial buildings.

- A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two USTs at the Site. There were no oil fill ports or fuel vents observed at the Site.

1.4.2.2 November 5, 2006 Phase II ESI Report

Environmental Business Consultants conducted a limited Phase II ESI that included the advancement of three soil borings, the installation of three temporary monitoring wells, and the collection and laboratory analysis of six soil and three groundwater samples.

Three soil borings were advanced to 20 feet bgs. Historic urban fill material was observed from surface grade to depths of 2 to 9 feet bgs. Native layers consisting of fine- to medium-grained sand, silt, and peat were observed underlying the fill layer. No evidence of impacts was observed based on photoionization detector (PID) screening of soils. Soil samples were collected from the 7 to 8 and 17 to 18 foot depth intervals in each boring. Soil samples were analyzed for the NYSDEC Spills Technology and Remediation Series (STARS)-listed volatile organic compounds (VOC) and semivolatile organic compounds (SVOC). One SVOC, pyrene, was detected in the shallow sample in boring SB2; however, the concentration did not exceed the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objective (RSCO). The TAGM RSCOs have subsequently been superseded by Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375. Under Part 375, the pyrene detection would still be below the corresponding Unrestricted Use Soil Cleanup Objective (SCO). There were no other VOC or SVOC detections in soil samples.

Three 1-inch diameter temporary monitoring wells were installed at a depth of 18 feet bgs with 15 feet of 0.010-inch slotted polyvinyl chloride (PVC) screen attached to PVC riser that extended approximately 2 feet above grade surface. Groundwater samples were collected

from each well and analyzed for NYSDEC STARS-listed VOCs and SVOCs. No STARS-listed VOCs or SVOCs were detected in groundwater samples.

1.4.2.3 December 9, 2011 Phase I ESA Report

The Phase I ESA identified the following RECs:

- *REC 1 - Historical Site Use:* Historical Site uses included a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard. Two gasoline USTs were identified on the 1947 and 1950 Sanborn maps and may be still present. The historic site usage may have negatively impacted soil and/or groundwater at the Site.

- *REC 2 – Historical Use of Surrounding Properties:* Properties adjacent and surrounding the Site were previously used for chromium plating, auto body/repair shops, a photochemical warehouse and textile printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the Site across Purves Street. The adjacent usage may have negatively impacted soil and/or groundwater at the Site.

1.4.2.4 March 18, 2014 Phase II ESI Report

Langan implemented the Phase II ESI between February 19 and 28, 2014. The investigation included the completion of a geophysical survey, advancement of eight soil borings, and installation of four permanent groundwater monitoring wells and seven soil vapor points. Samples collected from these locations (by media) included:

- Soil – 19 samples analyzed for VOCs, SVOCs, metals, pesticides, and polychlorinated biphenyls (PCBs)

- Groundwater – five samples analyzed for VOCs, SVOCs, metals, pesticides, PCBs, and hexavalent chromium

- Soil Vapor – five soil vapor samples and one ambient air sample analyzed for VOCs

Soil analytical data was compared to Unrestricted Use SCOs, groundwater analytical data was compared to NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA

Ambient Water Quality Standards (AWQS), and soil vapor analytical data was compared to concurrent ambient air quality data. The findings of the investigation are summarized below:

- The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Additionally, refusal encountered during the advancement of boring SB05 may have resulted from contact with a UST-related subsurface structure.

- The subsurface soil profile generally consisted of historic fill predominately characterized as brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. The fill layer extended to between approximately 1.5 and 11 feet bgs. The fill layer was underlain by brown, fine- to medium-grained sand. In borings located within the western portion of the Site (SB02, SB03, and SB06), the sand layer was underlain by layers of silt, peat, and clay. In borings located in the southeastern portion of the Site (SB04 and SB05), the sand layer was underlain by silt. In borings located in the northeastern portion of the Site (SB01, SB07, SB08), the sand layer was underlain by a silt layer followed by a clay layer.

- Soil –

    - Petroleum-Impacted Soil – Material exhibiting staining, odor, and elevated VOC concentrations based on field screening with a PID was observed at three boring locations: SB01, SB03, and SB05. Petroleum impacts in borings SB01 and SB03 were observed straddling the water table. Petroleum impacts in boring SB05 were observed at a depth of 2 to 3 feet bgs, above an obstruction that resulted in refusal. Impacts were observed in the northern and southern portions of the Site, including the area adjacent to potential USTs. A spill was reported to NYSDEC and spill number 1310949 was assigned.

    - Historic Fill – A layer of historic fill extending to between approximately 1.5 and 11 feet bgs was identified throughout the Site. The fill was characterized as predominately consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Anomalously high concentrations of metals, particularly lead, were identified in the borings indicated below.

        - Barium – Boring SB02

- Lead – Borings SB02, SB05, SB06, and SB08
- Mercury – Borings SB03 and SB04

o Analytical Results – The following constituents were detected in soil at concentrations that exceed their respective Unrestricted Use SCOs:

- VOCs: acetone
- SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and pentachlorophenol
- Metals: arsenic, barium, cadmium, hexavalent chromium, trivalent chromium, copper, lead, mercury, nickel, and zinc
- Total PCBs

- Groundwater –

o Measurements collected during the ESI found groundwater ranged from 4.0 to 6.4 feet bgs.

o No light non-aqueous petroleum liquid (LNAPL) was observed in any of the monitoring wells. A PID reading of 12.8 ppm was observed in the headspace of monitoring well MW03.

o Chlorinated Solvent-Impacted Groundwater – Chlorinated VOCs (CVOC) including 1,1,1-TCA, cis-1,2-DCE, PCE, TCE, and vinyl chloride were identified in groundwater at concentrations exceeding the Class GA TOGS AWQS. Groundwater exceedances were observed in the eastern portion of the Site, with the highest concentrations in the northeast in monitoring well MW01.

o Metals – Manganese, selenium, and sodium were detected in groundwater at concentrations exceeding the Class GA TOGS AWQS in samples collected from two or more monitoring wells.

- Soil Vapor – Soil vapor results revealed concentrations of VOCs, included those related to petroleum and chlorinated solvents, above concentrations found in the ambient air sample.

1.4.2.5 July 2014 RI Report

RI findings and conclusions are as follows:

- Stratigraphy: Beneath the partial Site surface cover (i.e., concrete), overburden at the Site includes a historic fill layer, which extends to depths of up to approximately 11 feet bgs. The historic fill layer generally consists of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Underlying the fill is a layer of gray-brown and brown/tan fine- to medium-grained sand, which is underlain by layers of brown silt, gray clay and peat. Bedrock was not encountered during this investigation; however, based on Langan's previous geotechnical investigations, depth to bedrock at the Site ranges from approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast.

- Hydrogeology: Synoptic groundwater level measurements were collected on February 28, 2014 and April 24, 2014. Groundwater was encountered between approximately 4 and 6.4 feet bgs (el 4.89 feet to el 6.09 feet NAVD88) during the February gauging event and between approximately 5 and 7 feet bgs (el 4.24 feet to el 5.32 feet NAVD88) during the April gauging event. The groundwater elevation is highest in the western portion of the Site and appears to slope toward the east/northeast across the majority of the Site. Groundwater flow appears to be locally influenced by the sewer beneath the Purves Street sidewalk.

- Suspected USTs: Two USTs were identified on the Site in the 1947 and 1950 Sanborn Maps and there is no record of UST removal. The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Boring SB05, advanced at the geophysical anomaly, encountered refusal at 3 feet bgs, which may be related to the presence of UST structures. Borings in the vicinity of the UST found petroleum staining, odors, and elevated PID readings. A spill was reported to NYSDEC based on the observation of petroleum impacts. Petroleum impacts were also found in the western and northeastern parts of the Site and may be related to potential site USTs or potential off-site sources. Petroleum impacts are further described below.

- Soil Impacts:

    - Historic Fill – The historic fill layer contains concentrations of SVOC, metals, pesticides, and PCBs at concentrations that exceed their respective Unrestricted Use or Restricted Residential Use SCOs.

        - SVOCs were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site at levels considered typical of historic fill found in New York City.

        - PCB and pesticide concentrations above the Unrestricted Use SCO, but below the Restricted Residential Use SCOs, were detected in the fill.

        - Metals were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site. Anomalously high and potentially hazardous concentrations of lead were detected in samples from five borings, with the highest concentrations found in the shallow fill of borings SB08 and SB12 located in the northeastern corner of Lot 1, and the shallow and deep fill of boring SB02 in the northwest corner of Lot 1. An anomalously high concentration of barium was detected in the shallow fill of boring SB02, and an anomalously high concentration of mercury was detected in the shallow fill of boring SB04, located in the southeastern portion of the Site.

    - Petroleum-Impacted Soil: Petroleum impacts, evidenced by odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, SB05, SB13 and SB14. Odors and elevated PID readings were observed in the northeast corner of the Site (boring SB01 and off-site boring SB13), and sheen was observed on groundwater during purging and development of off-site monitoring well MW13. Odors, staining, and elevated PID readings were observed straddling the water table in borings SB03 and SB14 in the western portion of the Site. There was no free product observed in any of the monitoring wells. Potential sources of petroleum-impacted soil on the Site include the various historical industrial and manufacturing uses, the on-site USTs and off-site sources.

- CVOC-Impacted Soil: CVOCs were detected at concentrations above Unrestricted Use SCOs within the native layer off-site boring SB13.

- Groundwater Impacts: Groundwater VOC, SVOC, metal, and pesticide concentrations exceeded Class GA AWQS.

  - CVOCs (1,1,1-trichloroethane, PCE, TCE, cis-1,2-dichloroethene, vinyl chloride) were found at concentrations above Class GA AWQS on the northeastern and southeastern parts of the Site, with the highest concentrations in northeastern well MW01 and off-site well MW13. Groundwater data obtained from an investigation at adjacent Lot 23 (NYSDEC BCP Site No. C241164) revealed a total CVOC concentration in groundwater in an off-site well on the Purves Street sidewalk (to the northeast of the Site) that was greater than concentrations in samples collected for this RI. Additionally, CVOC concentrations were detected in soil in off-site boring SB13 at concentrations above Unrestricted Use SCOs, indicating the CVOC impacts are likely originating from an off-site source.

  - Sodium and selenium impacts to groundwater are consistent with regional groundwater quality. Manganese impacts along the western part of the Site are consistent with regional groundwater quality or off-site sources.

  - SVOC and pesticide contaminants were only detected in off-site well MW13, and do not appear to be impacting Site groundwater.

- Soil Vapor Impacts: Soil vapor sampling results indicate the presence of several VOCs, including CVOC and petroleum-related compounds, above the range of ambient air concentrations. The highest concentrations of TCE and PCE were identified along the eastern boundary of the Site along Purves Street and the southeastern boundary of the Site adjacent to Lot 31. VOCs may be due to historic releases of petroleum and chlorinated solvents originating from former off-site manufacturing/industrial processes.

1.4.2.6 October 20, 2014 Supplemental Soil Sampling Letter Report

Langan implemented a supplemental soil sampling investigation on September 23, 2014 to further investigate potential CVOC soil contamination in the Site's northeastern corner. Langan field personnel observed and documented field activities in the presence of a NYSDEC representative. The investigation consisted of two borings (SB20 and SB21) advanced to 25 feet below grade. Seven samples were collected and analyzed for CVOCs, and two samples

from each boring were analyzed for fraction organic carbon (FOC). The sample collection depths were based on: 1) field screening results and evidence of contamination; 2) comparable depths to remedial investigation boring SB-13; and, 3)_ boring termination depth. The investigation findings and conclusions are summarized as follows:

- The subsurface soil profile generally consisted of historic fill predominately characterized as brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, and wood. The fill layer extended to between approximately 2.5 and 8 feet bgs. The fill layer was underlain by brown, fine- to medium-grained sand. The sand layer was underlain by a silt layer followed by a clay layer.

- Soil –

    - Field Observations: Elevated PID readings (>10 ppm) were observed from approximately 13 to 18 feet bgs in boring SB20, with a maximum PID reading of 21.0 ppm at approximately 15 feet bgs. In boring SB21, elevated PID readings were observed from approximately 11 to 12 feet bgs, with a maximum PID reading of 11.5 ppm at 12 feet bgs. No discernable odors or staining were observed.

    - Analytical Results: The following CVOCs were detected in soil at concentrations that exceed their respective Unrestricted Use SCOs (no results exceeded Restricted Residential Use SCOs):

        - cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene

- The supplemental soil sampling results support the conceptual site model offered in the RIR and demonstrate the absence of CVOC source material within the Site. Specifically, CVOC concentrations in SB21, which is approximately 5 feet from the Site boundary, are higher than in SB20, which is approximately 16 feet from the Site boundary. The CVOC concentrations in soil are likely the result of long-term releases of chlorinated solvents from unidentified, off-site sources.

1.4.3 Geotechnical Engineering Study

Langan conducted a geotechnical subsurface investigation in February 2008, and a supplemental investigation in April 2014. The geotechnical investigations consisted of drilling 17 borings, installing 3 observation wells, excavating ten test pits, and performing six seismic cone penetration tests. The purposes of the investigations were to investigate the subsurface

conditions, develop foundation design recommendations, and develop geotechnical engineering recommendations related to the design and construction of the proposed development.

Borings were completed to depths of approximately 53 to 75 feet bgs. The borings revealed an approximately 5- to 9-foot-thick layer of historic fill above a 7- to 14-foot-thick layer of sand that overlies a 5- to 27-foot-thick layer of silt, overlying a 10- to 15-foot thick layer of clay. Decomposed rock was encountered from approximately 44 to 48 feet bgs in four borings, and bedrock was encountered between approximately 43 and 61 feet bgs in all borings. Groundwater was measured in the three observation wells at depths of 8 to 10 feet bgs. The May 12, 2014 Geotechnical Engineering Report is included as an appendix in the RIR.

1.4.4 Sanborn Maps

All Sanborn Maps available for this Site were reviewed prior to preparation of the RAWP. The Sanborn Maps are provided in Appendix D. Review of the features shown on the Sanborn Maps is consistent with the site history provided in this RAWP.

1.5 Significant Threat

The RI Report was submitted for review by NYSDEC and NYSDOH on July 15, 2014. NYSDEC and NYSDOH have determined that this Site does not pose a significant threat to human health and the environment. Notice of the significant threat determination was provided to the public in a Fact Sheet dated September 2014.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

Langan conducted a Phase II ESI between February 19 and 28, 2014, followed by supplemental remedial investigations conducted between April 15 and 24, 2014 and on September 23, 2014, to characterize the nature and extent of contamination at the Site. These investigation phases together constituted the RI. Investigation activities included a geophysical survey, soil boring advancement, monitoring well installation, soil vapor probe installation, and collection of soil, groundwater, and soil vapor samples.

The RI was conducted in accordance with New York Codes, Rules and Regulations (NYCRR) Title 6 Part 375 (6 NYCRR Part 375), the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010), the NYSDEC Draft Brownfield Cleanup Program Guide (May 2004), and the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006).

2.1 Field Investigation

The RI consisted of the following:

- A geophysical survey;
- Advancement of 21 soil borings (SB01 through SB21) and collection of 61 soil samples, including three duplicate samples;
- Installation of nine groundwater monitoring wells (MW01 through MW04 and MW09 through MW13) and collection of eleven groundwater samples, including two duplicate samples; and
- Installation of thirteen soil vapor points (SV01 through SV13) and collection of twelve soil vapor samples, including one duplicate sample, and two ambient air samples.

2.1.1 Geophysical Investigation

Prior to commencement of intrusive RI field activities (i.e., soil borings, well installation and soil vapor sampling), NOVA Geophysical & Environmental, Inc. (NOVA) of Douglaston, New York, conducted a geophysical survey under supervision of a Langan field engineer on February 19, 2014. Borings were relocated as necessary to avoid subsurface utilities and anomalies (other subsurface impediments). The geophysical survey identified the following subsurface anomalies:

- An anomaly was observed at the location where two USTs are shown on the 1947 and 1950 Sanborn maps in the central southern part of the Site; however, it could not verify the presence of USTs.

2.1.2 Drilling and Soil Logging

A total of 21 soil borings (SB01 through SB21) were completed during the RI. Borings were advanced until a potentially confining layer of silt or clay was identified. All except seven borings were advanced to 20 feet bgs; borings SB01, SB06, SB20, and SB21 were advanced to 25 feet bgs, and SB02, SB13, and SB16 were advanced to 15 feet bgs. Boring SB13 was located off-site on the Purves Street sidewalk. There were no borings located off-site on Thomson Avenue and 44th Drive due to the retaining wall spanning the western and southwestern Site boundaries. Continuous soil samples were collected from grade surface to the final depth of each boring.

A total of 61 grab soil samples, including three field duplicates, were collected for laboratory analysis. Generally, one sample was collected from the historic fill layer, and a second sample was collected from the interval of the greatest observable impact (staining, odor, elevated PID readings) or at the groundwater interface. During the supplemental investigation, a third sample from each boring was collected at the boring termination depth.

Soil samples collected from borings SB20 and SB21 were analyzed for CVOCs by Environmental Protection Agency (EPA) Method 8260C, and two samples from each boring were analyzed for FOC by American Society for Testing and Materials (ASTM) Method D 2974-87. All other soil samples were analyzed for NYSDEC Part 375 List VOCs by EPA Method 8260C, SVOCs by EPA method 8270D, metals (including hexavalent chromium) by EPA methods 6010C/7473/7196A, pesticides by EPA method 8081B, and PCBs by EPA method 8082A. Soil samples collected during the supplemental investigation were additionally analyzed for EPA Target Compound List (TCL) VOCs, SVOCs, pesticides, and PCBs, and Target Analyte List (TAL) metals. Eight of nineteen Phase II ESI soil samples and all of the supplemental investigation soil samples were analyzed for total cyanide by EPA method 9014/9010C.

2.1.3 Groundwater Monitoring

Nine soil borings were converted into groundwater monitoring wells by inserting 10 feet of 2-inch diameter, 0.01-inch slotted, schedule 40 PVC screen, with attached risers, into the boreholes. All wells were installed to a depth of approximately 14 feet bgs. Monitoring wells were sampled one week after development, in accordance with the EPA's low-flow groundwater sampling procedure to allow for collection of a representative sample ("Low Stress [low flow] Purging and Sampling Procedure for the Collection of Groundwater Samples

from Monitoring Wells", EQASOP-GW 001, January 19, 2010). Immediately before sample collection, a minimum of three well volumes were purged from each well and groundwater parameters (pH, conductivity, turbidity, dissolved oxygen [DO], temperature, and oxidation-reduction potential [ORP]) had stabilized and turbidity measurements were below 50 Nephelometric Turbidity Units (NTU).

Eleven groundwater samples – one sample from each well and two duplicate samples – were collected into laboratory-supplied glassware and picked up and delivered via courier service to York. Duplicate samples were collected from monitoring wells MW01 and MW13. Groundwater samples were analyzed for TCL VOCs by EPA Method 8260C, TCL SVOCs by EPA method 8270D, pesticides by EPA method 8081B, PCBs by EPA method 8082A, TAL metals by EPA methods 6010C/7470, and hexavalent chromium by EPA method 7196A. Groundwater samples collected during the supplemental investigation were additionally analyzed for NYSDEC Part 375 listed VOCs, SVOCs, Metals, PCBs, and pesticides, and total cyanide by Standard Method 4500.

2.1.4 Soil Vapor Investigation

During the RI, thirteen soil vapor sample points were installed to approximately 3 to 5 feet bgs. Twelve soil vapor samples, including one duplicate sample, and two ambient air samples, one at each sampling event were collected and submitted to York for analysis of VOCs via EPA Method TO-15. Samples collected from soil vapor points SV02 and SV05 were collected but were not submitted for analysis to due groundwater infiltration.

2.1.5 Summary of Remedial Investigation Findings

RI findings and conclusions are as follows:

1. Stratigraphy: Beneath the partial Site surface cover (i.e., concrete), overburden at the Site includes a historic fill layer, which extends to depths of up to approximately 11 feet bgs. The historic fill layer generally consists of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Underlying the fill is a layer of gray-brown and brown/tan fine- to medium-grained sand, which is underlain by layers of brown silt, gray clay and peat. Bedrock was not encountered during this investigation; however, based on Langan's previous geotechnical investigations, depth to bedrock at the Site ranges from approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast.

2. Hydrogeology: Synoptic groundwater level measurements were collected on February 28, 2014 and April 24, 2014. Groundwater was encountered between approximately 4 and 6.4 feet bgs (el 4.89 feet to el 6.09 feet) during the February gauging event and between approximately 5 and 7 feet bgs (el 4.24 feet to el 5.32 feet) during the April gauging event. The groundwater elevation is highest in the western portion of the Site and appears to slope toward the east/northeast across the majority of the Site. Groundwater flow appears to be locally influenced by the sewer beneath the Purves Street sidewalk.

3. Suspected USTs: Two USTs were identified on the Site in the 1947 and 1950 Sanborn Maps and there is no record of UST removal. The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Boring SB05, advanced in the geophysical anomaly, encountered refusal at 3 feet bgs, which may be related to the presence of UST structures. Borings in the vicinity of the UST found petroleum staining, odors, and elevated PID readings. A spill was reported to NYSDEC based on the observation of petroleum impacts. Petroleum impacts were also found in the western and northeastern parts of the Site and may be related to potential site USTs or potential off-site sources. Petroleum impacts are further described below.

4. Soil Impacts:

    a. Historic Fill – The historic fill layer contains concentrations of SVOCs, metals, pesticides, and PCBs at concentrations that exceed their respective Unrestricted Use or Restricted Residential Use SCOs.

        i. SVOCs were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site at levels considered typical of historic fill found in New York City.

        ii. PCB and pesticide concentrations above the Unrestricted Use SCO, but below the Restricted Residential Use SCOs, were detected in the fill.

        iii. Metals were detected at concentrations above Restricted Residential Use SCOs within the fill layer throughout the Site. Anomalously high and potentially hazardous concentrations of lead were detected in samples

from five borings, with the highest concentrations found in the shallow fill of borings SB08 and SB12 located in the northeastern corner of Lot 1, and the shallow and deep fill of boring SB02 in the northwest corner of Lot 1. An anomalously high concentration of barium was detected in the shallow fill of boring SB02, and an anomalously high concentration of mercury was detected in the shallow fill of boring SB04, located in the southeastern portion of the Site.

b. Petroleum-Impacted Soil: Petroleum impacts, evidenced by odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, SB05, SB13 and SB14. Odors and elevated PID readings were observed in the northeast corner of the Site (boring SB01 and off-site boring SB13), and sheen was observed on groundwater during purging and development of off-site monitoring well MW13. Odors, staining, and elevated PID readings were observed straddling the water table in borings SB03 and SB14 in the western portion of the Site. There was no free product observed in any of the monitoring wells. Potential sources of petroleum-impacted soil on the Site include the various historical industrial and manufacturing uses, the on-site USTs and off-site sources.

c. CVOC-Impacted Soil: CVOCs were detected at concentrations above Unrestricted Use SCOs, but below Restricted Residential Use SCOs, within the native layer of borings SB20, SB21, and off-site boring SB13.

5. Groundwater Impacts: Groundwater VOC, SVOC, metal, and pesticide concentrations exceeded Class GA AWQS.

a. Chlorinated VOCs (1,1,1-trichloroethane, PCE, TCE, cis-1,2-dichloroethene, vinyl chloride) were found at concentrations above Class GA AWQS on the northeastern and southeastern parts of the Site, with the highest concentrations in northeastern well MW01 and off-site well MW13. Groundwater data obtained from an investigation at adjacent Lot 23 (NYSDEC BCP Site No. C241164) revealed a total CVOC concentration in groundwater in an off-site well on the Purves Street sidewalk (to the northeast of the Site) that was greater than concentrations in samples collected for this RI. Additionally, CVOC concentrations were detected in soil in off-site boring SB13 at concentrations

above Unrestricted Use SCOs, indicating the CVOC impacts are likely originating from an off-site source.

b. Sodium and selenium impacts to groundwater are consistent with regional groundwater quality. Manganese impacts along the western part of the Site are consistent with regional groundwater quality or off-site sources.

c. SVOC and pesticide contaminants were only detected in off-site well MW13, and do not appear to be impacting Site groundwater.

6. Soil Vapor Impacts: Soil vapor sampling results indicate the presence of several VOCs, including CVOC and petroleum-related compounds, above the range of ambient air concentrations. The highest concentrations of TCE and PCE were identified along the eastern boundary of the Site along Purves Street and the southeastern boundary of the Site adjacent to Lot 31. VOCs may be due to historic releases of petroleum and chlorinated solvents originating from former off-site manufacturing/industrial processes.

7. Sufficient analytical data were gathered during the RI to establish site-specific soil cleanup levels and to develop a remedy for the Site. The remedy is described and evaluated in this RAWP, which has been prepared in accordance with NYS BCP guidelines. The remedy will address petroleum-impacted soil, historic fill impacted with metals and SVOCs, the potential for soil vapor intrusion, groundwater impacted with chlorinated VOCs from an off-site source, and a contingency for the removal and closure of unknown USTs.

2.2 Geological Conditions

Three Site-specific geologic units were identified during the RI. These units are listed in depth order (shallow to deep):

- Historic fill
- Native Soil Layers
- Bedrock

Subsurface profiles were included as part of the July 2014 RIR.

2.2.1 Historic Fill

A historic fill layer was observed that extended from surface grade to between approximately 1.5 and 11 feet bgs. The fill layer was deepest in the northwestern part of the Site (borings SB02, SB06, SB14, SB15, and SB16), and in the southeastern part (borings SB17 and SB18). A shallow fill layer (1.5 to 2.5 feet) was observed in the northeastern portion of the Site (borings SB07, SB08, SB12, SB19, and off-site boring SB13). The fill was characterized as predominantly consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood.

2.2.2 Native Soil Layers

The fill layer was underlain by brown, fine- to medium-grained sand. Soil types underlying the sand layer varied in different parts of the site, as follows:

- Western part – borings SB02, SB03, SB06, SB14, SB15, SB16 – layers of silt, peat, and organic clay
- Northeastern part – borings SB01, SB07, SB08, SB11, SB13, and SB19 – layers of silt and clay
- Southeastern part – borings SB04, SB05, SB09, SB10, SB12, SB17, SB18 – layer of silt

2.2.3 Bedrock

Based on the findings of the May 2014 Geotechnical Engineering Study conducted by Langan, bedrock consists of intermediate to hard, gray-white schist bedrock at depths ranging from approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast, and is deepest in the southeastern part of the Site.

2.2.4 Hydrogeology

Synoptic groundwater level measurements were collected on February 28, 2014, April 24, 2014, and July 9, 2014. Groundwater was encountered between approximately 4 and 6.4 feet bgs during the February gauging event and between approximately 4.5 and 7 feet bgs during the April and July gauging events. The higher groundwater elevations during the February gauging event were presumed to be the result of snow melt. The groundwater elevation is highest in the western part of the Site and appears to flow east to northeast toward Purves Street.

Groundwater flow may be locally affected by the presence of a combined sewer line that runs adjacent to the Site beneath the western Purves Street sidewalk. According to NYCDEP records, the sewer was constructed circa 1911 of reinforced concrete pipe and during the RI construction crews were observed repairing what appeared to be a surficial breach or cave in. Wastewater flows north within the sewer. The sewer is 42 inches in diameter and has an invert elevation of about 3 feet. At the groundwater elevation noted above, the invert of the sewer is below the water table. If there are any cracks or penetrations in the base or sides of the sewer, the sewer will influence groundwater flow. Based on the inferred groundwater flow directions from groundwater measurements taken during the RI, it appears groundwater may be influenced by the sewer.

Depending on the water table elevation and the integrity of the sewer pipe, the sewer will either be a gaining or losing groundwater feature. During the RI, the sewer was likely a gaining feature because the water table was roughly 1.5 feet above the sewer's invert elevation. During the Langan geotechnical investigation, the sewer was likely a losing feature because the water table was observed to be significantly lower and below the sewer invert elevation.

2.3 Contaminant Conditions

2.3.1 Description of Areas of Concern

2.3.1.1 AOC-1: Historic Fill

AOC-1 Findings Summary

During the RI, historic fill was observed from surface grade to between 1.5 and 11 feet bgs. All borings are included within AOC-1, as historic fill encompasses the entire Site. Twenty-seven samples were collected from the historic fill layer, and the analytical results are summarized as follows:

- SVOCs and metals were detected at concentrations exceeding Restricted Residential Use SCOs. SVOC and metal concentrations were observed to be in the range of typical concentrations found in New York City historic fill, with the exception of isolated areas of anomalously high metals. Anomalously high concentrations of metals, particularly lead, barium, and mercury, were identified in the borings indicated below:
    - SB02 – lead, barium
    - SB04 – mercury

- SB05, SB06, SB08, SB12, SB16 – lead

- PCBs and pesticides were detected at concentrations exceeding Unrestricted Use SCOs.

AOC-1 Conclusions

Fill material on the site was found to have one or more exceedances of both the Unrestricted Use and Restricted Residential Use SCOs for SVOCs, metals, pesticides, and PCBs. The presence of historic fill does not appear to be impacting the groundwater and soil vapor on the Site.

The anomalously high concentrations of lead, barium, and mercury are potentially hazardous. Based on the prevalence and magnitude of the lead concentrations, and the relatively higher solubility of lead than barium and mercury, lead is the most likely to exist in hazardous concentrations.

2.3.1.2 AOC-2: Historic USTs and Petroleum-Impacted Soil

AOC-2 Findings Summary

AOC-2 represents the location of two USTs that were identified on the 1947 and 1950 Sanborn maps, and the petroleum-impacted soil identified during Langan's Phase II ESI. Based on the potential presence of USTs, the presumed age of the tanks (at least 67 years), and lack of tank closure documentation, the potential tanks are an AOC. In addition, visual, olfactory, and instrumental evidence of petroleum impacts was observed in three borings (SB01, SB03, and SB05) during Langan's Phase II ESI. Contaminants of concern include petroleum-related VOCs and SVOCs in soil and groundwater and VOCs in soil vapor. Investigation locations include the southern portion of the Site, which incorporates the suspected USTs and observations of petroleum impacts in Phase II ESI borings SB05 and SB03, and the northeastern portion of the Site, which incorporates observations of petroleum impacts in Phase II ESI boring SB01.

A summary of findings associated with AOC-2 is presented below:

AOC-2 USTs

The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. While drilling boring SB05, refusal was encountered at approximately 3 feet bgs. Refusal may have been caused by a UST structure.

AOC-2 Soil

- Southern Portion of the Site

    - Petroleum-impacted soil exhibiting staining, odor and PID readings up to 240 ppm was observed at depths of approximately 2 to 3 feet bgs in boring SB05, prior to refusal. No evidence of petroleum impacts was observed at the off-site location of SB05. Boring SB10 was advanced within the suspected UST area to the north of SB05, and no evidence of petroleum impacts was observed.

    - In boring SB17, located approximately 25 feet south of the suspected UST area, petroleum-impacted soil exhibiting odor was observed below the water table at a depth of approximately 10 feet bgs.

    - In boring SB03, located approximately 25 feet southwest of the suspected UST area, petroleum-impacted soil exhibiting staining, odor, and PID readings up to 91.7 ppm was observed straddling the water table.

    - Despite field observations of petroleum impacts, there were no VOCs detected at concentrations above the SCOs. Five SVOCs, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene, were detected at concentrations exceeding Unrestricted Use and/or Restricted Residential Use SCOs in sample SB05_1-3, which was collected at the location where refusal was encountered at 3 feet bgs. There were no SVOCs detected at concentrations above the SCOs in any other samples collected from the off-set location of SB05, SB03, SB10, or SB17.

- Northeastern Portion of the Site

    - Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 14.9 ppm was observed straddling the water table in boring SB01.

    - In boring SB13, advanced off-site and approximately 15 feet east of boring SB01, petroleum-impacted soil exhibiting odor, and PID readings up to 5.8 ppm was observed within the water table at approximately 8 to 10 feet bgs.

    - In boring SB19, advanced approximately 25 feet west of boring SB01, there was no observed evidence of petroleum-impacts.

- Despite the field observations of petroleum impacts, there were no elevated petroleum-related VOCs or SVOCs detected above the SCOs in soil samples collected from these depths.

- Additional Observed Impacts

  - In boring SB14, advanced in the western portion of the Site near the Site boundary, petroleum-impacted soil exhibiting staining, odor, and PID readings up to 8.9 ppm were observed straddling the water table at a depth of approximately 7 to 10 feet bgs. There were no VOCs or SVOCs detected above the SCOs in the soil sample collected at 8 to 9 feet bgs.

AOC-2 Groundwater

There were no petroleum-related VOCs or SVOCs detected at concentrations exceeding their respective Class GA AWQS in any of the groundwater samples. Elevated PID readings were recorded in the well headspace during the sampling of well MW03 (12.8 ppm), and during the development and purging of well MW13 (64.4 ppm). Additionally, a sheen was observed on groundwater purged from well MW13. There was no evidence of petroleum impacts on groundwater during the development and sampling of monitoring well MW10, located within the suspected UST area. The PID headspace reading in MW10 was 0.0 ppm.

AOC-2 Soil Vapor

Several VOCs, including petroleum-related compounds, were detected in soil vapor at concentrations above the anticipated range of background concentrations.

AOC-2 Conclusions

Conclusions relevant to AOC-2 include:

- Although not found during the RI, USTs may still be present;
- Field observations indicate a possible petroleum release from the suspected USTs at the location of boring SB05.
- Field observations indicate the possibility of petroleum impacts resulting from off-site sources.
- Analytical results indicate VOC impacts to soil vapor and SVOC impacts to soil, however no evidence of petroleum-related VOC or SVOC impacts to groundwater was observed.

2.3.1.3 AOC-3: Chlorinated VOC Contamination in Groundwater

AOC-3 Findings Summary

CVOCs including 1,1,1-trichloroethane, cis-1,2-dichloroethylene, PCE, TCE, and vinyl chloride were identified in groundwater at concentrations exceeding the Class GA AWQS in monitoring wells located along the eastern site border and off-site (MW01, MW04, MW09, MW12 and MW13), with the highest total CVOC concentration (871 µg/L) detected in the off-site well (MW13). Additionally, sheen was observed on groundwater purged from MW13 and a PID reading of 64.4 ppm was recorded in the headspace of MW13. CVOCs were also detected at concentrations above the Unrestricted Use SCO in soil samples collected from borings SB20, SB21, and off-site boring SB13.

The adjoining site to the north (Block 268, Lot 23) is also in the NYSDEC BCP (Site No. C241164). Data from a December 2013 investigation at this site further delineates the extent of CVOC impacts to groundwater. The highest total CVOC concentration (3,436 µg/L) from the adjoining site investigation was found at an off-site well in the Purves Street sidewalk (Lot 23 location MW01).

AOC-3 Conclusions

The data, including groundwater, soil, and soil vapor results, show that the highest CVOC concentrations on the Site are in the northeastern corner of the Site and off-site. The data and field observations indicate an off-site CVOC source to the east in the direction of Purves Street.

2.3.1.4 AOC-4: Soil Vapor Contamination

AOC-4 Findings Summary

AOC-4 represents the impacts to soil vapor resulting from the use of the Site and surrounding properties for various industrial and manufacturing uses.

Soil vapor analytical results were compared to ambient air sample results collected on each day of sampling. Several VOCs, including petroleum and chlorinated-solvent related VOCs, were detected at concentrations above background ambient air concentrations in all soil vapor samples. Chlorinated VOCs, specifically PCE and TCE, are considered soil vapor contaminants of concern. The highest PCE and TCE concentrations were detected in samples collected on the eastern side of the Site adjacent to Purves Street and the southeastern portion of the Site adjacent to Lot 31. At these locations (SV03, SV06, SV07, SV09, SV12, and SV13), TCE was detected at concentrations up to 200 µg/m^3 (SV09), and PCE was detected at concentrations up to 1,500 µg/m^3 (SV13). The maximum TCE concentration was at least 1,300 times greater than

the ambient air concentration, and the maximum PCE concentration was 1,765 times greater than the ambient air concentration.

AOC-4 Conclusions

Soil vapor at the Site contains VOCs, most notably PCE and TCE. The highest PCE concentrations were detected in soil vapor samples collected on the eastern side of the Site adjacent to Purves Street, which corresponds to PCE detections in groundwater.

2.3.2 Nature and Extent of Contamination

This section evaluates the nature and extent of soil, groundwater and soil vapor contamination at the Site.

2.3.2.1 Historic Fill

The site-wide fill layer extends from surface grade to depths up to approximately 11 feet bgs and contains varying levels of SVOCs, pesticides, PCBs, and metals that are discussed in detail in this section. The discussion is divided by the following contaminant classifications:

1. SVOC-Contaminated Material
2. Metals-Contaminated Material
3. Pesticide-contaminated Material
4. PCB-contaminated Material

SVOC (cPAHs)-Contaminated Material

SVOCs were detected at concentrations exceeding Unrestricted Use SCOs in soil samples collected from eleven of nineteen boring locations. At least one SVOC was detected at a concentration above its respective Restricted Residential Use SCO in ten of nineteen borings. There was one historic fill sample, SB14_8-9, that had no SVOC detections. Total SVOC concentrations in historic fill samples with detections ranged from 0.10 mg/kg in sample SB11_2-3.5 to 61 mg/kg in sample SB06_6-8. The contaminants of concern (COCs) include:

- benzo(a)anthracene
- benzo(a)pyrene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- chrysene
- dibenzo(a,h)anthracene
- indeno(1,2,3-cd)pyrene
- pentachlorophenol

These SVOCs are typically found in historic fill throughout New York City. Although these compounds can be associated with motor vehicle exhausts and fuels, they are likely incomplete combustion byproducts from the burning of wood or coal that were a component of the backfill source use for Site infilling. Except for pentachlorophenol, each COC was detected above its respective Restricted Residential Use SCO in at least one sample. COCs were detected above the Restricted Residential Use SCOs in samples collected from throughout the Site, at depths ranging from surface grade to 8 feet bgs. The highest concentrations of COCs were detected in samples collected from the shallow and deep fill in the northwest portion of the Site (borings SB02 and SB06), and the shallow fill in the northeast corner of the Site (SB19). Total SVOC concentrations in these areas are summarized in the following table:

Boring	Layer	Total SVOCs (mg/kg)
SB02	shallow fill	27.19
	deep fill	20.63
SB06	shallow fill	23.78
	deep fill	61.22
SB19	shallow fill	48.41

Metals-Contaminated Material

Metals were detected at concentrations above the Unrestricted Use SCOs in samples collected from all nineteen soil borings, and at concentrations above the Restricted Residential Use SCOs in samples collected from thirteen of nineteen soil borings. Metals that were detected above Restricted Residential Use SCOs are in **bold**. The COCs include (maximum concentration observed and corresponding sample name are shown in parenthesis):

- **arsenic**
  (35.8 mg/kg in SB05A_2-4)
- **barium**
  (4,340 mg/kg in SB02_2-4)
- **cadmium**
  (7.21 mg/kg in SB18_11-13)
- **hexavalent chromium**
  (8.52 mg/kg in SB06_6-8)
- **trivalent chromium**
  (251 mg/kg in SB02_2-4)
- **lead**
  (61,000 mg/kg in SB08_0-2)
- **copper**
  (860 mg/kg in DUP01_022014, parent sample SB04_1-3)
- **mercury**
  (14.9 mg/kg in DUP01_022014, parent sample SB04_1-3)

- nickel
  (54.7 mg/kg in SB08_0-2)
- zinc
  (3,260 mg/kg in SB02_2-4)
- selenium
  (6.17 mg/kg in SB14_8-9)

Metal concentrations above the Restricted Residential Use SCOs were detected within historic fill throughout the Site at depths ranging from surface grade to 9 feet bgs. The potential source of metals contamination is likely the quality of historic fill. The former chromium plating use in the southern-adjoining site (Block 268, Lot 31) may have contributed to the presence of hexavalent chromium in borings SB09, SB17, SB04, and SB18. The elevated metals concentrations in shallow and deep fill in SB02 may be the result of the former site use as a chemical laboratory. Anomalously high and potentially hazardous concentrations of metals, particularly lead, barium, and mercury, were identified in the borings indicated below:

- Lead – SB02, SB05, SB08, SB12 and SB16
- Barium – SB02
- Mercury – SB04

The highest lead concentrations were observed in samples collected from the shallow fill in borings SB08 and SB12, which are both located in northeastern corner of Lot 1. Potential sources of metal contamination include historical site uses and the quality of fill placed at the Site. Given the magnitude of lead concentration, the Site fill may be been impacted by releases of lead-based paints from demolition of the former buildings or lead paint mixing operations.

Pesticide-Contaminated Material

Pesticides, specifically 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin, exceeded their respective Unrestricted Use SCOs in shallow fill samples (0 to 3 feet bgs) in borings SB10, SB14, SB15 and SB19. There were no pesticides detected at concentrations above their respective Restricted Residential Use SCOs. The elevated pesticide concentrations were scattered throughout the Site with no discernable pattern. Pesticides were not detected in deeper samples within the impacted borings. Sources of the pesticides are likely prior usage by inhabitants of the former buildings or quality of the historic fill.

PCB-Contaminated Material

Two PCBs, Aroclor 1260 and Aroclor 1262, were detected at concentrations exceeding the Unrestricted Use SCO. The PCB concentrations did not exceed the Restricted Residential Use

SCO. PCBs were detected in borings SB03 and SB15, located in the southwestern part of the Site, between 0 and 3 feet bgs, and in boring SB04, located the southeastern part of the Site, between 4 and 6 feet bgs.

2.3.2.2 CVOC-Impacted Soil

CVOCs were detected at concentrations above their Unrestricted Use SCOs, but below Restricted Residential Use SCOs in on-site borings SB20 and SB21 and off-site boring SB13. These detections were found in the native soil beneath the historic fill. The following four SVOCs were detected in one or more samples at concentrations exceeding their respective Unrestricted Use SCOs (maximum concentrations are shown for each boring):

Compound	UU SCO	SB-13	SB-20	SB-21
DCE	0.25	0.75	NE	0.45
PCE	1.3	5.60	4.40	12
TCE	0.47	0.72	NE	1.1
VC	0.02	0.12	NE	NE

DCE – cis-1,2-dichloroethene
VC – vinyl chloride
NE – no exceedance
All concentrations shown in mg/kg

The concentrations of CVOCs found on the Site do not exceed the Part 375 Restricted Residential SCOs, and are not considered source material as defined in 6 NYCRR Part 375-1.2(au). The soil concentrations are not sufficiently high enough to migrate, release significant levels of contaminants to another environmental medium, or pose a threat to public health or the environment. The CVOC concentrations in soil are likely the result of long-term releases of CVOCs from unidentified, off-site sources.

2.3.2.3 Groundwater Contamination

Evaluation of the groundwater analytical results identified the following COCs for groundwater, which are discussed in more detail in this section:

1. CVOC Contamination
2. Metals Contamination

CVOC Impacts

CVOC concentrations exceeding Class GA AWQS were found in groundwater at monitoring wells MW01, MW04, MW09, and off-site well MW13. CVOCs were also identified in

groundwater samples collected from wells on the northern-adjoining site (Lot 23, NYSDEC BCP Site No. C241164), specifically off-site wells MW01 (Purves Street Sidewalk) and MW02 (Lot 23). The COCs include the following: 1,1,1-trichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride.

Monitoring well MW04 and MW09 each contained one CVOC at a concentration above Class GA AWQS: PCE (MW04) and cis-1,2-dichloroethene (MW09). CVOC concentrations in groundwater were highest in the northeast corner of the Site (MW01), on Lot 23 (MW02), and on the Purves Street sidewalk (MW13 and MW01). Total CVOC concentrations in these wells are summarized in the following table:

Well ID	Location	Total CVOCs (µg/L)
MW01	NE Site Corner	793
MW13	Purves Street Sidewalk	871
MW02	SE Corner – Adjacent Site (Lot 23)	733
MW01	Purves Street Sidewalk	3,436

On-site soil sampling did not reveal a source of CVOCs. CVOCs were detected in multiple on-site soil samples; however, the concentrations did not exceed Protection of Groundwater (PGW) SCOs (which is the applicable SCO for these contaminants since they are also found in groundwater) and were typically one to two orders of magnitude lower than the PGW SCO of 1.3 mg/kg. The highest on-site CVOC concentration was a PCE concentration of 12.0 mg/kg in sample SB21_24-25.

Based on soil and groundwater sampling results and field observations, the source of the chlorinated VOC contamination appears to be off-site.

Metal Impacts

Groundwater sample results revealed one or more of the following metals at concentrations that exceed their TOGS Class GA AWQS: manganese, selenium, and sodium. The presence of sodium and selenium is consistent with regional groundwater quality. Concentrations of manganese were found above the TOGS Class GA AWQS in 7 of the 9 monitoring wells, with concentrations generally higher on the eastern Site boundary, and highest in off-site monitoring well MW13. Manganese concentrations ranged from 17 to 13,400 µg/L and are considered indicative of regional groundwater quality or potential off-site sources. No manganese Unrestricted Use SCO exceedances were found in Site soil samples.

2.3.2.4 Soil Vapor Contamination

Total VOCs ranged from 62.71 µg/m³ at SV04 to 1,552 µg/m³ at SV13. PCE and TCE concentrations in soil vapor were prevalent throughout the Site. PCE was found in all soil vapor samples and ranged from 8.6 µg/m³ (SV10) to 1,500 µg/m³ (SV13). TCE was found in ten of twelve soil vapor samples (SV04 and SV08) and ranged from 2 µg/m³ in SV11 to 200 µg/m³ at SV09. The PCE and TCE concentrations were highest along the eastern portion of the Site along Purves Street and in the southeastern portion of the Site adjacent to Lot 31.

Site-wide VOC impacts to soil vapor may result from the potential USTs, historical uses of the Site and surrounding properties, or an off-site source of CVOCs along Purves Street.

2.4 Qualitative Human Exposure Assessment

Human health exposure risk was evaluated for both current and future site and off-site conditions, in accordance with the May 2010 NYSDEC Final DER-10 Technical Guidance for Site Investigation and Remediation. The assessment includes an evaluation of potential sources and migration pathways of site contamination, potential receptors, exposure media, and receptor intake routes and exposure pathways.

In addition to the human health exposure assessment, NYSDEC DER-10 requires an on-site and off-site Fish and Wildlife Resources Impact Analysis (FWRIA) if certain criteria are met. Based on the requirements stipulated in Section 3.10 and Appendix 3C of DER-10, there was no need to prepare an FWRIA for the Site. A completed form of DER-10 Appendix 3C is enclosed in Appendix K.

2.4.1 Current Conditions

The Site consists of an irregularly-shaped lot that is approximately 27,100 square feet (±0.62 acres). The Site has been a vacant lot for nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes.

2.4.2 Proposed Conditions

The proposed project will include the construction of a 33-story, approximately 263-unit residential apartment building and a one-story building with residential amenity space and retail along Thomson Avenue and 44th Street. One level of approximately at-grade parking will span an area of approximately 14,000 square feet. The anticipated excavation depth necessary for the at-grade first floor slab is approximately 1.2 to 3.4 feet bgs. Additional excavations to facilitate foundation elements and an elevator pit are anticipated but have not been finalized. Proposed development plans are provided in Appendix A.

2.4.3 Summary of Environmental Conditions

Soil sample analysis revealed SVOCs, metals, pesticides, and PCBs at concentrations that exceeded their respective Unrestricted Use SCOs, with SVOC and metal concentrations also above Restricted Residential SCOs. Additionally, CVOCs were detected at concentrations above the Unrestricted Use SCOs, but below the Restricted Residential Use SCOs, in samples collected from borings SB20 and SB21, and off-site boring SB13. Soil contaminants of concern (COC) include VOCs, SVOCs, PCBs, pesticides, and metals.

SVOC and metal impacts are widespread on the Site. SVOC concentrations above Restricted Residential Use SCOs were detected in samples collected from 10 of 19 borings (SB02, SB05, SB06, SB07, SB08, SB09, SB11, SB12, SB16, and SB19) at depths ranging from grade surface to 8 feet bgs. Metal concentrations above Restricted Residential Use SCOs were detected in samples collected from 13 of 19 borings (SB01, SB02, SB03, SB04, SB05, SB06, SB07, SB08, SB12, SB14, SB15, SB16, SB18, and SB19) at depths ranging from surface grade to 13 feet bgs.

Groundwater samples had concentrations of VOCs, SVOCs, pesticides, and metals that exceeded their respective Class GA AWQS. Chlorinated VOCs were detected in groundwater at the highest concentrations in off-site monitoring well MW13, located on Purves Street sidewalk close to the northern boundary of the Site, and MW01, located in the northeast corner of the site near Purves Street. Chlorinated VOCs were also detected in samples from monitoring wells MW04 and MW09 at concentrations above the Class GA AWQS. Metal concentrations above the Class GA AWQS were detected throughout the Site, and are likely attributable to regional groundwater conditions. One SVOC, benzo(a)anthracene, and one pesticide, alpha-chlordane, were detected above the Class GA AWQS in off-site monitoring well MW13.

Several VOCs, including chlorinated VOCs, were detected in soil vapor samples at concentrations above background ambient air levels throughout the Site.

2.4.4 Conceptual Site Model

A conceptual site model has been developed based on the findings of the RI. The purpose of the conceptual site model is to develop a simplified framework for understanding the distribution of impacted materials, potential migration pathways, and potentially complete exposure pathways, as discussed below.

2.4.4.1 Potential Sources of Contamination

Potential sources of contamination have been identified in Section 3.3 and are based on previous investigations. The site-wide layer of historic fill has been established as a source of SVOCs, metals, pesticides, and PCBs. Historic fill, however, does not appear to be impacting groundwater. Groundwater appears to be primarily impacted by off-site sources.

2.4.4.2 Exposure Media

The impacted media include soil, groundwater, and soil vapor. Site soil may have been impacted by former operations, the nature of the historic fill throughout the Site, and by possible historic petroleum releases. Analytical data indicates that the historic fill material underlying the Site contains SVOCs, metals, pesticides, and PCBs. Groundwater impacts include chlorinated VOCs and metals. Soil vapor throughout the Site is impacted with VOCs.

Because VOCs are present at elevated concentrations in soil vapor and portions of the proposed building slabs will be above the groundwater table, there is potential for vapors to accumulate under the proposed building slabs.

2.4.4.3 Receptor Populations

The Site is currently vacant and locked, preventing public access; therefore, human receptors are limited to occasional site visitors and workers involved in pre-development (e.g., investigation) activities. During site development, human receptors are limited to construction and remediation workers, authorized guests visiting the Site and the public adjacent to the Site. Under future conditions, receptors will include the new building tenants, workers, and visitors to the residential properties including children.

2.4.5 Potential Exposure Pathways – On-Site

2.4.5.1 Current Conditions

On-Site soil has been contaminated with SVOCs, metals, PCBs and pesticides. Approximately 55% of the Site is covered with a concrete slab, and the remaining 45% is covered with overgrown vegetation. In areas where human exposure to contaminated soil is possible, the potential migration pathway is likely complete for dermal absorption, inhalation and ingestion. The Site is surrounded by construction fencing and locked, which limits activity within the Site boundary to authorized guests.

On-Site groundwater is contaminated with VOCs and metals. Because groundwater in New York City is not used as a potable water source, there is no completion of the exposure pathway under current Site conditions. There is a potential exposure pathway during groundwater sampling associated with Site investigation. The potential pathway is through dermal absorption, inhalation, and ingestion. Site access is currently limited to authorized guests.

Soil vapor results indicate the presence of VOCs. There is a potential exposure pathway during soil vapor sampling associated with Site investigation. The potential pathway is through inhalation. Site access is currently limited to authorized guests.

2.4.5.2 Construction/Remediation Condition

Construction and remediation activities may result in potential exposures to Site contaminants in the absence of a Health and Safety Plan (HASP) and a Community Air Monitoring Plan (CAMP). Soil contains SVOCs and metals at concentrations that exceed Unrestricted and Restricted Residential Use SCOs, and PCBs and pesticides at concentrations that exceed Unrestricted Use SCOs. Construction and remedial activities include construction of foundation components and excavation and off-site disposal of impacted soil. In the absence of a HASP and CAMP, this scenario presents the potential for exposure of soil COCs to construction and remediation workers via dermal absorption, ingestion, and inhalation of particulate matter. In the absence of CAMP, activities may result in exposure to the public adjacent to the Site through potential generation and off-site migration of dust containing Site COCs.

Site groundwater contains VOCs and metals at concentrations that exceed their respective Class GA AWQS. Groundwater will be encountered during excavation activities by workers, and there is potential for exposure to groundwater COCs, in the absence of a HASP, to construction workers via dermal absorption, ingestion, or inhalation.

Soil vapor results indicated the presence of petroleum-related and chlorinated VOCs. During site development, construction and remediation workers may be exposed to soil vapor COCs via inhalation in the absence of a HASP. In the absence CAMP, activities may also result in exposure to the public adjacent to the Site through volatilization of vapors into the air and potential off-site migration.

2.4.5.3 Proposed Future Conditions

The proposed development will include residential use. Upon completion of the new development, the entire Site will be capped with the concrete building foundation. These barriers will prevent direct human exposure to impacted soil and groundwater.

In the absence of engineering controls (e.g., vapor barrier and/or depressurization system), the presence of VOCs in the groundwater and soil vapor creates potential for VOCs to volatilize and accumulate in the proposed building, completing an exposure pathway for future users. In the absence of engineering controls, routes of exposure may include inhalation of vapors that accumulate in the building.

There is no risk of ingesting groundwater COCs because the Site and surrounding areas obtain their drinking water supply from surface water reservoirs located upstate and not from groundwater; groundwater is not intended for consumption.

2.4.6 Potential Exposure Pathways – Off-Site

In the absence of CAMP, soil has the potential to be transported off-site by wind in the form of dust or on the tires of vehicles or equipment leaving the Site during development and remediation activities. Metal impacts to groundwater are considered a regional problem and are not considered a localized concern. Chlorinated VOC impacts to the groundwater in the northeast corner of the Site are likely from an off-site source. The off-site chlorinated VOC impacts migrating onto the Site and are likely migrating onto other properties as well and represent a potential exposure pathway via soil vapor intrusion.

The potential off-site migration of site contaminants is not expected to result in a complete exposure pathway for current, construction and remediation, or future conditions for the following reasons:

- Air monitoring will be conducted for particulates (i.e., dust) and VOCs during all intrusive activities as part of a community air monitoring program. Dust and/or vapor suppression techniques will be employed to limit potential for off-site migration of site soil and vapors.
- Vehicle tires and undercarriages will be washed as necessary prior to leaving the Site to prevent tracking material off-site.
- The Site is located in a highly urbanized area with continuous impervious (i.e. concrete) surface covering.

- Groundwater in New York City is not used as a potable water source.

2.4.7 Evaluation of Human Health Exposure

Based upon the conceptual site model and the review of environmental data, complete on-site exposure pathways appear to be present, in the absence of institutional and engineering controls, in current, construction and remediation, and future conditions. The complete exposure pathways indicate there is a risk of exposure to humans from Site contaminants via exposure to soil, groundwater, and soil vapor if institutional and engineering controls are not implemented.

Complete exposure pathways have the following five elements: 1) a contaminant source; 2) a contaminant release and transport mechanism; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population. A discussion of the five elements comprising a complete pathway as they pertain to the Site is provided below.

2.4.7.1 Current Conditions

Contaminant sources include historic fill with varying levels of SVOCs, metals, pesticides, and PCBs, two potential USTs, chlorinated VOCs in groundwater, and PCE, TCE, and other VOCs in soil vapor.

Contaminant release and transport mechanisms include contaminated soil transported as dust and volatilization of contaminants from the soil and groundwater matrices to the soil vapor phase, and existing soil vapor contaminants. Under current conditions, the likelihood of exposure to humans is limited, as the Site surface cover, consisting of a partial concrete slab and vegetation, generally prevents contact with soils, groundwater is not currently accessible and soils are not currently being disturbed except during investigation. In addition, the Site property is kept locked and activity is limited to authorized guests. All five elements exist; therefore, the potential for completed exposure pathways is present. However, the risk can be avoided or minimized by applying appropriate health and safety measures during investigation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate personal protective equipment (PPE).

In accordance with a HASP and CAMP, measures such as conducting an air-monitoring program, donning PPE, and applying vapor and dust suppression measures to prevent off-site

migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

2.4.7.2 Construction/Remediation Activities

During development and remediation activities, points of exposure include disturbed and exposed soil during excavation, dust and organic vapors generated during excavation activities, and contaminated groundwater that will be encountered during excavation and dewatering operations. Routes of exposure include ingestion and dermal absorption of contaminated soil and groundwater, inhalation of organic vapors arising from contaminated soil and groundwater, and inhalation of dust arising from contaminated soil. The receptor population includes the construction and remediation workers and, to a lesser extent, the public adjacent to the Site. All five elements exist; therefore, the potential for completed exposure pathways is present. However, the risk can be avoided or minimized by applying appropriate health and safety measures during construction and remediation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate PPE.

In accordance with a HASP, a Soil Management Plan (SMP), and a CAMP, measures such as conducting an air-monitoring program, donning PPE, covering soil stockpiles, altering work sequencing, proper housekeeping, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

2.4.7.3 Proposed Future Conditions

For the proposed future conditions, some residual contaminants may remain and may include those listed under current conditions. Contaminant release and transport mechanisms include volatilization of contaminants from soil vapor or the groundwater matrix to the soil vapor phase. If institutional and/or engineering controls are not implemented, points of exposure include potential cracks in the foundation or lower-level slab of the proposed development. Routes of exposure may include inhalation of vapors entering the building; these routes may not exist depending on the effectiveness of the remediation. The receptor population includes the building tenants, residential property employees, and visitors. The possible routes of exposure will be avoided or mitigated by proper installation of soil vapor mitigation measures (e.g., vapor barrier and depressurization system) and the impermeable (concrete) site cap.

2.4.7.4 Human Health Exposure Assessment Conclusions

The following conclusions were developed from this human health exposure assessment:

1. Under current conditions there is a moderate risk to exposure. Contaminated soil transport off-site as dust is limited by the site cover consisting of a concrete slab and vegetation. The exposure risks can be avoided or minimized by maintaining site security and limiting access to authorized guests, and by following the appropriate health and safety and vapor and dust suppression measures during investigation activities.

2. In the absence of institutional and engineering controls, there is a moderate risk of exposure during the construction and remediation activities. This risk can be avoided or minimized by following the appropriate health and safety, vapor and dust suppression, and site security measures.

3. The existence of a complete exposure pathway for Site contaminants to human receptors during proposed future conditions is unlikely, as a large quantity of soil will be excavated and transported to an off-site disposal facility, groundwater is not used as a potable water source in New York City, and the potential pathway for soil vapor intrusion into the building would be addressed through the use of soil vapor mitigation measures (e.g., vapor barrier and depressurization system).

4. It is unlikely that a complete exposure pathway exists for the migration of site contaminants to off-site human receptors for current, construction phase, or future conditions. Monitoring and control measures would be used during investigation and construction to prevent completion of this pathway. Under future conditions, the site will be remediated and engineering controls can be implemented to prevent completion of this pathway.

2.5 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

2.5.1 Groundwater

RAOs for Public Health Protection:

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.

- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection:

- Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.

2.5.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil or contaminated soil in particulate form.

RAOs for Environmental Protection:

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.5.3 Soil Vapor

RAOs for Public Health Protection:

- Mitigate impacts to public health resulting from for the potential for soil vapor intrusion into occupied buildings at the Site.

3.0 DESCRIPTION OF REMEDIAL ACTION PLAN

The BCP requires the analysis of at least two remedial alternatives when the chosen option is not a Track 1 cleanup. This section presents an analysis of two remedial actions that can potentially be achieved under the BCP. The proposed SCOs will be the generic Track 1 Part 375 Unrestricted Use SCOs for Alternative I and Track 4, restricted residential use with site-specific SCOs for Alternative II.

This section is organized as follows:

- Section 3.1 describes the remedial goals and objectives
- Sections 3.2 and 3.3 provide technical descriptions of:
    - Alternative I, a BCP Unrestricted Use Track 1 concept
    - Alternative II, a BCP Site-specific Track 4 concept
- Section 3.4 evaluates the remedial alternatives based on the BCP Remedy Selection Evaluation Criteria
- Section 3.5 discusses the recommended remedial alternative

3.1 Standards, Criteria, Guidance, and Remedial Action Objectives

In accordance with ECL § 27-1415 and DER-10, the objectives of the remedial action are to: (1) reduce the concentrations of COCs at the Site to meet those levels that will protect public health and the environment, and (2) isolate the Site from migration of contaminated groundwater and soil vapor from potential on-site sources. In accordance with DER-10, the Volunteer will have no remedial responsibilities with respect to groundwater contamination migrating under the Site from an off-site source; however, remedial alternatives will be developed for such a case that eliminate or mitigate on-site environmental impacts or human exposures, to the extent practical, resulting from the off-site contamination. Where identifiable sources of contamination are found on the Site, the sources will be removed or treated to the extent practical.

Also in accordance with DER-10, the Remedial Action Objectives (RAO) for this Site are defined as medium-specific objectives for the protection of public health and the environment and are developed based on contaminant-specific standards, criteria, and guidance (SCGs). The SCGs for the Site include:

- NYSDEC – Brownfield Cleanup Program Guide (draft 2004);
- NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (2010);
- NYSDEC TAGM No. 4031– Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Waste Sites (1989);
- NYSDEC TOGS 1.1.1 – Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (1998);
- NYSDEC TOGS 5.1.8 – New York State Stormwater Management Design Manual (2008);
- NYSDEC TOGS 5.1.10 – New York Standards and Specifications for Erosion and Sediment Controls (2005);
- NYSDOH – Guidance for Evaluating Soil Vapor Intrusions in the State of New York (2006);
- New York State Codes, Rules and Regulations (NYCRR) Title 6 Part 364 – Waste Transporter Permits;
- 6 NYCRR Part 370 – Hazardous Waste Management System;
- 6 NYCRR Part 375 – Environmental Remediation Program (December 2006);
- 6 NYCRR Part 376 – Land Disposal Restrictions;
- 6 NYCRR Part 750 – State Pollutant Discharge Elimination System (SPDES) Regulations;
- Code of Federal Regulations (CFR) Title 29 Part 1910.120 - Hazardous Waste Operations and Emergency Response Standard;
- CFR Title 29 Part 1926 - Safety and Health Regulations for Construction; and
- NYSDEC CP-51 - Soil Cleanup Guidance (2010).

In addition to the SCGs listed above, the RAOs were developed from information derived from previous environmental investigations referenced in Section 1.4, including identified contaminated media and potential public health and environmental exposure pathways, which were summarized in Section 2.4. The RAOs for this RAWP are listed in Section 2.5.

3.2 Technical Description of Alternative I

3.2.1 Summary of Alternative I – Track 1 Remedy

Alternative I, a Track 1 remedy, would include the following tasks:

- Removal of all on-site soil exceeding Unrestricted Use SCOs and grossly-impacted material;
- Removal of USTs, if encountered, and closure of NYSDEC Spill No. 1310949;
- Dewatering the excavation to accommodate remedial excavation;
- Collection and analysis of confirmation soil samples to confirm Unrestricted Use SCOs have been achieved – over-excavation would be required as necessary to meet SCOs;
- Backfilling of excavated areas to development grade with certified-clean material (meeting Unrestricted Use SCOs), recycled concrete aggregate (RCA) or virgin, native crushed stone;
- Installation of a vapor barrier to protect against VOC intrusion from off-site sources in Site buildings;
- Any enclosed subgrade parking garages that are included for any future on-site building(s) are required by the New York City Mechanical Code to provide ventilation;
- Installation of a sub-membrane depressurization (SMD) system, under portions of the Site building that will not be used as a ventilated parking garage, to protect against VOC intrusion;
- Development and execution of plans for the protection of on-site workers, community, and environment during remediation and construction activities; and
- Short-term (less than 5 years from date of issuance of Certificate of completion) Institutional Controls in the form of a Site Management Plan and Environmental Easement to ensure operation of the SMD.

The requirements for each of the above tasks are described below. The Alternative I remedial excavation extent is shown on Figure 5. The remedial excavation extent is based on data presented in the July 2014 RI Report and the October 20, 2014 letter report.

3.2.2 Fill and Soil Removal

SVOCs, pesticides, PCBs, and metals were detected in historic fill at concentrations that exceed the Part 375 Unrestricted Use SCOs. To achieve Track 1, soil removal and disposal is estimated to extend to approximately 7 feet bgs (approx. el 4.0) throughout the majority of the Site. The area around RI borings SB08 and SB12 is anticipated to only require excavation to 2.5 feet bgs (approx. el 8.5). Additional excavation will likely be required around the following RI boring locations to achieve Track 1:

- SB02: 13 feet bgs
- SB03: 9 feet bgs
- SB06: 9 feet bgs
- SB14: 9 feet bgs
- SB16: 8 feet bgs
- SB18: 8 feet bgs
- SB20: 15 feet bgs

These hotspot areas will be excavated to the above depths and within a grid of approximately 30 feet by 30 feet around each boring. The estimated volume of fill and soil requiring removal and off-site disposal for a Track 1 cleanup is approximately 8,800 cubic yards. This estimate is based on vertical excavation limits derived from the laboratory analytical results and field observations in the RI. Soil sample results from the RI are shown on Figure 4, and the Track 1 remedial extent is shown on Figure 5. The final excavation depth would extend below the water table and will require site-wide support of excavation and dewatering and extensive measures (e.g., underpinning) to protect the adjacent buildings. Structural concerns about the retaining wall, which spans the western and southwestern Site border, would require that excavations be limited to a maximum of 10 feet in width along the wall. Each 10-foot excavation along the retaining wall would need to be backfilled to Site grade before excavation could continue.

3.2.3 UST Removal Contingency

Based on previous investigations, two USTs may be present in the central part of the Site. If USTs are encountered during remedial activities, they will be decommissioned in accordance with 6 NYCRR Part 613.9, NYSDEC Commissioner's Policy 51 (CP-51), and other applicable NYSDEC UST closure requirements. Petroleum-impacted soil, if encountered, will be excavated and disposed off-site.

3.2.4 Excavation Dewatering and Treatment

Construction dewatering of contaminated groundwater will be required to reach the proposed excavation depths. Prior to mobilization, the Contractor will follow the New York City Department of Environmental Protection (NYCDEP) "Procedure for Obtaining Letter of Approval for Groundwater Discharge to Sanitary or Combined Sewer." Based on the NYCDEP's effluent limitations and Site groundwater data, the Contractor will be required to pre-treat dewatering fluids to reduce contaminant concentrations below NYCDEP effluent limitations prior to discharge. Pretreatment may include a settling tank, bag filters, carbon filtration, etc. If the contractor's dewatering system has a pumping capacity of greater than 45 gallons per minute, a Long Island Well permit will be obtained from NYSDEC. If the Contractor will discharge more than 10,000 gallons per day, they will also have to obtain an NYCDEP Temporary Discharge of Groundwater into the City Sewer System Permit. Collected groundwater or rainwater will be discharged, as defined by the NYCDEP permit, into the New York City sewer system, via an entry point acceptable to the NYCDEP. The dewatering and treatment system will be designed by the Contractor's New York State-licensed Professional Engineer.

3.2.5 Confirmation Soil Sampling

Per NYSDEC Division of Environmental Remediation (DER) policy, confirmation soil sample collection would be completed from the excavation base at a frequency of one sample per 900 square feet of floor area. Sidewall samples would not be collected from the perimeter of the Site, since the excavation would extend site-wide and excavation support (e.g., sheeting, lagging) would provide a barrier to collection of the sidewall samples. However, sidewall samples would be collected from the interior of the Site in hot-spot excavation areas. Based on these criteria, approximately 30 base confirmation samples and 18 sidewall confirmation samples, plus required quality assurance/quality control (QA/QC) samples, would be collected. Confirmation soil samples would be analyzed for combined Part 375 and TCL+TAL listed VOCs, SVOCs, PCBs, pesticides, and metals. Over-excavation may be required as practical to remove soil that does not comply with the SCOs and represents a source of groundwater or soil vapor contamination. If over-excavation is completed, additional confirmation samples would be required. No off-site excavation would be required.

3.2.6 Excavation Backfill

After the targeted areas are excavated, they would be backfilled to bring the Site to the grade required for construction activities. About 8,000 cubic yards of fill material is anticipated to restore the Site to development grade. Backfill material will consist of clean fill (meeting the Unrestricted Use SCOs) or other acceptable fill material such as virgin, native 0.75-inch stone from a quarry or RCA. If RCA is imported to the Site, it will be from NYSDEC-permitted or registered facilities in compliance 6 NYCRR Part 360 registration and permitting requirements

for the period of acquisition of RCA. RCA imported from compliant facilities will not require chemical testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover, drainage, or SMD gravel-layer material.

The clean fill would be segregated at a source/facility that is free of environmental contaminants. Qualified environmental personnel would collect representative samples at a frequency consistent with DER-10 table 5.4. The samples would be analyzed for Part 375 VOCs (EPA Method 8260), SVOCs (EPA Method 8270), pesticides/PCBs (EPA Method 8082/8081) and metals by an NYSDOH ELAP-certified laboratory. Acceptable backfill material would not exceed Unrestricted Use SCOs. Upon meeting these criteria, the certified-clean fill would be transported to the site and segregated from impacted material, as necessary, on plastic sheeting until it is used as backfill.

3.2.7 Vapor Barrier

The potential exists for future migration of VOC-impacted groundwater and soil vapor to the Site from unknown off-site sources. To mitigate potential exposure, a vapor barrier will be installed under the future Site building. The vapor barrier will be a minimum 20 mil thickness, and installed as a continuous subslab membrane under slabs. The Remediation Engineer (RE) will oversee implementation and document operations. The installation of the vapor barrier is a contingency measure and is not considered an engineering control to address on-site contamination.

3.2.8 Sub-membrane Depressurization (SMD) System

In addition to the vapor barrier, an SMD system would be installed beneath the vapor barrier of the future Site building in accordance with the NYSDOH Guidance for Evaluation Soil Vapor Intrusion in the State of New York, dated October 2006. The SMD system will include a sub-membrane collection layer (6- to 12-inch layer of ¾-inch clean stone) with horizontal perforated collection pipes, riser pipes to convey the collected vapor to the roof, and a roof-mounted blower system that will maintain a constant negative pressure through the piping and collection layer. Two riser pipes and blower systems are anticipated. The vacuum blowers will operate continuously after initial startup. Prior to initial startup of the SMD system, the system will be inspected to confirm that all components are in place. The system will be implemented in accordance with the manufacturer's recommendations. The installation of an SMD system is considered a contingency measure for protection from off-site contamination, and not an engineering control to address on-site contamination. The SMD system would operate for a

maximum of 5 years to retain Track 1 status. If the SMD system is needed for more than 5 years after the date of COC issuance, the Site would revert to Track 2.

3.2.9 On-Site Worker, Public Health and Environmental Protection

A Site-specific HASP would be developed and enforced to protect on-site workers from accidents and acute and chronic exposures from the identified contaminated media. Public health would be protected by implementing and enforcing dust, odor, and organic vapor control and monitoring procedures included in the CAMP. The CAMP would include continuous perimeter monitoring of dust and organic vapor utilizing DustTrak aerosol monitors and PIDs capable of recording data and calculating 15-minute averages. A field engineer, scientist, or geologist would monitor Site perimeters for visible dust and odors. The environment would be protected by implementing and enforcing the appropriate soil erosion prevention measures.

3.2.10 Institutional Controls/Engineering Controls

An environmental easement would be recorded referencing institutional or engineering controls (IC/EC) that are part of the selected remedy, which would be binding upon all subsequent owners and occupants of the property. The ICs would restrict the Site's use to restricted residential, commercial and industrial uses, require implementation of the SMP and include notice-of-use restrictions of the Site's soil. The ECs would include the SMD system. The SMP would identify monitoring and maintenance requirements. In order to retain Track 1 status, the active SMD system could operate for no more than 5 years after the date of the Certificate of Completion, otherwise the site would revert to Track 2 status.

3.3 Technical Description of Alternative II

3.3.1 Summary of Alternative II – Track 4 Remedy

Alternative II, a Track 4 remedy, would be executed by accomplishing the following tasks:

- Excavation (to the extent practical) and off-site disposal of soils exceeding Track 4 site-specific SCOs (Restricted Residential Use SCOs) and grossly-impacted soil, if encountered;
- Removal of USTs, if encountered, and closure of NYSDEC Spill No. 1310949, which was opened during the February 2014 Phase II ESI;
- Due to the planned excavation of two elevator pits into the ground water table, dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system;

- Collection and analysis of documentation soil samples to document removal of targeted materials;
- Backfilling of excavated areas to development grade with certified-clean material (meeting the lower of the protection of groundwater SCO or the Protection of Public Health SCO for Restricted Residential Use in Part 375-6.7(d)(ii)(b)), recycled concrete aggregate (RCA) or virgin, native crushed stone;
- Any enclosed subgrade parking garages that are included for any future on-site building(s) are required by the New York City Mechanical Code to provide ventilation;
- Installation of a vapor membrane under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion into Site buildings;
- Installation of a SMD system under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion;
- Development and execution of plans for the protection of on-site workers, community, and environment during remediation and construction activities;
- Installation of a site cover system consisting of either of the structures such as buildings, pavement, sidewalks comprising the site development or a minimum 2 foot thick clean soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs); and
- Implementation of long-term Institutional Controls in the form of a Site Management Plan (SMP) and an Environmental Easement.

The requirements for each of the above tasks are described below. The Alternative II remedial extent is shown on Figure 6. The remedial extent is based on previous data collected at the site.

3.3.2 Fill and Soil Removal

To remediate the Site to Track 4 SCOs, excavation would be targeted towards removing grossly-impacted soils (if encountered) and soils having concentrations of contaminants that exceed the Part 375 Restricted Residential Use SCOs, shown in Table 1. The Site will be excavated to 2.5 feet bgs (approx. el 8.5 feet) to remove historic fill. An additional 3.5 feet of excavation is anticipated in roughly half the Site to a total depth of 6 feet bgs (el 5.0 feet). In the western part of the Site along 44th Drive, some additional excavation up to 2 feet into the water table (7 to 8 feet bgs) may be necessary to address metal and SVOC impacts in the deeper historic fill. Support of excavation for remedial excavations deeper than 4 feet bgs will be accomplished by 1.5:1 sloping of sidewalls. The Alternative II remediation will include excavations for foundation elements where material known to exceed Track 4 SCOs and/or

historic fill is anticipated. Excavation into the groundwater table will be conducted where necessary and to the extent practical; however, site-wide dewatering will not be conducted to perform remedial excavations. Excavation will not be conducted in areas where removal of soil is unsafe and will threaten the structural integrity of the buildings and retaining wall that border the Site.

Based on these excavation guidelines, the estimated volume of fill and soil requiring removal and off-site disposal for a Track 4 cleanup is approximately 5,800 cubic yards. This estimate is based on vertical excavation limits derived from the laboratory analytical results and field observations in the RI. Soil sample results from the RI are shown on Figure 4, and the Track 4 remedial extent is shown on Figure 6.

3.3.3 UST Removal Contingency

Based on previous investigations, two USTs may be present in the central part of the Site. If USTs are encountered during remedial activities, they will be decommissioned in accordance with 6 NYCRR Part 613.9, NYSDEC Commissioner's Policy 51 (CP-51), and other applicable NYSDEC UST closure requirements. Grossly petroleum-impacted soil, if encountered, will be excavated and disposed off-site.

3.3.4 Excavation Dewatering

Localized dewatering may be required for the excavation of the two planned elevator pits. Prior to mobilization, the Contractor will follow the New York City Department of Environmental Protection (NYCDEP) "Procedure for Obtaining Letter of Approval for Groundwater Discharge to Sanitary or Combined Sewer." Based on the NYCDEP's effluent limitations and Site groundwater data, the Contractor may be required to pre-treat dewatering fluids to reduce contaminant concentrations below NYCDEP effluent limitations prior to discharge. Pretreatment may include a settling tank, bag filters, carbon filtration, etc. If the contractor's dewatering system has a pumping capacity of greater than 45 gallons per minute, a Long Island Well permit will be obtained from NYSDEC. If the Contractor will discharge more than 10,000 gallons per day, they will also have to obtain an NYCDEP Temporary Discharge of Groundwater into the City Sewer System Permit. Collected groundwater or rainwater will be discharged, as defined by the NYCDEP permit, into the New York City sewer system, via an entry point acceptable to the NYCDEP. The dewatering and treatment system will be designed by the Contractor's New York State-licensed Professional Engineer. As an alternate, the Contractor will collect the water into a vessel for off-site disposal at a facility permitted to accept the dewatering fluids.

3.3.5 Documentation Soil Samples

Per NYSDEC DER policy, documentation soil sample collection would be completed from the excavation base at a frequency of one sample per 900 square feet of floor area and one sidewall sample for every 30 linear feet around the Site perimeter. Based on these criteria, approximately 30 base confirmation samples and 24 site-perimeter sidewall samples, plus required QA/QC samples, would be collected. An estimated twelve additional sidewall samples, plus required QA/QC samples, will be collected from hotspot areas. Documentation soil samples would be analyzed for the combined Part 375 and TCL/TAL listed VOCs, SVOCs, pesticides, PCBs, and metals. Over-excavation is not anticipated for the Track 4 remedy, given that there are no impacts to groundwater from the contaminants of concern and engineering and institutional controls will be used to manage residual impacts. No off-site excavation would be required.

3.3.6 Excavation Backfill

After the targeted areas are excavated, the areas would be backfilled to the extent necessary to bring the Site to the development grade. The quantity of off-site fill material required to be imported to bring the Site to the required development grade is estimated at 5,000 cubic yards. Backfill material will consist of Part 375-6.7(d)(ii)(a) SCO-compliant soil or other acceptable fill material such as virgin, native, stone from a quarry or RCA from a NYSDEC-registered facility. In accordance with DER-10, material other than soil imported for use as backfill must contain less than 10% by weight material that would pass through a No. 80 sieve. RCA imported from compliant facilities will not require chemical testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover, drainage, or SMD gravel-layer material.

Qualified environmental personnel would collect representative samples at a frequency consisted with CP-51/Soil Cleanup Guidance. The samples would be analyzed for Part 375 VOCs (EPA Method 8260), SVOCs (EPA Method 8270), pesticides/PCBs (EPA Method 8082/8081) and metals by an NYSDOH ELAP-certified laboratory. Acceptable backfill material shall not exceed site-specific SCOs. Upon meeting these criteria, the SCO-compliant fill would be transported to the site and segregated from impacted material, as necessary, on plastic sheeting until it is used as backfill.

3.3.7 Vapor Barrier

To mitigate exposure to VOCs identified in on-site soil vapor, a vapor barrier will be installed under the future Site building. The vapor barrier will be a minimum 20 mil thickness, and

installed as a continuous subslab membrane under slabs, except for ventilated parking garage. The Remedial Engineer will oversee implementation and documentation.

3.3.8 Sub-membrane Depressurization (SMD) System

In addition to the vapor barrier, an SMD system would be installed beneath the vapor barrier of the future Site building in accordance with the NYSDOH Guidance for Evaluation Soil Vapor Intrusion in the State of New York, dated October 2006. The SMD system will include a sub-membrane collection layer (6- to 12-inch layer of ¾-inch clean stone) with horizontal perforated collection pipes, riser pipes to convey the collected vapor to the roof, and a roof-mounted blower system that will maintain a constant negative pressure through the piping and collection layer. Two riser pipes and blower systems are anticipated. The vacuum blowers will operate continuously after initial startup. Prior to initial startup of the SMD system, the system will be inspected to confirm that all components are in place. The system will be implemented in accordance with the manufacturer's recommendations. Installation of monitoring points is being evaluated by NYSDEC, NYSDOH and the Remedial Engineer. If monitoring points are installed, they will be built into the SMD system during installation so that post-installation pressure readings can be collected. The number and locations of these points will be decided after RAWP approval and with NYSDEC and NYSDOH concurrence. Alternatively, system operation will be documented through pressure monitoring at the sampling ports installed at the base (interface with slab) of the SMD riser pipes.

3.3.9 On-Site Worker, Public Health and Environmental Protection

A Site-specific HASP has been developed and will be enforced to protect on-site workers from accidents and acute and chronic exposures from the identified contaminated media. The HASP is included as Appendix E. Public health would be protected by implementing and enforcing dust, odor, and organic vapor control as specified in Section 5.4.13, and monitoring procedures included in the CAMP as specified in Section 5.4.12 and the HASP. The CAMP would include continuous perimeter monitoring of dust and organic vapor utilizing DustTrak aerosol monitors and PIDs capable of recording data and calculating 15-minute averages. A field engineer, scientist, or geologist under the supervision of the Remedial Engineer would monitor Site perimeters for visible dust and odors. The environment would be protected by implementing and enforcing the appropriate soil erosion prevention measures (see Sections 4.3.2 and 5.4.10).

3.3.10 Site Cover System

A site cover system will be installed at the Site to allow for Restricted Residential Use. The cover system will consist of the concrete slab of the future building or at least two feet of clean soil or crushed stone in any landscaped areas. Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part

375-6.7(d) for restricted residential use. The cover system also serves as an engineering control for the protection of human health by establishing an incomplete exposure pathway to residual Site soils. Where clean soil cover is used in landscaped areas, a demarcation layer (e.g., orange snow fencing) will be installed on top of the residual soil layer prior to placing the clean soil cap with the upper six inches of the soil of sufficient quality to maintain a vegetation layer.

3.3.11 Institutional Controls/Engineering Controls

An environmental easement would be recorded referencing institutional or engineering controls (IC/EC) that are part of the selected remedy, which would be binding upon all subsequent owners and occupants of the property. The ICs would restrict the Site's use to restricted residential, commercial and industrial uses, require implementation of the SMP and include notice-of-use restrictions of the Site's soil. The ECs would include the appropriate surface cover (cap), SMD system and vapor barrier. The SMP would identify long-term monitoring and maintenance requirements.

3.4 Selection of Preferred Remedy

The following is an evaluation of the proposed remedy based on the NYSDEC BCP remedy evaluation criteria listed below. The first two criteria are considered "threshold criteria" and the remaining criteria are "balancing criteria". A remedial alternative must meet the threshold criteria in order to be considered and evaluated further under the balancing criteria.

A. Protection of Human Health and Environment;
B. Standards, Criteria, and Guidance (SCG);
C. Short-Term Effectiveness and Permanence;
D. Long-Term Effectiveness and Permanence;
E. Reduction of Toxicity, Mobility, or Volume;
F. Implementability;
G. Cost Effectiveness;
H. Community Acceptance; and
I. Land Use

3.4.1 Overall Protection of Public Health and the Environment

Alternative I – The remedy would eliminate all pathways of exposure from on-site contaminated media. Remediating the Site to Track 1 standards would result in the elimination of all on-site soil that exceeds Track 1 SCOs. Any encountered USTs would be decommissioned, removed and disposed off-site, and petroleum-impacted material, if encountered, would be excavated

and disposed off-site. The RAOs for public health and environmental protection would be met through the removal of all contaminated media at the Site, which would eliminate any possible ingestion, inhalation or dermal contact.

Alternative II – The Track 4 remedy would provide similar overall protection to public health and the environment to Alternative I. Under a Track 4 remedy, historic fill material exceeding site-specific SCOs would be removed and disposed of off-site. A composite site cap would make exposure pathways to residual contamination incomplete. Potential exposure pathways for off-site groundwater and soil vapor that may migrate onto the Site, and potential impacts from on-site residual petroleum contamination would be eliminated by installing a vapor barrier and SMD system. In addition, groundwater in Long Island City is not used as a source of drinking water.

Public health would be protected during remediation activities under both remedial alternatives by implementing and enforcing dust, odor, and organic vapor control and monitoring procedures when needed. The environment would be protected by implementing and enforcing the selected soil erosion plans.

3.4.2 Standards, Criteria, and Guidance

Alternative I - Remediating the Site to Track 1 Unrestricted Use standards would ensure compliance with all applicable SCGs that were listed in Section 3.1 due to the removal of all impacted on-site materials.

Alternative II – This remedy was designed to meet the requirements of a Track 4 cleanup including Site-specific SCOs. Remediation includes removal of site material to achieve site specific cleanup objectives, as set forth in DER-10, Technical Guidance for Site Investigation and Remediation, CP-51 and 6 NYCRR Part 375. Alternative II complies with the SCGs.

Remedial alternatives will also comply with standards, criteria and guidance (SCGs) that involve protection of the public health and environment during the remedial action by implementing and enforcing a Site-specific HASP. Occupational Safety and Health Administration (OSHA) requirements for on-site construction safety will be followed by the site Contractors.

3.4.3 Short-Term Effectiveness and Permanence

Alternative I - The most significant short-term adverse impacts and risks to the community will be the potential complications and risk involved with designing support of excavation and underpinning for the buildings and structures adjoining the Site. Additionally, the smaller excavations necessary to protect the retaining wall will require delays in the completion of excavations and extend the construction period. Increased truck traffic and operational noise

levels would be necessary to haul out the impacted fill excavated to achieve Track 1 standards and to haul in the additional backfill. The operation is estimated to require 680 25-cubic yard capacity truck trips to haul soil for disposal and backfill. This volume of truck traffic equates to a significantly higher discharge of greenhouse gas emissions over Alternative II. Truck traffic will be routed on the most direct course using major thoroughfares where possible and flaggers will be used to protect pedestrians at Site entrances and exits. Additionally, waiting times associated with analysis of confirmation sampling and resampling may delay construction, leaving soil exposed for a longer time resulting in a potential increase in dust, odors, and organic vapor from the excavation. The effects of these potential adverse impacts to the community, workers and the environment will be minimized by implementing their respective control plans.

Alternative II – Limiting the required excavation extent to depths ranging from 2 to 8 feet bgs based on Track 4 standards will reduce implementation of risky support of excavation techniques, minimize dewatering and reduce the duration of the excavation and the associated risks of a large excavation with underpinning of adjacent buildings. The number of truck trips required to haul out the impacted fill and import backfill is estimated to be 432 25-cubic yard capacity truck trips; approximately 36% fewer trips than that required for Alternative I. The Track 4 remedy is the most sustainable approach, because fewer fossil fuel natural resources are required and carbon emissions to the atmosphere are reduced. Excavation activities will be significantly expedited compared to Alternative I, reducing potential exposure to dust, odors, and organic vapor from the excavation and construction-related noise.

Under both remedial alternatives, dust will be controlled by the application of water spray on the haul roads, and on site, when and where needed. Engineering controls, such as slowing the pace of work, applying foam suppressant or covering portions of the excavation will be used to minimize vapors and suppress odors when required. Work will be modified or stopped according to the action levels set in the CAMP.

3.4.4 Long-Term Effectiveness and Permanence

Alternative I - The Track 1 remedy will remove all contaminated media from the site exceeding Unrestricted Use SCOs for soil. The potential exists for residual VOC concentrations in groundwater and soil vapor due to off-site sources. The potential of soil vapor intrusion from an off-site source would be addressed by a vapor barrier and SMD system for the proposed building. In addition, groundwater in this area of New York City is not used for drinking water. Therefore, the long-term effectiveness of this remedy will eliminate risks and satisfy the objectives of this criterion.

Alternative II – The magnitude of the remaining risks will be minimal because potential exposure pathways to the contaminated soil, groundwater, and soil vapor will be eliminated by the completion of the Track 4 remedy. The Track 4 remedy will remove contaminated media from the Site exceeding Site-specific SCOs for soil to depths up to 8 feet bgs. The exposure pathways to residual soil contaminants will be controlled through the use of a site cap. Potential exposure from soil vapor VOC intrusion will be prevented by the installation of a vapor barrier and an SMD system for the proposed building. In addition, groundwater in this area of New York City is not used for drinking water. Therefore, the long-term effectiveness of this remedy will eliminate risks and satisfy the objectives of this criterion.

3.4.5 Reduction of Toxicity, Mobility, and Volume

Alternative I - The Track 1 remedy will permanently and significantly reduce the toxicity, mobility, and volume of contamination through removal of all on-site contaminated fill through excavation and off-site disposal, and dewatering, treatment, and off-site disposal of groundwater.

Alternative II - The Track 4 remedy will reduce the toxicity through removal of historic fill and petroleum-impacted soil exceeding site-specific SCOs. The mobility of residual contaminants does not represent an off-site migration concern. Installation of the SMD system in the proposed building will address concerns related to the toxicity and mobility of soil vapor impacted by residual on-site contamination or potential unknown off-site sources.

3.4.6 Implementability

Alternative I - Implementing Alternative I would be technically challenging due to soil and fill exceeding Track 1 SCOs to 7 feet bgs Site-wide and up to 15 feet bgs in hot-spot areas. Extensive excavation support, underpinning of adjacent buildings and dewatering will be required to remove material exceeding the Unrestricted Use SCOs. This remedy will consist mostly of excavation with standard bucket excavators of the targeted fill and soil. The feasibility is low for the excavation activities because of the risks, costs and time associated with the extensive support of excavation design, which will rely on coordination with adjacent property owners. The risk of damage to adjacent property buildings and structures is highest for the Alternative I remedy.

Alternative II - The technical feasibility of implementing the Alternative II remedy is greater than Alternative I. Excavation support may still be required for implementation of Alternative II; however, these tasks will be minimal for Alternative II in comparison to Alternative I. This alternative will consist mostly of excavation with standard bucket excavators of the targeted fill and soil. The remedy uses typical remediation methods to address site impacts and

contractors experienced in implementing the described remedy are readily available in the area of the Site. The risk of damage to adjacent property buildings is lowest for the Alternative II remedy.

3.4.7 Cost Effectiveness

Alternative I - Based on the assumptions detailed for Alternative I, including removal of all soil and fill exceeding Unrestricted Use SCOs, dewatering and groundwater treatment, and vapor barrier and SMD system installation, the estimated remediation cost of a Track 1 cleanup is $5.752 million. As the Site will be remediated to an Unrestricted Use level, there are no operations, maintenance, or monitoring costs associated with the proposed remedy. Table 2 details the individual cost components used to arrive at this cost estimate. Alternative I is the least cost effective alternative, considering the alternative of managing lower level contaminants in place.

Alternative II - Based on the assumptions detailed for Alternative II, the estimated remediation cost to achieve a Track 4 cleanup is approximately $3.37 million. Table 3 details the individual cost-components used to arrive at this cost estimate. Alternative II presents the most cost effective alternative for achieving the remediation goals and objectives.

3.4.8 Community Acceptance

Both remedial alternatives should be acceptable to the community because the potential exposure pathways to on-site contamination will be eliminated upon completion of the respective alternatives. The selected remedy was subject to a 45-day public comment period in accordance with the Citizen Participation Plan. Any substantive public comments would need to be addressed before the remedy is approved.

3.4.9 Land Use

The current, intended, and reasonably anticipated future land use of the Site and its surroundings are compatible with the selected remedy of soil remediation. The future proposed development is a mixed-use commercial and residential building, which is expected to cover 90% of the Site footprint. The remaining 10% of the Site will consist of an uncovered driveway area and an open courtyard. Review of previous environmental and public documents for the Site has led to the following conclusions:

1. The current, intended, and reasonably anticipated future land use of the Site and its surroundings will be compatible with the selected remedy. The reasonably anticipated future use of the Site and the use of its surroundings have been documented by the volunteer in the BCP application and RI Report.

2. The use proposed for the Site conforms to applicable zoning laws or maps or the reasonably anticipated future use of the site.
3. The proposed use conforms to historical and/or recent development patterns in the area.
4. The Site does not fall within the boundaries of an existing Brownfield Opportunity Area (BOA).
5. The site is located in an urban setting that is characterized by industrial, some residential, commercial office, and commercial retail developments. There are no areas zoned for agricultural use in the proximity of the Site.
6. There are no identified environmental justice concerns.
7. There are no federal or state land designations.
8. The population growth patterns and projections support the proposed land use.
9. The Site is accessible to existing infrastructure.
10. The Site is not in close proximity to important cultural resources, including federal or state historic or heritage sites or Native American religious sites.
11. The site is not located in close proximity to important federal, state or local natural resources, including waterways, wildlife refuges, wetlands, or critical habitats of endangered or threatened species.
12. Municipal water supply wells are not present in this area of New York City; therefore, groundwater from the Site cannot affect municipal water supply wells or recharge areas.
13. According to the National Flood Insurance Rate Map for the City of New York published by the Federal Emergency Management Agency (FEMA) (Map No. 3604970202G, dated December 5, 2013), the site is located within Zone X. Zone X is designated for areas of 0.2 percent chance annual flood; areas of 1 percent chance annual flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.
14. Site geology is described in Section 2.2.
15. There are no known current institutional controls in effect at the Site.

3.5 Summary of Selected Remedial Actions

Based on the evaluation of the remedial alternatives described above, both alternatives will be protective of human health and the environment and meet the remedy selection criteria.

Implementation of Alternative I provides for removal of all impacted, on-site soil contamination exceeding Track 1 SCOs and treatment of groundwater through dewatering; however, the extended excavation depths required to remove all soil exceeding Track 1 SCOs is not considered practical and presents unnecessary added risk. The additional excavation required to achieve a Track 1 cleanup is expected to extend below the water table and will substantially complicate support of excavation design for adjoining buildings, structures and roadways, increase truck traffic, and prolong potential exposure to noise and contaminated dust and vapors associated with additional excavation.

Alternative II provides for removal of historic fill to the extent practical to achieve Track 4 site-specific SCOs for the Site. The exposure pathways to residual soil contaminants will be controlled through the use of a site cap and construction of a SMD system, for the proposed building, will protect against potential vapor intrusion issues from residual on-site impacts or potential off-site sources.

Unlike Alternative I, Alternative II can be practically implemented in a cost-effective manner while providing the same overall protection to human health and the environment. Therefore, Alternative II is the recommended remedial alternative for this Site. Figures depicting the Alternative II remedy are included as follows:

- Figure 6 – Alternative II –Track 4 Cleanup
- Figure 7 – SMD System and Vapor Barrier Layout Plan
- Figure 8 – Composite Cover System Plan

Remedial activities will be performed in accordance with this NYSDEC-approved RAWP. All deviations from the RAWP will be promptly reported to NYSDEC for approval and fully explained in the Final Engineering Report (FER).

4.0 REMEDIAL ACTION PROGRAM

4.1 Governing Documents

The primary documents governing the remedial action are summarized in this section. Where referenced, copies of the full plan are provided in the appendices.

4.1.1 Site Specific Health & Safety Plan

The Remedial Engineer prepared a Site-specific HASP, which is included as Appendix E. The HASP will apply to all remedial and construction-related work on-site. The HASP provides a mechanism for establishing on-site safe working conditions, safety organization, procedures, and personal protective equipment (PPE) requirements. The HASP meets the requirements of 29 CFR 1910 and 29 CFR 1926 (which includes 29 CFR 1910.120 and 29 CFR 1926.65). The HASP includes, but is not limited to, the following components listed below:

- Organization and Identification of key personnel;
- Training requirements;
- Medical surveillance requirements;
- List of site hazards;
- Excavation safety;
- Work zone descriptions;
- Personal safety equipment and protective clothing requirements;
- Decontamination requirements;
- Standard operating procedures;
- Protective measure Plan;
- CAMP; and
- Material Safety Data Sheets.

All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate HASP and for the appropriate performance of work according to that plan and applicable laws.

The HASP and requirements defined in this RAWP pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion (COC).

The Site Safety Coordinator will be Paul McMahon. All project personnel resumes are included in Appendix G.

Confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gasses.

4.1.2 Quality Assurance Project Plan

The RE prepared a Quality Assurance Project Plan (QAPP) that describes the quality control components employed so that the proposed remedy accomplishes the remedial goals, remedial action objectives, and is completed in accordance with the design specifications. The QAPP is provided as Appendix F and includes:

- Responsibilities of key personnel and their organizations for the proposed remedy;
- Qualifications of the quality assurance officer;
- Sampling requirements including methodologies, quantity, volume, locations, frequency, acceptance and rejection criteria; and
- Description of the reporting requirements for quality assurance activities including weekly quality assurance review reports, periodic quality assurance and quality control audits, and other report and data submissions.

4.1.3 Construction Quality Assurance Plan

The contractor will prepare a Construction Quality Assurance Plan (CQAP) that describes the quality control components that will be employed so that the proposed remedy accomplishes the remedial goals, remedial action objectives, and is completed in accordance with the design specifications. The CQAP will be reviewed by the RE prior to implementation of the RAWP. Because the remedy is being accomplished through building construction, the contractor and construction manager will have the primary responsibility to provide construction quality.

The following project personnel are anticipated for oversight of the RAWP implementation. Project personnel resumes are provided in Appendix G.

Remedial Engineer (RE):	Jason Hayes, P.E.
Project Manager:	Gerald Nicholls, P.E., CHMM
Langan Health & Safety Officer:	Tony Moffa, CHMM
Site Safety Coordinator	Paul McMahon, E.I.T.
Qualified Environmental Professional (QEP)	Nicole Rice, P.E.
Field Team Leader	Gerald Nicholls, P.E., CHMM
Quality Assurance Officer	Michael Burke, CHMM

A QEP or the RE will directly supervise field engineers, scientists and geologists that will be on-site during remedial action to monitor particulates and organic vapor in accordance with the CAMP. CAMP results that exceed specified action levels will be reported to the NYSDEC and NYSDOH in daily reports.

A QEP or the RE will directly supervise field engineers, scientists and geologists that will meet with the Construction Superintendent on a daily basis to discuss the plans for that day and schedule upcoming activities. The field engineers/scientists and geologists will document all remedial activities in the daily report. This document will be forwarded to the Field Team Leader on a daily basis and to the Project Manager and the RE on a weekly basis.

A QEP or the RE will directly supervise field engineers, scientists and geologists that will screen the excavation with a PID during intrusive activities. All readings will be noted in the record. Elevated readings will be reported to the NYSDEC and NYSDOH in the daily reports. The field engineers, scientists and geologists will collect the excavation endpoint samples in accordance with this RAWP.

A photo log will be kept to document construction activities by still photos. The photo log may also be used to record activities recorded in the Daily Report.

The project field book will be used to document all sampling activities and how they correspond to the RAWP. All observations, field and/or laboratory tests will be recorded in the project field book or on separate logs. Recorded field observations may take the form of notes, charts, sketches, or photographs.

The Field Team Leader will maintain the current field book and all original field paperwork during the performance of work. The Project Manager will maintain the field paperwork after completion and will maintain all submittal document files.

4.1.4 Soil/Materials Management Plan

The RE prepared a Soil/Materials Management Plan, which includes detailed plans for managing all soils/materials that are disturbed at the site, including excavation, handling, storage, transport and disposal. It also includes controls that will be applied to these efforts to facilitate effective, nuisance-free performance in compliance with all applicable Federal, State and local laws and regulations (see Section 5.4).

4.1.5 Stormwater Pollution Prevention Plan

Erosion and sediment controls will be in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. Erosion and sediment controls that will be implemented are described in Section 4.3.2 (Erosion and Sedimentation Controls) and 5.4.10 (Stormwater Pollution Prevention). A Stormwater Pollution Prevention Plan (SWPPP) is not necessary because stormwater discharge, as required, will be to a combined sewer in accordance with the New York City generic stormwater pollution discharge elimination system permit.

4.1.6 Community Air Monitoring Program

A CAMP has been prepared by the RE and is included in the HASP (Appendix E).

4.1.7 Contractors Site Operations Plan

The RE will review all plans and submittals for this remedial project (including those listed above and contractor and subcontractor document submittals) and confirm that they are in compliance with this RAWP. The RE is responsible to document that all later document submittals for this remedial project, including contractor and subcontractor document submittals, are in compliance with this RAWP. All remedial documents will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.8 Citizen Participation Plan

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (specific date) and that it contained all of applicable project documents.

No changes will be made to the approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

The approved Citizen Participation Plan for this project is attached in Appendix H.

A document repository has been established at the following location and contains all applicable project documents:

Queens Library - Court Square Branch
2501 Jackson Ave
Long Island City, Queens, NY 11101
Phone: 718-937-2790
Hours (Call to verify):
Monday, Thursday, Friday: 11:00 a.m. to 7:00 p.m.
Tuesday, Wednesday: 1:00 p.m. to 7:00 p.m.
Saturday & Sunday: Closed

4.1.9 Remedial Design and Green Remediation Principles

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

4.2 General Remedial Construction Information

4.2.1 Project Organization

This Section presents the anticipated project organization and associated roles, including key personnel, descriptions of duties, and lines of authority in the management of the RAWP. Information regarding the organization/personnel and their associated responsibilities is provided below.

4.2.2 Remediation Engineer (RE)

The RE for this project will be Jason Hayes, P.E. The RE is a registered professional engineer licensed by the State of New York. The RE will have primary direct responsibility for implementation of the remedial program for the 44-30 Purves Street Site (NYSDEC BCP Site No. C241162). The RE will certify in the FER that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the RAWP and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other RE certification requirements are listed later in this RAWP.

The RE will document the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal. The RE will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The RE will review all pre-remedial plans submitted by contractors for compliance with this RAWP and will certify compliance in the FER.

In the FER, the RE will provide the certifications listed in Section 10.1.

4.2.3 Remedial Action Construction Schedule

The remedial action construction schedule is provided in Appendix I. Proposed changes, delays or deviations will be promptly communicated to NYSDEC.

4.2.4 Work Hours

The hours for operation of remedial construction will conform to the New York City Department of Buildings construction code requirements or according to specific variances issued by that agency. NYSDEC will be notified by the Volunteer of any variances issued by the Department of Buildings. NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

The site perimeter will be secured with gated, signed, plywood fencing with points of entry in accordance with NYCDOB and NYCDOT permits and requirements. The purpose of the fencing is to limit site access to authorized personnel, protect pedestrians from site activities, and maintain site security.

4.2.6 Traffic Control

Site traffic will be controlled through designated points of access along Purves Street. Access points will be continuously monitored and a flagging system will be used to protect workers, pedestrians and authorized guests. Traffic will also adhere to applicable local, state and federal law.

4.2.7 Contingency Plan

Contingency plans, as described below, have been developed to effectively deal with unexpected discoveries of additional contaminated media or USTs.

4.2.7.1 Discovery of Additional Targeted Contaminated Soil

During remedial and construction activities, the soil will be continuously monitored by the RE's field representatives using a PID and visual and olfactory field screening techniques to identify additional soil that may not be suitable for the current disposal facility. Soil so identified will be confirmed by collecting and analyzing a sample in accordance with disposal facility requirements. If the facility is not permitted to receive the suspect materials, the material will be disposed off-site at a permitted facility able to receive the material based on the characterization data.

4.2.7.2 Discovery of Additional USTs

Based on previous investigations, it is likely that USTs will be discovered. As a contingency, if USTs are encountered during remedial activities, they will be decommissioned in accordance with 6 NYCRR Part 613.9, and DER-10 section 5.5. Once the tank and its contents are removed, post-excavation soil samples will be collected as per the NYSDEC DER-10 requirements. If encountered, petroleum-contaminated soils will be removed. UST closure documentation, such as contractor affidavits, bills of lading for sludge disposal, and tank disposal receipts, will be provided as appendices in the FER (Section 10.0). Depending on the type, number, and capacity of discovered the tanks, the NYSDEC PBS registration requirements will be complied with as necessary.

4.2.8 Worker Training and Monitoring

Worker training and monitoring will be conducted in accordance with the HASP, included as Appendix E.

4.2.9 Agency Approvals

There are no State Environmental Quality Review Act (SEQRA) requirements for this site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site conforms to current zoning for the property as determined by New York City Department of Planning. A COC will not be issued for the project unless conformance with zoning designation is demonstrated.

4.2.10 NYSDEC BCP Signage

A project sign will be erected at the main entrance to the Site prior to the start of any remedial activities. The sign will indicate that the project is being performed under the New York State Brownfield Cleanup Program. The sign will meet the detailed specifications provided by the NYSDEC Project Manager and contained in Appendix J.

4.2.11 Pre-Construction Meeting with NYSDEC

A meeting will be conducted to discuss project roles and responsibilities with the RE, Volunteer, Construction Manager, Remediation Contractor and the NYSDEC. This meeting must take place prior to the start of major construction activities.

4.2.12 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

4.2.13 Remedial Action Costs

The total estimated cost of the Track 4 Remedial Action is $3.105 million. An itemized and detailed summary of estimated costs for all remedial activity is provided as Table 3. This estimate will be revised based on actual costs and submitted as an appendix to the FER.

4.3 Site Preparation

4.3.1 Mobilization

Prior to commencing the remedial excavation, the Remediation Contractor will mobilize to the Site and prepare for remedial activities. Descriptions of mobilization and site preparation activities may include the following.

- Identifying the location of all aboveground and underground utilities (e.g., power, gas, water, sewer, telephone), equipment, and structures (as necessary to implement the remediation);
- Mobilizing necessary remediation personnel, equipment, and materials to the Site;
- Constructing one or more stabilized construction entrances consisting of nonhazardous material capped with a gravel roadway at or near the site exit, which takes into consideration the site setting and site perimeter;
- Constructing an equipment decontamination pad for trucks, equipment, and personnel that come into contact with impacted materials during remedial activities;
- Installing erosion and sedimentation control measures in accordance with the provisions of the Erosion and Sediment Control Plan;
- Installing temporary fencing or other temporary barriers to limit unauthorized access to areas where remediation activities will be conducted.

4.3.2 Erosion and Sedimentation Controls

Based on the size of the Site and the planned excavation, select common erosion and sedimentation control practices will be necessary. The Soil and Sediment Erosion Plan (SSE Plan) has been developed in accordance with NYS Standards and Specifications for Erosion and Sediment Control (August 2005). Best Management Practices (BMP) for soil erosion have been selected to minimize erosion and sedimentation off-site from the start of the remediation to the completion of development. The SSE Plan includes the following information:

- Descriptions of the selected BMPs that will be used to control erosion and sedimentation for each stage of remediation and construction.
- Map showing the location of the proposed BMPs.
- Implementation schedule and maintenance requirements for the proposed BMPs.

- For active remediation and construction work zones such as excavation pits, stockpile areas and truck wash down areas, a perimeter BMP system should be installed and maintained to contain soil and sediment.

- Accumulated sediment in the BMPs that is removed will be properly disposed if found.

The SSE Plan is includes as Appendix K.

4.3.3 Temporary Gravel Construction Entrance(s)

Temporary gravel construction entrances will be installed on-site at the existing curb cuts along Purves Street. The entrance will be graded so that runoff water will be directed on site. The Contractor will protect and maintain the existing sidewalks and roadway at site access points.

4.3.4 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the Site has been investigated by the RE. It has been determined that no risk or impediment to the planned work under this RAWP is posed by known utilities or easements on the Site.

4.3.5 Sheeting and Shoring

Appropriate management of structural stability of on-site or off-site structures during on-site activities, including excavation, is the sole responsibility of the Volunteer and its contractors. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this Plan. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved Plan.

4.3.6 Equipment and Material Staging

The Contractor will notify the RE and Purves Street Owners, LLC, in writing with receipt confirmed, of pending site work mobilization at least 30 calendar days in advance. During mobilization, construction equipment will be delivered to the site, temporary facilities constructed, and temporary utilities installed. The Contractor will place and maintain temporary toilet facilities within the work areas for usage by all site personnel. The Contractor will provide drinking water for all site personnel.

4.3.7 Decontamination Area

The Contractor will construct decontamination pads at each site entrance/exit planned for construction vehicle usage. The location of decontamination pads may change periodically to accommodate the Contractor's sequencing of work. The pad will be constructed by the Contractor to collect wastewater for off-site disposal or treatment and discharge, if generated during decontamination activities. The design will consider adequate space to decontaminate site equipment and vehicles, and sloping and liners to facilitate collection of wastewater. Collected decontamination wastewater shall be either discharged in accordance with the Contractor's NYCDEP permit or tested and transported to an off-site disposal facility that is permitted to accept this waste, in accordance with applicable city, state, and federal regulations.

If the Contractor uses high pressure washing methods, the Contractor shall provide splash protection around the vehicle decontamination facility. Splash protection shall minimize potential contamination from splatter and mist movement off-site during the vehicle decontamination process. Splash protection shall be temporary and stable and capable of being dismantled in the event of high winds.

Accumulated truck rinsate and decontamination materials will be collected and commingled with other waste streams for disposal, as appropriate. The Contractor will maintain the decontamination pad(s) throughout the duration of site work. Prior to demobilization, the Contractor will deconstruct the pads and dispose of materials as required.

4.3.8 Site Fencing

The Site perimeter will be secured with gated, signed, plywood fencing. The purpose of the fencing is to limit site access to authorized personnel, protect pedestrians from site activities, and maintain site security.

4.3.9 Demobilization

The contractor will be responsible for demobilizing all labor, equipment, and materials not designated for off-site disposal from the Site. The RE will be required to document that the Remediation Contractor decontaminates all equipment and materials prior to removal from the Site. The RE will be responsible to document that the Excavation Contractor performs any follow-up coordination and maintenance for the following activities: removal of sediment and erosion control measures and disposal of materials in accordance with acceptable rules and regulations; removal of any residual contaminated material or wastes; equipment decontamination; and general refuse disposal.

4.4 Reporting

Periodic reports and an FER will be required to document the remedial action. The Project RE responsible for certifying all reports will be an individual licensed to practice engineering in the State of New York; Jason Hayes, P.E. of Langan, will have this responsibility. Should Mr. Hayes become unable to fulfill this responsibility, another suitably qualified New York State professional engineer will take his place. All daily and monthly Reports will be included in the FER. In addition to the periodic reports and the FER, copies of all relevant contractor documents will be submitted to the NYSDEC.

4.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by the end of each day following the reporting period and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to alpha-numeric map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP findings, including excursions;
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to an alpha-numeric map that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

The NYSDEC assigned project number will appear on all reports.

4.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers by the tenth of the following month of the reporting period and will include the following information, as well as the information required in the Brownfield Cleanup Agreement:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e. tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

4.4.3 Other Reporting

Photographs will be taken of remedial activities and submitted to NYSDEC in digital (JPEG) format. Photos will illustrate the remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any remedial actions will be provided. Representative photos will be provided of each contaminant source area and Site structures before, during and after remediation. Photos will be submitted to NYSDEC on CD or other acceptable electronic media and will be sent to NYSDEC's Project Manager (2 copies) and to NYSDOH's Project Manager (1 copy). CD's will have a label and a general file inventory structure that separates photos into directories and subdirectories according to logical Remedial Action components. A photo log keyed to photo file ID numbers will be prepared to provide explanation for all representative photos.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

4.4.4 Complaint Management Plan

The management plan for documenting complaints is detailed below.

Item	Description
Approach	Complaints regarding remediation or construction activities/operations to be minimized and mitigation measures implemented to reduce the incidence of complaints.
Objective	To manage environmental complaints from the community regarding construction or remediation.
Implementation Strategy/Mitigation Measures	All complaints will be documented on a complaint register. The register will be maintained as an ongoing record. The entry will include following information: • Time, date and nature of complaint; • Type of communication (telephone, letter, personal, etc.); • Name, contact address and contact number; • Response and investigation undertaken as a result of the complaint; and action taken and signature of responsible person. Each complaint will be investigated as soon as practical in relation to requirements.
Monitoring	A representative from the Volunteer or the Remediation Engineer will follow up on the complaint within two weeks of receipt to ensure it is resolved.
Reporting	Upon receipt NYSDEC will be notified. Complaint and resolutions will be documented in daily reports.
Corrective Action	Should an incident of failure to comply occur in relation to the management of environmental complaints, one or more of the following corrective actions will be undertaken as appropriate: • Conduct additional training of staff to handle environmental complaints; • Investigate why the environmental complaint was not addressed within the specified time frame; and • Investigate complaint and action follow-up according to results of investigation.

4.4.5 Deviations from the RAWP

An addendum to this RAWP will be provided for any deviations and will include:

- Reasons for deviating from the approved RAWP;
- Approval process to be followed for changes/editions to the RAWP; and
- Effect of the deviations on overall remedy.

5.0 REMEDIAL ACTION: MATERIAL REMOVAL FROM SITE

5.1 Soil Cleanup Objectives

The Site-specific Soil Cleanup Objectives (SCOs) are listed in Table 1. Part 375 Restricted Residential Use SCOs were used to establish the Site-specific SCOs. Although not anticipated with the proposed development, any exposed soil that remains within the top 2 feet of landscaped areas of the Site must meet the Restricted Residential Use SCOs.

Soil and materials management on-site and off-site will be conducted in accordance with the Soil Management Plan as described below. UST closures will, at a minimum, conform to criteria defined in DER-10.

5.2 Remedial Performance Evaluation (Post-Excavation Documentation Sampling)

Documentation soil samples will be collected and analyzed to evaluate soil/fill remaining in place. Documentation samples will be sampled for analysis of 6 NYCRR Part 375 list and TCL/TAL list VOCs, SVOCs, PCBs, pesticides, and metals. Documentation sampling will be collected in accordance with NYSDEC DER-10. Samples will be collected from the excavation bottom at a frequency of one sample per 900 square feet. Sidewall samples will be collected at a frequency of one sample per 30 feet of sidewall. If encountered, a minimum of five additional soil samples will be collected for UST removal areas, including four sidewall samples and one bottom sample. Should additional documentation sampling be deemed necessary (e.g., additional tank closure), documentation sampling will occur in accordance with NYSDEC DER-10 and Soil Cleanup Guidance CP-51. No additional excavation will be required based on the documentation sample results.

Soil documentation samples will be transported under standard chain-of-custody protocol to an NYSDOH ELAP-approved laboratory for analysis of the Site soil contaminants of concern. Laboratory analyses will be conducted in accordance with EPA SW-846 methods and NYSDEC Analytical Services Protocol (ASP) Category B deliverable format. The quality assurance and quality control procedures required by the NYSDEC ASP and SW-846 methods will be followed. This will include instrument calibration, standard compound spikes, surrogate compound spikes, and analysis of quality control samples. The laboratory will provide sample bottles, which are pre-cleaned and preserved. Where there are differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP shall take precedence.

A data usability summary report (DUSR) will be included in the FER. Quality control procedures for the sampling are included in the QAPP, described in Appendix F. Confirmation analytical

results will be provided in NYSDEC electronic data deliverable (EDD) format for EQuIS™. Guidance on sampling frequency is presented in Section 5.4 of DER-10.

The FER will provide a tabular and map summary of all end-point sample results and results that exceed Site-specific SCOs.

5.3 Estimated Material Removal Quantities

The estimated quantity of soil/fill to be removed from the Site is 5,800 cubic yards (4,000 cubic yards of historic fill, 1,550 cubic yards of historic fill with potentially hazardous metal concentrations, and 250 cubic yards of petroleum-impacted soil potentially encountered in the UST area). The estimated quantity of soil to be imported for backfill is 5,000 cubic yards.

5.4 Soil/Materials Management Plan

This section presents the approach to managing, disposing and reuse of soil, fill, and debris excavated from the Site. This plan is based on the current knowledge of Site conditions, and will be augmented with the additional data collected during remediation. A field engineer, scientist or geologist, under the direction of the RE or a QEP, will monitor and document the handling and transport of contaminated material removed from the Site for disposal as a regulated solid waste. A field engineer, scientist or geologist, under the direction of the RE or a QEP, will assist the Remedial Contractor in identifying impacted materials during excavation, determining materials suitable for direct load out versus temporary on-site stockpiling, selection of samples for waste characterization, and determining the proper off-site disposal facility. Separate stockpile areas will be constructed as needed for the various materials to be excavated or generated, with the intent to most efficiently manage and characterize the materials and to avoid comingling impacted materials with non-impacted soil.

The following three material types are reasonably anticipated to be encountered during the remediation:

- Track 4 SCO-Contaminated, Non-hazardous Material – This material refers to historic fill that contains contaminants that exceed the Site-specific SCOs and will not be reused on-site. This material will be excavated throughout the Site to 2.5 feet bgs, and in approximately half of the Site to between 6 and 8 feet bgs as part of the Track 4 remedy. This material will be transported off-site, and disposed at a facility permitted to accept the material. Characterization sampling will be completed in conformance with the requirements of the disposal facility and post-excavation documentation samples will be collected to document residual soil conditions.

- Track 4 SCO-Petroleum-Impacted, Non-hazardous Material – This material refers to petroleum-impacted historic fill or soil associated with the potential on-site USTs that may contain contaminants that exceed the Site-Specific SCOs and will not be reused on-site. Grossly-impacted material with free product that may be a source to groundwater contamination will be excavated as part of the Track 4 remedy, transported off-site, and disposed at a facility permitted to accept the material. Characterization sampling will be completed to conform to the requirements of the disposal facility and post-excavation documentation samples will be collected to document residual soil conditions.

- Hazardous Material – If determined hazardous during waste characterization sampling, this material will include soil with hazardous levels of metals (lead, mercury, and/or barium). This material is potentially present in the western part of the Site, to depths of approximately 8 feet bgs. Excavated hazardous material will not be reused on-site, and must be transported off-site and disposed at a facility certified to accept the material. Hazardous material will be removed as shown on the remediation excavation drawing as part of the Track 4 remedy. Post-excavation documentation samples will be collected to document residual soil conditions.

5.4.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by an engineer, geologist or scientist under the direct supervision of a PE or qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (Residual Contamination Zone). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the FER.

Screening will be performed by field engineers, scientists or geologists under the direct supervision of the RE or QEP. Resumes will be provided for all personnel responsible for field screening (i.e. those representing the RE) of invasive work for known or unknown contaminant sources during remediation and development work.

5.4.2 Stockpile Methods

Soil stockpile areas, if needed for the different soil materials, will be constructed for staging of Site soil, pending loading or characterization testing. Separate stockpile areas will be constructed to avoid comingling materials of differing waste types. All stockpile areas will meet the following minimum requirements:

- The excavated soil will be placed onto a minimum thickness of 10-mil low-permeability liner of sufficient strength and thickness to prevent puncture during use; separate stockpiles will be created where material types are different (e.g., petroleum-impacted material stockpiled in a contaminated soil area). The use of multiple layers of thinner liners is permissible.
- Equipment and procedures will be used to place and remove the soil that will minimize the potential to jeopardize the integrity of the liner.
- Stockpiles will be covered at the designated times (see below) with minimum 6-mil plastic sheeting or tarps which will be securely anchored to the ground. Stockpiles will be routinely inspected and broken sheeting covers will be promptly replaced.
- Stockpiles will be covered upon reaching their capacity of approximately 1,000 cubic yards until ready for loading. Stockpiles that have not reached their capacity will be covered at the end of each workday.
- Active stockpiles will be covered at the end of each workday.
- Each stockpile area will be encircled with silt fences and hay bales, as needed to contain and filter particulates from any rainwater that has drained off the soils, and to mitigate the potential for surface water run-off.
- The stockpile areas will be inspected daily and noted deficiencies will be promptly addressed.

5.4.3 Materials Excavation and Load Out

Field engineers, scientists or geologists under the direct supervision of the RE or QEP will oversee all invasive work and the excavation and load-out of all excavated material. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site has been investigated by the RE. It has been determined that no risk or impediment to the planned work under this RAWP is posed by known utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). Trucks hauling historic fill will not be lined unless the material exhibits free liquids or is grossly impacted.

A truck wash/cleaning area will be operated on-site. The RE will be responsible for documenting that all outbound trucks will be washed/cleaned at the truck wash before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site sediment tracking.

The RE will be responsible for documenting that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The RE will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this RAWP.

Each hotspot and structure to be remediated (e.g., USTs, vaults and associated piping, etc.) will be removed and post-excavation documentary sampling completed before excavations related to Site development commence proximal to the hotspot or structure.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-site is prohibited, without pre-approval by NYSDEC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. The survey information will be shown on maps to be reported in the FER.

5.4.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded. Trucks will enter the Site using Purves Street or other routes approved by NYSDEC. All trucks loaded with Site materials will exit the vicinity of the Site using only approved truck routes.

Proposed in-bound and out-bound truck routes to the Site are shown in Figure 9. This is the most appropriate route and takes into account:

(a) limiting transport through residential areas and past sensitive sites;

(b) use of city mapped truck routes;

(c) prohibiting off- Site queuing of trucks entering the facility;

(d) limiting total distance to major highways;

(e) promoting safety in access to highways; and

(f) overall safety in transport;

(g) community input [where necessary]

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

To the extent possible, queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-Site queuing will be minimized.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All truck carriages and wheels will be free from dirt and debris when leaving the site. As required, truck wash waters will be collected and disposed of off-site in an appropriate manner.

5.4.5 Materials Disposal Off-Site.

All soil/fill/solid waste excavated and removed from the Site will be handled, transported and disposed in accordance with all local, State (including 6 NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean

soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 1 Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the RE for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms to all applicable laws:

(1) A letter from the RE or BCP Volunteer to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the RE. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and

(2) A letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Nonhazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2

Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but nonhazardous and are being removed from the Site are considered by the Division of Materials Management (DMM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DMM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-site or off-site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the RE. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-site movement of nonhazardous wastes and contaminated soils. This information will be reported in the FER.

Hazardous wastes derived from on-site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

5.4.6 Materials Reuse On-Site

Soil excavated during installation of foundation components may be reused if the requirements in this section are met. Grossly-impacted soil will not be reused. Reused soil must be nonhazardous and meet the lower of 6 NYCRR 375-6(b) Restricted Residential Use or Protection of Groundwater SCOs in accordance with the predetermined beneficial use determination listed in 6 NYCRR § 360-1.15(b). The Protection of Groundwater SCOs apply only to compounds or analytes detected in groundwater at concentrations that exceeded the Class GA AWQS. If any of the waste materials are used for an end use specified in Section 360-1.15(b), it will not be considered a solid waste. Soil removed during implementation of the remedy or removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. Reuse of soil will be coordinated in advance with the NYSDEC case manager. Material deemed unfit for reuse will be transported for off-site disposal.

5.4.7 Fluids Management

Collection and pretreatment of contaminated groundwater is not anticipated for remedial excavations, however it may be needed for excavations associated with foundation components and/or an elevator pit. All liquids to be removed from the Site, including

dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-site.

Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a SPDES permit.

Localized construction dewatering of contaminated groundwater will be required to excavate the elevator pits. For the remedy, dewatering is considered a remedial component inasmuch as it is necessary to facilitate excavation of historic fill for the elevator pits. Limited dewatering may be conducted via a sump pump or well point system. Dewatering fluids will either be containerized for off-site disposal of discharged to a NYC sewer in accordance with a NYSDEP permit. Based on the NYCDEP's effluent limitations, the Contractor may be required to install additional pretreatment utilities for dewatering fluids to reduce contaminant concentration below the NYCDEP effluent limitations prior to discharge. Additional pretreatment may include bag filters, carbon filtration, etc. If the contractor's dewatering system has a pumping capacity of greater than 45 gallons per minute, a Long Island Well permit will be obtained from NYSDEC. If the Contractor will discharge more than 10,000 gallons per day, they will also have to obtain a NYCDEP Temporary Discharge of Groundwater into the City Sewer System Permit. Collected groundwater or rainwater will be discharged, as defined by the NYCDEP permit, into the New York City sewer system, via an entry point acceptable to the NYCDEP. If required, the dewatering and treatment system will be designed by the Contractor's New York State-licensed Professional Engineer.

5.4.8 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soil. A physical demarcation layer, consisting of orange snow fencing material or equivalent material will be placed on this surface to provide a visual reference, where the surface is capped with clean soil (e.g., landscaped area). The demarcation layer is not required if the residual soil is capped with impervious surface cover (e.g., concrete slab). This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and subsoils, structures, or other materials. This survey and the demarcation layer placed on this

grade surface will constitute the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP. A map showing the survey results will be included in the FER and the SMP.

5.4.9 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the RE and will be in compliance with provisions in this RAWP prior to receipt at the Site. Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site. Solid waste will not be imported onto the Site.

The FER will include the following certification by the RE: "I certify that all import of soils from off-site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the RAWP".

Backfill material will consist of clean fill (as described in the following paragraph) or other acceptable fill material such as virgin, native 0.75-inch stone from a quarry or recycled concrete aggregate (RCA). If RCA is imported to the Site, it will be from NYSDEC-permitted or registered facilities in compliance 6 NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require chemical testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover, drainage, or SMD gravel-layer material.

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC approved backfill or cover soil quality objectives are the lower of the protection of groundwater or the protection of public health soil cleanup objectives for Restricted Residential Use as set forth in Table 375-6.8(b) of 6 NYCRR Part 375. Non-compliant soils will not be imported without prior approval by NYSDEC. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

The clean fill would be segregated at a source/facility that is free of environmental contaminants. Qualified environmental personnel would collect representative samples at a frequency consistent with CP-51 / Soil Cleanup Guidance. The samples would be analyzed for Part 375 VOCs (EPA Method 8260), SVOCs (EPA Method 8270), pesticides/PCBs (EPA Method 8082/8081) and metals by an NYSDOH ELAP-certified laboratory. Upon meeting these criteria, the certified-clean fill would be transported to the site and segregated from impacted material, as necessary, on plastic sheeting until it is used as backfill.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this RAWP should be construed as an approval for this purpose. Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

5.4.10 Stormwater Pollution Prevention

Silt fencing or hay bales will be installed around the perimeter of the remedial construction area, as required. Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering. Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

5.4.11 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters Part 375 and TCL/TAL listed VOCs, SVOCs, metals, pesticides, and PCBs. These analyses will not be limited to STARS parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

5.4.12 Community Air Monitoring Plan (CAMP)

Community air monitoring will be conducted in compliance with the NYSDOH Generic CAMP outlined below.

The CAMP will include real-time monitoring for VOCs and particulates at the downwind perimeter of each designated work area when certain activities are in progress. Continuous monitoring will be required for all ground intrusive activities and during demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but

are not limited to, soil/waste excavation and handling, test pitting and trenching, and the installation of soil borings or monitoring wells. Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location.

CAMP monitoring for VOCs levels will be conducted with PIDs, and monitoring for dust/particulates will be conducted with particulate sensors equipped with filters to detect particulates less than 10 microns in diameter (PM10). Monitoring for particulates and odors will be conducted during all ground intrusive activities by the RE's field inspector. The work zone is defined as the general area in which machinery is operating in support of remediation activities. A portable PID will be used to monitor the work zone and for periodic monitoring for VOCs during activities such as soil and groundwater sampling. The Site perimeter will be visually monitored for fugitive dust emissions.

The following actions will be taken based on VOC levels measured:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.

- If total VOC levels at the downwind perimeter of the hot zone persist at levels in excess of 5 ppm above background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps work activities will resume provided that the total organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.

- If the total VOC level is above 25 ppm at the perimeter of the hot zone, activities will be shut down.

The following actions will be taken based on visual dust observations:

- If the downwind particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind PM10 levels do not

exceed 150 µg/m³ above the background level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 µg/m³ above the background level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration.

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report.

5.4.13 Odor, Dust and Nuisance Control Plan

Dust, odor and nuisance control will be accomplished by the remediation contractor as described in this section. The FER will include the following certification by the RE: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the RAWP."

5.4.13.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include application of foam suppressants or tarps over the odor or VOC source areas. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Volunteer's RE, who is responsible for certifying the FER. Application of odor controls is the responsibility of the Remedial Contractor.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (b) use of staff to monitor odors in surrounding neighborhoods.

Although not anticipated, where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

5.4.13.2 Dust Control Plan

Dust suppression will include, at a minimum, the controls listed below:

- Dust suppression will be achieved through the use of a dedicated water distribution system or on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

5.4.13.3 Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work and will conform, at a minimum, to NYCDEP noise control standards.

6.0 RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Because residual contaminated soil and groundwater will exist beneath the Site after the remedy is complete, Engineering and Institutional Controls (ECs and ICs) are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have three primary EC systems: 1) a vapor barrier, 2) a SMD system; and 3) a site cover system consisting of a concrete building slab.

The FER will report residual contamination in tabular and map form. This will include presentation of contaminant concentrations that exceed both Track 1 and Track 4 SCOs.

7.0 ENGINEERING CONTROLS

7.1 Vapor Barrier

Exposure to residual contaminated soil vapor will be prevented by an engineered, continuous vapor barrier installed on subsurface slabs and walls of the section of the proposed development that will not be used for a ventilated parking garage. The barrier will consist of Grace Preprufe 300R (or its approved equivalent) underneath the slab and Grace Preprufe 160R or Bituthene (or its approved equivalent) on the subsurface walls. The vapor barrier extents are shown on Figure 7, and the vapor barrier manufacturer's documentation and specifications are included as Appendix L.

7.2 Soil Vapor Mitigation System

As a protective measure to mitigate potential soil vapor intrusion into the planned on-site building, an SMD system will be installed beneath the vapor barrier for the portion of the development that will not have an at-grade ventilated parking garage. The proposed SMD system layout is shown on Figure 7, and design details are provided as Appendix M. The SMD system was developed in general accordance with the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The system consists of a sub-membrane collection layer and vapor conveyance piping to two active electric blowers. Installation of monitoring points is being evaluated by NYSDEC, NYSDOH and the Remedial Engineer. If monitoring points are installed, they will be built into the SMD system during installation so that post-installation pressure readings can be collected. The number and locations of these points will be decided after RAWP approval and with NYSDEC and NYSDOH concurrence. Alternatively, system operation will be documented through pressure monitoring at the sampling ports installed at the base (interface with slab) of the SMD riser pipes. The RE will oversee implementation and documentation. All as-built drawings, diagrams, calculation and manufacturer documentation for SMD system will be presented in the FER. The blower fan would remain in continuous operation until permission to discontinue its use is granted in writing by NYSDEC, at which point the active blower system would be transitioned to a passive system through the use of a wind turbine.

7.3 Site Cover System

Exposure to residual contaminated soils will be prevented by an engineered site cover system. This site cover system will be comprised of a reinforced concrete building slab that is estimated at 14-inches thick and covers approximately 90% of the Site. The additional approximately 10% of the Site includes a driveway with a concrete slab above the building's drainage system, and an open courtyard with a soil cap consisting of at least 2 feet of imported clean fill (meeting

the lower of the protection of groundwater or the protection of public health for restricted residential use SCOs). Proposed development plans are provided in Appendix B, and a site cover system plan is included as Figure 8.

A Soil Management Plan will be included in the SMP and will outline the procedures to be followed in the event that the site cover system and underlying residual contamination are disturbed after the Remedial Action is complete. Maintenance of this site cover system will be described in the SMP in the FER.

8.0 CRITERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF ENGINEERING CONTROL SYSTEMS

The below sections describe the criteria for completion of remediation and termination of remedial systems.

8.1 Site Cover System and Vapor Barrier

The site cover and vapor barrier systems are permanent controls and the quality and integrity of these systems will be inspected at defined, regular intervals in perpetuity.

8.2 Sub-membrane Depressurization System (SMD)

The active SMD system will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the active SMD system may be submitted by the property owner based on confirmatory data that justifies such request. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH. Refer to Appendix M for SMD system design details.

9.0 INSTITUTIONAL CONTROLS

After the remedy is complete, the Site will have residual contamination remaining in place. Engineering Controls for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and an SMP. These elements are described in this Section.

A Site-specific Environmental Easement will be recorded with Queens County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all Engineering and Institutional Controls (ECs/ICs) placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

9.1 Environmental Easement

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-site after the Remedial Action is complete. If the Site will have residual contamination after completion of all Remedial Actions then an Environmental Easement is required. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with the Queens County Clerk. The Environmental Easement will be submitted as part of the FER.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with the Queens County Clerk before the COC can be issued by NYSDEC. A series of Institutional Controls are required under this remedy to implement, maintain and monitor these Engineering Control systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to restricted residential use(s) only. These Institutional Controls are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. Institutional Controls can, generally, be subdivided between controls that support ECs, and those that place general restrictions on Site usage or other requirements. Institutional Controls

in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The Institutional Controls that support ECs are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All ECs must be operated and maintained as specified in this SMP;
- A site cover system consisting of the concrete building slabs must be inspected, certified and maintained as required in the SMP;
- A soil vapor mitigation system consisting of a vapor barrier and sub-membrane depressurization system under all building structures must be inspected, certified, operated and maintained as required by the SMP;
- All ECs on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-Site environmental monitoring devices, including but not limited to groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP;
- ECs may not be discontinued without an amendment or extinguishment of the Environmental Easement. The Environmental Easement may be extinguished only by release by the Commissioner of NYSDEC, or the Commissioner's designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

Adherence to these Institutional Controls for the Site is mandated by the Environmental Easement and will be implemented under the SMP (discussed in the next section). The Controlled Property (Site) will also have a series of Institutional Controls in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;
- The Controlled Property may be used for restricted residential use only, provided the long-term Engineering and Institutional Controls included in the SMP are employed;
- The Controlled Property may not be used for a higher level of use, such as residential use without an amendment or extinguishment of this Environmental Easement;
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This statement must be certified by an expert that the NYSDEC finds acceptable.

9.2 Site Management Plan (SMP)

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the COC for the Remedial Action. The SMP is submitted as part of the FER but will be written in a manner that allows its use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annual and will be due for submission to NYSDEC within 45 days of the end of the reporting period.

No exclusions for handling of residual contaminated soils will be provided in the SMP. All handling of residual contaminated material will be subject to provisions contained in the SMP.

10.0 FINAL ENGINEERING REPORT

A FER and COC will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The FER will include as-built drawings for all constructed elements, certifications, manifests, bills of lading as well as the complete SMP (formerly the Operation and Maintenance Plan). The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the SMP and Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.

The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.

The FER will provide a summary of residual contamination that exceeds the SCOs defined for the Site in the RAWP and an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a COC, all project reports must be submitted in digital form on electronic media (PDF).

10.1 Certifications

The following certification will appear in front of the Executive Summary of the FER. The certification will be signed by the RE Jason Hayes, who is a Professional Engineer registered in New York State. This certification will be appropriately signed and stamped. The certification will include the following statements:

I _____certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan (or Remedial Design or Plans and Specifications) was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Work Plan (or Remedial Design or Plans and Specifications).

The data submitted to DER demonstrates that the remediation requirements set forth in the Remedial Work Plan (or Remedial Design or Plans and Specifications) and all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in the work plan (or Remedial Design or Plans and Specifications).

All use restrictions, institutional controls, ECs and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

A SMP has been submitted for the continual and proper operation, maintenance, and monitoring of any ECs employed at the Site including the proper maintenance of any remaining monitoring wells, and that such plan has been approved by DER.

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

11.0 SCHEDULE

Mobilization will commence prior to remedial activities at the Site and is expected to take approximately 2 weeks. Once mobilization is complete, the remedial activities can begin, and are anticipated to take approximately 4 months. Within 90 days of completion of all remedial activities at the Site, a FER will be submitted to NYSDEC as detailed in Section 10.0. A Gantt chart showing a detailed project schedule is included in Appendix I.

TABLES

Table 1
Restricted Residential Use SCOs
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

VOCS (mg/kg)	
1,1,1-Trichloroethane	100
1,1-Dichloroethane	26
1,1-Dichloroethylene	100
1,2,4-Trimethylbenzene	52
1,2-Dichlorobenzene	100
1,2-Dichloroethane	3.1
1,3,5-Trimethylbenzene	52
1,3-Dichlorobenzene	49
1,4-Dichlorobenzene	13
1,4-Dioxane	13
2-Butanone	100
Acetone	100
Benzene	4.8
Carbon tetrachloride	2.4
Chlorobenzene	100
Chloroform	49
cis-1,2-Dichloroethylene	100
Ethyl Benzene	41
Methyl tert-butyl ether (MTBE)	100
Methylene chloride	100
n-Butylbenzene	100
n-Propylbenzene	100
sec-Butylbenzene	100
tert-Butylbenzene	100
Tetrachloroethylene	19
Toluene	100
trans-1,2-Dichloroethylene	100
Trichloroethylene	21
Vinyl Chloride	0.9
Xylenes, Total	100
Metals (mg/kg)	
Arsenic	16
Barium	400
Beryllium	72
Cadmium	4.3
Chromium, hexavalent	110
Chromium, trivalent	180
Copper	270
Lead	400
Manganese	2000
Mercury	0.81
Nickel	310
Selenium	180
Silver	180
Zinc	10000

SVOCS (mg/kg)	
2-Methylphenol	100
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(g,h,i)perylene	100
Benzo(k)fluoranthene	3.9
Chrysene	3.9
Dibenzo(a,h)anthracene	0.33
Dibenzofuran	59
Fluoranthene	100
Fluorene	100
Hexachlorobenzene	1.2
Indeno(1,2,3-cd)pyrene	0.5
Naphthalene	100
Pentachlorophenol	6.7
Phenanthrene	100
Phenol	100
Pyrene	100
PCBs/Pesticides (mg/kg)	
2,4,5-TP Acid (Silvex)	100
4,4'-DDE	8.9
4,4'-DDT	7.9
4,4'-DDD	13
Aldrin	0.097
alpha-BHC	0.48
beta-BHC	0.36
Chlordane (alpha)	4.2
delta-BHC	100
Dibenzofuran	59
Dieldrin	0.2
Endosulfan I	24
Endosulfan II	24
Endosulfan sulfate	24
Endrin	11
Heptachlor	2.1
Lindane	1.3
Polychlorinated biphenyls	1

Notes:
SCO: Soil Cleanup Objective
SVOC: semivolatile organic compound
VOC: volatile organic compound
PCB: polychlorinated biphenyl
mg/kg: milligram per kilogram

Table 2
Alternative I Remedial Cost Estimate - Track 1 - Unrestricted Use SCOs
44-30 Purves Street
Block No. 268, Lots No. 1
Long Island City, New York

Track 1 – Unrestricted Use

Item No.	Description of Environmental Premium Item	Estimated Quantity		Unit Price		Estimated Premium
A - CONTRACTOR FEES						
A-1	Remediation Facilities, Mobilization, Demobilization, and Site Maintenance - Remediation and decontamination facilities, site fencing, trailer, truck cleaning facilities, etc.			**Allowance**		**$175,000**
A-2	Contaminated Material Excavation - Accounts for excavation of material containing concentrations exceeding Unrestricted Use Soil Cleanup Objectives.	**9,000**	**CY**	**$25**	**per CY**	**$225,000**
A-3	Transport and Disposal of Urban Fill - Includes transport vehicles and disposal of urban fill at a permitted facility.	**10,600**	**Tons**	**$50**	**per Ton**	**$530,000**
A-4	Transport and Disposal of Urban Fill with Hazardous Metals - Includes transport vehicles and disposal of urban fill at a permitted facility.	**2,600**	**Tons**	**$200**	**per Ton**	**$520,000**
A-5	Transport and Disposal of Petroleum Contaminated Material - Includes transport vehicles and disposal of petroleum-impacted fill material at a permitted facility.	**400**	**Tons**	**$80**	**per Ton**	**$32,000**
A-6	UST Removal - Registration, cleaning, removal and disposal of potential USTs. Includes the cost for the two anticipated USTs.	**2**	**Tanks**	**$10,000**	**per tank**	**$20,000**
A-7	Dust, Odor and Vapor Control - Includes odor, dust, and organic vapor control during the excavation of petroleum-impacted material, removal of USTs, and remediation of the Site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	**6**	**Months**	**$10,000**	**per Month**	**$60,000**
A-8	Support of Excavation - Includes sheeting or shoring along the perimeter of the Site.	**6,900**	**SF**	**$175**	**per SF**	**$1,207,500**
A-9	Underpinning - Accounts for foundation stabilization of southern and northern adjoining buildings during excavation.			**Allowance**		**$200,000**
A-10	Dewatering/Fluid Treatment - Accounts for the design, installation, and for cost to operate and maintain the dewatering and treatment system for 2 months.			**Allowance**		**$600,000**
A-11	Backfill - Import and placement of clean fill material to bring site to development grade. An additional 30% of material is included to account for compaction.	**8,000**	**CY**	**$45**	**per CY**	**$360,000**
A-12	Active Submembrane Depressurization System (SMD) System - To be installed under portions of the Site building that will not be used as a ventilated parking garage.			**Lump Sum**		**$140,000**
A-13	Vapor Barrier - The vapor barrier will be a minimum 20 mil thickness and installed as a continuous subslab membrane under slabs and outside subsurface walls.	**20,720**	**SF**	**$9**	**per SF**	**$187,000**
A-14	Mud Slab - To be poured on top of backfill layer in support of SMD system and vapor barrier installation.	**14,800**	**SF**	**$4**	**per SF**	**$60,000**
					SUBTOTAL (without contingency)	**$4,317,000**
					Remediation Contingency (25% of Contractor Costs)	**$1,080,000**
					SUBTOTAL (with contingency)	**$5,397,000**
B - ENGINEERING AND REMEDIATION OVERSIGHT FEES						
B-1	Preliminary Waste Characterization -Includes in-situ characterization of soil for off-site disposal in accordance with the criteria of most disposal facilities. Pre-characterization of the material to be removed as part of development/remedial excavation will assist in obtaining pre-approval from disposal facilities and understanding disposal cost.			**Lump Sum**		**$75,000**
B-2	Engineering Oversight during RAWP Implementation, Monthly and Daily Reporting - Full time oversight and office support	**6**	**Months**	**$**	**30,000 per Month**	**$180,000**
B-3	Community air monitoring program (CAMP) - Includes fulltime equipment rental and operation of perimeter dust and volatile organic compounds monitors and daily reporting.	**6**	**Months**	**$**	**2,500 per Month**	**$15,000**
B-4	Documentation Sampling - To confirm contaminated material removal (assumes analysis for VOCs, SVOCs, PCBs, pesticides, and metals for each sample).			**Lump Sum**		**$40,000**
B-5	Final Engineering Report (FER) and NYSBCP Closeout			**Lump Sum**		**$45,000**
					SUBTOTAL	**$355,000**
					REMEDIAL ALTERNATIVE 1 - TRACK 1 BCP ESTIMATE - SITE PREPARATION (without contingency)	**$4,672,000**
					REMEDIAL ALTERNATIVE 1 - TRACK 1 BCP ESTIMATE - SITE PREPARATION (with contingency)	**$5,752,000**

General Assumptions and Conditions:

1. Cost estimate is based on Langan past experience and generalized vendor estimates using 2013 dollars.
2. This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this cost estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. Changes in cost elements are likely to occur as a result of new information and data collected during the engineering design of the remedial alternative. This cost estimate is expected to be within -30% to +50% of the actual cost. Utilization of this cost estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this cost estimate information is not intended to be utilized for complying with financial reporting requirements associated with liability services.
3. The density used for conversion from cubic yards to tons was 1.5 tons per cubic yard.
4. Excavation depths were calculated using Phase II and Remedial Investigation soil sample results, field observations, and observed fill depths.
5. If contamination could not be delineated vertically based on soil sample results, it was assumed that contamination extended to the terminus of historic fill.

Contractor Cost Assumptions:

Item A-2: The unit rate provided reflects construction labor to be OSHA certified.

Item A-4: Hazardous material disposal assumes union disposal costs for the New York City area. This number is an allowance (hazardous material presence has not been confirmed). This item does not include hazardous waste fees and taxes, which should be waived considering the site is the NYS BCP.

Items A-3 to A-5: A truck wash area will be established and maintained near the exit of the site. All trucks that have come into contact with site contaminated material will need to be washed prior to leaving Site. All trucks containing hazardous waste or petroleum-impacted material shall be lined.

Item A-7: Vapor/odor control cost estimate includes equipment, and materials necessary to monitor vapor/odor emission during intrusive site activities. Cost estimate includes application of vapor/odor suppressing foam to open excavations and soil loaded into trucks.

Item A-12: The SMD system will include a subslab collection layer (6- to 12-inch layer of ¾-inch clean stone) with horizontal perforated collection pipes, riser pipes to convey the collected vapor to the roof, and a roof-mounted blower system that will maintain a constant negative pressure through the piping and collection layer. Two riser pipers and blowers systems are anticipated.

Item A-13: Additional vapor barrier needed on sidewalls of the building perimeter and deep foundation elements was estimated by adding a 40% markup to the building area.

Engineering Cost Assumptions:

Item B-1: Sampling frequency based on 9,000 cubic yards of material at a conservative rate of 500 cubic yards/sample. A representative suite (not disposal facility specific) of analyses was assumed. Sample collection activities assumed to occur over a three-day, single mobilization. Assumes standard turnaround time for sample analysis.

Item B-2: Engineering oversight includes community air monitoring program (CAMP), onsite engineer throughout remediation, remediation health and safety including purchase and maintenance of appropriate PPE, periodic office reporting to NYSDEC, and 2 site meetings per month.

Item B-3: Community air monitoring program (CAMP) assumed duration of four months. CAMP scope includes fulltime equipment operation of perimeter dust and volatile organic compounds monitors and daily reporting.

Item B-4: Confirmation samples scope based on 53 samples analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), PCBs, pesticides, and metals. Cost includes labor and materials to collect samples and subcontracted laboratory analysis by a New York State Department of Health (NYSDOH) environmental laboratory approval program (ELAP)-accredited laboratory. Assumes standard turnaround time for sample analysis.

Table 3
Alternative II Remedial Cost Estimate - Track 4 - Site-Specific SCOs
44-30 Purves Street
Block No. 268, Lots No. 1
Long Island City, New York

Track 4 – Restricted Use with Site-Specific SCOs

Item No.	Description of Environmental Premium Item	Estimated Quantity		Unit Price		Estimated Premium
A - CONTRACTOR FEES						
A-1	Remediation Facilities, Mobilization, Demobilization, and Site Maintenance - Remediation and decontamination facilities, trailer, truck cleaning facilities, etc.			**Allowance**		**$100,000**
A-2	Contaminated Material Excavation - Accounts for excavation of material containing concentrations exceeding the cleanup levels that are estimated to be agreed upon with NYSDEC (assumes excavation can be safely executed with sloping as the only excavation support method)	**5,800**	**CY**	**$25**	**per CY**	**$145,000**
A-3	Support of Excavation - Accounts for design and implementation of excavation support for remedial excavation below 4 feet below grade surface.			**Allowance**		**$187,500**
A-4	Transport and Disposal of Urban Fill - Includes transport vehicles and disposal of urban fill at a permitted facility.	**6,000**	**Tons**	**$50**	**per Ton**	**$300,000**
A-5	Transport and Disposal of Urban Fill with Hazardous Metals - Includes transport vehicles and disposal of urban fill at a permitted facility.	**2,400**	**Tons**	**$200**	**per Ton**	**$480,000**
A-6	Transport and Disposal of Petroleum Contaminated Material - Includes transport vehicles and disposal of petroleum-impacted fill material at a permitted facility.	**400**	**Tons**	**$85**	**per Ton**	**$34,000**
A-7	UST Removal - Registration, cleaning, removal and disposal of potential USTs. Includes the cost for the two anticipated USTs.	**2**	**Tanks**	**$10,000**	**per tank**	**$20,000**
A-8	Dust, Odor and Vapor Control - Includes odor, dust, and organic vapor control during the excavation of petroleum-impacted material, removal of USTs, and remediation of the Site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	**4**	**Months**	**$10,000**	**per Month**	**$40,000**
A-9	Backfill - Import and placement of clean fill material to bring site to development grade. An additional 30% of material is included to account for compaction.	**5,000**	**CY**	**$45**	**per CY**	**$225,000**
A-10	Incidental Groundwater Collection and Disposal - Accounts for limited, localized groundwater pumping, collection and disposal to accommodate small excavations that may required below the water table for an elevator pit or similar.			**Allowance**		**$60,000**
A-11	Active Submembrane Depressurization System (SMD) System - To be installed under portions of the Site building that will not be used as a ventilated parking garage.			**Lump Sum**		**$140,000**
A-12	Vapor Barrier - The vapor barrier will be a minimum 20 mil thickness and installed as a continuous subslab membrane under slabs and outside subsurface walls.	**20,720**	**SF**	**$9**	**per SF**	**$187,000**
A-13	Mud Slab - To be poured on top of backfill layer in support of SMD system and vapor barrier installation.	**14,800**	**SF**	**$4**	**per SF**	**$60,000**
A-14	Composite Cap (Concrete slab) - 6-inch reinforced structural slab to be poured above the vapor barrier.	**26,850**	**SF**	**$17.50**	**per SF**	**$470,000**
				SUBTOTAL (without contingency)		**$2,448,500**
				Remediation Contingency (25% of Contractor Costs)		**$613,000**
				SUBTOTAL (with contingency)		**$3,061,500**
B - ENGINEERING AND REMEDIATION OVERSIGHT FEES						
B-1	Preliminary Waste Characterization -Includes in-situ characterization of soil for off-site disposal in accordance with the criteria of most disposal facilities. Pre-characterization of the material to be removed as part of development/remedial excavation will assist in obtaining pre-approval from disposal facilities and understanding disposal cost.			**Lump Sum**		**$45,000**
B-2	Engineering Oversight during RAWP Implementation, Monthly and Daily Reporting - Full time oversight and office support	**4**	**Months**	**$ 33,000**	**per Month**	**$132,000**
B-3	Community air monitoring program (CAMP) - Includes fulltime equipment rental and operation of perimeter dust and volatile organic compounds monitors and daily reporting.	**4**	**Months**	**$ 2,500**	**per Month**	**$10,000**
B-4	Documentation Sampling - To confirm source material removal (assumes analysis for VOCs, SVOCs, PCBs, pesticides, and metals for each sample).			**Lump Sum**		**$56,000**
B-5	Final Engineering Report (FER), Site Management Plan (SMP) and NYSBCP Closeout			**Lump Sum**		**$65,000**
				SUBTOTAL		**$308,000**
				REMEDIAL ALTERNATIVE 2 - TRACK 4 BCP ESTIMATE - SITE PREPARATION (without contingency)		**$2,756,500**
				REMEDIAL ALTERNATIVE 2 - TRACK 4 BCP ESTIMATE - SITE PREPARATION (with contingency)		**$3,369,500**

General Assumptions and Conditions:

1. Cost estimate is based on Langan past experience and generalized vendor estimates using 2013 dollars.

2. This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this cost estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. Changes in cost elements are likely to occur as a result of new information and data collected during the engineering design of the remedial alternative. This cost estimate is expected to be within -30% to +50% of the actual cost. Utilization of this cost estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this cost estimate information is not intended to be utilized for complying with financial reporting requirements associated with liability services.

3. The density used for conversion from cubic yards to tons was 1.5 tons per cubic yard.

4. Excavation depths were calculated using Phase II and Remedial Investigation soil sample results, field observations, and observed fill depths.

5. If contamination could not be delineated vertically based on soil sample results, it was assumed that contamination extended to the terminus of historic fill.

6. We assume that slope stabilization will be achieved by sloping the excavation. This cost estimate does not include the cost of shoring or sheeting.

Contractor Cost Assumptions:

Item A-2: The unit rate provided reflects construction labor to be OSHA certified.

Item A-5: Hazardous material disposal assumes union disposal costs for the New York City area. This number is an allowance (hazardous material presence has not been confirmed). This item does not include hazardous waste fees and taxes.

Items A-4 to A-6: A truck wash will be established and maintained near the exit of the site. All trucks that have come into contact with site contaminated material will need to be washed prior to leaving Site. All trucks containing hazardous waste or petroleum-impacted material shall be lined.

Item A-8: Vapor/odor control cost estimate includes equipment, and materials necessary to monitor vapor/odor emission during intrusive site activities. Cost estimate includes application of vapor/odor suppressing foam to open excavations and soil loaded into trucks.

Item A-11: The SMD system will include a subslab collection layer (6- to 12-inch layer of ¾-inch clean stone) with horizontal perforated collection pipes, riser pipes to convey the collected vapor to the roof, and a roof-mounted blower system that will maintain a constant negative pressure through the piping and collection layer. Two riser pipers and blowers systems are anticipated.

Item A-12: Additional vapor barrier needed on sidewalls of the building perimeter and deep foundation elements was estimated by adding a 40% markup to the building area.

Engineering Cost Assumptions:

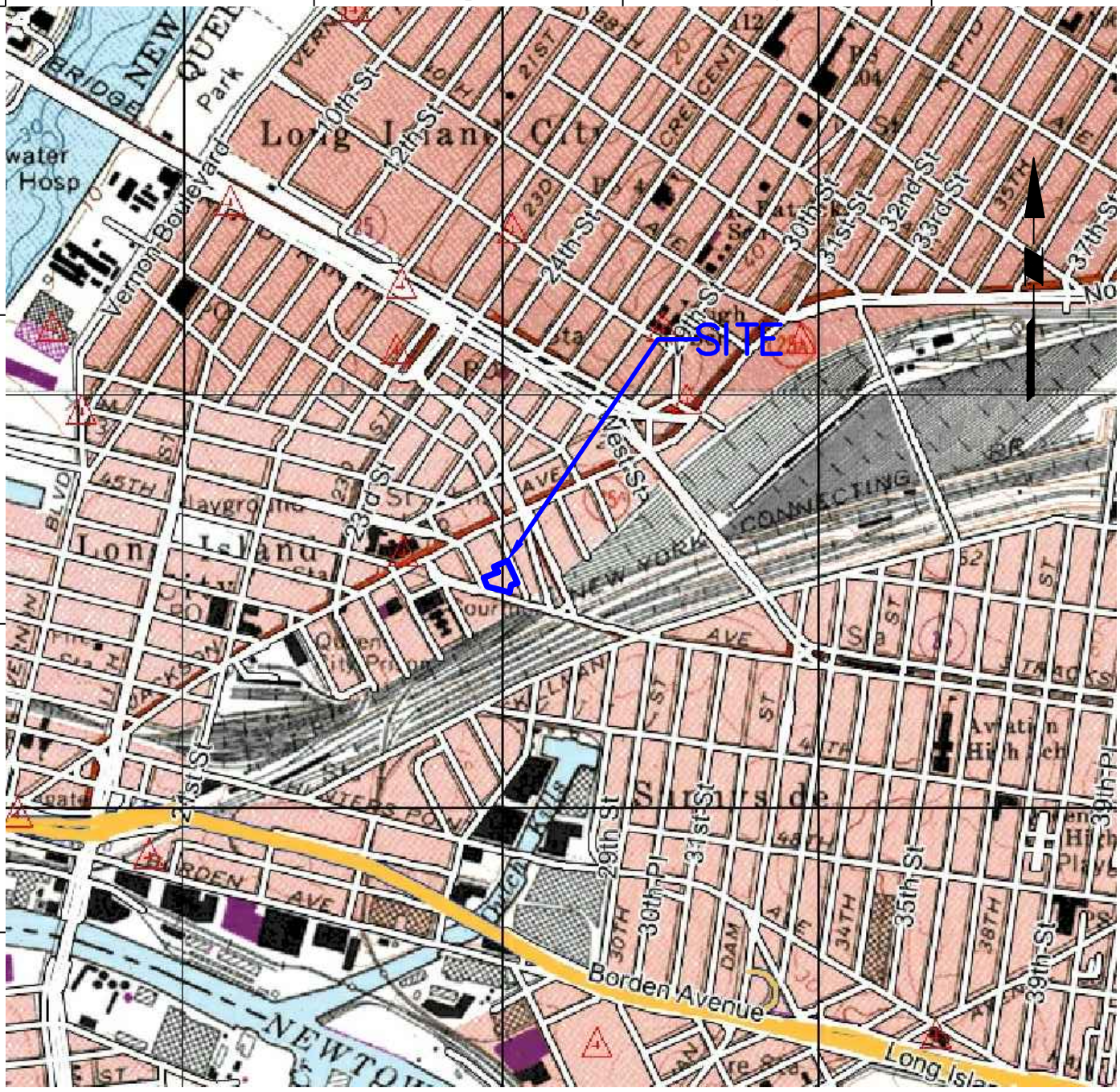
Item B-1: Sampling frequency based on 5,800 cubic yards of material at a conservative rate of 500 cubic yards/sample. A representative suite (not disposal facility specific) of analyses was assumed. Sample collection activities assumed to occur over a three-day, single mobilization. Assumes standard turnaround time for sample analysis.

Item B-2: Engineering oversight includes community air monitoring program (CAMP), onsite engineer throughout remediation, remediation health and safety including purchase and maintenance of appropriate PPE, periodic office reporting t NYSDEC, and 2 site meetings per month.

Item B-3: Community air monitoring program (CAMP) assumed duration of four months. CAMP scope includes fulltime equipment operation of perimeter dust and volatile organic compounds monitors and daily reporting.

Item B-4: Documentation samples scope based on 73 samples analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), PCBs, pesticides, and metals. Cost includes labor and materials to collect samples an subcontracted laboratory analysis by a New York State Department of Health (NYSDOH) environmental laboratory approval program (ELAP)-accredited laboratory. Assumes standard turnaround time for sample analysis.

Figures



LEGEND:

SITE BOUNDARY

NOTES:

1. BASE MAP TAKEN FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 1927 NORTH AMERICAN DATUM, REVISED IN 1979.

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Collectively known as Langan

Project	44-30 PURVES STREET BLOCK No. 268, LOT Nos. 1, 24, 25, 26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	SITE LOCATION MAP
Project No.	170282501
Date	2/24/2014
Scale	NTS
Drawn By	PM
Submission Date	–
Figure No.	1
Sheet	1 of 9

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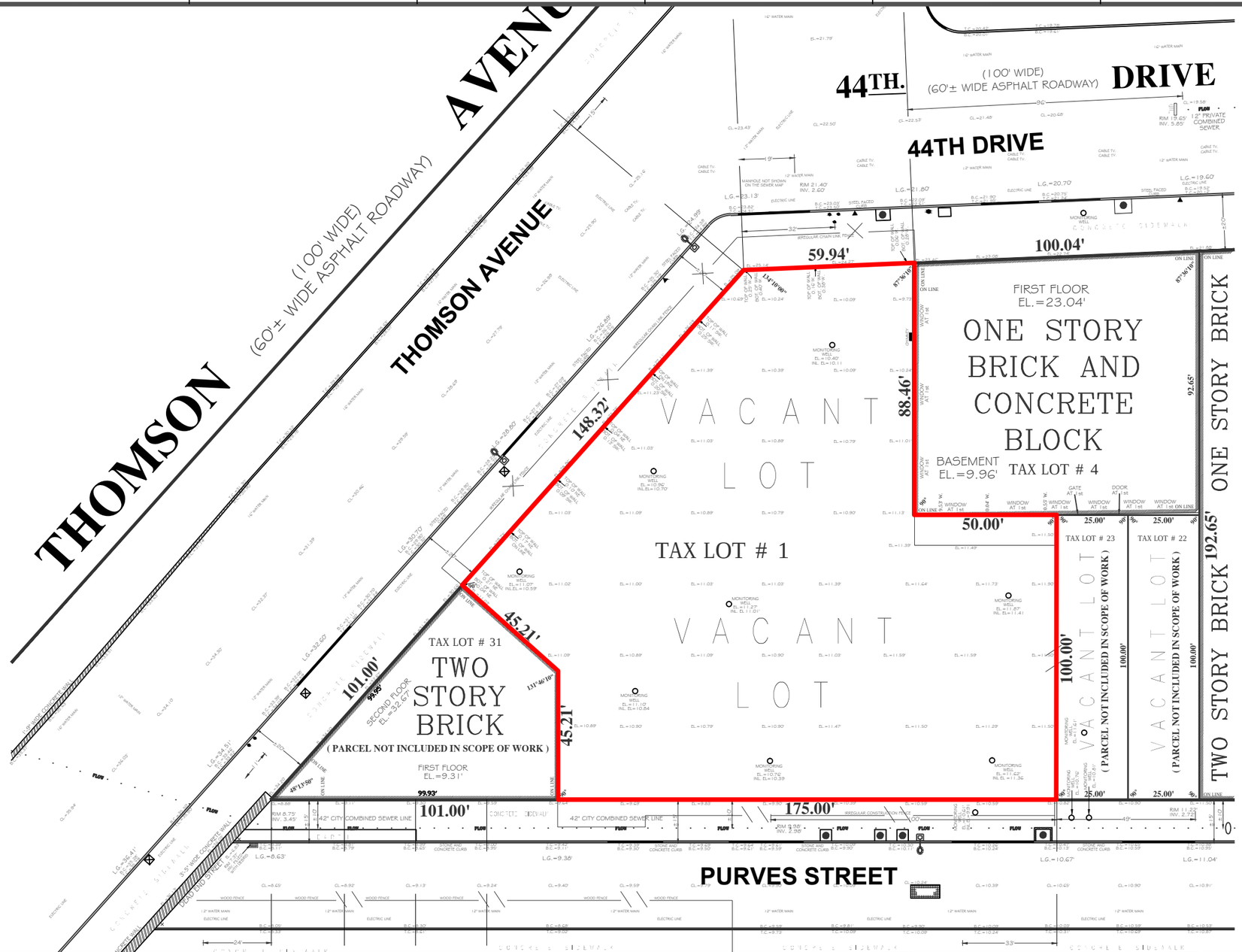
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 1 - Site Location Map.dwg Date: 7/18/2014 Time: 12:30 User: pmcmahon Style Table: Langan.stb Layout: ANSIA-BP



LEGEND

SITE BOUNDARY

NOTES:

1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.
2. ELEVATIONS ARE MEASURED IN FEET AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS 1.095 FEET ABOVE THE NATIONAL GEODETIC VERTICAL DATUM (NGVD29) AT SANDY HOOK, NEW JERSEY.

40 0 10 25 40

SCALE IN FEET

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Langan CT, Inc.
Langan International LLC

Collectively known as Langan

Project

44-30 PURVES STREET

BLOCK No. 268, LOT No. 1
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title

SITE PLAN

Project No. 170282501	Figure No. 2
Date 05/16/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By	
Submission Date	Sheet 2 of 9

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LEGEND

SITE BOUNDARY

RESIDENTIAL TOWER BOUNDARY

RETAIL BUILDING BOUNDARY

NOTES:

1. DRAWING BASED ON DRAWING TITLED "1ST FLOORPLAN", DATED JUNE 25, 2014, BY FX FOWLE ARCHITECTS.

40 0 10 25 40

SCALE IN FEET

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Collectively known as Langan

Project

44-30 PURVES STREET

BLOCK No. 268, LOT No. 1
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title

SITE DEVELOPMENT PLAN

Project No. 170282501	Figure No. 3
Date 07/17/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By	
Submission Date	Sheet 3 of 9

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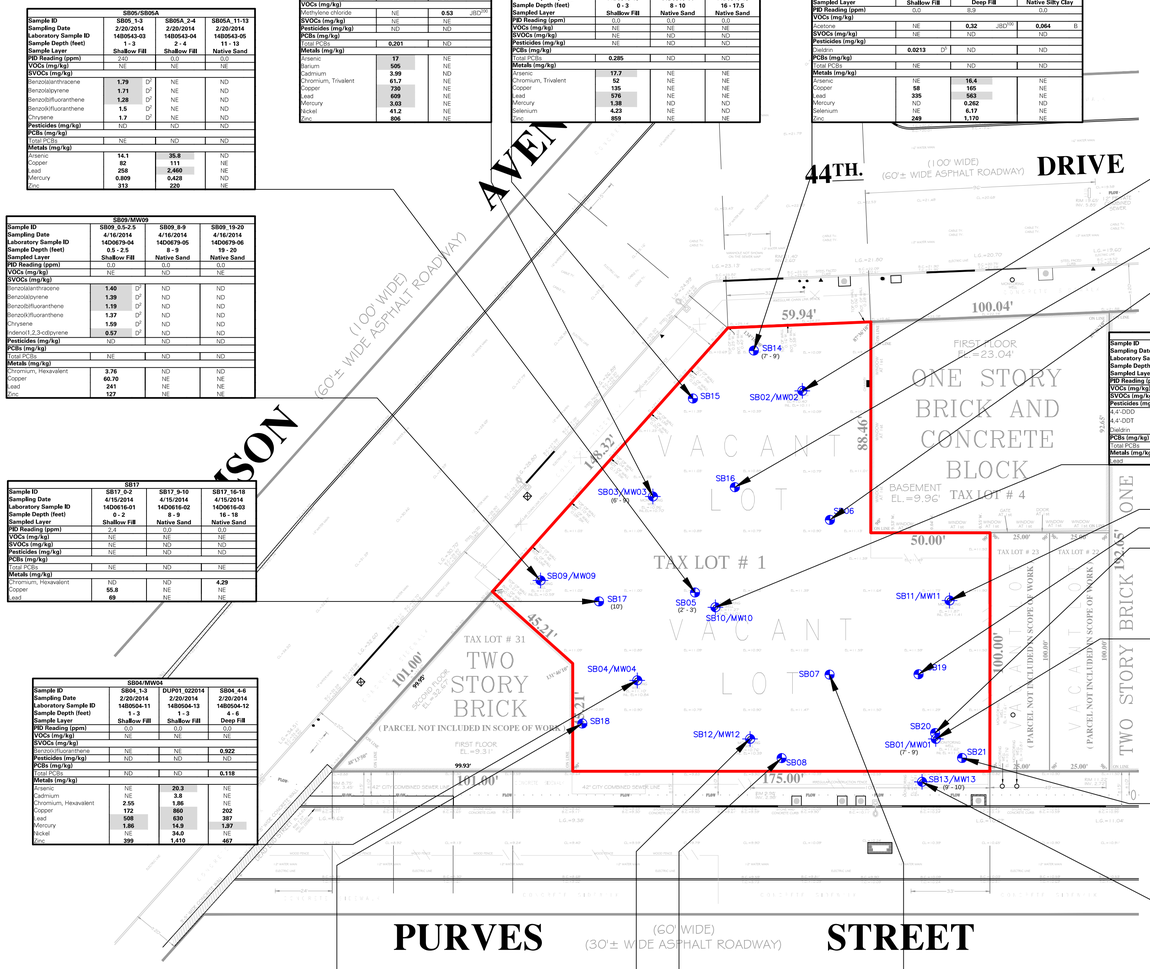

SB05/SB05A

Sample ID	SB05_1-3	SB05A_2-4	SB05A_11-13
Sampling Date	2/20/2014	2/20/2014	2/20/2014
Laboratory Sample ID	1480543-03	1480543-04	1480543-05
Sample Depth (feet)	1 - 3	2 - 4	11 - 13
Sample Layer	Shallow Fill	Shallow Fill	Native Sand
PID Reading (ppm)	240	0.0	0.0
VOCs (mg/kg)	NE	NE	NE
SVOCs (mg/kg)			
Benzo(a)anthracene	**1.79** D[a]	NE	ND
Benzo(a)pyrene	**1.71** D[a]	NE	ND
Benzo(b)fluoranthene	**1.28** D[a]	NE	ND
Benzo(k)fluoranthene	**1.5** D[a]	NE	ND
Chrysene	**1.7** D[a]	NE	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	NE	ND	ND
Metals (mg/kg)			
Arsenic	**14.1**	**35.8**	ND
Copper	**82**	**111**	NE
Lead	**258**	**2,460**	NE
Mercury	**0.809**	**0.428**	NE
Zinc	**313**	**220**	NE

SB03/MW03

Sample ID	SB03_1-3	SB03_6-8
Sampling Date	2/20/2014	2/20/2014
Laboratory Sample ID	1480543-01	1480543-02
Sample Depth (feet)	1 - 3	6 - 8
Sample Layer	Shallow Fill	Native Sand
PID Reading (ppm)	0.0	91.7
VOCs (mg/kg)		
Methylene chloride	NE	**0.53** JBD[PR]
SVOCs (mg/kg)	NE	NE
Pesticides (mg/kg)	ND	ND
PCBs (mg/kg)		
Total PCBs	**0.201**	ND
Metals (mg/kg)		
Arsenic	**17**	NE
Barium	**505**	NE
Cadmium	**3.99**	ND
Chromium, Trivalent	**61.7**	NE
Copper	**730**	NE
Lead	**609**	NE
Mercury	**3.03**	NE
Nickel	**41.2**	NE
Zinc	**806**	NE

SB15

Sample ID	SB15_0-3	SB15_8-10	SB15_16-17.5
Sampling Date	4/15/2014	4/15/2014	4/15/2014
Laboratory Sample ID	14D0616-12	14D0616-14	14D0616-15
Sample Depth (feet)	0 - 3	8 - 10	16 - 17.5
Sampled Layer	Shallow Fill	Native Sand	Native Sand
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	NE	NE	NE
SVOCs (mg/kg)	NE	NE	NE
Pesticides (mg/kg)	NE	NE	NE
PCBs (mg/kg)			
Total PCBs	**0.285**	ND	ND
Metals (mg/kg)			
Arsenic	**17.7**	NE	NE
Chromium, Trivalent	**52**	NE	NE
Copper	**135**	NE	NE
Lead	**376**	NE	NE
Mercury	**1.38**	ND	ND
Selenium	**4.23**	NE	ND
Zinc	**959**	NE	NE

SB14

Sample ID	SB14_0-1	SB14_8-9	SB14_14-15	
Sampling Date	4/15/2014	4/15/2014	4/15/2014	
Laboratory Sample ID	14D0616-10	14D0616-11	14D0616-12	
Sample Depth (feet)	0 - 1	8 - 9	14 - 15	
Sampled Layer	Shallow Fill	Deep Fill	Native Silty Clay	
PID Reading (ppm)	0.0	8.9	0.0	
VOCs (mg/kg)				
Acetone	NE	ND	**0.32** JBD[PR]	**0.064** B
SVOCs (mg/kg)	NE	NE	NE	
Pesticides (mg/kg)				
Dieldrin	**0.0213** D[a]	ND	ND	
PCBs (mg/kg)				
Total PCBs	**0.285**	ND	ND	
Metals (mg/kg)				
Arsenic	**17.7**	NE	NE	
Chromium, Trivalent	**52**	NE	NE	
Copper	**135**	NE	NE	
Lead	**376**	**583**	NE	
Mercury	ND	**0.262**	ND	
Selenium	**4.23**	NE	ND	
Zinc	**959**	**1,170**	NE	

SB02/MW02

Sample ID	SB02_2-4	SB02_6-8	SB02_11-13
Sampling Date	2/21/2014	2/21/2014	2/21/2014
Laboratory Sample ID	1480579-01	1480579-02	1480579-03
Sample Depth (feet)	2 - 4	6 - 8	11 - 13
Sample Layer	Shallow Fill	Deep Fill	Native Clay
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)			
Acetone	NE	B NE	**0.06**
SVOCs (mg/kg)			
Benzo(a)anthracene	**2.06** JD[1]	**1.61** D[a]	ND
Benzo(a)pyrene	**2.52** JD[1]	**1.98** D[a]	ND
Benzo(b)fluoranthene	**2.62** JD[1]	**1.56** D[a]	ND
Benzo(k)fluoranthene	**2.62** JD[1]	**1.41** D[a]	ND
Chrysene	**2.32** JD[1]	**1.62** D[a]	ND
Indeno(1,2,3-cd)pyrene	**1.2** JD[1]	**0.764** D[a]	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND

SB16

Sample ID	SB16_0-2	SB16_6.5-8	DUP8102_041614	SB16_14-15
Sampling Date	4/16/2014	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-01	14D0679-02	14D0679-17	14D0679-03
Sample Depth (feet)	0 - 2	6.5 - 8	6.5 - 8	14 - 15
Sampled Layer	Shallow Fill	Deep Fill	Deep Fill	Native Peat
PID Reading (ppm)	0.0	0.0	0.0	0.0
VOCs (mg/kg)				
Acetone	ND	NE	**0.0640** B	**0.075**
SVOCs (mg/kg)				
Benzo(a)anthracene	**2.64** D[a]	NE	**1.14**	ND
Benzo(a)pyrene	**2.26** D[a]	NE	NE	ND
Benzo(b)fluoranthene	**2.38** D[a]	NE	NE	ND
Benzo(k)fluoranthene	**2.19** D[a]	NE	**0.92**	ND
Chrysene	**2.35** D[a]	NE	NE	ND
Dibenz(a,h)anthracene	**0.69** JD[a]	NE	NE	ND
Indeno(1,2,3-cd)pyrene	**1.24** D[a]	NE	NE	ND
Pesticides (mg/kg)	ND	ND	ND	ND
PCBs (mg/kg)				
Total PCBs	NE	ND	ND	ND
Metals (mg/kg)				
Barium	**426**	NE	**470**	NE
Cadmium	**2.77**	NE	**3.53**	ND
Chromium, Hexavalent	**3.88**	ND	ND	ND
Chromium, Trivalent	**81.72**	NE	**30.2**	NE
Copper	**434**	**75.5**	**165**	NE
Lead	**715**	**2,190**	**4,140**	**84**
Mercury	ND	ND	**0.208**	ND
Selenium	**3.84**	NE	**4.29**	ND
Zinc	**2,990**	**403**	**1,190**	NE

SB06

Sample ID	SB06_3-5	SB06_6-8
Sampling Date	2/19/2014	2/19/2014
Laboratory Sample ID	1480504-03	1480504-04
Sample Depth (feet)	3 - 5	6 - 8
Sample Layer	Shallow Fill	Deep Fill
PID Reading (ppm)	0.0	0.0
VOCs (mg/kg)		
Acetone	NE	**0.170**
SVOCs (mg/kg)		
Benzo(a)anthracene	**2.04** D[a]	**4.16** D[b]
Benzo(a)pyrene	NE	**3.34** D[b]
Benzo(b)fluoranthene	**1.47** D[a]	**3.82** D[b]
Benzo(k)fluoranthene	**1.69** D[a]	**6.29** D[b]
Chrysene	**2.53** D[a]	**5.72** D[b]
Indeno(1,2,3-cd)pyrene	NE	**1.24** JD[b]
Pesticides (mg/kg)	ND	ND
PCBs (mg/kg)		
Total PCBs	ND	ND
Metals (mg/kg)		
Chromium, Hexavalent	NE	**8.52**
Copper	**334**	**86.6**
Lead	**240**	**1,090**
Mercury	**0.452**	**1.29**
Zinc	**655**	**897**

SB10/MW10

Sample ID	SB10_0-2	SB10_9-11	DUP801_041614	SB10_19-20
Sampling Date	4/16/2014	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-13	14D0679-14	14D0679-16	14D0679-15
Sample Depth (feet)	0 - 2	9 - 11	9 - 11	19 - 20
Sampled Layer	Shallow Fill	Native Sand	Native Sand	Native Sandy Silt
PID Reading (ppm)	0.0	0.0	0.0	0.0
VOCs (mg/kg)	ND	NE	NE	NE
SVOCs (mg/kg)	NE	ND	ND	ND
Pesticides (mg/kg)				
4,4'-DDD	**0.0097** D[a]	ND	ND	ND
4,4'-DDT	**0.0038** D[a]	ND	ND	ND
Dieldrin	**0.0083** D[a]	ND	ND	ND
PCBs (mg/kg)				
Total PCBs	ND	ND	ND	ND
Metals (mg/kg)				
Lead	**93**	NE	NE	NE

SB11/MW11

Sample ID	SB11_2-3.5	SB11_6-7	SB11_17-18
Sampling Date	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-07	14D0679-08	14D0679-09
Sample Depth (feet)	2 - 3.5	6 - 7	17 - 18
Sampled Layer	Shallow Fill	Native Sandy Silt	Native Sand
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	ND	ND	ND
SVOCs (mg/kg)			
Benzo(a)anthracene	ND	**1.04**	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Chromium, Trivalent	NE	**35.50**	NE
Lead	NE	**76**	NE
Mercury	ND	**0.317**	ND

SB20

Sample ID	SB20_9-10	SB20_14-15	SB20_24-25
Sampling Date	9/23/2014	9/23/2014	9/23/2014
Laboratory Sample ID	1480908-05	1480908-06	1480908-07
Sample Depth (feet)	9 - 10	14 - 15	24 - 25
Sampled Layer	Sand	Silty Clay	Sand
PID Reading (ppm)	0.0	21.0	4.8
VOCs (mg/kg)			
Tetrachloroethylene	NE	**4.4** D[SR]	NE

SB19

Sample ID	SB19_0-2	SB19_7-9	SB19_17-19
Sampling Date	4/15/2014	4/15/2014	4/15/2014
Laboratory Sample ID	14D0616-07	14D0616-08	14D0616-09
Sample Depth (feet)	0 - 2	7 - 9	17 - 19
Sampled Layer	Shallow Fill	Native Sand	Native Silty Clay
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	NE	ND	NE
SVOCs (mg/kg)			
Benzo(a)anthracene	**4.54** D[a]	ND	ND
Benzo(a)pyrene	**4.66** D[a]	ND	ND
Benzo(b)fluoranthene	**3.54** JD[a]	ND	ND
Benzo(k)fluoranthene	**5.16** D[a]	ND	ND
Chrysene	**4.39** D[a]	ND	ND
Dibenz(a,h)anthracene	**1.11** JD[a]	ND	ND
Indeno(1,2,3-cd)pyrene	**1.92** JD[a]	ND	ND
Pentachlorophenol	**2.79** JD[a]	ND	ND
Pesticides (mg/kg)			
4,4'-DDE	**0.0037** D[a]	ND	ND
4,4'-DDT	**0.0134** D[a]	ND	ND
PCBs (mg/kg)			
Total PCBs	NE	ND	ND
Metals (mg/kg)			
Arsenic	**14.4**	ND	NE
Copper	**103**	NE	NE
Lead	**857**	NE	NE
Zinc	**263**	NE	NE

SB01/MW01

Sample ID	SB01_4-6	SB01_7-9
Sampling Date	2/19/2014	2/19/2014
Laboratory Sample ID	1480504-01	1480504-02
Sample Depth (feet)	4 - 6	7 - 9
Sample Layer	Deep Fill	Native Sand
PID Reading (ppm)	0.0	1.9
VOCs (mg/kg)	NE	NE
SVOCs (mg/kg)	NE	NE
Pesticides (mg/kg)	ND	ND
PCBs (mg/kg)		
Total PCBs	ND	ND
Metals (mg/kg)		
Chromium, Trivalent	**33.0**	NE
Copper	**699**	NE
Lead	**410**	NE
Mercury	**0.29**	ND
Nickel	**48**	NE
Zinc	**532**	**121**

SB21

Sample ID	SB21_9-10	SB21_11-12	SB21_14-15	SB21_24-25
Sampling Date	9/23/2014	9/23/2014	9/23/2014	9/23/2014
Laboratory Sample ID	1480908-01	1480908-02	1480908-03	1480908-04
Sample Depth (feet)	9 - 10	11 - 12	14 - 15	24 - 25
Sampled Layer	Sand	Sand	Silty Clay	Sandy Clay
PID Reading (ppm)	0.0	21.0	4.8	
VOCs (mg/kg)				
cis-1,2-Dichloroethylene	NE	**0.45** D[SR]	**0.42** D[SR]	NE
Tetrachloroethylene	NE	NE	NE	**12** D[SR]
Trichloroethylene	NE	NE	NE	**1.10** D[SR]

SB18

Sample ID	SB18_0-5	SB18_11-13	SB18_17-19
Sampling Date	4/15/2014	4/15/2014	4/15/2014
Laboratory Sample ID	14D0616-04	14D0616-05	14D0616-06
Sample Depth (feet)	0 - 5	11 - 13	17 - 19
Sampled Layer	Shallow Fill	Native Sand	Native Sandy Silt
PID Reading (ppm)	0.0	0.3	0.0
VOCs (mg/kg)	NE	NE	NE
SVOCs (mg/kg)	NE	ND	ND
Pesticides (mg/kg)	NE	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Cadmium	NE	**7.21**	ND
Chromium, Hexavalent	ND	**4.7**	ND
Chromium, Trivalent	NE	**86**	NE
Copper	NE	**57**	NE
Lead	**222**	NE	NE
Zinc	**182**	NE	NE

SB12/MW12

Sample ID	SB12_1-2	SB12_6-8	SB12_12-14
Sampling Date	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-10	14D0679-11	14D0679-12
Sample Depth (feet)	1 - 2	6 - 8	12 - 14
Sampled Layer	Shallow Fill	Native Sand	Native Sand
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	ND	ND	ND
SVOCs (mg/kg)			
Benzo(a)anthracene	**1.63**	ND	ND
Benzo(a)pyrene	**1.31**	ND	ND
Benzo(k)fluoranthene	**1.22**	ND	ND
Chrysene	**1.40**	ND	ND
Indeno(1,2,3-cd)pyrene	**0.51**	ND	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Barium	**1,410**	NE	NE
Copper	**228**	NE	NE
Lead	**7,090**	NE	NE
Zinc	**622**	NE	NE

SB08

Sample ID	SB08_0-2	SB08_15-17
Sampling Date	2/19/2014	2/19/2014
Laboratory Sample ID	1480504-07	1480504-08
Sample Depth (feet)	0 - 2	15 - 17
Sampled Layer	Shallow Fill	Native Silt
PID Reading (ppm)	0.0	0.0
VOCs (mg/kg)	NE	NE
SVOCs (mg/kg)		
Benzo(a)anthracene	**3.02** D[a]	ND
Benzo(a)pyrene	**1.93** D[a]	ND
Benzo(b)fluoranthene	**3.84** D[a]	ND
Benzo(k)fluoranthene	**2.52** D[a]	ND
Chrysene	**3.38** D[a]	ND
Indeno(1,2,3-cd)pyrene	**0.692** JD[a]	ND
Pesticides (mg/kg)	ND	ND
PCBs (mg/kg)		
Total PCBs	ND	ND
Metals (mg/kg)		
Chromium, Hexavalent	**1.29**	ND
Copper	**484**	NE
Lead	**81,000** D[SR]	NE
Mercury	**0.63**	ND
Nickel	**54.7**	NE
Zinc	**197**	NE

SB07

Sample ID	SB07_1-3	SB07_5-7
Sampling Date	2/19/2014	2/19/2014
Laboratory Sample ID	1480504-05	1480504-06
Sample Depth (feet)	1 - 3	5 - 7
Sampled Layer	Shallow Fill	Native Sand
PID Reading (ppm)	0.0	0.0
VOCs (mg/kg)	NE	NE
SVOCs (mg/kg)		
Benzo(a)anthracene	**1.49** D[a]	ND
Benzo(a)pyrene	**1.14** D[a]	ND
Benzo(b)fluoranthene	**1.56** D[a]	ND
Benzo(k)fluoranthene	**1.22** D[a]	ND
Chrysene	**1.43** D[a]	ND
Pesticides (mg/kg)	ND	ND
PCBs (mg/kg)		
Total PCBs	ND	ND
Metals (mg/kg)		
Lead	**168**	NE
Mercury	**0.569**	ND
Zinc	**173**	NE

SB13/MW13

Sample ID	SB13_0-2	SB13_3-10	SB13_14-15
Sampling Date	4/17/2014	4/17/2014	4/17/2014
Laboratory Sample ID	14D0716-01	14D0716-02	14D0716-03
Sample Depth (feet)	0 - 2	9 - 10	14 - 15
Sampled Layer	Shallow Fill	Native Silty Sand	Native Silt
PID Reading (ppm)	0.0	5.8	0.3
VOCs (mg/kg)			
cis-1,2-Dichloroethylene	ND	**0.75** D[SR]	**0.32** D[SR]
Tetrachloroethylene	NE	**5.6** D[SR]	**5.3** D[SR]
Trichloroethylene	NE	**0.72** D[SR]	**1.4** D[SR]
Vinyl Chloride	ND	**0.12**	ND
SVOCs (mg/kg)	NE	ND	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Lead	**87**	NE	NE

SB04/MW04

Sample ID	SB04_1-2	DUP01_022014	SB04_4-6
Sampling Date	2/20/2014	2/20/2014	2/20/2014
Laboratory Sample ID	1480504-11	1480504-13	1480504-12
Sample Depth (feet)	1 - 3	1 - 3	4 - 6
Sample Layer	Shallow Fill	Shallow Fill	Deep Fill
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	NE	NE	NE
SVOCs (mg/kg)			
Benzo(b)fluoranthene	NE	NE	**0.922**
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	**0.118**
Metals (mg/kg)			
Arsenic	NE	**20.3**	NE
Cadmium	NE	**3.8**	NE
Chromium, Hexavalent	**2.55**	**1.86**	NE
Copper	**172**	**860**	**202**
Lead	**508**	**630**	**387**
Mercury	**1.86**	**14.9**	**1.37**
Nickel	NE	**34.0**	NE
Zinc	**399**	**1,410**	**467**

LEGEND

- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- SITE BOUNDARY
- (2' - 3') — DEPTH INTERVAL AT WHICH PETROLEUM IMPACTS, INCLUDING ODORS, STAINING, AND PHOTOIONIZATION DETECTOR (PID) READINGS ABOVE BACKGROUND LEVELS, WERE OBSERVED IN THE BORING

NOTES:

1. DRAWING BASED ON MAY 5, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED, BORING LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.
3. SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (SCO) AND RESTRICTED RESIDENTIAL RESTRICTED USE SCOs.
4. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE SCOs ARE SHOWN.
5. CONCENTRATIONS ABOVE THE NYSDEC PART 375 UNRESTRICTED USE SCOs ARE IN BOLD.
5. CONCENTRATIONS ABOVE THE NYSDEC PART 375 RESTRICTED RESIDENTIAL RESTRICTED SCOs ARE HIGHLIGHTED.
6. DUP01_022014 IS A DUPLICATE OF SAMPLE SB04_1-3; DUPR101_041614 IS A DUPLICATE OF SAMPLE SB10_9-10; AND DUPR102_041614 IS A DUPLICATE OF SAMPLE SB16_6.5-8.
7. VOC = VOLATILE ORGANIC COMPOUND
8. SVOC = SEMIVOLATILE ORGANIC COMPOUND
9. PCB = POLYCHLORINATED BIPHENYL
10. mg/kg = MILLIGRAM PER KILOGRAM
11. ND = NOT DETECTED
12. NE = COMPOUND DETECTED AT A CONCENTRATION THAT DID NOT EXCEED THE NYSDEC PART 375 UNRESTRICTED USE SCOs AND RESTRICTED RESIDENTIAL RESTRICTED SCOs .

QUALIFIERS:

J = DETECTED ABOVE THE METHOD DETECTION LIMIT BUT BELOW THE REPORTING LIMIT; THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION
B = ANALYTE WAS DETECTED IN THE ASSOCIATED LABORATORY ANALYSIS BATCH BLANK
DII = RESULT IS FOR A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR

	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Residential Restricted Use SCOs
VOCs (mg/kg)		
Acetone	0.05	100
cis-1,2-Dichloroethylene	0.25	100
Methylene chloride	0.05	100
Tetrachloroethylene	1.3	19
Trichloroethylene	0.47	21
Vinyl Chloride	0.02	0.9
SVOCs (mg/kg)		
Benzo(a)anthracene	1	1
Benzo(a)pyrene	1	1
Benzo(b)fluoranthene	1	1
Benzo(k)fluoranthene	0.8	3.9
Chrysene	1	3.9
Dibenz(a,h)anthracene	0.33	0.33
Indeno(1,2,3-cd)pyrene	0.5	0.5
Pentachlorophenol	0.8	6.7
Pesticides (mg/kg)		
4,4'-DDD	0.0033	13
4,4'-DDE	0.0033	8.9
4,4'-DDT	0.0033	7.9
alpha-Chlordane	0.094	4.2
Dieldrin	0.005	0.2
PCBs (mg/kg)		
Total PCBs	0.1	1
Metals (mg/kg)		
Arsenic	13	16
Barium	350	400
Cadmium	2.5	4.3
Chromium, Hexavalent	1	110
Chromium, Trivalent	30	180
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Selenium	3.9	180
Zinc	109	10000

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Project: 44-30 PURVES STREET
BLOCK No. 268, LOT No. 1
LONG ISLAND CITY
QUEENS NEW YORK

Drawing Title: SOIL SAMPLE RESULTS MAP

Project No.	170282501
Date	05/13/2014
Scale	1" = 30'
Drawn By	PMM
Submission Date	X
Figure No.	4
Sheet	4 of 9

SUBMISSION DATE: XXXXX ##,####
PROJECT No. 170282501

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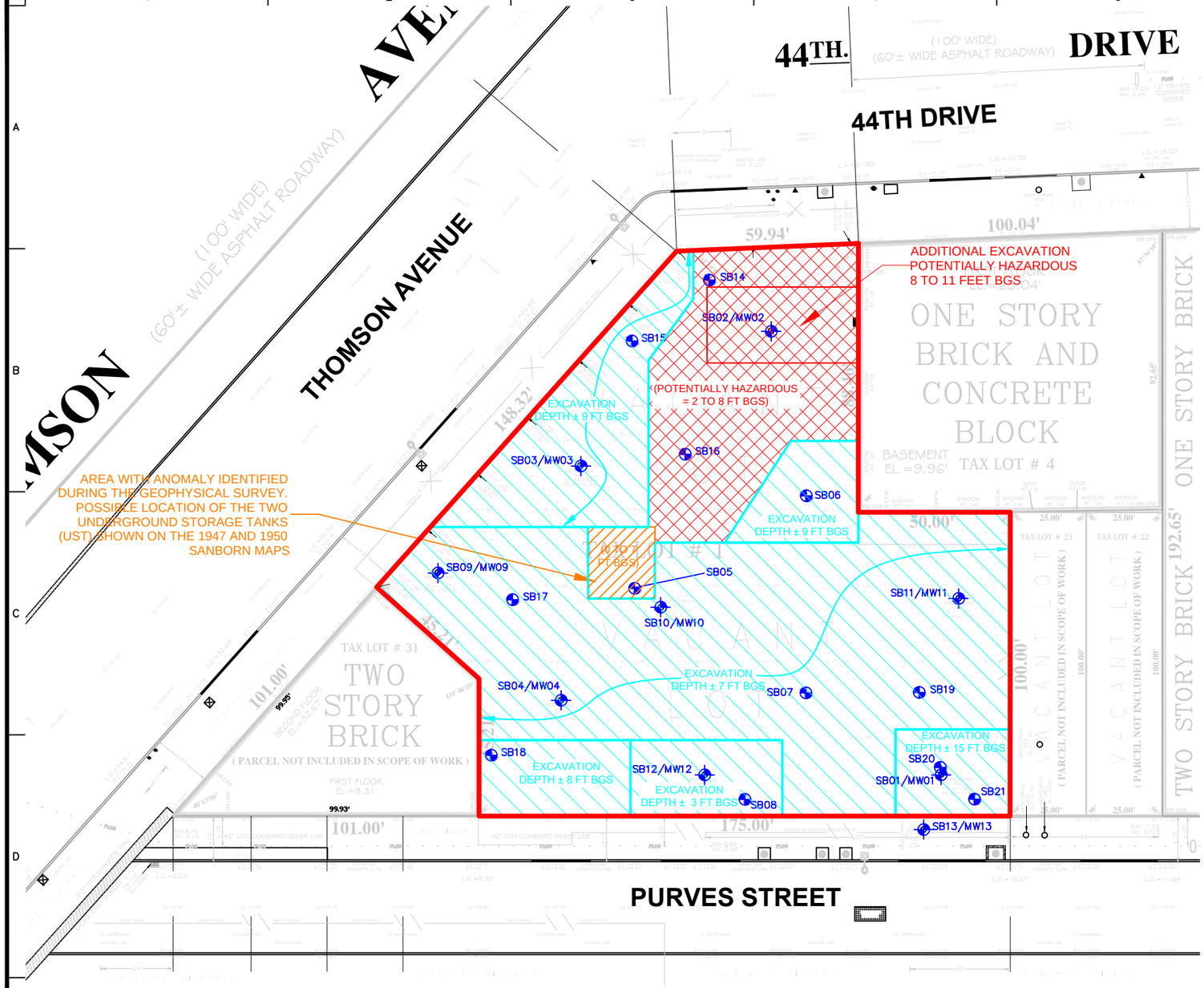

LEGEND

- SITE BOUNDARY
- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- UNDERGROUND STORAGE TANK EXCAVATION AREA
- HISTORIC FILL WITH POTENTIAL HAZARDOUS METALS
- HISTORIC FILL

NOTES:

1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED. BORING LOCATIONS, SOIL VAPOR AND AMBIENT AIR SAMPLE LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.
3. FT BGS = FEET BELOW GRADE SURFACE

40 0 10 25 40
SCALE IN FEET

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Drawing Title
ALTERNATIVE 1 - TRACK 1 CLEANUP

Project No. 170282501	Figure No. 5
Date 07/16/2014	
Scale 1" = 40'	
Drawn By PM / Checked By	
Submission Date	Sheet 5 of 9

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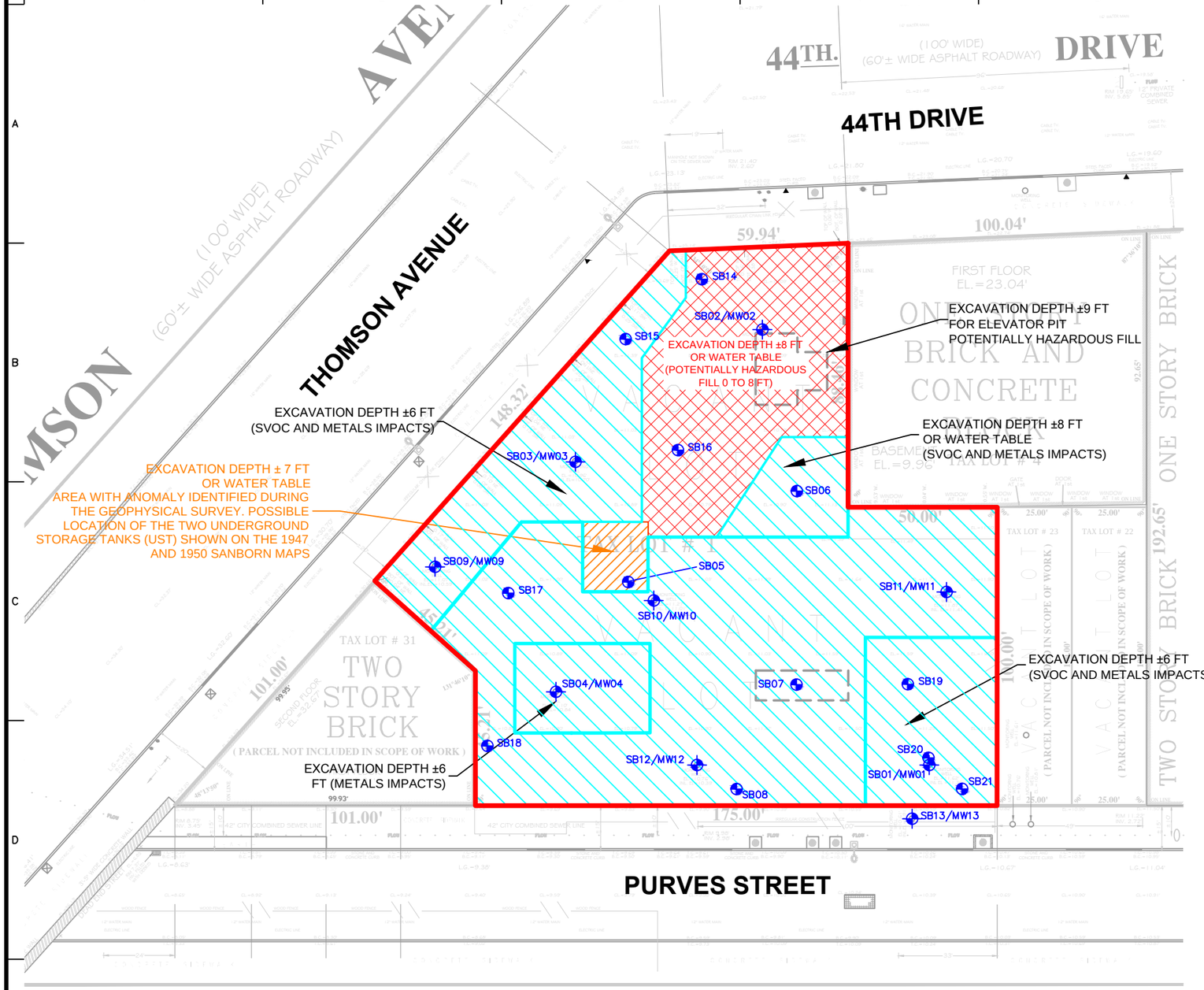

LEGEND

- SITE BOUNDARY
- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- UNDERGROUND STORAGE TANK EXCAVATION AREA
- HISTORIC FILL WITH POTENTIAL HAZARDOUS LEAD
- HISTORIC FILL (MINIMUM EXCAVATION IS ±2.5 FEET; DEEPER EXCAVATIONS ARE INDICATED)
- AREA OF DEEPER EXCAVATION REQUIRED FOR ELEVATOR PIT

NOTES:

1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED. BORING LOCATIONS, SOIL VAPOR AND AMBIENT AIR SAMPLE LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.
3. FOR EXCAVATION DEPTHS GREATER THAN 4 FEET, SUPPORT OF EXCAVATION WILL BE ACCOMPLISHED BY 1.5:1 SLOPING.

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Drawing Title
ALTERNATIVE II - TRACK 4 CLEANUP

Project No. 170282501	Figure No. 6
Date 07/16/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By	
Submission Date	Sheet 6 of 9

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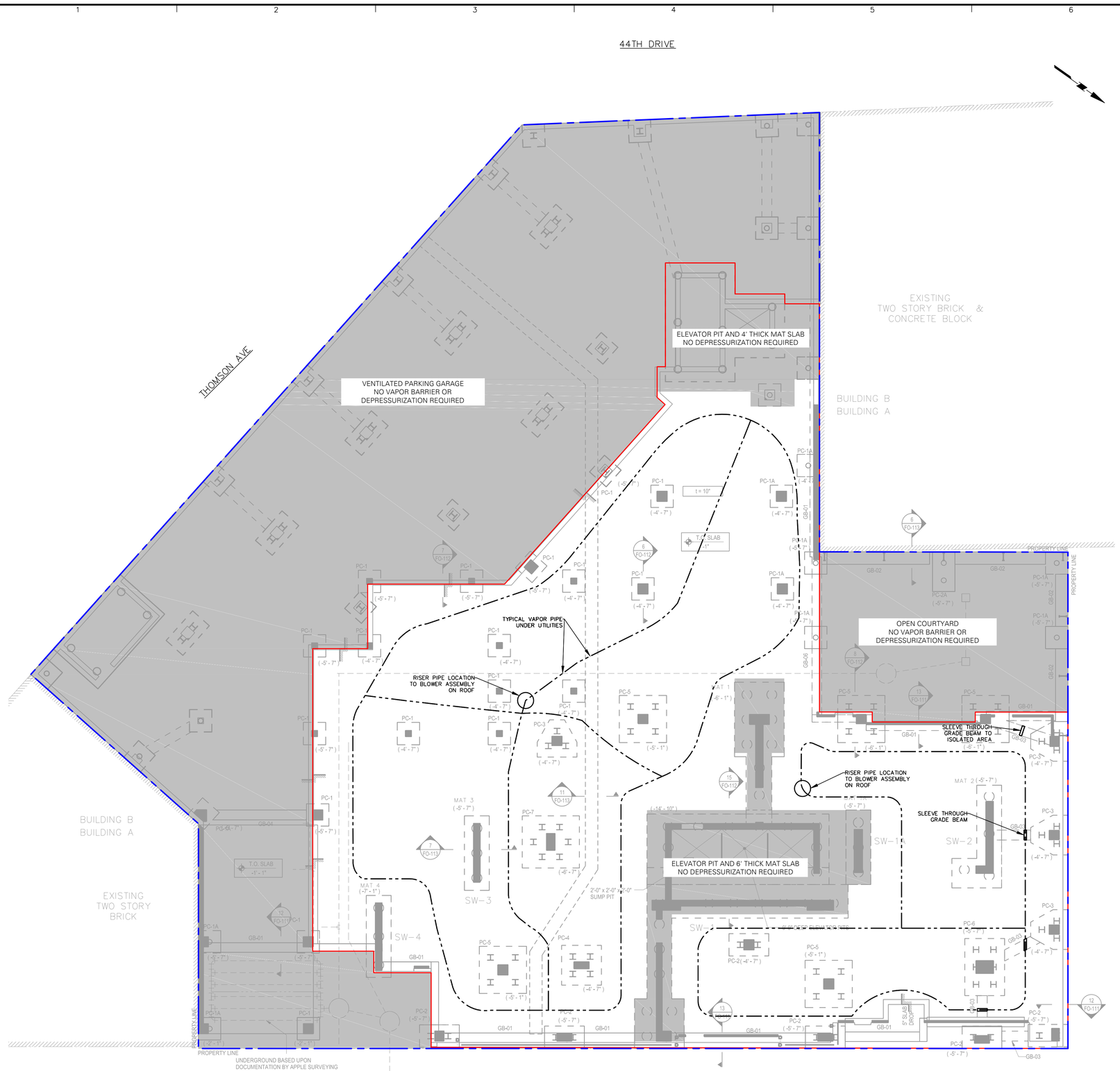

GENERAL NOTES:

1. BASE MAP TAKEN FROM FXFOWLE, "FOUNDATION PLAN, FO-101.00", DATED OCTOBER 22, 2014.
2. VAPOR BARRIER EXTENDS BELOW THE FOOTPRINT AND ALONG THE VERTICAL WALLS OF DEPRESSED FOUNDATION MAT AND SLABS, AS NOTED IN THE DRAWING. VAPOR BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
3. VAPOR COLLECTION PIPE RUNS ARE APPROXIMATE. PIPE LOCATIONS ARE SUBJECT TO CHANGE PER FIELD CONDITIONS.
4. RISER PIPE STUB LOCATION IS APPROXIMATE. RISER PIPE RUNS AND ROOF-TOP BLOWER AND EXHAUST POINT LOCATIONS TO BE DESIGNED BY OTHERS.
5. SUBMEMBRANE DEPRESSURIZATION SYSTEM (SMD) AND VAPOR BARRIER DETAILS ARE INCLUDED IN APPENDIX E.
6. THE DEEP ELEVATOR PIT AND SHEAR WALL PILE CAP WILL NOT BE DEPRESSURIZED BECAUSE IT IS A 6-FOOT THICK CONCRETE MAT AND WILL BE WATERPROOFED IN ACCORDANCE WITH THE FOUNDATION DRAWINGS AND SPECIFICATIONS.
7. THE WATERPROOFING BENEATH THE SHEAR WALL PILE CAP, DEEP ELEVATOR PIT, AND ANY OTHER WATERPROOFED FOUNDATION ELEMENT, WILL BE MARRIED TO THE VAPOR BARRIER MEMBRANE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
8. SLEEVES THROUGH GRADE BEAMS TO BE DESIGNED BY OTHERS.

LEGEND:

- PROPERTY BOUNDARY
- VAPOR BARRIER EXTENTS AND DEPRESSURIZED AREA
- SMD VAPOR COLLECTION PIPING
- SLEEVE THROUGH GRADE BEAM FOR VAPOR COLLECTION PIPE
- APPROXIMATE RISER PIPE LOCATION

Date	Description	No.

REVISIONS

SIGNATURE DATE SIGNED

PROFESSIONAL XXXXXXXXXX
STATE LIC. No. XXXXX

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Drawing Title

SMD SYSTEM AND VAPOR BARRIER LAYOUT PLAN

Project No. 170282501	Drawing No. 7
Date 7/25/2014	
Scale 1" = 10'	
Drawn By AT / Checked By	
Submission Date	Sheet 7 of 9

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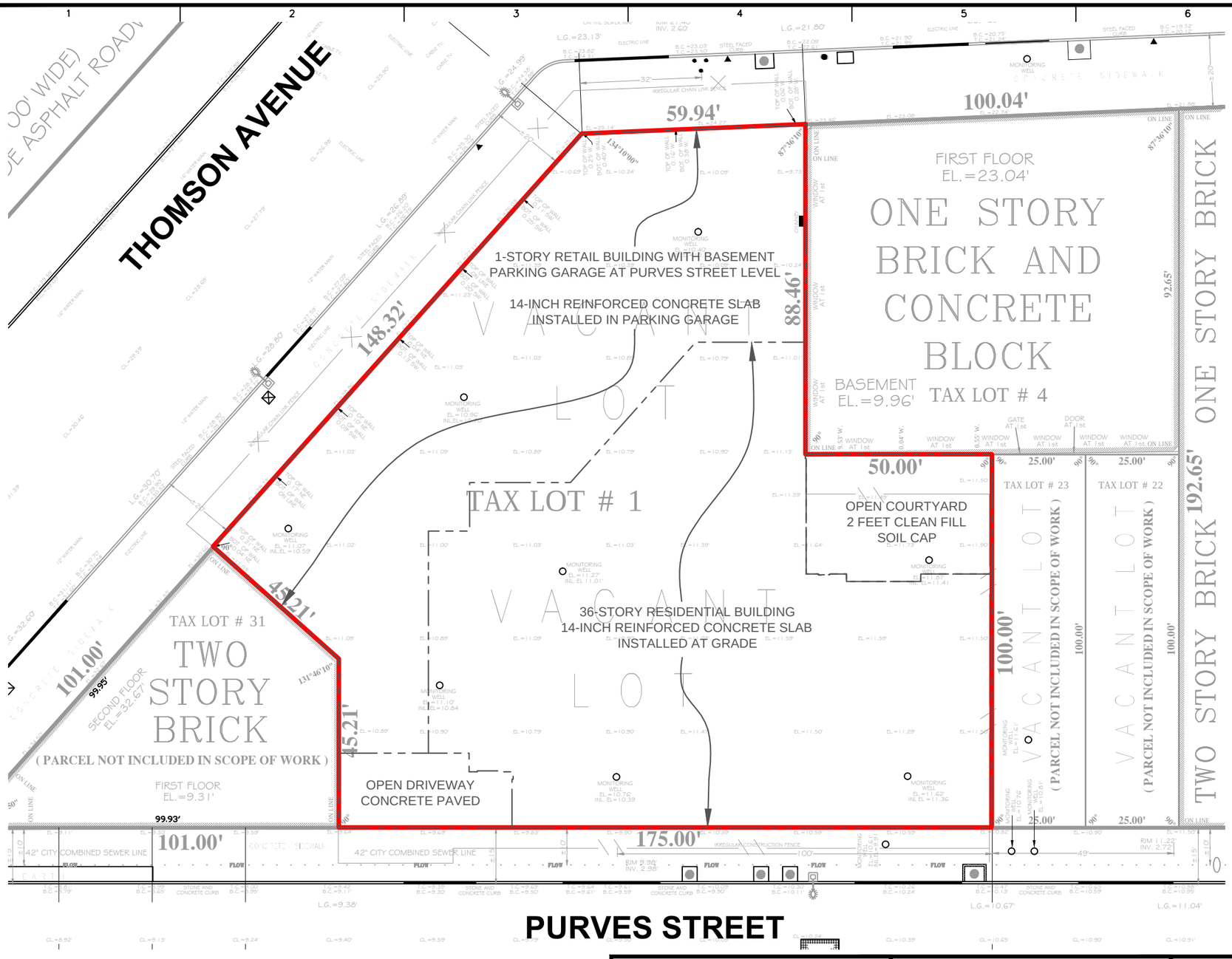

LEGEND

SITE BOUNDARY

PROPOSED DEVELOPMENT OUTLINE

NOTES:

1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.

30 0 15 30

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Drawing Title

SITE COVER SYSTEM PLAN

Project No. 170282501	Figure No. 8
Date 07/16/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By	
Submission Date	Sheet 8 of 9

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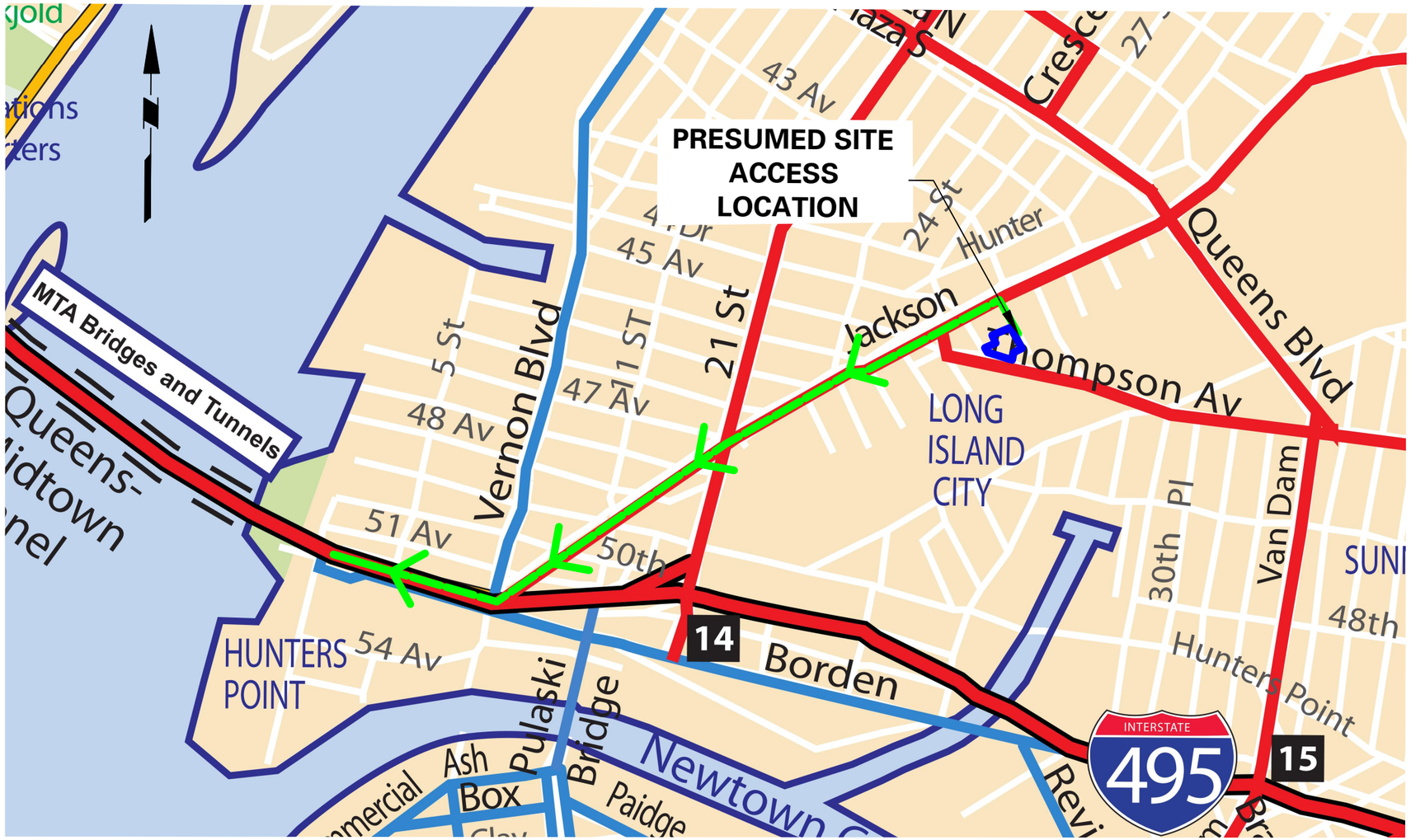

LEGEND:

- APPROXIMATE SITE BOUNDARY
- THROUGH TRUCK ROUTE
- TRUCK ROUTE

NOTES:

1. TRUCK ROUTE MAP ADAPTED FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYCDOT) 2011-2012 NEW YORK CITY TRUCK ROUTE MAP ON JULY 9, 2014.
2. SITE ACCESS GATE LOCATION MAY CHANGE BASED ON CONSTRUCTION LOGISTICS.

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Project
44-30 PURVES STREET
BLOCK No. 268, LOT No. 1
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
TRUCK ROUTE MAP

Project No. 170282501	Figure No. 9
Date 7/17/2014	
Scale N.T.S	
Drawn By PMM / Checked By	
Submission Date	Sheet 9 of 9

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Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RAWP Figures\Figure 7.Truck Route Map.dwg Date: 7/18/2014 Time: 13:33 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL

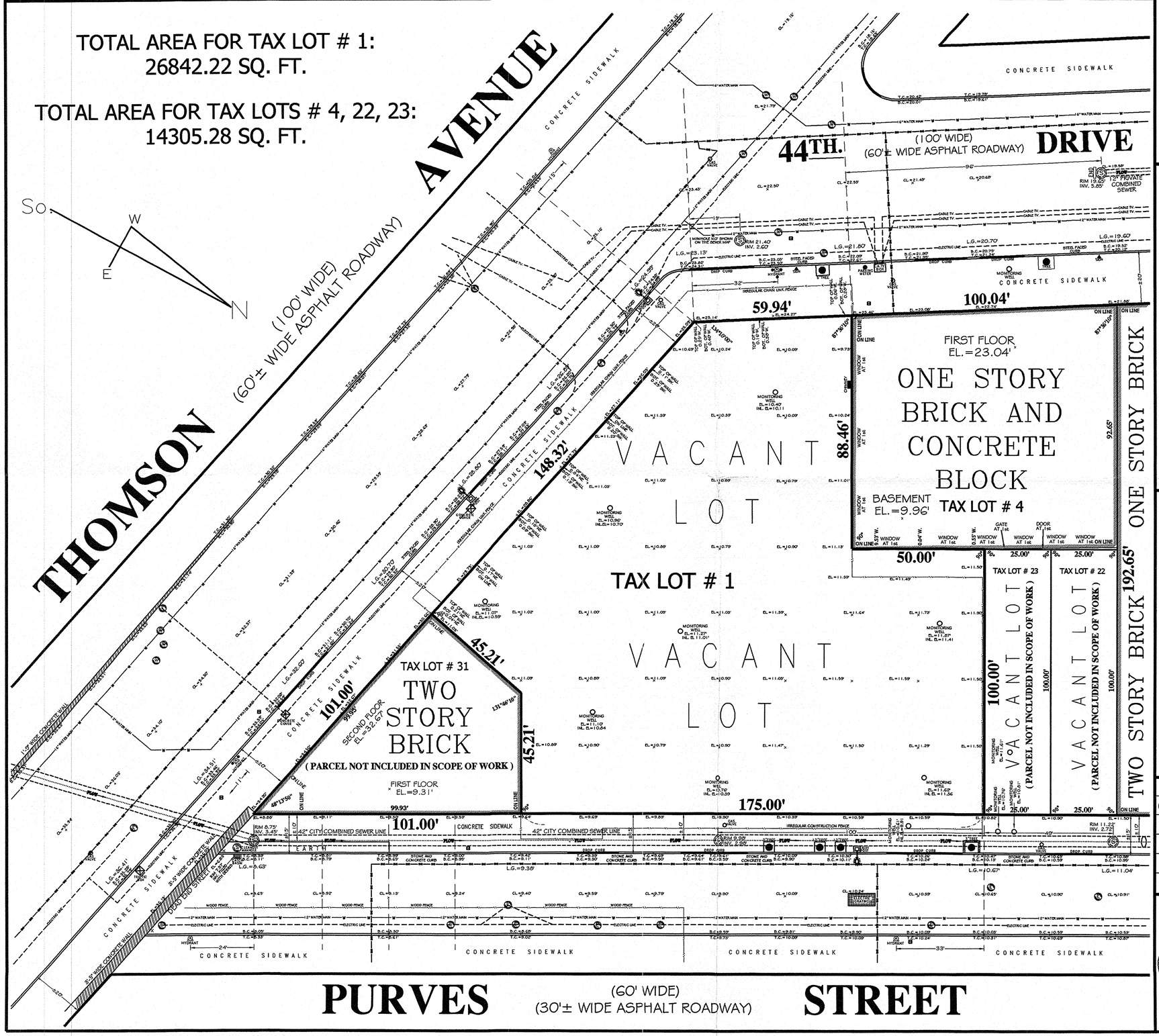
Appendix A
Site Survey

LEGEND | LIGHT POST | UTILITY POLE | CATCH BASIN | WATER VALVE | GAS VALVE | PARKING METER | TRAFFIC SIGN | HYDRANT HYD. | E.E. ELECTRIC BOX | TREE PIT | (S) SEWER MANHOLE | (E) ELECTRIC MANHOLE | (T) TELEPHONE MANHOLE | (W) D.W.S WATER

No. NORTH | So. SOUTH | E. EAST | W WEST | F.E. FIRE ESCAPE | CONCRETE WALL | STREET LINE | A. AREAWAY | CL. CLEAR | RT. RIGHT | EL. ELEVATION | TOP OF CURB EL. | TC. | BOT. OF CURB EL. | BC. | CENTER OF ROAD EL. | CL. | LG. LEGAL GRADE | CALC. CALCULATED | N.T.S. NOT TO SCALE

TOTAL AREA FOR TAX LOT # 1:
26842.22 SQ. FT.

TOTAL AREA FOR TAX LOTS # 4, 22, 23:
14305.28 SQ. FT.



NOTE:

* NOT FOR TITLE PURPOSES

CAUTION: BEFORE PERFORMING ANY DIGGING OR DRILLING ON THIS SITE, IT IS REQUIRED THAT SUBSURFACE SERVICES, INCLUDING THE UNDERGROUND MAINS BE MARKED AND IDENTIFIED BY THE UTILITY INVOLVED IN COMPLIANCE WITH INDUSTRIAL CODE 53 OF NEW YORK STATE.

1) ALL ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS 1.095 FEET ABOVE NATIONAL GEODETIC SURVEY DATUM AT SANDY HOOK NEW JERSEY.
2) UNDERGROUND UTILITY INFORMATION SHOWN WAS OBTAINED FROM VARIOUS COMPANIES AND CITY AGENCIES AND IS NOT GUARANTEED FOR ACCURACY OR COMPLETENESS.
3) THIS IS TO CERTIFY THAT THERE ARE NO APPARENT STREAMS NOR NATURAL WATER COURSES IN THE PROPERTY AS SHOWN ON THIS SURVEY.

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY. GUARANTEES OR CERTIFICATIONS INDICATED HEREON SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED, AND ON HIS BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION. GUARANTEES OR CERTIFICATION ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

BLOCK 268
LOT AS SHOWN
SECTION 2
COUNTY QUEENS
DWG BY VOY.
SCALE 1"-24'

DATE	JOB No.	DESCRIPTION
04-11-2014	14169	TOPOGRAPHIC & BOUNDARY SURVEY

APPLE SURVEYING
2390 Mc DONALD AVE.
BROOKLYN, NY 11223
(REAR ENTRANCE)
TEL. 718 331 0800
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E-MAIL: office@applesurveying.com

Appendix B

Proposed Development Plans

GENERAL NOTES NEW YORK - NEW SPEC NEW CONSTRUCTION:

I - CODES

1. BUILDING CODE OF THE CITY OF NEW YORK, INCLUDING LATEST AMENDMENTS ("2008 N.Y.C. CODE"), CONSISTING OF THE 2003 INTERNATIONAL BUILDING CODE.
2. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318-02 ("ACI") AS MODIFIED BY CHAPTER 19 OF THE N.Y.C. BUILDING CODE.
3. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530-02 ("ACI 530") AS MODIFIED CHAPTER 21 OF THE N.Y.C. BUILDING CODE.

II - MATERIALS

UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS:

1. STRUCTURAL STEEL:
   ALL ROLLED SHAPES: ASTM A572 OR A992, GRADE 50
   ALL PLATES AND CONNECTION MATERIAL: ASTM A36
   ALL TUBULAR SECTIONS: ASTM A500, GRADE B
   ANCHOR BOLTS, U.O.N.: ASTM F1554
2. CAST-IN-PLACE CONCRETE:
   FOUNDATION WALLS & BUTTRESSES: 5000 PSI NORMAL WT. (145 PCF)
   MAT FOUNDATIONS AND PILE CAPS: 6000 PSI NORMAL WT. (145 PCF)
   GRADE BEAMS AND STRAP BEAMS: 6000 PSI NORMAL WT. (145 PCF)
   FORMED SLABS: AS NOTED ON PLAN DRAWINGS
   COLUMNS AND WALLS: AS NOTED ON COLUMN SCHEDULE
3. REINFORCEMENT:
   DEFORMED BARS: ASTM A615, GRADE 60, GRADE 75 FOR #10 & #11
   WELDED WIRE FABRIC: ASTM A185.
   WELDED DEFORMED WIRE FABRIC: ASTM A467, GRADE 60.
4. WELDING ELECTRODES: E70XX LOW HYDROGEN.
5. BOLTING MATERIALS: ASTM A325 OR F1852 (TWIST-OFFTYPE).
   OR A490. U.O.N.

III - GENERAL

1. NOTES, TYPICAL DETAILS AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, ARCHITECTURAL AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO PERFORMING WORK.
3. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.
4. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATER/DAMPROOFING AND FIREPROOFING DETAILS AND REQUIREMENTS.
5. TOP OF CONCRETE SLABS ARE AT FLOOR REFERENCE ELEVATIONS EXCEPT AS NOTED. FOR FLOOR REFERENCE ELEVATIONS SEE COLUMN SCHEDULE.
6. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTS. SEE CONSTRUCTION MANAGER'S DOCUMENTS.
7. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECTS OR ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.
8. SHORING, BRACING AND PROTECTION OF EXISTING AND ADJACENT STRUCTURES DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PROTECT AND MAINTAIN THE INTEGRITY OF ADJACENT STREETS, BUILDINGS AND STRUCTURES.
9. ALL EXISTING DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY FIELD MEASUREMENTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
10. DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE KNOWLEDGE OF EXISTING CONDITIONS. IF, DURING DEMOLITION, EXCAVATION OR CONSTRUCTION, ACTUAL CONDITIONS ARE DISCOVERED TO DIFFER FROM THOSE INDICATED ON DRAWINGS, ENGINEER SHALL BINOTIFIED.
11. CONSTRUCTION DOCUMENTS ARE IN COMPLIANCE WITH SECTION BC 1603 OF NEW YORK CITY BUILDING CODE.

IV - FOUNDATION NOTES

1. ALL THE COLUMNS AND SHEAR WALLS SHALL BEAR ON DEEP FOUNDATIONS SUCH AS H-PILES, PIPE PILES, OR CAISSONS.
2. NO BACKFILL SHALL BE PLACED AGAINST FOUNDATION WALLS UNLESS SUPPORTING SLABS ARE IN PLACE AND SET OR THE WALLS ARE ADEQUATELY BRACED.
3. UNDERPINNING OF EXISTING ADJACENT FOUNDATIONS MAY BE REQUIRED. ALL ENGINEERING, DESIGNS AND MEANS AND METHODS OF CONSTRUCTION RELATED TO UNDERPINNING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. DEWATERING OF THE SITE DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR NOT TO UNDERMINE EXISTING FOUNDATIONS. METHOD OF DEWATERING AND CALCULATIONS FOR THE APPROPRIATE SYSTEM ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL PILE CAPS ARE TO BE CENTERED ON COLUMNS ABOVE, U.O.N.
6. PROVIDE DOWELS IN FOUNDATIONS FOR ALL WALLS, COLUMNS, AND SHEAR WALLS OF SAME NUMBER AND SIZE AS THE VERTICAL REINFORCEMENT ABOVE, U.O.N.
7. PROVIDE WATERSTOPS IN ALL VERTICAL CONSTRUCTION JOINTS IN BASEMENT WALLS.
8. SLABS ON GROUND SHALL BE PLACED ON SELECT FILL COMPACTED TO 95 PERCENT MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557).

V - UNDERPINNING NOTES

1. CONTRACTOR SHALL RETAIN THE SERVICE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK TO PREPARE SIGNED AND SEALED DESIGN DRAWINGS AND CALCULATIONS FOR ALL REQUIRED UNDERPINNING OF ADJACENT STRUCTURES. THE CONTRACTOR SHALL FILE THE DRAWINGS WITH THE BUILDING DEPARTMENT.
2. SUBMIT COPY OF FILED DRAWINGS TO DESIMONE FOR INFORMATION ONLY. ALL UNDERPINNING WORK SHALL BE SUBJECT TO SPECIAL INSPECTION IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
3. THE FULL SCOPE OF THIS WORK IS TO BE DETERMINED BY THE CONTRACTOR BY THE REVIEW OF ALL AVAILABLE DOCUMENTATION SUCH AS SURVEYS, GEOTECHNICAL REPORTS AND THE LIKE AND BY SITE REVIEW PRIOR TO BIDDING.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF ALL EXISTING ADJACENT BUILDINGS, STRUCTURES, SIDEWALKS, VAULTS AND THE LIKE DURING AND AS A RESULT OF UNDERPINNING OPERATIONS.

VI - CONCRETE NOTES

1. REINFORCING STEEL SHALL HAVE A MINIMUM CLEAR COVER AS FOLLOWS, U.O.N. IN DRAWINGS:

   CONCRETE POURED AGAINST EARTH..... 3"

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #5 OR SMALLER..... 11/2"
   #6 OR LARGER..... 2"

   CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   COLUMNS (TIES AND MAIN REINFORCING)..... 11/2"
   SLABS, WALLS,
   #11 OR SMALLER..... 3/4"
   BEAMS (STIRRUPS AND MAIN REINF)..... 11/2"

   CLEAR COVER SHALL BE CLEARLY SHOWN ON ALL REBAR DETAIL DRAWINGS.
2. ALL REINFORCEMENT SHALL BE SECURELY HELD IN POSITION WHILE PLACING CONCRETE. IF NECESSARY, ADDITIONAL BARS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES, BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, AS WELL AS THE STRUCTURAL DRAWINGS FOR THE LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED.
4. LOCATION OF ALL CONSTRUCTION JOINTS NOT SHOWN IN DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO DETAILING OF REINFORCING. ALL CONSTRUCTION JOINTS TO BE CLEARLY SHOWN IN REBAR DETAIL DRAWINGS. ENGINEER MAY REQUIRE ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS.
5. DIMENSIONS "Ld" AS NOTED ON DRAWINGS SHALL BE AS FOLLOWS:

BEAMS		
BAR SIZE	BOTTOM BARS	OTHER BARS
#3	13	17
#4	17	23
#5	22	28
#6	26	34
#7	38	49
#8	43	56
#9	48	63
#10	54	71
#11	60	78

COLUMNS	
BAR SIZE	Ld
#3	13
#4	17
#5	22
#6	26
#7	38
#8	43
#9	48
#10	54
#11	60

TABLE ASSUMPTIONS:
1. f'c = 5 ksi
2. A MINIMUM CLEAR COVER AS SHOWN IN NOTE 1 ABOVE
3. A MINIMUM CLEAR SPACING OF 3" BETWEEN ANY BARS
4. fy = 60 ksi
5. NORMAL WEIGHT CONCRETE
6. FOR WALLS:
   CASE 1 = CLEAR SPACING > 2db AND CLEAR COVER > db
   CASE 2 = OTHER THAN CASE 1

WALLS				
BAR SIZE	VERTICAL BARS		HORIZONTAL BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	13	20	17	25
#4	17	26	23	34
#5	22	32	28	42
#6	26	39	34	50
#7	38	56	49	73
#8	43	64	56	83
#9	48	72	63	94
#10	54	81	70	106
#11	60	90	78	117

SLABS / MATS			
BAR SIZE	THICKNESS 12" OR LESS	THICKNESS GREATER THEN 12"	
	ALL BARS	BOTTOM BARS	OTHER BARS
#3	13	13	17
#4	17	17	23
#5	22	22	28
#6	26	26	34
#7	56	56	73
#8	64	64	83
#9	72	72	94
#10	81	81	106
#11	90	90	117

FOR: f'c = 3 ksi Ld =1.29 x TABLE VALUE
f'c = 4 ksi Ld =1.12 x TABLE VALUE
f'c = 6 ksi Ld =0.92 x TABLE VALUE
f'c = 8 ksi Ld =0.79 x TABLE VALUE

6. ALL LAP SPLICES SHALL BE 1.3LD UNLESS NOTED OTHERWISE ON DRAWINGS.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
8. COMBINATIONS OF EFFECTS DUE TO CONCRETE STRENGTH, CONCRETE WEIGHT ARE CUMULATIVE. Ld SHALL BE MULTIPLIED BY EACH FACTOR TO FIND THE CORRECT VALUE.
9. DOWEL BAR SUBSTITUTIONS SHALL BE PERMITTED PROVIDED THAT MANUFACTURER'S DATA SUPPORTS FULL TENSION SPLICES.
10. ALL SLEEVES AND PENETRATIONS SHALL BE PROVIDED BY THE SUB-CONTRACTOR REQUIRING THE OPENING.
11. CONCRETE COLUMN LENGTH ADJUSTMENT FOR ELASTIC SHORTENING, SHRINKAGE AND CREEP EFFECTS SHALL BE DISCUSSED WITH THE CONCRETE CONTRACTOR.
12. CONDUIT PLACED IN CONCRETE SLABS MUST BE PLACED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
    a. CONTRACTOR SHALL NOT INSTALL CONDUIT THAT IS NOT SHOWN ON MECHANICAL DRAWINGS.
    b. DO NOT CROSS MORE THAN ONE LAYER OF CONDUIT OVER ANOTHER IN ANY GIVEN AREA.
    c. PLACE CENTROID OF CONDUIT OR CONDUIT GROUP AT THE MID-HEIGHT OF THE SLAB.
    d. CONDUIT OR CONDUIT GROUP CAN NOT EXTEND OUTSIDE THE MIDDLE 1/3 OF THE SLAB.
    e. MAINTAIN A MINIMUM CLEAR SPACING BETWEEN THE CONDUIT OF 3 DIAMETERS. THIS REQUIREMENT APPLIES EXCEPT WHERE CONDUIT ACCUMULATES AT "TURN DOWNS". THE CONDITIONS AT "TURN DOWNS" LOCATIONS MUST BE EVALUATED AT EACH LOCATION BY THE STRUCTURAL ENGINEER. "TURN DOWNS" CAN NOT OCCUR AT COLUMN OR BUTTRESS LOCATIONS.
    f. DO NOT PLACE ANY CONDUIT IN THE SLAB WITHIN 36" FROM THE EDGE OF ANY COLUMN OR WALL ABOVE OR BELOW THE SLAB.
    g. SLAB REINFORCEMENT MUST NOT BE MOVED, CUT, OR BENT TO ACCOMODATE CONDUIT PLACEMENT.
    h. CONDUIT IS NOT TO RUN THROUGH G/R WITHIN A COLUMN OR WALL.
    i. ALUMINUM CONDUIT SHALL NOT BE EMBEDDED IN A SLAB UNLESS IT IS EFFECTIVELY COATED.

    IF THE ABOVE REQUIREMENTS ARE ALL MET, CONDUIT LOCATIONS NEED NOT BE REVIEWED BY THE STRUCTURAL ENGINEER. ANY DEVIATIONS MUST BE SUBMITTED ON A SHOP DRAWING FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO CONDUIT PLACEMENT.

    THE FOLLOWING CASES MUST BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER:

    a. LOCATIONS OF ANY CONDUIT LARGER THAN 2" IN OUTSIDE DIAMETER.
    b. LOCATIONS OF ANY BUNDLED CONDUITS.

VII - SURVEYING

1. PRIOR TO REMOVING RESHORES THE UNDERSIDE OF THE SLAB SHALL BE SURVEYED TO DETERMINE THE RELATIVE ELEVATION OF THE SLAB. AT A MINIMUM, SURVEY POINTS ARE TO BE LOCATED NEXT TO COLUMNS AND AT CENTER OF COLUMN STRIPS AND MIDDLE STRIPS. SLAB EDGES AND CANTILEVERS ARE TO BE SURVEYED AT POINTS OF THEORETICAL MAXIMUM AND MINIMUM DEFLECTIONS WITHIN EACH SPAN. SURVEYOR IS TO SUBMIT A GENERAL LAYOUT OF POINTS TO ENGINEER FOR APPROVAL PRIOR TO SURVEYING THE SLABS. ADDITIONAL POINTS MAY BE REQUIRED AT ENGINEER'S DISCRETION. THE C.M. IS TO CONTRACT OUT THE SURVEYING SERVICE TO A SURVEYOR NOT AFFILIATED WITH THE CONCRETE CONTRACTOR. THE COST OF THIS SURVEY IS TO BE INCLUDED IN THE CONSTRUCTION COST.

VIII - MASONRY NOTES

1. STRUCTURAL CONCRETE MASONRY, AS SHOWN ON THESE DRAWINGS, SHALL HAVE A COMPRESSIVE STRENGTH (F'M) OF 2,000 PSI.
2. MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE II, NORMAL WEIGHT, HOLLOW UNLESS SPECIFICALLY NOTED OTHERWISE ON THESE DRAWINGS, WITH A UNIT STRENGTH AS REQUIRED TO ACHIEVE COMPRESSIVE STRENGTH SPECIFIED ABOVE.
3. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S FOR ABOVE GRADE, TYPE M FOR BELOW GRADE.
4. GROUT FOR FILLED CELLS SHALL CONFORM TO ASTM C476 WITH 3000 PSI STRENGTH AT 28 DAYS. CELLS SHALL BE GROUTED IN INCREMENTS NOT EXCEEDING 5 FEET VERTICALLY. FILL ALL CELLS BELOW GRADE.
5. VERTICAL REINFORCING SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. MINIMUM LAP SPLICES SHALL BE AS FOLLOWS:

   # 3 BARS - 1'-6"
   # 4 BARS - 2'-0"
   # 5 BARS - 2'-6"
   # 6 BARS - 3'-0"
6. HORIZONTAL REINFORCING SHALL BE NO. 9 GAGE "DUROWALL" OR EQUIVALENT AND SHALL BE PLACED EVERY OTHER COURSE U.O.N.
7. ALL BLOCK SHALL BE PLACED IN RUNNING BOND.

IX - SPECIAL INSPECTIONS

OWNER WILL ENGAGE AND PAY FOR A SPECIAL INSPECTOR AND AN INDEPENDENT TESTING AGENCY TO PERFORM THE FOLLOWING SPECIAL INSPECTION AND TESTING AS SPECIFIED ON THE APPLICABLE SECTIONS OF THE NEW YORK CITY BUILDING CODE, CHAPTER 17, SECTION 1704. TECHNICAL REPORT STATEMENT OF RESPONSIBILITY TR-1 FORM SHALL BE FILLED WITH THE BUILDING DEPARTMENT FOR APPROVAL OF SPECIAL INSPECTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE PRIOR NOTICE FOR COMPLETION OF INSPECTIONS.

1. CONCRETE:
   ALL CONCRETE WORK SHALL BE SUBJECT TO SPECIAL INSPECTION BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AS REQUIRED BY SUBCHAPTERS 1704.4 AND 1905.3 AND TABLE 1704.4 OF THE N.Y.C. BUILDING CODE.
   A. THE OWNER SHALL ENGAGE A LICENSED PROFESSIONAL ENGINEER, APPROVED BY THE ENGINEER OF RECORD, TO SUPERVISE THE TESTING OF THE MATERIALS AND THE INSPECTION OF CONCRETE CONSTRUCTION.
   B. THE PRELIMINARY TEST FOR CONTROLLED CONCRETE SHALL BE MADE IN ACCORDANCE WITH SUBCHAPTER 1905.3 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE AND THE APPROVED DESIGN MIXES FILED ON TECHNICAL REPORT TR-3. NO CONCRETE SHALL BE PLACED BEFORE ACCEPTANCE BY ENGINEER.
   C. QUALITY CONTROL AND INSPECTION OF MATERIALS AND OF BATCHING SHALL BE MADE IN ACCORDANCE WITH SUBCHAPTER 1905.3 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE.
   D. ALL FIELD TESTS AND INSPECTIONS SHALL BE PERFORMED AS REQUIRED BY SUBCHAPTER 1905.6 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE. CONCRETE TEST CYLINDER RESULTS SHALL BE FILED ON TECHNICAL REPORT TR-2.
   E. PRIOR TO PERMIT OWNER TO ENGAGE CONCRETE TESTING AGENCY FOR TR-2 AND TR-3 FORMS.

GRAVITY LOADS

CDL CONSTRUCTION DEAD LOAD: SELF WEIGHT OF STRUCTURE.

SDL SUPERIMPOSED DEAD LOAD: WEIGHT OF ALL MATERIALS SUPPORTED ON OR HUNG FROM STRUCTURAL FLOOR.

LL LIVE LOAD

PSF POUNDS PER SQUARE FOOT

1ST FLOOR
CDL: 125 PSF - 10" NORMAL WT CONCRETE SLAB
SDL: 50 PSF - RETAIL/PUBLIC LOBBY
20 PSF - UTILITIES/STORAGE/PARKING/OTHER AREAS
10 PSF - CORRIDORS
LL: 150 PSF - RETAIL/PUBLIC LOBBY/STORAGE/UTILITIES
50 PSF - PARKING/OTHER AREAS

2ND FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - UTILITIES/STORAGE/PARKING/OTHER AREAS
LL: 400 PSF - POOL
150 PSF - MECHANICAL
100 PSF - PUBLIC

3RD FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ROOF
20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL
30 PSF - ROOF

4TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL

5TH - 14TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL

15TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ROOF
20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - ELEVATOR LOBBY
40 PSF - RESIDENTIAL
60 PSF - PRIVATE TERRACE

16TH - 32ND FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL/BALCONY
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - ELEVATOR LOBBY/BALCONY
40 PSF - RESIDENTIAL

33RD FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL/BALCONY
10 PSF - ELEVATOR LOBBY/MECHANICAL
LL: 150 PSF - MECHANICAL
100 PSF - ELEVATOR LOBBY/PUBLIC TERRACE
40 PSF - RESIDENTIAL

34TH LOW ROOF
CDL: 125 PSF - 10" NORMAL WT CONCRETE SLAB
SDL: 10 PSF - ELEVATOR LOBBY
LL: 600 PSF - WATER TANK
150 PSF - MECHANICAL
100 PSF - ELEVATOR LOBBY/BALCONY

35TH EMR FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 10 PSF - ELEVATOR LOBBY
LL: 400 PSF - EMR
100 PSF - ELEVATOR LOBBY

36TH UPPER ROOF
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ELEVATOR LOBBY
LL: 30 PSF - ELEVATOR LOBBY/BALCONY

THE DESIGN, DETAILS, AND NOTES HEREIN ARE IN COMPLIANCE WITH LOCAL LAW 17/95 AND SECTIONS 1613 TO 1620 AND 1624 TO 1626 OF THE 2008 NEW YORK CITY BUILDING CODE.

SEISMIC LOADING CRITERIA	VALUE	CODE REFERENCE
SITE CLASS	D	PER GEOTECH REPORTS
SEISMIC USE GROUP	I	1616.2 - NYC CODE 2008
SEISMIC DESIGN CATEGORY	C	1616.3 - NYC CODE 2008
EARTHQUAKE IMPORTANCE FACTOR, I	1.00	TABLE 1604.5, NYC CODE 2008
PLAN/VERT. STRUCTURAL IRREGULARITIES	NONE	TABLE 12.3-1 & 12.3-2, ASCE 7-05
SHORT PERIOD MAPPED SPECTURAL ACC., Ss	0.365 g	PER GEOTECH REPORTS
1 SEC. PERIOD MAPPED SPECTRAL ACC., S1	0.071 g	PER GEOTECH REPORTS
ACCELERATION SITE COEFFICIENT, Fa	1.51	TABLE 1615.1(1), NYC CODE 2008
VELOCITY SITE COEFFICIENT, Fv	2.4	TABLE 1615.1.2, NYC CODE 2008
MAX. SHORT PERIOD SPECTRAL ACC., SMS	0.550 g	SECTION 1615.1.2, NYC CODE 2008
MAX. 1 SEC. PERIOD SPECTRAL ACC., SM1	0.170 g	SECTION 1615.1.2, NYC CODE 2008
DESIGN SHORT PERIOD SPECTRAL ACC., SDS	0.367 g	SECTION 1615.1.3, NYC CODE 2008
DESIGN 1 SEC. PERIOD SPECTRAL ACC., SD1	0.114 g	SECTION 1615.1.3, NYC CODE 2008
BUILDING PERIOD COEFFICIENT, Ct	0.020	TABLE 12.8-2, ASCE 7-05
BUILDING HEIGHT ABOVE BASE, hn	374 FT	SECTION 12.8.2.1, ASCE 7-05
FUNDAMENTAL PERIOD, Ta	1.7 SEC	PER 3-D LATERAL ANALYSIS
MAX. FUNDAMENTAL PERIOD, T	2.85 SEC	SECTION 12.8.2.1, ASCE 7-05
ANALYSIS PROCEDURE	EQ. LAT. FORCE	SECTION 12.8, ASCE 7-05
RESPONSE MODIFICATION FACTOR, R	5	TABLE 1617.6.2, NYC CODE 2008
DEFLECTION AMPLITDUDE FACTOR, Cd	4 1/2	TABLE 1617.6.2, NYC CODE 2008
SEISMIC RESPONSE COEFFICIENT, Cs	0.073	SECTION 12.8.1.1, ASCE 7-05
BUILDING WEIGHT, W	- KIPS	
SEISMIC BASE SHEAR, V	- KIPS	SECTION 12.8.1, ASCE 7-05

WIND DESIGN DATA

THE DESIGN, DETAILS, AND NOTES HEREIN ARE IN COMPLIANCE WITH ASCE7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

BASIC WIND SPEED: 98 MPH
BUILDING TYPE: ENCLOSED
OCCUPANCY CATEGORY: II
WIND IMPORTANCE FACTOR Iw: 1.0
DIRECTION FACTOR, Kd: 0.85
WIND EXPOSURE CATEGORY: X DIRECTION: B
Y DIRECTION: B

SNOW DESIGN DATA

SNOW LOADING CRITERIA	VALUE	SNOW LOADING CRITERIA
GROUND SNOW LOAD, pg	25 PSF	SECT. 1608.2, NYC BC 2008
SNOW IMPORTANCE FACTOR, I	1.0	TABLE 1604.5, NYC BC 2008
SNOW EXPOSURE FACTOR, Ce	0.9	TABLE 7-2, ASCE 7-05
THERMAL FACTOR, Ct	1.0	TABLE 7-3, ASCE 7-05
FLAT ROOF SNOW LOAD, pf	20.0 PSF	SECT. 7-3, ASCE 7-05
SNOW DENSITY, GAMMA	17.25 PCF	EQN. 7-3, ASCE 7-05
MAX DRIFT LOADS	-	

GARAGE IMPACT LOAD CRITERIA

WALLS & ELEMENTS SUBJECT TO VEHICLE IMPACT SHALL BE DESIGNED FOR AN ULTIMATE IMPACT LOAD OF 6,000 LBS, LOCATED (18" ABOVE THE FINISHED FLOOR ON A 1 SQ. FT. AREA.)	SECT. 1607.7.3, IBC 2009

SHEET INDEX

SHEET NUMBER	SHEET NAME
S-001	DRAWING NOTES , DRAWING INDEX
FO-101	FOUNDATION PLAN - BUILDING A
FO-102	FOUNDATION PLAN - BUILDING B
FO-103	CELLAR FLOOR PLAN - BUILDING B
FO-111	FOUNDATION TYPICAL DETAILS
FO-112	FOUNDATION DETAILS
FO-113	FOUNDATION DETAILS
FO-114	MAT PART PLANS
FO-115	MAT PART PLANS ALTERNATE
S-201	1ST FLOOR PLAN - BUILDING A
S-251	1ST FLOOR PLAN - BUILDING B

MATERIAL KEYING LEGEND:

NO.	REVISIONS | SUBMISSIONS	DATE
	80% FOUNDATION DRAWINGS	07.16.2014
	DOB FILING	06.27.2014
	DESIGN DEVELOPMENT	05.30.2014

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DRAWING TITLE:
DRAWING NOTES , DRAWING INDEX

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Date: 05/12/14
Scale: 12" = 1'-0"

Project No.: 13434
Cad File:
Drawing No.:

S-001.00

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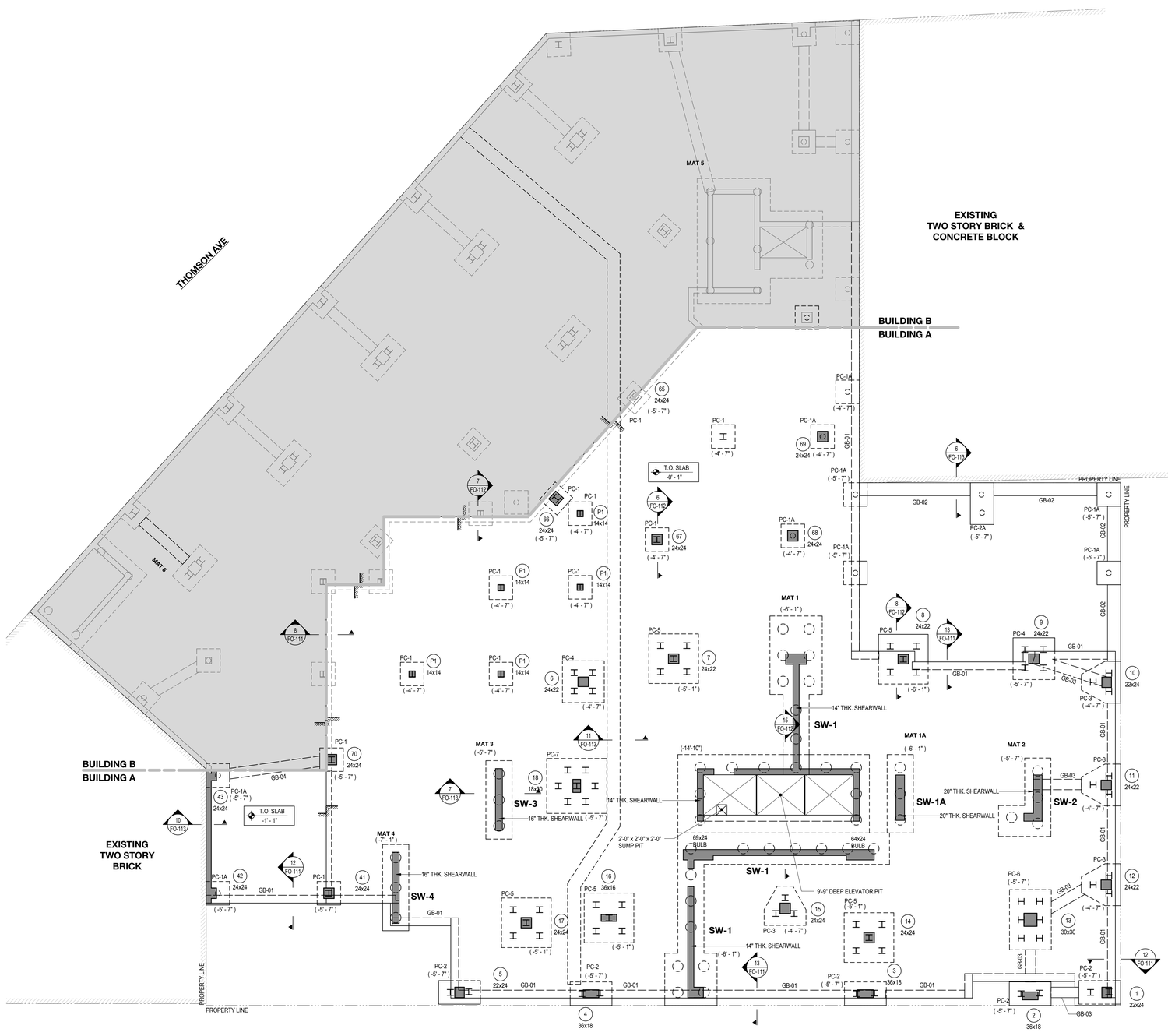

PURVES STREET

FOUNDATION PLAN - BUILDING A

SCALE: 1/8" = 1'-0"

CONCRETE GRADE BEAM SCHEDULE BUILDING A

MARK	SIZE (w x h)	CONT. TOP BARS	BOTTOM BARS	STIRRUPS	COMMENTS
GB-01	18x42	3-#8	3-#8	2L#4@12	#6@12" O.C. E.F.
GB-02	30x42	5-#8	5-#8	3L#4@12	#6@12" O.C. E.F.
GB-03	24x36	5-#8	5-#8	2L#4@12	#6@12" O.C. E.F.
GB-04	24x24	4-#8	4-#8	2L#4@12	#6@12" O.C. E.F.

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
4. SEE S-601 FOR TYPICAL MASONRY DETAILS.
5. PC-X INDICATES PILE CAPS SUPPORTED BY DRIVEN PILES OR DRILLED CAISSONS. SEE FO-112 FOR SCHEDULE AND DETAILS, INCLUDING REQUIRED COMPRESSION AND TENSION CAPACITIES FOR DIFFERENT PILE/CAISSON TYPES.
6. TOP OF FILE CAPS, MATS, AND GRADE BEAMS ARE TYPICALLY 12" FROM TOP OF SLAB. BOTTOM OF FOUNDATION ELEVATIONS INDICATED ON PLAN GOVERN.
7. (X'-X") INDICATES BOTTOM OF PILE CAP OR MAT FOUNDATION ELEVATION.
8. PROVIDE 12-#8 DOWELS AT PILE CAPS FOR ALL COLUMNS, TYPICAL.
9. FOUNDATION PLAN INDICATES DRILLED CAISSONS FOR ALL SHEAR WALL MATS, WITH MAT LAYOUTS SHOWN ON FO-114, SHEET FO-115 DEPICTS ALTERNATE MAT LAYOUTS FOR USE OF DRIVEN PILES AT MATS 1 THROUGH 4.

MATERIAL KEYING LEGEND:

80% FOUNDATION DRAWINGS	07.16.2014
DOB FILING	06.27.2014
DESIGN DEVELOPMENT	05.30.2014

NO. REVISIONS | SUBMISSIONS DATE

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FOUNDATION PLAN - BUILDING A

Seal:

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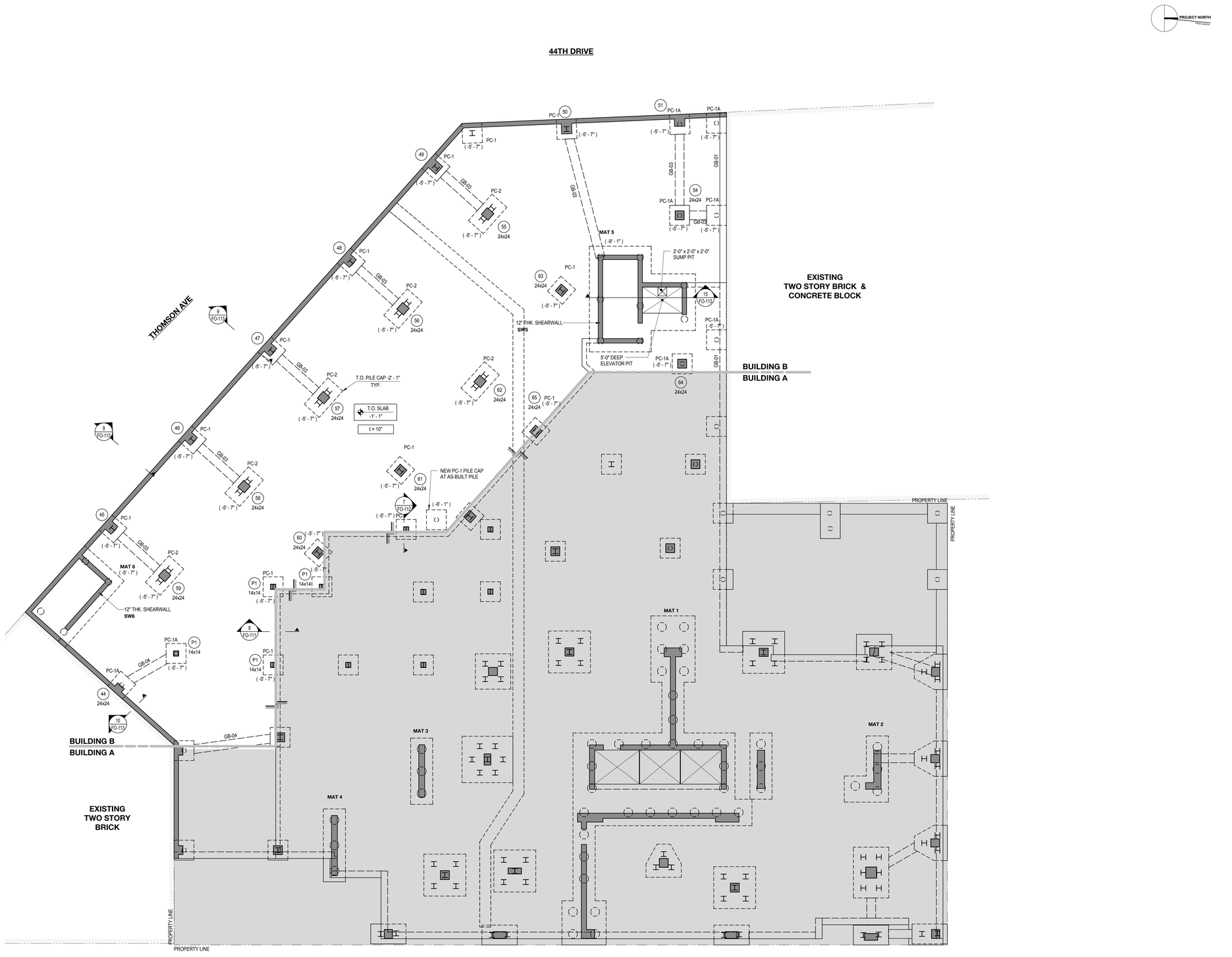

MATERIAL KEYING LEGEND:

FOUNDATION PLAN - BUILDING B

SCALE: 1/8" = 1'-0"

CONCRETE GRADE BEAM SCHEDULE BUILDING B

MARK	SIZE (w x h)	CONT. TOP BARS	BOTTOM BARS	STIRRUPS	COMMENTS
GB-01	18x42	3-#8	3-#8	2L#4@12	#6@12" O.C. E.F.
GB-02	30x42	5-#8	5-#8	3L#4@12	#6@12" O.C. E.F.
GB-03	24x36	5-#8	5-#8	2L#4@12	#6@12" O.C. E.F.
GB-04	24x24	4-#8	4-#8	2L#4@12	#6@12" O.C. E.F.

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
4. SEE S-601 FOR TYPICAL MASONRY DETAILS.
5. PC-X INDICATES PILE CAPS SUPPORTED BY DRIVEN PILES OR DRILLED CAISSONS. SEE FO-112 FOR SCHEDULE AND DETAILS, INCLUDING REQUIRED COMPRESSION AND TENSION CAPACITIES FOR DIFFERENT PILE/CAISSON TYPES.
6. TOP OF FILE CAPS, MATS, AND GRADE BEAMS ARE TYPICALLY 12" FROM TOP OF SLAB. BOTTOM OF FOUNDATION ELEVATIONS INDICATED ON PLAN GOVERN.
7. (X'-X") INDICATES BOTTOM OF PILE CAP OR MAT FOUNDATION ELEVATION.
8. PROVIDE 12-#8 DOWELS AT PILE CAPS FOR ALL COLUMNS, TYPICAL.
9. FOUNDATION PLAN INDICATES DRILLED CAISSONS FOR ALL SHEAR WALL MATS, WITH MAT LAYOUTS SHOWN ON FO-114, SHEET FO-115 DEPICTS ALTERNATE MAT LAYOUTS FOR USE OF DRIVEN PILES AT MATS 1 THROUGH 4.

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FOUNDATION PLAN - BUILDING B

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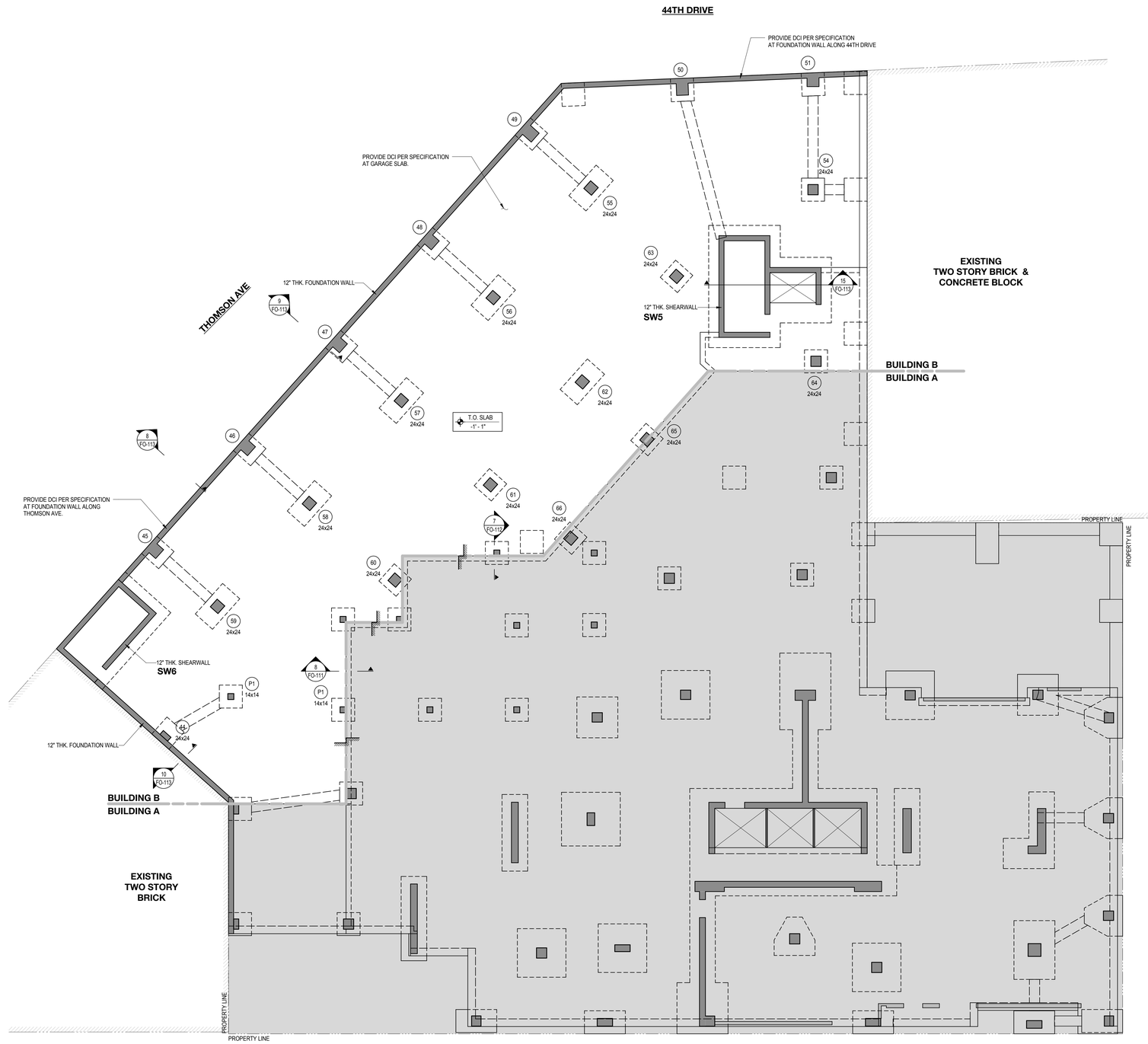

CELLAR FLOOR PLAN - BUILDING B

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **10"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
REINFORCEMENT: **SLAB TOP BARS EACH WAY, #7@12" SLAB BOTTOM BARS EACH WAY, #6@12"**	2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
CONCRETE STRENGTH: **COLUMN / WALLS 8 ksi**	3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
SLAB / BEAMS 6 ksi	4. SEE S-601 FOR TYPICAL MASONRY DETAILS.
	5. TOP OF PILE CAPS, MATS, AND GRADE BEAMS ARE TYPICALLY 12" FROM TOP OF SLAB. BOTTOM OF FOUNDATION ELEVATIONS INDICATED ON PLAN GOVERN.
	6. PROVIDE 12-#8 DOWELS AT PILE CAPS FOR ALL COLUMNS, TYPICAL.

MATERIAL KEYING LEGEND:

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CELLAR FLOOR PLAN - BUILDING B

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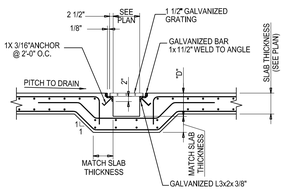
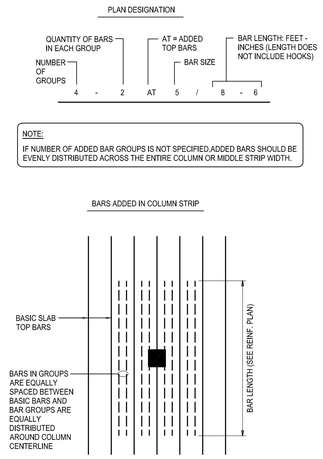


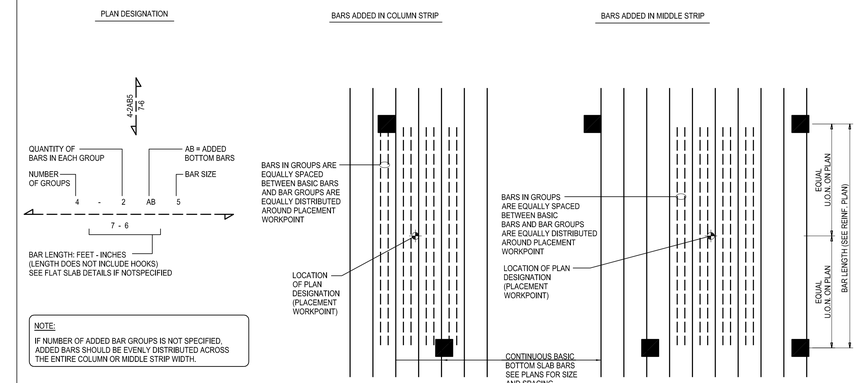
5 TYPICAL SECTION THROUGH TRENCH DRAIN IN STRUCTURAL SLAB

SCALE: 1/2"=1'-0"



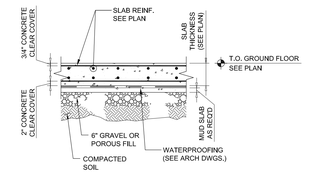
4 ADDITIONAL TOP BAR PLACEMENT

SCALE: 1/2"=1'-0"



3 ADDITIONAL BOTTOM BAR PLACEMENT

SCALE: 1/2"=1'-0"

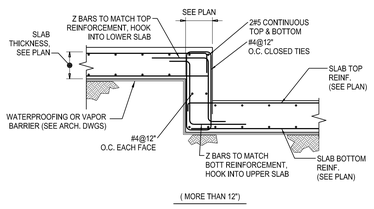


1 TYPICAL STRUCTURAL SLAB ON GROUND DETAIL

SCALE: 1/2"=1'-0"

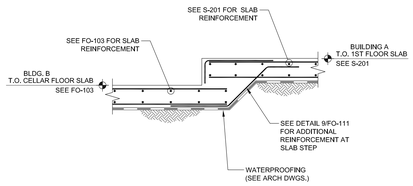
MATERIAL KEYING LEGEND:

10 NOT USED



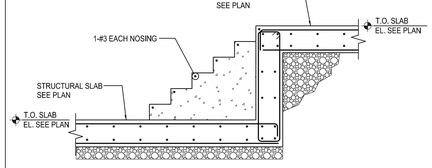
9 TYPICAL SLAB STEP DETAIL

SCALE: 1/2"=1'-0"



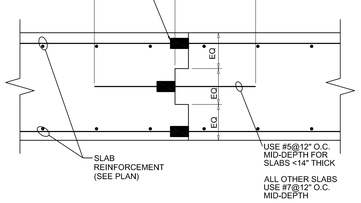
8 SLAB ON GROUND STEP DETAIL

SCALE: 1/2"=1'-0"



7 TYPICAL SECTION THROUGH BUILT-UP STAIRS

SCALE: 1/2"=1'-0"



6 TYPICAL SLAB CONSTRUCTION JOINT DETAIL

SCALE: 1/2"=1'-0"

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LIC PURVES STREET DEVELOPMENT

44-30 PURVES STREET, QUEENS, NY

DRAWING TITLE:

TYPICAL FOUNDATION DETAILS

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Date: 07/16/14

Scale:

Project No.: 13434.00

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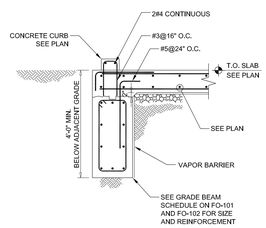
15 NOT USED

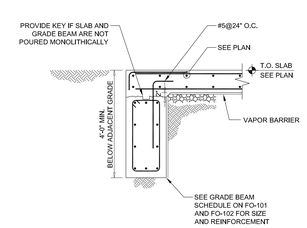
14 TYPICAL STRAP GRADE BEAM DETAIL

SCALE: 1/2"=1'-0"



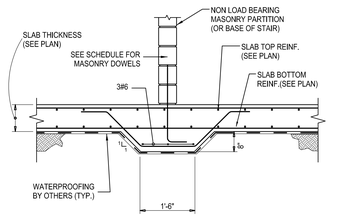
13 TYPICAL GRADE BEAM WITH CURB DETAIL

SCALE: 1/2"=1'-0"



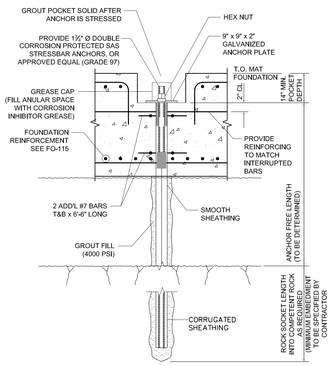
12 TYPICAL GRADE BEAM DETAIL AT BUILDING EDGE

SCALE: 1/2"=1'-0"



11 TYPICAL THICKENED SLAB UNDER MASONRY PARTITION

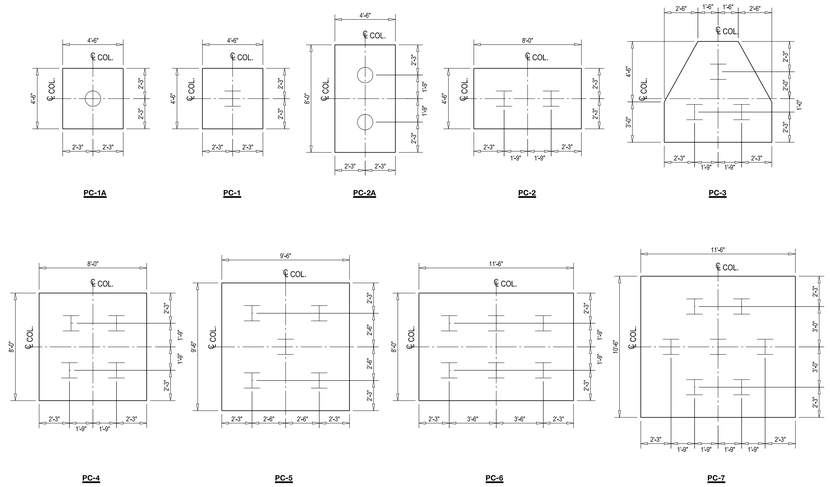
SCALE: 1/2"=1'-0"



NOTE: ROCK ANCHORS ARE ONLY REQUIRED FOR ALTERNATIVE MAT OPTION PER FO-115.

5 CONCEPTUAL ROCK ANCHOR DETAIL

SCALE: NOT TO SCALE



4 TYPICAL PILE CAP DETAILS

SCALE: 1/4"=1'-0"

DRILLED CAISSONS: PILE CAP SCHEDULE

MARK	SIZE	DEPTH	BOTTOM REINFORCING		REMARKS
			LONG WAY	SHORT WAY	
PC-1A	4'-6" x 4'-6"	3'-6"	5 #6H	5 #6H	150-TON COMPRESSION, 50-TON TENSION, 13.625"Ø
PC-2A	8'-0" x 4'-6"	3'-6"	8 #9H	8 #9H	150-TON COMPRESSION, 50-TON TENSION, 13.625"Ø
MAT 1	SEE 15/FO-114	5'-0"	SEE 15/FO-114		750-TON COMPRESSION, 250-TON TENSION, 24.0"Ø
MAT 2	SEE 13/FO-114	4'-6"	SEE 13/FO-114		750-TON COMPRESSION, 250-TON TENSION, 24.0"Ø
MAT 3	SEE 12/FO-114	4'-6"	SEE 12/FO-114		750-TON COMPRESSION, 250-TON TENSION, 24.0"Ø
MAT 4	SEE 11/FO-114	4'-6"	SEE 11/FO-114		750-TON COMPRESSION, 250-TON TENSION, 24.0"Ø
MAT 5	SEE 7/FO-114	3'-0"	SEE 7/FO-114		500-TON COMPRESSION, 166-TON TENSION, 18.0"Ø
MAT 6	SEE 2/FO-114	3'-6"	SEE 2/FO-114		500-TON COMPRESSION, 166-TON TENSION, 18.0"Ø

DRIVEN H-PILES: PILE CAP SCHEDULE

MARK	SIZE	DEPTH	BOTTOM REINFORCING		REMARKS
			LONG WAY	SHORT WAY	
PC-1	4'-6" x 4'-6"	3'-6"	5 #6H	5 #6H	200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-2	8'-0" x 4'-6"	3'-6"	8 #9H	8 #6H	200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-3	SEE 4/FO-112	3'-6"	5 #9H 3-WAYS		200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-4	8'-0" x 8'-0"	3'-6"	12 #9H	12 #9H	200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-5	9'-6" x 9'-6"	4'-0"	13 #9H	13 #9H	200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-6	11'-6" x 8'-0"	4'-6"	16 #9H	11 #9H	200-TON COMPRESSION, 10-TON TENSION, HP14x117
PC-7	11'-6" x 10'-6"	4'-6"	11 #9H	12 #9H	200-TON COMPRESSION, 10-TON TENSION, HP14x117

PILECAP NOTES:

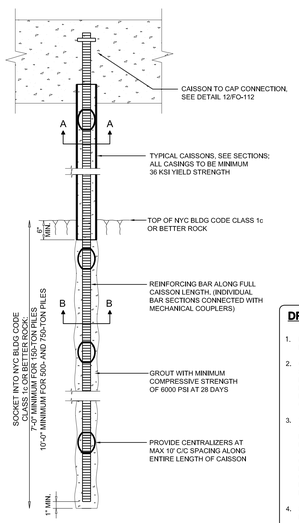
1. ALL PILE CAPS ARE DESIGNED BASED ON THE PILE/CAISSON CAPACITIES LISTED IN THE REMARKS COLUMN, AS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
2. SEE NOTES ON S-001 AND DRIVEN PILE AND DRILLED CAISSON SPECIFICATIONS (BY OTHERS) FOR REQUIREMENTS.
3. CONCRETE STRENGTH FOR ALL PILE CAPS SHALL BE 6,000 PSI.
4. GEOMETRY OF PILE CAPS SHOWN ON SCHEDULE IS BASED ON THE H-PILE SIZE OR PIPE DIAMETERS INDICATED.
5. "H" DESIGNATES HOOKED OR HEADED BARS TO BE USED.
6. ALLOWABLE LATERAL CAPACITY TO BE FIELD VERIFIED BY LOAD TEST IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 023500.

PLEASE NOTE THAT THE ABOVE PILE AND CAISSON TYPE INFORMATION IS PROVIDED BY THE GEOTECHNICAL ENGINEER. PLEASE SEE THE GEOTECHNICAL REPORT FOR FURTHER INFORMATION.

2 PILE CAP SCHEDULE AND NOTES

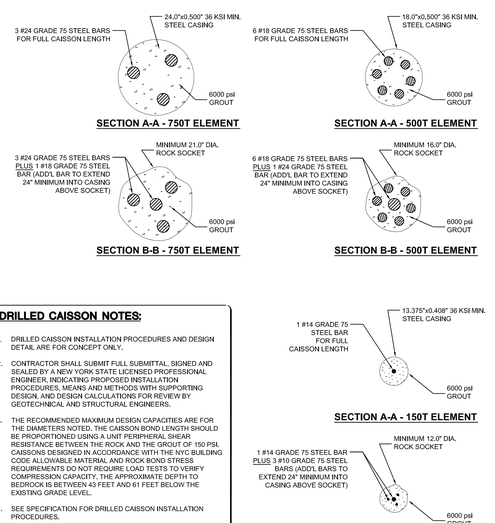
SCALE: NOT TO SCALE

MATERIAL KEYING LEGEND:



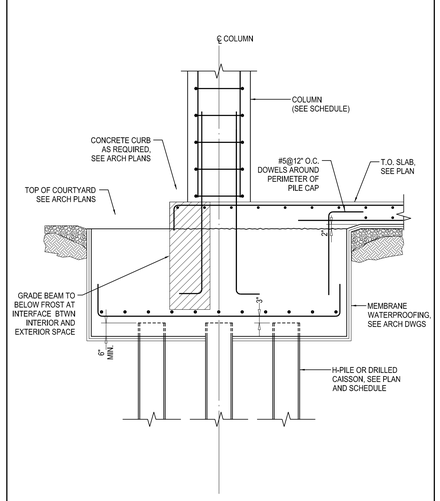
10 CONCEPTUAL CAISSON DETAILS

SCALE: NOT TO SCALE



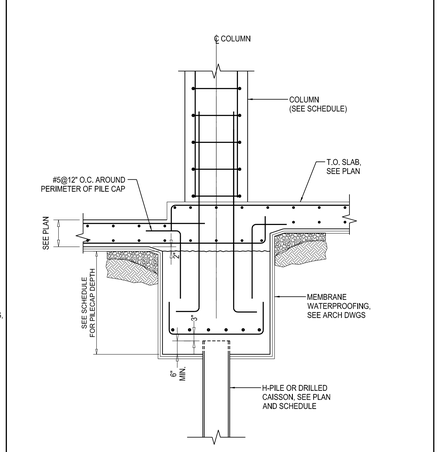
DRILLED CAISSON NOTES:

1. DRILLED CAISSON INSTALLATION PROCEDURES AND DESIGN DETAIL ARE FOR CONCEPT ONLY.
2. CONTRACTOR SHALL SUBMIT FULL SUBMITTAL, SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, INDICATING PROPOSED INSTALLATION PROCEDURES, MEANS AND METHODS WITH SUPPORTING DESIGN, AND DESIGN CALCULATIONS FOR REVIEW BY GEOTECHNICAL AND STRUCTURAL ENGINEERS.
3. THE RECOMMENDED MAXIMUM DESIGN CAPACITIES ARE FOR THE DIAMETERS NOTED. THE CAISSON BOND LENGTH SHOULD BE PROPORTIONED USING A UNIT PERIPHERAL SHEAR RESISTANCE BETWEEN THE ROCK AND THE GROUT OF 150 PSI. CAISSONS DESIGNED IN ACCORDANCE WITH THE NYC BUILDING CODE ALLOWABLE MATERIAL AND ROCK BOND STRESS REQUIREMENTS DO NOT REQUIRE LOAD TESTS TO VERIFY COMPRESSION CAPACITY. THE APPROXIMATE DEPTH TO BEDROCK IS BETWEEN 43 FEET AND 61 FEET BELOW THE EXISTING GRADE LEVEL.
4. SEE SPECIFICATION FOR DRILLED CAISSON INSTALLATION PROCEDURES.



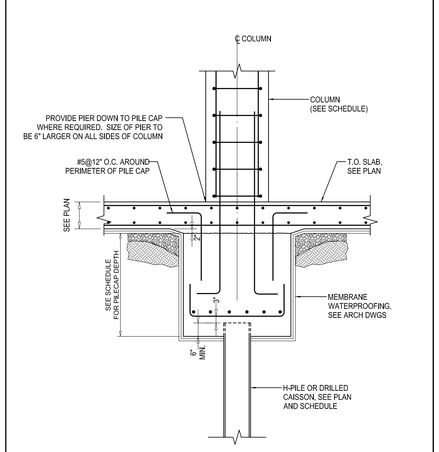
8 PILE CAP DETAIL AT COURTYARD STEP

SCALE: 1/2"=1'-0"



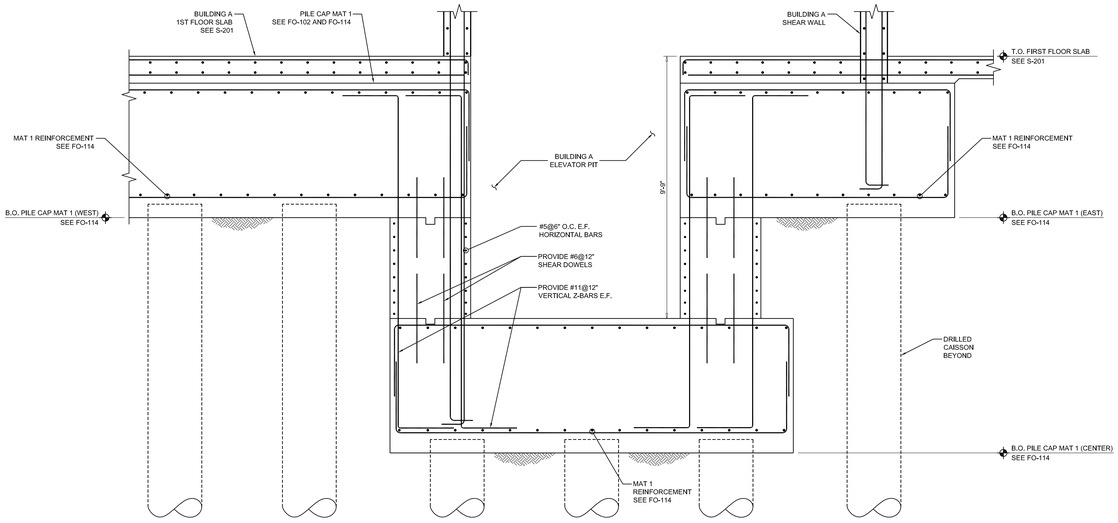
7 PILE CAP DETAIL AT TYPICAL SLAB STEP

SCALE: 1/2"=1'-0"



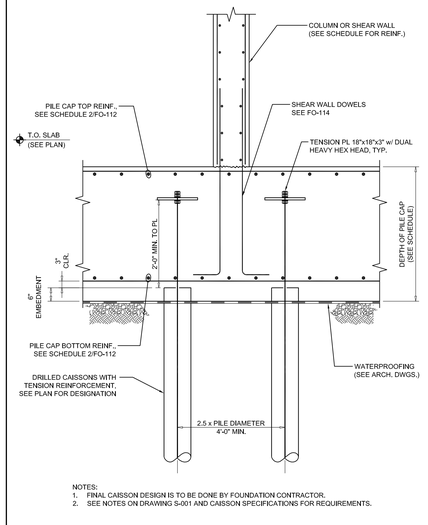
6 TYPICAL PILE CAP DETAIL

SCALE: 1/2"=1'-0"



15 SECTION AT SHEAR WALL MAT 1 - BUILDING A

SCALE: 1/2"=1'-0"

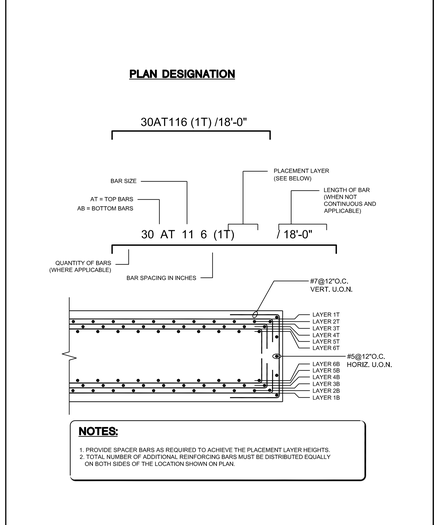


NOTES:
1. FINAL CAISSON DESIGN IS TO BE DONE BY FOUNDATION CONTRACTOR.
2. SEE NOTES ON DRAWING S-001 AND CAISSON SPECIFICATIONS FOR REQUIREMENTS.

12 TYPICAL TENSION CAISSON DETAIL

SCALE: 1/2"=1'-0"

PLAN DESIGNATION



NOTES:

1. PROVIDE SPACER BARS AS REQUIRED TO ACHIEVE THE PLACEMENT LAYER HEIGHTS.
2. TOTAL NUMBER OF ADDITIONAL REINFORCING BARS MUST BE DISTRIBUTED EQUALLY ON BOTH SIDES OF THE LOCATION SHOWN ON PLAN.

11 MAT REINFORCEMENT DETAIL

SCALE: 1/2"=1'-0"

80% FOUNDATION DRAWINGS 07.16.2014

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LIC PURVES STREET DEVELOPMENT

44-30 PURVES STREET, QUEENS, NY

DRAWING TITLE:
FOUNDATION DETAILS

Seal:

Drawn: Project No.: 13434.00

Checked: Cad File:

Reviewed: Drawing No.:

Date: 07/16/14

Scale:

FO-112.00

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DeSimone Consulting Engineers - - Jerry Gaitanis_PW:\\BEWVI - Drawing of: V:\Projects\13434\13434.001\DWG\Struct\13434.001-FO-112.dwg [Drawing_36x48] - Date: - July 16, 2014 - 5:29PM

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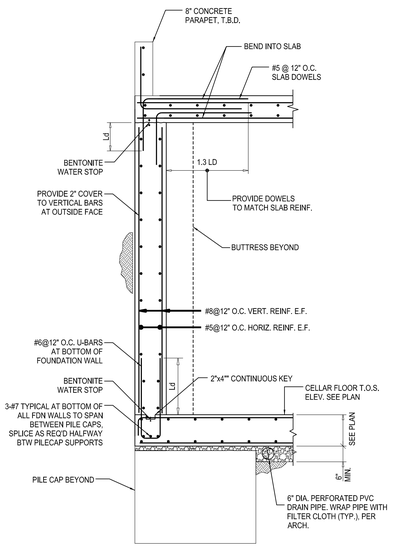
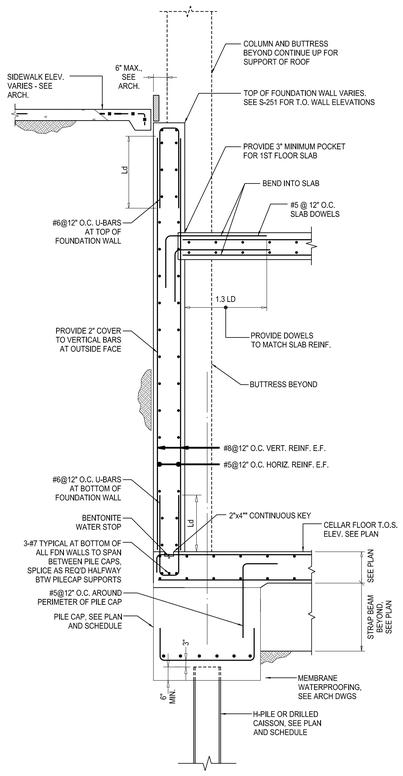


10 TYPICAL FDN WALL DETAIL AT COURTYARD

SCALE: 1/2"=1'-0"

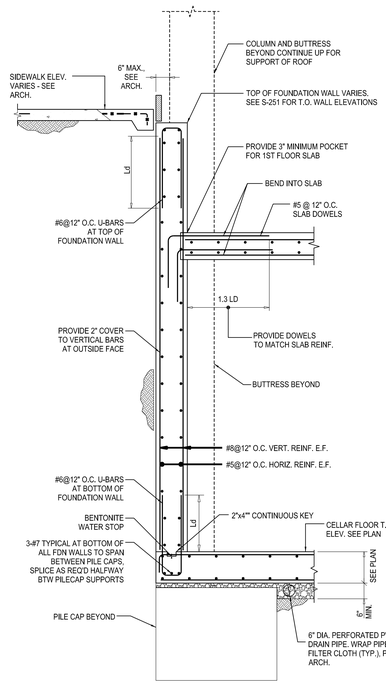
** INCLUDE DCI PER SPECIFICATIONS AT FOUNDATION WALLS ALONG THOMSON AVENUE AND 44TH DRIVE



9 TYPICAL FOUNDATION WALL DETAIL AT PILE CAP

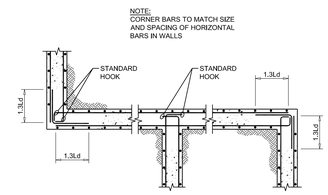
SCALE: 1/2"=1'-0"

** INCLUDE DCI PER SPECIFICATIONS AT FOUNDATION WALLS ALONG THOMSON AVENUE AND 44TH DRIVE



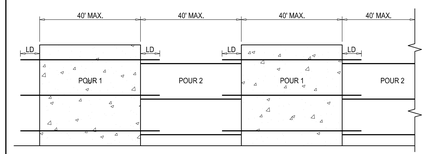
8 TYPICAL FOUNDAITON WALL DETAIL

SCALE: 1/2"=1'-0"



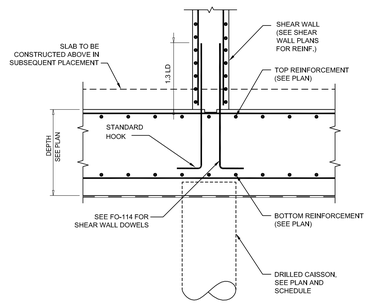
2 TYPICAL REINFORCING DETAIL AT FOUNDATION WALL CORNERS

SCALE: 1/2"=1'-0"



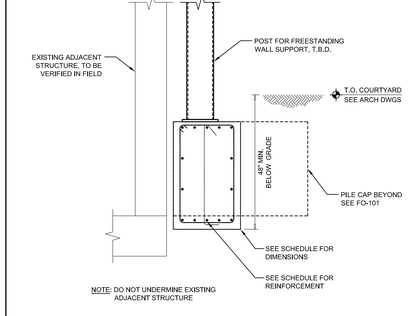
1 FOUNDATION WALL POUR SEQUENCE OPTIONS

SCALE: NOT TO SCALE



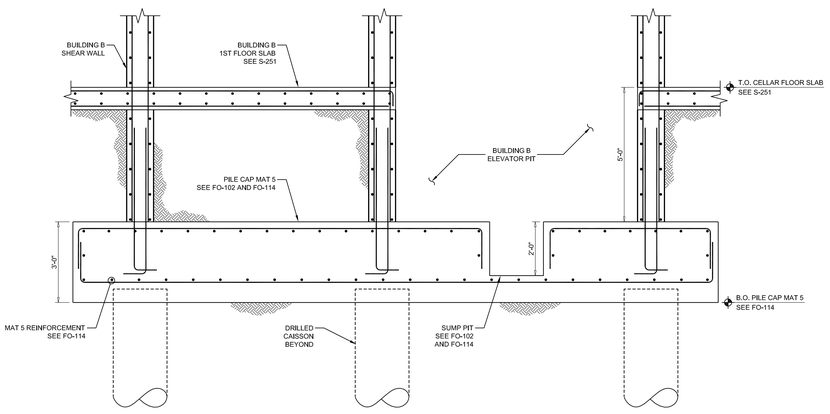
7 TYPICAL DETAILS AT INTERFACE BETWEEN SHEAR WALL AND PILE CAP

SCALE: 1/2"=1'-0"



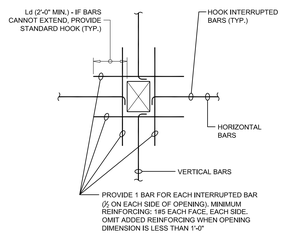
6 FOUNDATION DETAIL AT FREESTANDING COURTYARD WALL

SCALE: 1/2"=1'-0"



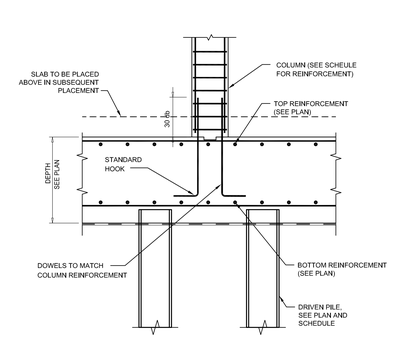
15 SECTION AT SHEAR WALL MAT 5 - BUILDING B

SCALE: 1/2"=1'-0"



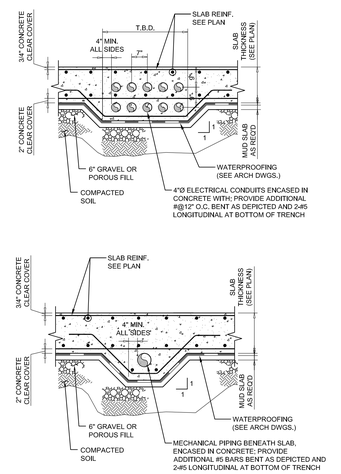
13 TYPICAL DETAIL FOR OPENING THROUGH FOUNDAITON WALL

SCALE: 1/2"=1'-0"



12 TYPICAL DETAILS AT INTERFACE BTW COLUMN AND PILE CAP

SCALE: 1/2"=1'-0"



11 UTILITY ENCASEMENT AT STRUCTURAL SLAB ON GRADE

SCALE: 1/2"=1'-0"

MATERIAL KEYING LEGEND:

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LIC PURVES STREET DEVELOPMENT

44-30 PURVES STREET, QUEENS, NY

DRAWING TITLE:
FOUNDATION DETAILS

Seal:

Drawn:

Checked:

Reviewed:

Date: 07/16/14

Scale:

Project No.: 13434.00

Cad File:

Drawing No.:

FO-113.00

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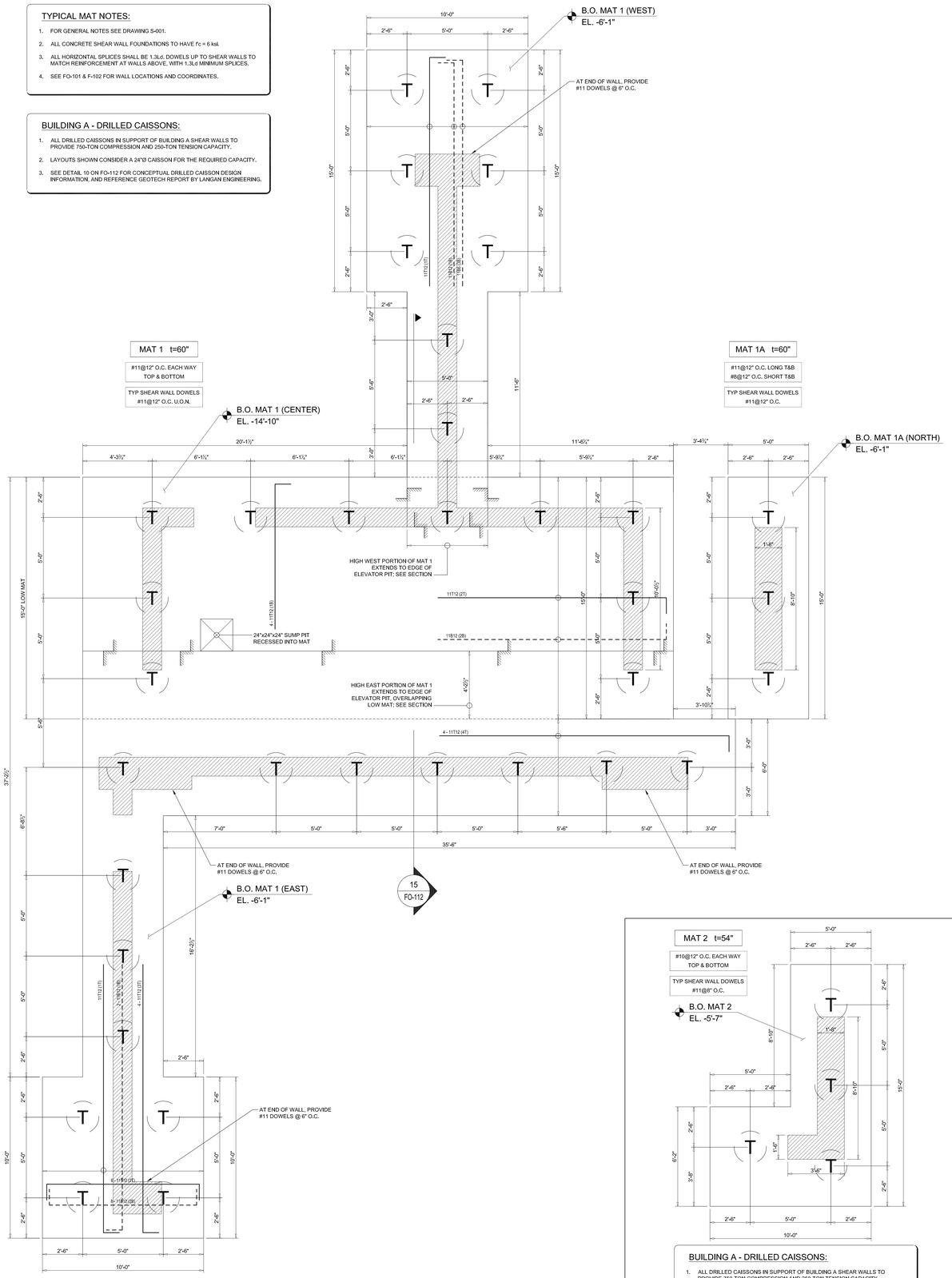
TYPICAL MAT NOTES:

1. FOR GENERAL NOTES SEE DRAWING S-001.
2. ALL CONCRETE SHEAR WALL FOUNDATIONS TO HAVE f'c = 6 ksi.
3. ALL HORIZONTAL SPLICES SHALL BE 1.3Ld. DOWELS UP TO SHEAR WALLS TO MATCH REINFORCEMENT AT WALLS ABOVE, WITH 1.3Ld MINIMUM SPLICES.
4. SEE FO-101 & F-102 FOR WALL LOCATIONS AND COORDINATES.

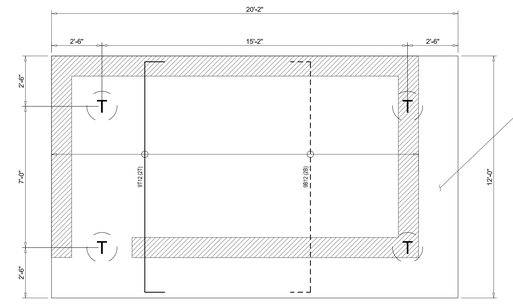
BUILDING A - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 750-TON COMPRESSION AND 250-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 24"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.



** THIS PLAN IS FOR DRILLED CAISSONS; SEE FO-115 FOR DRIVEN PILE ALTERNATE OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

15 SHEAR WALL MAT 1 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

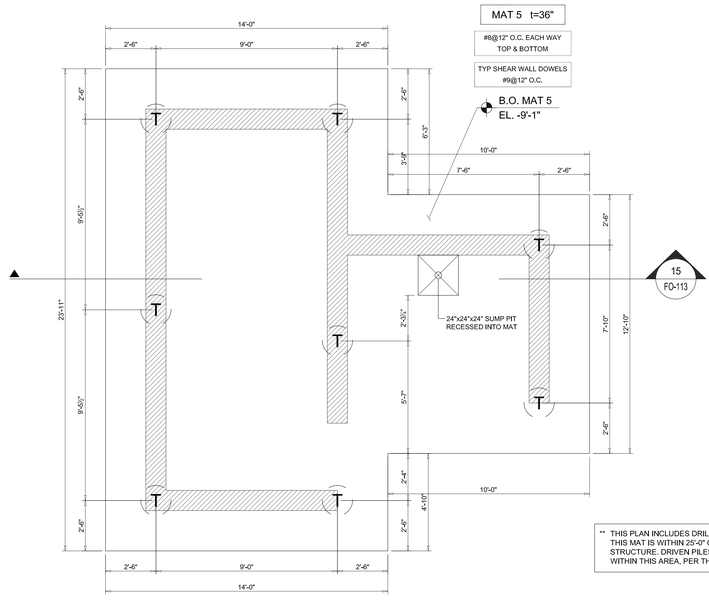


** THIS PLAN INCLUDES DRILLED CAISSONS, SINCE THIS MAT IS WITHIN 25'-0" OF AN ADJACENT STRUCTURE. DRIVEN PILES ARE NOT PERMITTED WITHIN THIS AREA, PER THE GEOTECH REPORT.

BUILDING B - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 500-TON COMPRESSION AND 166-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 18"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

2 SHEAR WALL MAT 6 - LAYOUT PLAN
SCALE: 3/8"=1'-0"



** THIS PLAN INCLUDES DRILLED CAISSONS, SINCE THIS MAT IS WITHIN 25'-0" OF AN ADJACENT STRUCTURE. DRIVEN PILES ARE NOT PERMITTED WITHIN THIS AREA, PER THE GEOTECH REPORT.

BUILDING B - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 500-TON COMPRESSION AND 166-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 18"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

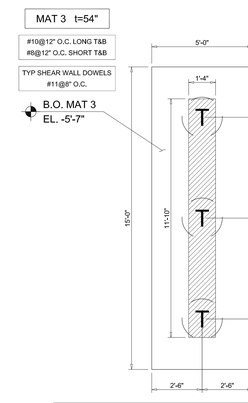
7 SHEAR WALL MAT 5 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

BUILDING A - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 750-TON COMPRESSION AND 250-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 24"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

** THIS PLAN IS FOR DRILLED CAISSONS; SEE FO-115 FOR DRIVEN PILE ALTERNATE OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

13 SHEAR WALL MAT 2 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

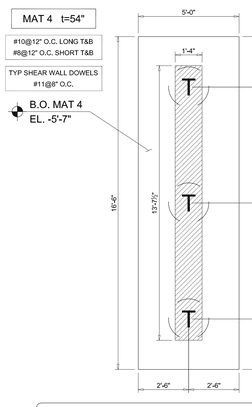


BUILDING A - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 750-TON COMPRESSION AND 250-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 24"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

** THIS PLAN IS FOR DRILLED CAISSONS; SEE FO-115 FOR DRIVEN PILE ALTERNATE OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

12 SHEAR WALL MAT 3 - LAYOUT PLAN
SCALE: 3/8"=1'-0"



BUILDING A - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 750-TON COMPRESSION AND 250-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 24"Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

** THIS PLAN IS FOR DRILLED CAISSONS; SEE FO-115 FOR DRIVEN PILE ALTERNATE OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

11 SHEAR WALL MAT 4 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

MATERIAL KEYING LEGEND:

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LIC PURVES STREET DEVELOPMENT

44-30 PURVES STREET, QUEENS, NY

DRAWING TITLE:
MAT PART PLANS

Seal:

Drawn:
Checked:
Reviewed:
Date: 07/16/14
Scale:

Project No.: 13434.00
Cad File:
Drawing No.:

FO-114.00

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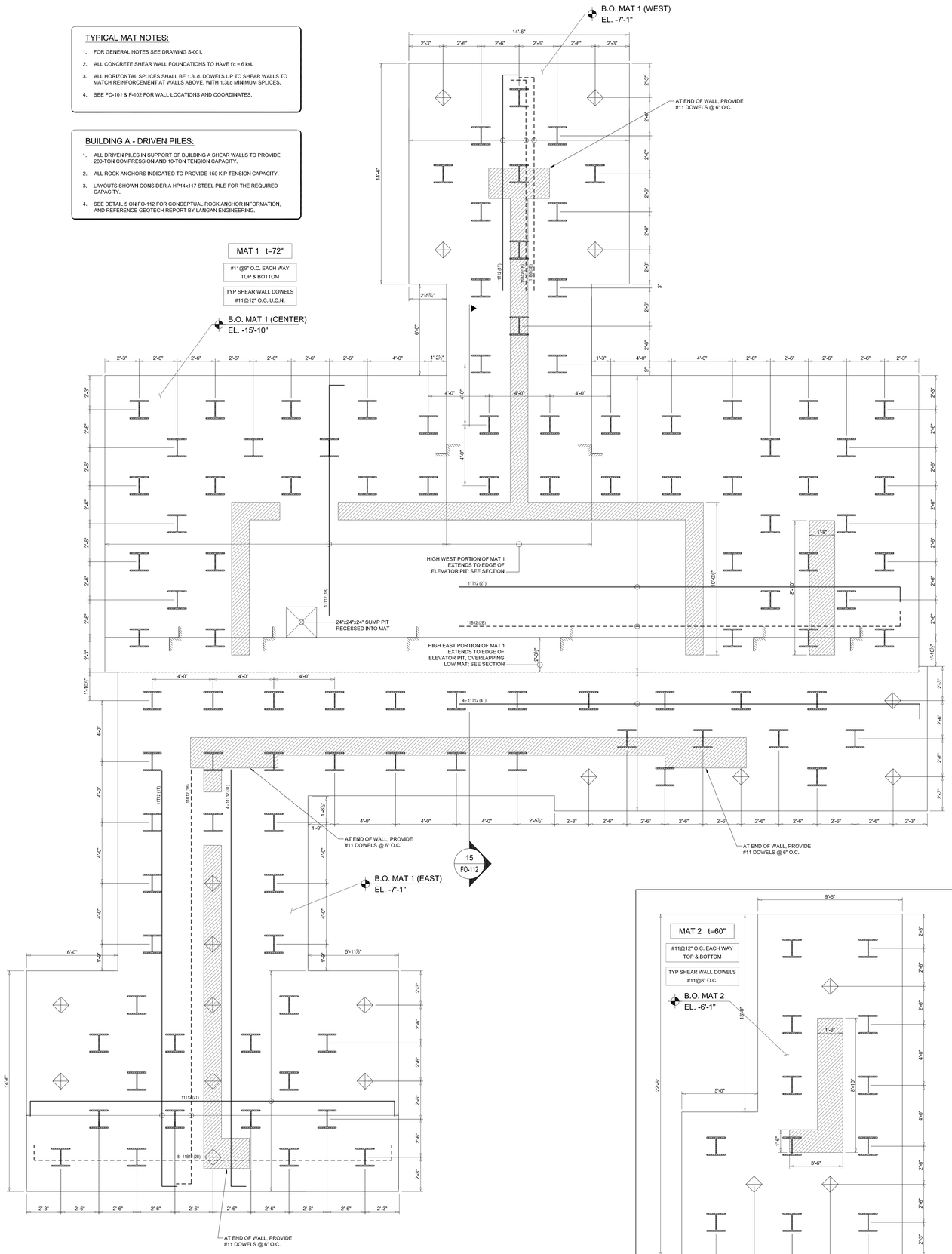
TYPICAL MAT NOTES:

1. FOR GENERAL NOTES SEE DRAWING S-001.
2. ALL CONCRETE SHEAR WALL FOUNDATIONS TO HAVE f'c = 6 ksi.
3. ALL HORIZONTAL SPLICES SHALL BE 1.3Ld. DOWELS UP TO SHEAR WALLS TO MATCH REINFORCEMENT AT WALLS ABOVE, WITH 1.3Ld MINIMUM SPLICES.
4. SEE FO-101 & F-102 FOR WALL LOCATIONS AND COORDINATES.

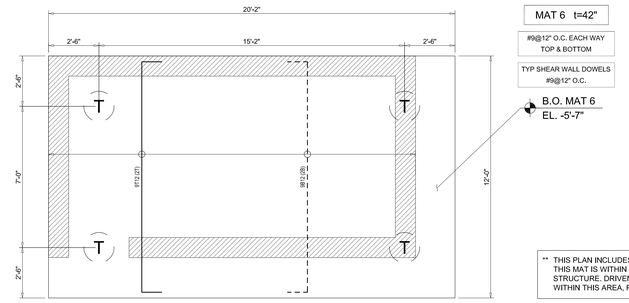
BUILDING A - DRIVEN PILES:

1. ALL DRIVEN PILES IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 200-TON COMPRESSION AND 10-TON TENSION CAPACITY.
2. ALL ROCK ANCHORS INDICATED TO PROVIDE 150 KIP TENSION CAPACITY.
3. LAYOUTS SHOWN CONSIDER A HP14x117 STEEL PILE FOR THE REQUIRED CAPACITY.
4. SEE DETAIL 5 ON FO-112 FOR CONCEPTUAL ROCK ANCHOR INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.



15 SHEAR WALL MAT 1 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

** THIS PLAN IS AN ALTERNATE FOR DRIVEN PILES; SEE FO-114 FOR DRILLED CAISSON OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

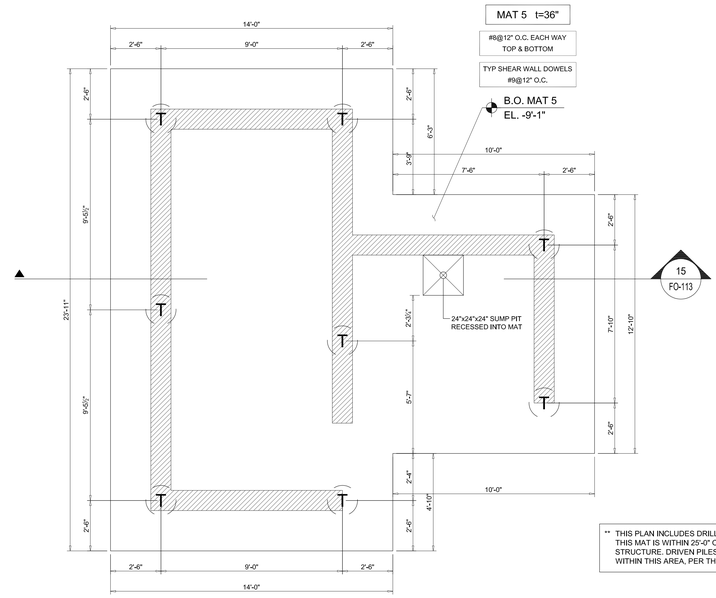


2 SHEAR WALL MAT 6 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

** THIS PLAN INCLUDES DRILLED CAISSONS, SINCE THIS MAT IS WITHIN 25'-0" OF AN ADJACENT STRUCTURE, DRIVEN PILES ARE NOT PERMITTED WITHIN THIS AREA, PER THE GEOTECH REPORT.

BUILDING B - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 500-TON COMPRESSION AND 166-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 16'Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.



7 SHEAR WALL MAT 5 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

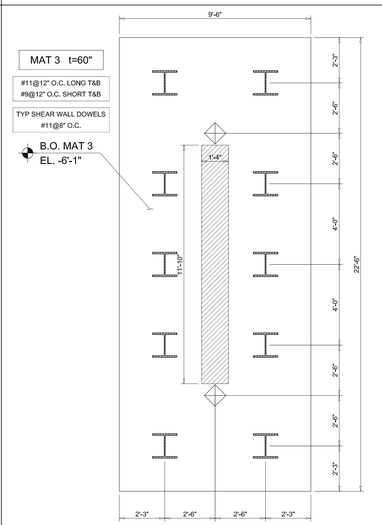
** THIS PLAN INCLUDES DRILLED CAISSONS, SINCE THIS MAT IS WITHIN 25'-0" OF AN ADJACENT STRUCTURE, DRIVEN PILES ARE NOT PERMITTED WITHIN THIS AREA, PER THE GEOTECH REPORT.

BUILDING B - DRILLED CAISSONS:

1. ALL DRILLED CAISSONS IN SUPPORT OF BUILDING A SHEAR WALLS TO PROVIDE 500-TON COMPRESSION AND 166-TON TENSION CAPACITY.
2. LAYOUTS SHOWN CONSIDER A 16'Ø CAISSON FOR THE REQUIRED CAPACITY.
3. SEE DETAIL 10 ON FO-112 FOR CONCEPTUAL DRILLED CAISSON DESIGN INFORMATION, AND REFERENCE GEOTECH REPORT BY LANGAN ENGINEERING.

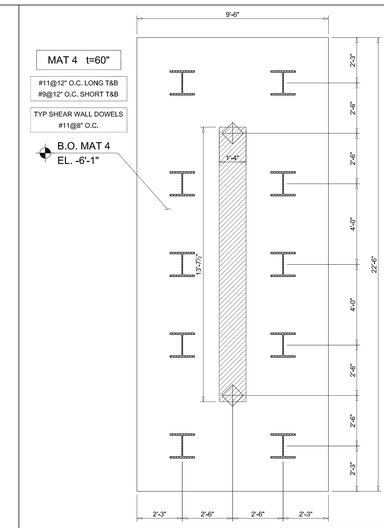
13 SHEAR WALL MAT 2 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

** THIS PLAN IS AN ALTERNATE FOR DRIVEN PILES; SEE FO-114 FOR DRILLED CAISSON OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.



12 SHEAR WALL MAT 3 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

** THIS PLAN IS AN ALTERNATE FOR DRIVEN PILES; SEE FO-114 FOR DRILLED CAISSON OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.



11 SHEAR WALL MAT 4 - LAYOUT PLAN
SCALE: 3/8"=1'-0"

** THIS PLAN IS AN ALTERNATE FOR DRIVEN PILES; SEE FO-114 FOR DRILLED CAISSON OPTION. THE DRILLED CAISSON OPTION IS THE PRIMARY OPTION THAT IS REFLECTED ON THE FOUNDATION PLANS.

MATERIAL KEYING LEGEND:

80% FOUNDATION DRAWINGS 07.16.2014

NO. REVISIONS | SUBMISSIONS DATE

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LIC PURVES STREET DEVELOPMENT

44-30 PURVES STREET, QUEENS, NY

DRAWING TITLE:
MAT PART PLANS - ALTERNATE

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Drawn:

Checked:

Reviewed:

Date: 07/16/14

Scale:

Project No.: 13434.00

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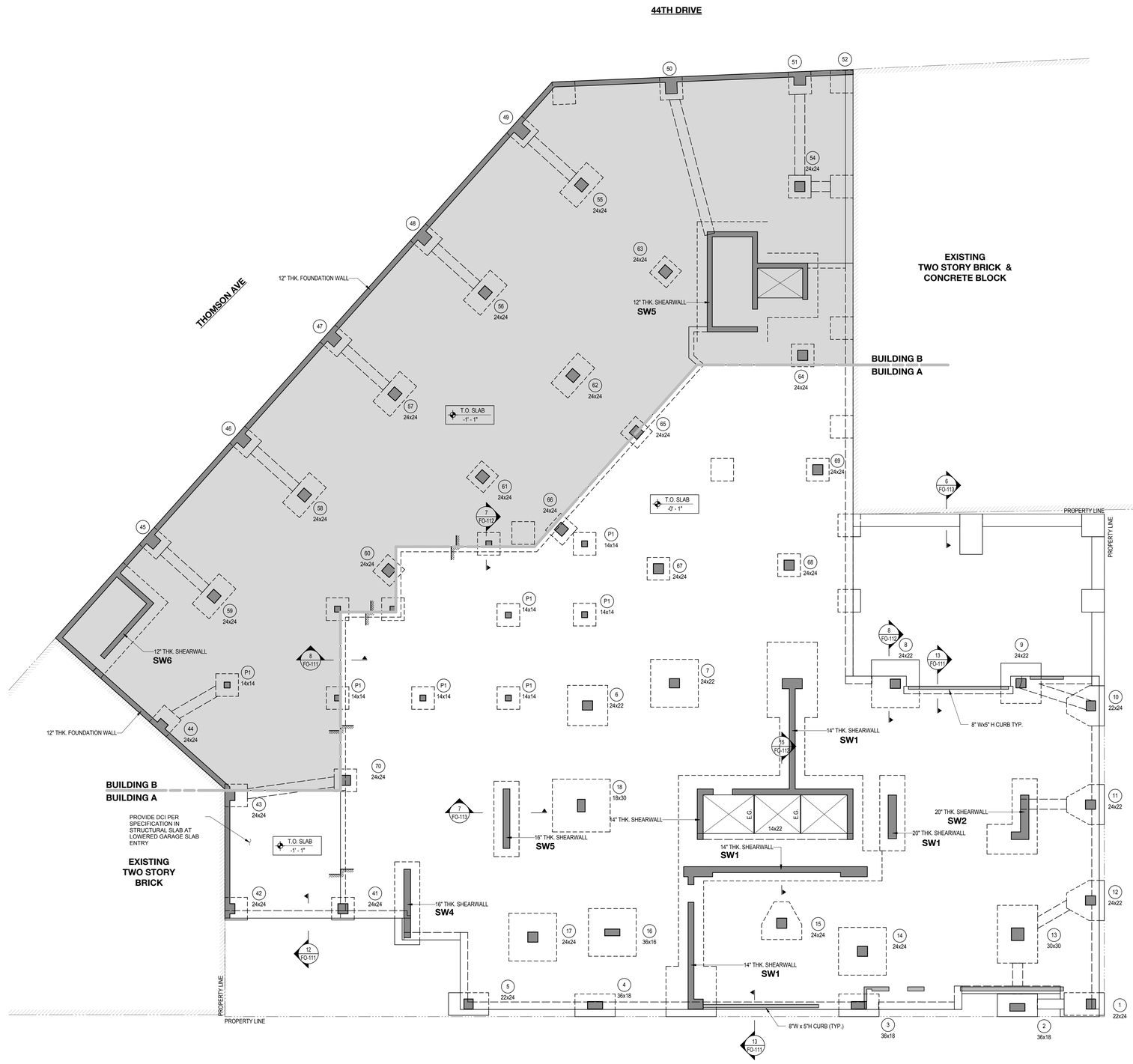

1ST FLOOR PLAN - BUILDING A

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **10"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
REINFORCEMENT: **SLAB TOP BARS EACH WAY, #7@12" SLAB BOTTOM BARS EACH WAY, #6@12"**	2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
CONCRETE STRENGTH: **COLUMN / WALLS 8 ksi**	3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
SLAB / BEAMS 6 ksi	4. SEE S-601 FOR TYPICAL MASONRY DETAILS.
	5. TOP OF PILE CAPS, MATS, AND GRADE BEAMS ARE TYPICALLY 12" FROM TOP OF SLAB. BOTTOM OF FOUNDATION ELEVATIONS INDICATED ON PLAN GOVERN.
	6. PROVIDE 12-#8 DOWELS AT PILE CAPS FOR ALL COLUMNS, TYPICAL.

MATERIAL KEYING LEGEND:

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	DOB FILING	06.27.2014
	DESIGN DEVELOPMENT	05.30.2014

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44-30 Purves Street

DRAWING TITLE:
1ST FLOOR PLAN - BUILDING A

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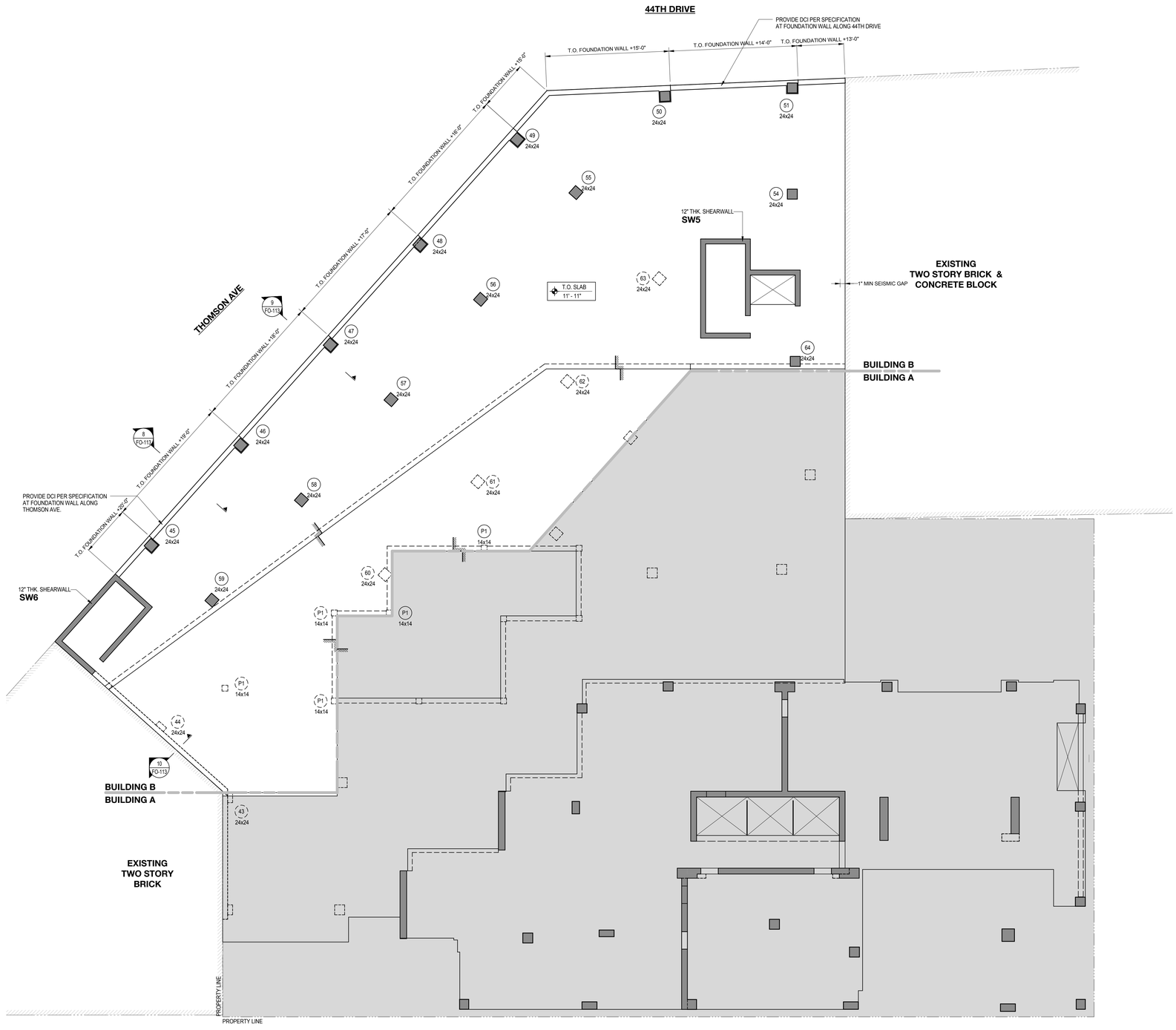

1ST FLOOR PLAN - BUILDING B

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **12"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
REINFORCEMENT: **SLAB BOTTOM BARS EACH WAY, #6@12"**	2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
CONCRETE STRENGTH: **COLUMN / WALLS 8 ksi**	3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
SLAB / BEAMS 6 ksi	4. SEE S-601 FOR TYPICAL MASONRY DETAILS.

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44-30 Purves Street

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1ST FLOOR PLAN - BUILDING B

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Reviewed:	Drawing No.:
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Appendix C
Previous Environmental Reports

REMEDIAL INVESTIGATION REPORT

for

44-30 PURVES STREET
LONG ISLAND CITY, NEW YORK

NYSDEC BCP NO.: C241162

Prepared For:

Purves Street Owners LLC
c/o Brause Realty, Inc.
52 Vanderbilt Avenue
New York, New York 10017

Prepared By:

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21 Penn Plaza,
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New York, New York 10001

September 2014
170282501

LANGAN

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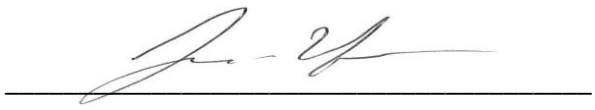
LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
ASTM	American Society for Testing and Materials
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CAMP	Community Air Monitoring Program
COC	Contaminant of Concern
CSUL	Comprehensive Subsurface Utility
CVOC	Chlorinated Volatile Organic Compound
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
EDR	Environmental Data Resources
ELAP	Environmental Laboratory Approval Program
EM	Electromagnetic
EPA	United Stated Environmental Protection Agency
ESA	Environmental Site Assessment
ESI	Environmental Site Investigation
FINDS	Facility Index System/Facility Registry System
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
IDW	Investigation Derived Waste
LNAPL	Light Non-Aqueous Phase Liquid
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAVD88	North American Vertical Datum of 1988
NGVD29	National Geodetic Vertical Datum of 1929 at Sandy Hook, NJ
NYCRR	New York Codes, Rules, and Regulations
NYSDOH	New York State Department of Health
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	Department of Transportation
NTU	Nephelometric Turbidity Units
ORP	Oxidation-Reduction Potential
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbon
PBS	Petroleum Bulk Storage
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PID	Photoionization Detector
PPE	Personal Protective Equipment
ppm	Parts per million

Acronym	Definition
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
RRU	Restricted Residential Use
SCO	Soil Cleanup Objective
SMD	Submembrane Depressurization System
SMP	Soil Management Plan
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCA	Trichloroethane
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
UN/DOT	United Nations Department of Transportation
USGS	United States Geological Survey
UST	Underground Storage Tank
UU	Unrestricted Use
VOC	Volatile Organic Compound

CERTIFICATION

I, Jason J. Hayes, certify that I am currently a NYS registered professional engineer and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



Jason J. Hayes

NYS PE No. 089491

1.0 INTRODUCTION

This Remedial Investigation (RI) Report was prepared on behalf of Purves Street Owners, LLC (the "Volunteer") for the property located at 44-30 Purves Street in the Long Island City neighborhood of Queens, New York (the "Site"). A Site Location Map is provided as Figure 1. The Volunteer was accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) to remediate the Site in conjunction with new development under a NYSDEC Brownfield Cleanup Agreement (BCA) dated July 1, 2014 for Site No. C241162.

This RI Report presents a summary of environmental investigations including data obtained during the Phase II Environmental Site Investigation (ESI), conducted between February 19 and 28, 2014, and the supplemental remedial investigation, conducted between April 15 and 24, 2014. Both investigations were completed by Langan. The objective of this RI is to determine, to the extent possible, the nature and extent of contamination in soil, soil vapor, and groundwater. Information presented in this RI Report will be used to evaluate appropriate remedial action alternatives.

This RI Report is organized as follows:

- Section 2.0 describes the site setting and the physical characteristics of the site.
- Section 3.0 describes the site background including results of previous investigations and identified areas of concern (AOCs).
- Section 4.0 presents the investigation field procedures.
- Section 5.0 describes the field observations and analytical results.
- Section 6.0 presents an assessment of the exposure risks of Site contaminants to human, fish, and wildlife receptors.
- Section 7.0 presents the nature and extent of contamination in all site media as determined through the field investigation and analysis of environmental samples.
- Section 8.0 summarizes the results of the investigation and presents conclusions based on field observations and analytical results.
- Section 9.0 presents the references used in preparation of this report.

2.0 SITE PHYSICAL CHARACTERISTICS

2.1 Site Description

The Site is an irregularly-shaped, 27,100-square-foot (0.62-acre) vacant lot located at 44-30 Purves Street in the Long Island City neighborhood of Queens, New York (Block 268, Lots 1, 24, 25, and 26). The Site is bounded by Purves Street to the east, Lot 31 with a two-story brick building to the southeast, Thomson Avenue to the southwest, 44th Drive to the west, and lots 4 (vacant one-story building) and 23 (vacant) to the north. The Site has approximately 175 feet of frontage along Purves Street, 150 feet of frontage along Thomson Street, and 60 feet of frontage along 44th Drive. The Site has been a vacant lot for nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes.

2.1.1 Description of Surrounding Properties

The Site is located in an urban setting historically characterized by industrial and commercial development, and has recently undergone residential and commercial development due to rezoning. Surrounding properties are summarized in the following table:

Direction	Adjoining Properties	Surrounding Properties
North	Lot 4 (vacant one-story building) and lots 22 and 23 (vacant) followed by one- and two-story industrial buildings	Multiple-story residential, commercial and industrial buildings
East	Purves Street followed by a 14-story residential building and under-construction residential building	
Southeast	Lot 31 (vacant two-story building) followed by Thomson Street	
Southwest	Thomson Street followed by a five-story residential and commercial building	
West	44th Drive followed by multiple one- and two-story commercial buildings	

The surrounding area is highly urbanized and characterized by major infrastructure, including subway tunnels and elevated subway lines, underground utility lines, storm drains, and sewers. The presence of underground infrastructure may influence contaminant migration from potential up-gradient sources. The New York City Metropolitan Transit Authority (MTA) M and E subway lines extend underneath Jackson Avenue approximately 250 feet northwest of the Site.

Sensitive receptors within a half mile of the Site are listed in the following table:

NUMBER	NAME (Approximate distance from Site)	ADDRESS
1	Frank Sinatra High School (1,373 feet southeast)	30-20 Thomson Avenue, Long Island City, New York 11101
2	Information Technology High School (1,636 feet northwest)	21-16 44th Road, Long Island City, New York 11101
3	LaGuardia Community College High School (1,901 feet southeast)	45-35 Van Dam Street, Long Island City, New York 11101
4	Laguardia Community College Pre-School (1,901 feet southeast)	31-10 Thomson Avenue, Long Island City, New York 11101
5	Academy of American Studies High School (2,000 feet northeast)	28-04 41st Avenue, Long Island City, New York 11101
6	Robert F. Wagner Secondary School (2,006 feet southeast)	47-07 30th Place, Long Island City, New York 11101
7	Newcomers High School (2,164 feet northeast)	28-01 41st Avenue, Long Island City, New York 11101
8	YMCA of Greater New York (2,534 feet east)	32-23 Queens Blvd., Long Island City, New York 11101

A map showing the surrounding land uses and the locations of the nearest sensitive receptors is included as Figure 2.

2.1.2 Topography

Ground surface elevations were obtained from a survey drawing by Apple Surveying, dated May 5, 2014. All elevations (el) presented herein are measured in feet and referenced to the North American Vertical Datum of 1988 (NAVD88), which is 1.095 feet above the National Geodetic Vertical Datum (NGVD29) at Sandy Hook, New Jersey.

Based on survey data, Site grade ranges from el 9.73 in the northwest to 11.90 in the northeast. The sidewalk grade of Thomson Avenue and 44th Drive is elevated above site grade, and slopes upward from north to south from el 23.46 to el 30.66. A retaining wall supports the Thomson Avenue and 44th Drive sidewalks. The sidewalk grade of Purves Street slopes upward from south to north from el 9.64 to el 10.82.

2.1.3 Surface Water and Drainage

There are no stormwater drains on the Site. Approximately 55% of the Site is covered with a concrete slab and the remaining 45% is covered with overgrown vegetation. The partial concrete slab covers portions of the northeast and southern parts of the Site; therefore, precipitation infiltrates to the water table. The majority of runoff drains to city sewers, then to one of the several wastewater treatment plants that serve the city. The nearest sewer line is located to the east of the Site, flowing from south to north underneath the western sidewalk of Purves Street. Rainwater that infiltrates the ground percolates downwards toward the water table and joins the anticipated regional flow of groundwater, which is estimated to flow west and southwest towards the East River and Newtown Creek. However, based on our Site groundwater gauging data, localized groundwater is estimated to flow towards the east and northeast.

According to the National Flood Insurance Rate map for the City of New York published by the Federal Emergency Management (FEMA) (Community Panel No. 3604970 202 F, dated September 5,2007), the Site is located within Zone X. Zone X is designated for areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.

2.1.4 Wetlands

Potential wetlands on or near the Site were evaluated by reviewing the National Wetlands Inventory and NYSDEC regulated wetlands. There are no wetlands on or adjacent to the Site. The nearest wetlands to the Site are the Dutch Kills, a tributary of Newtown Creek, located approximately 0.25 miles south-southeast of the Site, and the East River, which is located approximately 0.65 miles west of the Site.

2.2 Regional Geology and Hydrogeology

2.2.1 Regional Geology

The Site is located in the Borough of Queens which lies within the Atlantic Coastal lowlands physiographic province of New York State, an area which includes all of Long Island. The last glacial advance and retreat in New York City are primarily responsible for the present day surface features and topography. The southernmost advance of the glacial ice sheet through Queens County is marked by the Harbor Hill moraine, a ridge or mound composed of unsorted, unstratified glacial drift, formed by the direct action of the glacial ice. Glacial Lakes Bayonne

and Hudson formed north of the moraine and are underlain by varved deposits of ground moraine consisting of glacial outwash till, a mixture of rock debris ranging in size from clay to boulders. The Site is located within the former footprint of glacial Lake Bayonne.

The USGS "Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey" indicates that the bedrock underlying the Site consists of fine- to coarse-grained, gray- to tan-weathering, quartzofeldspathic, muscovite-biotite-garnet schist.

2.2.2 Regional Hydrogeology

Within the ground, water ("groundwater") is contained within the unconsolidated geologic materials and the fractured bedrock. The upper surface of the groundwater reservoir is marked by the water table surface. Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flows toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeological network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeological and anthropogenic variables such as precipitation, evaporation, extent of vegetation cover, and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, and variability in local geology and groundwater sources or sinks.

3.0 SITE BACKGROUND

This section describes historical site use, the proposed redevelopment, and provides discussion on the findings from previous environmental and geotechnical investigations. Based on a review of the previous reports, the areas of concern (AOC) are also summarized.

3.1 Historical Site Use

The Site is located in an area of historical industrial usage and has been used for manufacturing purposes since as early as 1947. Past uses of Lots 1 and 26 include a chemical laboratory, automobile repair, storage, paper embossing, private garage, and a contractor's yard. Past uses of Lots 24 and 25 include controller manufacturing, fine chemicals manufacturing, and welding and repair services. Sanborn maps, dated 1947 and 1950, indicate two underground storage tanks (UST) in the central portion of Lot 1, and geophysical anomalies indicative of USTs were identified in this area of the Site during the February 2014 Phase II ESI.

Adjacent and surrounding properties were historically used for industrial and manufacturing purposes. Sanborn maps indicate surrounding properties were used for chromium plating, multiple auto body/repair shops, a photochemical warehouse, steel and machine part storage, and textile printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the Site across Purves Street. Historical uses of the Site and surrounding properties are shown on Figure 3.

3.2 Proposed Redevelopment Plan

The purpose of the project is to develop an underutilized, contaminated parcel into market rate residential use, while implementing remedial measures that are protective of human health and the environment. The proposed project will include the construction of a 33-story, approximately 263-unit residential apartment building and a one-story building with residential amenity space and retail along Thomson Avenue and 44th Street. One level of approximately at-grade ventilated parking will span an area of approximately 14,000 square feet.

The proposed development will not have a basement, so the majority of the excavation required for development will be to the bottom of the first floor slab. The necessary general excavation cut required for development is assumed to be at approximately el 8.5 feet, which is between approximately 1.2 and 3.4 feet bgs. Additional deeper excavations will be required for an elevator pit and foundation elements. Proposed development plans are provided in Appendix A.

3.3 Previous Investigations

Previous environmental reports were reviewed as part of this RI Report. Environmental reports prepared for the Site include the following:

- *April 27, 2006 Phase I Environmental Site Assessment (ESA) Report, prepared by Middleton Environmental, Inc.*
- *November 5, 2006 Phase II Environmental Site Investigation (ESI) Report, prepared by Environmental Business Consultants*
- *December 9, 2011 Phase I ESA Report, prepared by IVI Assessment Services, Inc.*
- *March 18, 2014 Phase II ESI Report, prepared by Langan*

The reports listed above are summarized below and are included in Appendix B.

3.3.1 April 27, 2006 Phase I ESA Report

Middleton Environmental, Inc. prepared a Phase I ESA Report for the property located at 44-26/30 Purves Street (Block 268, Lots 24, 25, and 26), and a Phase I ESA update that included 44-32/38 Purves Street (Block 268, Lot 1). The Phase I ESA reports concluded the following:

- No recognized environmental conditions (REC) were identified.
- At the time of this Phase I ESA, two buildings were present at the Site. The buildings were vacant, and had most recently been used for automobile repair and carpet storage. The site was previously used by a chemical laboratory, a filter cleaner company, a hardware warehouse, a paper embossing company, a taxi repair facility, a controller manufacturing company, a pine chemical company and an air freight company.
- At the time of this Phase I ESA, surrounding property usage included a welding company, an automobile repair facility, a construction site, and vacant industrial buildings.
- A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two underground storage tanks (UST) at the Site. There were no oil fill ports or fuel vents observed at the Site.

3.3.2 November 5, 2006 Phase II ESI Report

Environmental Business Consultants conducted a limited Phase II ESI that included the advancement of three soil borings, the installation of three temporary monitoring wells, and the collection and laboratory analysis of six soil and three groundwater samples.

Three soil borings were advanced to 20 feet below grade surface (bgs). Historic urban fill material was observed from surface grade to depths of 2 to 9 feet bgs. Native layers consisting of fine- to medium-grained sand, silt, and peat were observed underlying the fill layer. No evidence of impacts was observed based on photoionization detector (PID) screening of soils. Soil samples were collected from the 7 to 8 and 17 to 18 foot depth intervals in each boring. Soil samples were analyzed for the New York State Department of Environmental Conservation (NYSDEC) Spills Technology and Remediation Series (STARS)-listed volatile organic compounds (VOC) and semivolatile organic compounds (SVOC). One SVOC, pyrene, was detected in the shallow sample in boring SB2; however, the concentration did not exceed the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objective (RSCO). The TAGM RSCOs have subsequently been superseded by Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375. Under Part 375, the pyrene detection would still be below the corresponding Unrestricted Use (UU) Soil Cleanup Objective (SCO). There were no other VOC or SVOC detections in soil samples.

Three 1-inch diameter temporary monitoring wells were installed at a depth of 18 feet bgs with 15 feet of 0.010-inch slotted polyvinyl chloride (PVC) screen attached to PVC riser that extended approximately 2 feet above grade surface. Groundwater samples were collected from each well and analyzed for NYSDEC STARS-listed VOCs and SVOCs. No STARS-listed VOCs or SVOCs were detected in groundwater samples.

3.3.3 December 9, 2011 Phase I ESA Report

The Phase I ESA identified the following RECs:

- *REC 1 - Historical Site Use:* Historical Site uses included a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard. Two gasoline USTs were identified on the 1947 and 1950 Sanborn maps and may be still present. The historic site usage may have negatively impacted soil and/or groundwater at the Site.

- *REC 2 – Historical Use of Surrounding Properties:* Properties adjacent and surrounding the Site were previously used for chromium plating, auto body/repair shops, a photochemical warehouse and textile printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the Site across Purves Street. The adjacent usage may have negatively impacted soil and/or groundwater at the Site.

3.3.4 March 18, 2014 Phase II ESI Report

Langan implemented the Phase II ESI between February 19 and 28, 2014. The investigation included the completion of a geophysical survey, advancement of eight soil borings, and installation of four permanent groundwater monitoring wells and seven soil vapor points. Samples collected from these locations (by media) included:

- Soil – 19 samples analyzed for VOCs, SVOCs, metals, pesticides, and PCBs
- Groundwater – five samples analyzed for VOCs, SVOCs, metals, pesticides, PCBs, and hexavalent chromium
- Soil Vapor – five soil vapor samples and one ambient air sample analyzed for VOCs

Soil analytical data was compared to UU SCOs, groundwater analytical data was compared to NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Ambient Water Quality Standards (AWQS), and soil vapor analytical data was compared to concurrent ambient air quality data. The findings of the investigation are summarized below:

- The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Additionally, refusal encountered during the advancement of boring SB05 may have resulted from contact with a UST-related subsurface structure.
- The subsurface soil profile generally consisted of historic fill predominately characterized as brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. The fill layer extended to between approximately 1.5 and 11 feet bgs. The fill layer was underlain by brown, fine- to medium-grained sand. In borings located within the western portion of the site (SB02, SB03, and SB06), the sand layer was underlain by layers of silt, peat, and clay. In borings located in the southeastern portion of the site (SB04 and SB05), the sand layer was underlain by silt.

In borings located in the northeastern portion of the site (SB01, SB07, SB08), the sand layer was underlain by a silt layer followed by a clay layer.

- Soil –
    - Petroleum-Impacted Soil – Material exhibiting staining, odor, and elevated VOC concentrations based on field screening with a PID was observed at three boring locations: SB01, SB03, and SB05. Petroleum impacts in borings SB01 and SB03 were observed straddling the water table. Petroleum impacts in boring SB05 were observed at a depth of 2 to 3 feet bgs, above an obstruction that resulted in refusal. Impacts were observed in the northern and southern portions of the Site, including the area adjacent to potential USTs. A spill was reported to NYSDEC and spill number 1310949 was assigned.
    - Historic Fill – A layer of historic fill extending to between approximately 1.5 and 11 feet bgs was identified throughout the site. The fill was characterized as predominately consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Anomalously high concentrations of metals, particularly lead, were identified in the borings indicated below.
        - Barium – Boring SB02
        - Lead – Borings SB02, SB05, SB06, and SB08
        - Mercury – Borings SB03 and SB04
    - Analytical Results – The following constituents were detected in soil at concentrations that exceed their respective UU SCOs:
        - VOCs: acetone and methylene chloride
        - SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene
        - Metals: arsenic, barium, cadmium, hexavalent chromium, trivalent chromium, copper, lead, mercury, nickel, and zinc
        - Total PCBs

- Groundwater –
    - Measurements collected during the ESI found groundwater ranged from 4.0 to 6.4 feet bgs.
    - No light non-aqueous petroleum liquid (LNAPL) was observed in any of the monitoring wells. A PID reading of 12.8 ppm was observed in the headspace of monitoring well MW03.
    - Chlorinated Solvent-Impacted Groundwater – Chlorinated VOCs (CVOC) including 1,1,1-TCA, cis-1,2-DCE, PCE, TCE, and vinyl chloride were identified in groundwater at concentrations exceeding the Class GA TOGS AWQS. Groundwater exceedances were observed in the eastern portion of the site, with the highest concentrations in the northeast in monitoring well MW01.
    - Metals – Manganese, selenium, and sodium were detected in groundwater at concentrations exceeding the Class GA TOGS AWQS in samples collected from two or more monitoring wells.
- Soil Vapor – Soil vapor results revealed concentrations of VOCs, included those related to petroleum and chlorinated solvents, above concentrations found in the ambient air sample.

3.4 Geotechnical Engineering Study

Langan conducted a geotechnical subsurface investigation in February 2008, and a supplemental investigation in April 2014. The geotechnical investigations consisted of drilling 17 borings, installing 3 observation wells, excavating ten test pits, and performing six seismic cone penetration tests. The purposes of the investigations were to investigate the subsurface conditions, develop foundation design recommendations, and develop geotechnical engineering recommendations related to the design and construction of the proposed development.

Borings were completed to depths of approximately 53 to 75 feet below grade surface (bgs). The borings revealed an approximately 5- to 9-foot-thick layer of historic fill above a 7- to 14-foot-thick layer of sand that overlies a 5- to 27-foot-thick layer of silt, overlying a 10- to 15-foot thick layer of clay. Decomposed rock was encountered from approximately 44 to 48 feet bgs in four borings, and bedrock was encountered between approximately 43 and 61 feet bgs in all borings. Groundwater was measured in the three observation wells at depths of 8 to 10 feet bgs. The May 12, 2014 Geotechnical Engineering Report is included in Appendix C.

3.5 Summary of Areas of Concern

Based on a review of previous reports, the following AOCs were identified:

1. AOC-1 - Historic Fill: A layer of historic fill spanning from surface grade to between 2 and 11 feet bgs was identified during previous subsurface investigations at the Site. In addition, based on the data provided by the New York City Office of Environmental Remediation Searchable Property Database Environmental E-Database (SPEED), the Site is listed under the Vacant Property Database and the Vacant Property Database Fill Properties, which indicate the Site is vacant and likely in-filled using historic fill. The analytical results of soil samples collected during Langan's Phase II ESI indicated that the historic fill layer is impacted with SVOCs, metals, and PCBs.

2. AOC-2 - Historical Underground Storage Tanks (UST) and Petroleum-Impacted Soil: USTs were identified on the Site on the 1947 and 1950 Sanborn Maps, and the geophysical survey conducted for Langan's Phase II ESI identified an anomaly in the area of the suspected USTs. Visual, olfactory, and instrumental evidence of petroleum impacts was observed on soil in one boring in the area of the USTs and in borings in the western and northeastern parts of the Site. A spill was called in during Langan's Phase II ESI and spill number 1310949 was assigned.

3. AOC-3 - Chlorinated VOC Contamination in Groundwater: Langan's Phase II ESI found chlorinated solvent impacts (e.g. PCE and TCE) to groundwater along the eastern Site boundary near Purves Street.

4. AOC-4 - Potential Soil Vapor Contamination: The above listed historical site uses, historical uses of surrounding properties, and historical presence of USTs on the site and surrounding properties indicate potential for soil vapor contamination at the Site.

4.0 FIELD INVESTIGATION

Langan conducted a Phase II ESI between February 19 and 28, 2014, followed by a supplemental remedial investigation conducted between April 15 and 24, 2014, to characterize the nature and extent of contamination at the Site. The two investigation phases together constitute the RI. Investigation activities included a geophysical survey, soil boring advancement, monitoring well installation, soil vapor probe installation, and collection of soil, groundwater, and soil vapor samples. A summary of samples collected is provided in Table 1, and sample locations are shown on Figure 4.

The RI consisted of the following:

- Advancement of nineteen soil borings (SB01 through SB19) and collection of 54 soil samples, including three duplicate samples.
- Installation of nine groundwater monitoring wells (MW01 through MW04 and MW09 through MW13) and collection of eleven groundwater samples, including two duplicate samples.
- Installation of thirteen soil vapor points (SV01 through SV13) and collection of twelve soil vapor samples, including one duplicate sample, and two ambient air samples.

Langan conducted the RI in accordance with New York Codes, Rules and Regulations (NYCRR) Title 6 Part 375 (6 NYCRR Part 375), the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010), the NYSDEC Draft Brownfield Cleanup Program Guide (May 2004), and the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006).

4.1 Geophysical Investigation

Prior to commencement of intrusive RI field activities (i.e., soil borings, well installation and soil vapor sampling), NOVA Geophysical & Environmental, Inc. (NOVA) of Douglaston, New York, conducted a geophysical survey under supervision of a Langan field engineer on February 19, 2014. Borings were relocated as necessary to avoid subsurface utilities and anomalies (other subsurface impediments). A geophysical report presenting the findings is included in Appendix D.

4.2 Soil Investigation

4.2.1 Investigation methodology

A total of 19 soil borings (SB01 through SB19) were completed during the RI. Boring locations were selected to provide sufficient Site coverage and to evaluate the AOCs listed in section 3.5. Borings SB01 through SB08 were advanced during the Phase II ESI with a direct-push Geoprobe® 6610DT drill rig by Laurel Environmental Associates, Ltd. (Laurel) of Huntington Station, New York, and supplemental borings SB09 through SB17 were advanced with a direct-push Geoprobe® 7822DT drill rig by Aarco Environmental Services Corp. (Aarco) of Lindenhurst, New York. All borings were advanced under the supervision of a Langan field engineer. Boring locations are presented on Figure 4.

Borings were advanced until a potentially confining layer of silt or clay was identified. All except five borings were advanced to 20 feet bgs; borings SB01 and SB06 were advanced to 25 feet bgs, and SB02, SB13, and SB16 were advanced to 15 feet bgs. Boring SB13 was located off-site on the Purves Street sidewalk. There were no borings located off-site on Thomson Avenue and 44th Drive due to the retaining wall spanning the western and southwestern Site boundaries. Continuous soil samples were collected from grade surface to the final depth of each environmental boring. Samples were collected in 5-foot Macro-Core® sample barrels with new, dedicated acetate liners. Each soil sample was screened for visual, olfactory, and instrumental evidence of environmental impacts, and was visually classified for soil type, grain size, texture, and moisture content. Instrument screening for the presence of VOCs was performed with a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. Boring logs documenting these observations are included in Appendix E. Following sample collection, all borings were backfilled with soil cuttings and sand or converted to groundwater monitoring wells.

4.2.2 Sampling Methodology

A total of 54 grab soil samples, including three field duplicates, were collected for laboratory analysis. Generally, one sample was collected from the historic fill layer, and a second sample was collected from the interval of the greatest observable impact (staining, odor, elevated PID readings) or at the groundwater interface. During the supplemental investigation, a third sample from each boring was collected at the boring termination depth.

Samples submitted for VOC analysis were collected directly from the acetate sleeve via laboratory-supplied Terra Core® soil samplers. The remaining sample volume was homogenized and placed in appropriate laboratory-supplied containers for all additional analyses. The sample

containers were labeled, placed in a laboratory-supplied cooler and packed on ice (to maintain a temperature of 4±2°C). The samples were picked up and delivered via courier service to York Analytical Laboratories (York), a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory in Stratford, Connecticut under standard chain-of-custody protocol.

All soil samples were analyzed for NYSDEC Part 375 List VOCs by Environmental Protection Agency (EPA) Method 8260C, SVOCs by EPA method 8270D, metals (including hexavalent chromium) by EPA methods 6010C/7473/7196A, pesticides by EPA method 8081B, and polychlorinated biphenyls (PCBs) by EPA method 8082A. Soil samples collected during the supplemental investigation were additionally analyzed for EPA Target Compound List (TCL) VOCs, SVOCs, pesticides, and PCBs, and Target Analyte List (TAL) metals. Eight of nineteen Phase II ESI soil samples and all of the supplemental investigation soil samples were analyzed for total cyanide by EPA method 9014/9010C. A sample log showing samples and sample analyses is provided in Table 1. Analytical reports and chain-of-custody documentation are provided in Appendix D.

4.3 Groundwater Investigation

A total of nine monitoring wells (MW01 through MW04 and MW09 through MW13) were installed during the RI. Monitoring wells were sampled to investigate potential impacts to groundwater associated with the identified AOCs.

4.3.1 Monitoring Well Installation and Development Methodology

Nine soil borings were converted into groundwater monitoring wells by inserting 10 feet of 2-inch diameter, 0.01-inch slotted, schedule 40 PVC screen, with attached risers, into the boreholes. The monitoring wells were screened across the water table to allow for the monitoring of light non-aqueous phase liquid (LNAPL). Each monitoring well ID corresponds to the boring where it was installed (i.e. MW01 was installed in SB01). Monitoring wells MW01 through MW04 were installed and sampled during the Phase II ESI, and MW09 through MW13 were installed and sampled during the supplemental investigation. All wells were installed to a depth of approximately 14 feet bgs. Three monitoring wells (MW01, MW03, and MW04) were installed with 2.0-inch inner diameter (ID) by 3.4-inch outer diameter (OD) prepacked well screens. Prepacked well screens include a stainless steel wire mesh with a 0.011-inch pore size surrounding the slotted PVC and containing 20/40 mesh silica sand. Prepack screen installation required advancing 4-inch ID steel augers to the desired well depth. All other monitoring wells were constructed with a PVC screen with no prepack and were installed by advancing 3-inch OD Macro-Core® sample barrels. The annulus of each well was filled with #2 Morie sand to approximately 1.5 feet above the top of the screen. Hydrated bentonite well

seals were installed above the filter sand. Following installation, each well was developed using a submersible Monsoon pump. Development water was placed into labeled drums. Monitoring well construction details are presented in Table 2 and construction logs are included in Appendix F. Monitoring well locations are shown on Figure 4.

A Langan field engineer completed synoptic groundwater gauging prior to sampling on February 28, 2014 and again on April 24, 2014. Groundwater elevations are presented in Table 3. A groundwater contour map based on the April 24, 2014 groundwater gauging event is presented as Figure 5.

4.3.2 Groundwater Sampling

Monitoring wells were sampled one week after development, in accordance with the EPA's low-flow groundwater sampling procedure to allow for collection of a representative sample ("Low Stress [low flow] Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells", EQASOP-GW 001, January 19, 2010). Immediately before sample collection, a minimum of three well volumes were purged from each well and groundwater parameters (pH, conductivity, turbidity, dissolved oxygen [DO], temperature, and oxidation-reduction potential [ORP]) had stabilized and turbidity measurements were below 50 Nephelometric Turbidity Units (NTU). The groundwater parameters at monitoring well MW11 did not stabilize prior to sampling due to a low recharge rate. Groundwater sampling logs are included in Appendix G.

Eleven groundwater samples – one sample from each well and two duplicate samples – were collected into laboratory-supplied glassware and picked up and delivered via courier service to York. Duplicate samples were collected from monitoring wells MW01 and MW13. Groundwater samples were analyzed for TCL VOCs by EPA Method 8260C, TCL SVOCs by EPA method 8270D, pesticides by EPA method 8081B, PCBs by EPA method 8082A, TAL metals by EPA methods 6010C/7470, and hexavalent chromium by EPA method 7196A. Groundwater samples collected during the supplemental investigation were additionally analyzed for NYSDEC Part 375 listed VOCs, SVOCs, Metals, PCBs, and pesticides, and total cyanide by Standard Method 4500.

4.4 Soil Vapor Investigation

NYSDEC DER-10 requires an assessment of soil vapor for contaminated sites to assess the health risk associated with potential exposure to VOCs through vapor intrusion into occupied spaces. Seven soil vapor sample points (SV01 through SV07) were installed and sampled for

the Phase II ESI, and six soil vapor sample points (SV08 through SV13) were installed and sampled for the supplemental investigation. Soil vapor samples collected from SV02 and SV05 were not submitted for analysis because of groundwater intrusion during sample collection. Soil vapor sample locations are shown on Figure 4.

4.4.1 Soil Vapor Point Installation

Soil vapor points SV01 through SV07 were installed by Laurel with a Geoprobe® 6610DT drill rig with 1.25-inch OD steel probe rods to a depth of 4 to 5 feet bgs. Soil vapor points SV08 through SV13 were installed by Aarco with a Geoprobe® 7822DT drill rig with a 2-inch OD Macro-Core® to a depth of 3 to 4 feet bgs. The probes were installed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York and were comprised of a stainless steel screen implant (3/8-inch in diameter, and approximately 6 inches in length) threaded into polyethylene tubing. A sand filter pack was installed around the screen implant by pouring No. 2 Morie sand into the annulus to approximately 1 foot bgs. The remainder of the annulus was filled to grade surface with a bentonite slurry seal.

4.4.2 Air Sampling and Analysis

As a quality assurance/quality control (QA/QC) measure, an inert tracer gas (helium) was introduced into an above-grade sampling chamber to ensure that the soil vapor sampling points were properly sealed above the target sampling depth, thereby preventing subsurface infiltration of ambient air. Direct readings of helium of less than 10 percent prior to sampling were considered sufficient to verify a tight seal. All soil vapor points had sufficiently tight seals.

Each soil vapor point was purged using a PID at a rate of 0.2 liters per minute (L/min) to evacuate a minimum of three sample tubing volumes prior to sample collection. The purged soil vapor was also monitored for VOCs and the value was recorded. After purging was completed, the soil vapor samples were collected into laboratory-supplied, batch-certified Summa® canisters. Phase II ESI samples were collected into 2.7-Liter Summa® canisters that were calibrated for a sampling rate of approximately 0.0225 L/min for 120 minutes of sampling. Supplemental investigation samples were collected into 6-Liter Summa® canisters that were calibrated for a sampling rate of approximately 0.05 L/min for 120 minutes of sampling. An ambient air sample was collected during both sampling events and submitted to the lab for analysis for QA/QC purposes. Soil vapor sampling logs are provided in Appendix H.

The 2.7-Liter Summa® canisters were labeled and picked up by a courier for delivery to Alpha Analytical Laboratories (Alpha), a NYSDOH ELAP-certified laboratory in Westborough,

Massachusetts, under standard chain-of-custody protocol. The 6-Liter Summa® canisters were labeled and picked up by a courier for delivery to York. Soil vapor samples were analyzed for VOCs by EPA Method TO-15. Soil vapor sampling locations are shown on Figure 4, and a summary of collected soil vapor and ambient air samples is included in Table 1.

4.5 Quality Control Sampling

During the RI, field blanks, trip blanks, field duplicate samples, matrix spike/matrix spike duplicate (MS/MSD) samples and ambient air samples were collected and submitted for laboratory analysis. Quality assurance/quality control (QA/QC) samples are summarized in Table 1 and include the following matrix-specific QA/QC samples.

Soil QA/QC samples

- Three field duplicate samples;
- One MS/MSD sample;
- Three field blank samples; and
- Three trip blank samples.

Groundwater QA/QC samples

- Two field duplicate samples;
- One MS/MSD sample;
- Two field blank samples; and
- Two trip blank samples.

Soil Vapor QA/QC Samples

- One field duplicate sample; and
- Two ambient air samples.

Field blanks were collected to determine the effectiveness of the decontamination procedures for the groundwater sampling equipment train and the cleanliness of unused neoprene gloves and acetate liners used to collect soil samples. Field blank samples consisted of deionized, distilled water provided by the laboratory that has passed through the sampling apparatus. Field blank samples were analyzed for same lists as the corresponding sampling event and sample matrix.

MS/MSD samples were collected to assess the effect of the sample matrix on the recovery of target compounds or target analytes.

The field duplicates were collected to assess the precision of the analytical methods relative to the sample matrix. The duplicate was collected from the same material as the primary sample by splitting the volume of homogenized sample collected in the field into two sample containers.

The trip blank samples were collected to assess the potential for contamination of the sample containers and samples during the trip from the laboratory, to the field, and back to the laboratory for analysis. Trip blanks contains approximately 40 milliliters of acidic water (doped with hydrochloric acid) that is sealed by the laboratory when the empty sample containers are shipped to the field, and unsealed and analyzed by the laboratory when the sample shipment is received from the field. The trip blank samples were analyzed for VOCs.

4.6 Data Validation

Data from the RI was validated by a Langan data validator in accordance with EPA and NYSDEC validation protocols. Copies of the data usability summary reports (DUSRs) and the data validator's credentials are provided in Appendix I.

4.6.1 Data Usability Summary Report Preparation

A DUSR was prepared for each sampling matrix. The DUSR presents the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. For the soil and groundwater samples, the following items were assessed:

- Holding times
- Sample preservation
- Sample Extraction and digestion
- Laboratory blanks
- Laboratory control samples
- System monitoring compounds
- Matrix spike (MS) and matrix spike duplicate (MSD) recoveries
- Field duplicate, trip blanks, and field blanks sample results

For the air samples, the following items were assessed:

- Holding times
- Canister certification
- Laboratory blanks
- Laboratory control samples
- System monitoring compounds
- Target compound identification and qualification
- Field duplicate sample results

Based on the results of data validation, the following qualifiers may be assigned to the data in accordance with EPA's guidelines and best professional judgment:

- "U" – The analyte was analyzed for but was not detected at a level greater than or equal to the reporting limit (RL) or the sample concentration or the sample concentration for results impacted by blank contamination.

- "UJ" – The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

- "J" – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

- "NJ" – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associate numerical value represents its approximate concentration.

- "R" – The sample results are not useable due to quality of the data generated because certain criteria were not met. The analyte may and may not be present in the sample.

After data validation activities were complete, validated data was used to prepare the tables and figures included in this report.

4.7 Field Equipment Decontamination

Groundwater sampling equipment including interface probe, water quality meters, and sampling pump were cleaned with Alconox and rinsed with water between sampling locations during groundwater sample collection.

Decontamination occurred at the sampling locations, and all liquids were temporarily contained in 5 gallon buckets. Between rinses, equipment was placed on polyethylene sheets, avoiding contact with the ground. Decontamination wastewater was drummed for disposal.

4.8 Investigation-Derived Waste Management

Investigation-derived wastes (IDW) generated during the RI were containerized. Solid waste generated during drilling of soil borings and soil vapor points and aqueous waste from monitoring well development and purging, and decontamination water were placed into separate United Nations/Department of Transportation (UN/DOT)-approved 55-gallon steel drums with closed tops. The drums were staged in a secured area on-site. The drums will be properly transported by a licensed waste hauler and disposed at a licensed facility.

5.0 FIELD OBSERVATIONS AND ANALYTICAL RESULTS

This section summarizes the field observations and laboratory analytical results from the RI. Soil analytical results are compared to the Part 375-6.8(a) Unrestricted Use (UU) SCOs and Restricted Residential Restricted Use (RRU) SCOs and groundwater analytical results are compared to the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 AWQS for Class GA groundwater (Class GA AWQS). Soil vapor results are compared to the ambient air sample results from the corresponding sampling event. The nature and extent of contamination is discussed in Section 7.0.

Investigation locations include the following:

- Nineteen soil borings;
- Nine monitoring wells; and
- Thirteen soil vapor points.

Samples collected at these locations include:

- Soil
    - Fifty-four samples, including three duplicate samples, analyzed for VOCs, SVOCs, metals, PCBs, pesticides, and total cyanide.
- Groundwater
    - Eleven samples, including two duplicate samples, analyzed for VOCs, SVOCs, total metals, PCBs, pesticides, and total cyanide
- Soil Vapor
    - Fourteen samples, including two ambient air samples and one duplicate sample, analyzed for VOCs

A description of the soil, groundwater, and soil vapor samples collected is provided in Table 1.

Copies of the laboratory analytical data reports for data generated during the RI are provided in Appendix J. Summaries of the soil, groundwater, soil vapor, and QA/QC sample analytical result detections for samples collected during the RI are provided in the following tables:

- Table 4a: Soil Sample VOC and SVOC Detection Summary
- Table 4b: Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
- Table 5: Groundwater Sample Detection Summary
- Tables 6a and 6b: Soil Vapor and Ambient Air Sample Detection Summary
- Table 7: Trip Blank and Field Blank Sample Detection Summary

The following sections describe the field observations and analytical data associated with the RI.

5.1 Geology and Hydrogeology

Provided below is a description of the geologic and hydrogeologic observations made during the RI. A groundwater contour map is provided as Figure 5. Cross-sectional diagrams showing the depths of each encountered soil type in the overburden are shown on Figure 6A, 6B, and 6C. Boring logs are provided in Appendix E. Langan's May 2014 Geotechnical Engineering Study, which includes subsurface profiles showing the inferred occurrence of historic fill, native soil and bedrock, is included in Appendix C.

5.1.1 Historic Fill

A historic fill layer was observed that extended from surface grade to between approximately 1.5 and 11 feet bgs. The fill layer was deepest in the northwestern part of the Site (borings SB02, SB06, SB14, SB15, and SB16), and in the southeastern part (borings SB17 and SB18). A shallow fill layer (1.5 to 2.5 feet) was observed in the northeastern portion of the Site (borings SB07, SB08, SB12, SB19, and off-site boring SB13). The fill was characterized as predominantly consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood.

5.1.2 Native Soil Layers

The fill layer was underlain by brown, fine- to medium-grained sand. Soil types underlying the sand layer varied in different parts of the site, as follows:

- Western part – borings SB02, SB03, SB06, SB14, SB15, SB16 – layers of silt, peat, and organic clay
- Northeastern part – borings SB01, SB07, SB08, SB11, SB13, and SB19 – layers of silt and clay
- Southeastern part – borings SB04, SB05, SB09, SB10, SB12, SB17, SB18 – layer of silt

5.1.3 Bedrock

Based on the findings of the May 2014 Geotechnical Engineering Study conducted by Langan, bedrock consists of intermediate to hard, gray-white schist bedrock at depths ranging from

approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast, and is deepest in the southeastern part of the Site.

5.1.4 Hydrogeology

Synoptic groundwater level measurements were collected on February 28, 2014, April 24, 2014, and July 9, 2014. Groundwater was encountered between approximately 4 and 6.5 feet bgs during the February gauging event and between approximately 4.8 and 7.1 feet bgs during the April and July gauging events. The higher groundwater elevations during the February gauging event were presumed to be the result of snow melt. The groundwater elevation is highest in the western part of the Site and appears to flow east to northeast toward Purves Street. A summary of groundwater gauging at the Site is presented in Table 3, and a groundwater contour map based on the April 24, 2014 gauging event is presented as Figure 5.

Groundwater flow may be locally affected by the presence of a combined sewer line that runs adjacent to the Site beneath the western Purves Street sidewalk. According to NYCDEP records, the sewer was constructed circa 1911 of reinforced concrete pipe and during the RI construction crews were observed repairing what appeared to be a surficial breach or cave in. Wastewater flows north within the sewer. The sewer is 42 inches in diameter and has an invert elevation of about 3 feet. At the groundwater elevation noted above, the invert of the sewer is below the water table. If there are any cracks or penetrations in the base or sides of the sewer, the sewer will influence groundwater flow. Based on the inferred groundwater flow directions shown on Figure 5, it appears groundwater may be influenced by the sewer.

Depending on the water table elevation and the integrity of the sewer pipe, the sewer will either be a gaining or losing groundwater feature. During the RI, the sewer was likely a gaining feature because the water table was roughly 1.5 feet above the sewer's invert elevation. During the field work conducted in January 2008 for Langan's geotechnical investigation, the sewer was likely a losing feature because the water table was observed to be significantly lower and below the sewer invert elevation.

5.2 Soil Findings

5.2.1 Field Observations

Historic urban fill was encountered from surface grade to depths of 1.5 to 11 feet bgs throughout the Site. The fill material is underlain by glacial till (i.e., silt, clay, silty sand) followed by bedrock.

Petroleum impacts, evidenced by odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, SB05, SB13, SB14, and SB17. No free product was observed. A spill was reported to NYSDEC on February 20, 2014 based on observation in soil boring SB01 and spill number 1310949 was assigned. Observations related to petroleum impacts at the Site are described as follows:

- The geophysical survey conducted during the Phase II ESI identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps in the central southern part of the Site; however, it could not verify the presence of USTs. Refusal encountered during the advancement of boring SB05 may have resulted from contact with a UST-related subsurface structure.
- Boring SB01 (northeastern part of the Site) – Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 14.9 parts per million (ppm) was observed at depths of approximately 7 to 9 feet bgs, and appeared to straddle the water table.
- Boring SB03 (southwestern part of the Site) – Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 91.7 ppm was observed at depths of approximately 6 to 9 feet bgs, and appeared to straddle the water table.
- Boring SB05 (southern/central part of the Site – near suspected USTs) – Petroleum-impacted soil exhibiting staining, odor and PID readings up to 240 ppm was observed at depths of approximately 2 to 3 feet bgs. Refusal was encountered at 3 feet bgs and the location was offset 3 feet to the north. There was no evidence of petroleum impacts observed at the offset location.
- Boring SB13 (Off-site, northeast part, on the Purves Street sidewalk) – Petroleum-impacted soil exhibiting odor and PID readings up to 5.8 ppm was observed at depths of approximately 9 to 10 feet bgs, below the water table.
- Boring SB14 (western part of the Site) – Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 8.9 ppm was observed at depths of approximately 7 to 9 feet bgs, and appeared to straddle the water table.
- Boring SB17 (southern part of the Site – near suspected USTs) – Petroleum-impacted soil exhibiting odor was observed below the water table at a depth of approximately 10 feet bgs.

5.2.2 Analytical Results

A summary of laboratory detections for soil samples collected during the RI is provided in Tables 4a and 4b with comparisons to the Part 375-6.8(a) UU SCOs and the RRU SCOs. Soil sample results that exceed UU and RRU SCOs for samples collected during both investigations are shown on Figure 7. Full laboratory reports for the RI are included in Appendix J. The

following is a summary of soil sample results that exceed their respective UU or RRU SCOs, organized by analytical parameter.

VOCs

Acetone was detected at concentrations above the UU SCO in four samples. Acetone is a common lab contaminant, and was detected in nine of the laboratory batch blank samples. The concentrations detected in the soil samples are likely not an accurate representation of Site conditions.

Chlorinated VOCs (CVOCs) were detected in two soil samples collected from off-site boring SB13 (SB13_9-10 and SB13_14-15) at concentrations above their respective UU SCOs. The following CVOCs were detected at concentrations above their respective UU SCOs:

- cis-1,2-dichloroetheylene in SB13_9-10 and SB13_14-15
- trichloroethylene (TCE) in SB13_9-10 and SB13_14-15
- tetrachloroethene (PCE) in SB13_9-10 and SB13_14-15
- vinyl chloride in SB13_9-10

SVOCs

At least one SVOC was detected at a concentration above its respective UU SCO and/or RRU SCOs in fourteen of fifty-four samples. The following SVOCs were detected at concentrations exceeding their respective UU and RRU SCO in one or more samples:

- benzo(a)anthracene
- benzo(a)pyrene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- chrysene
- dibenzo(a,h)anthracene
- indeno(1,2,3-cd)pyrene

Metals

At least one metal was detected at a concentration exceeding its respective UU and RRU SCOs in twenty-two of fifty-four samples. The following metals were detected at concentrations exceeding their respective UU and RRU SCOs in one or more samples:

- arsenic
- barium
- cadmium
- hexavalent chromium
- trivalent chromium
- copper

- lead
- mercury

At least one metal was detected at a concentration exceeding its respective UU SCO in thirty-one of fifty-four samples. The following metals were detected at concentrations above their respective UU SCO, but below the RRU SCO:

- nickel
- selenium
- zinc

PCBs

The concentration of total PCBs in samples SB03_1-3, SB04_4-6, and SB15_0-3 exceeded the UU SCO. Total PCBs exceeded the UU SCO in samples SB03_1-3 and SB04_4-6 due to the presence of Aroclor 1262, and in sample SB15_0-3 due to the presence of Aroclor 1260.

Pesticides

At least one pesticide was detected at a concentration exceeding its respective UU SCO in three of fifty-four samples. The following pesticides were detected at concentrations exceeding their respective UU SCOs in one or more samples:

- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- dieldrin

Cyanide

Total cyanide was not detected at a concentration above the SCOs in any soil samples.

5.3 Groundwater Findings

5.3.1 Field Observations

All wells were screened for free product with an oil-water interface probe. No evidence of free product was observed on groundwater during the RI. During development of off-site monitoring well MW13, sheen was observed on purged groundwater. PID headspace readings ranged from 0.0 ppm to 64.4 ppm (highest reading in monitoring well MW13) during development and sampling. Refer to section 5.1.4 for a discussion of hydrogeology.

5.3.2 Analytical Data

Eleven groundwater samples, including two duplicate samples, were analyzed for VOCs, SVOCs, total metals (including hexavalent chromium), PCBs, and pesticides. Six of the eleven

samples were also analyzed for total cyanide. A summary of the groundwater sample laboratory detections compared to NYSDEC TOGS 1.1.1 Class GA AWQS is presented in Table 5. Groundwater sample locations and results that exceed their respective Class GA AWQS are presented in Figure 8. The following is a summary of the groundwater sample results that exceed the Class GA AWQS organized by analytical parameter.

VOCs

The following VOCs were detected at concentrations above the Class GA AWQS:

- 1,1,1-trichloroethane in MW01 and MW13 (off-site);
- 1,1-dichloroethane in MW13 (off-site);
- cis-1,2-dichloroethylene in MW01, MW09, and MW13 (off-site);
- PCE in MW01, MW04, and MW13 (off-site);
- TCE in MW01 and MW13 (off-site); and
- vinyl chloride in MW01 and MW13 (off-site).

SVOCs

One SVOC, benzo(a)anthracene was detected at a concentration above its TOGS GA AWQS in monitoring well MW13.

Metals

The following metals were detected at concentrations exceeding their respective Class GA AWQS in five or more samples:

- manganese
- selenium
- sodium

PCBs and Cyanide

PCBs and cyanide were not detected in any of the groundwater samples.

Pesticides

One pesticide, total chlordane, was detected at a concentration exceeding its Class GA AWQS in monitoring well MW13 (off-site).

5.4 Soil Vapor Findings

Twelve soil vapor samples, including one duplicate sample, and two ambient air samples – one for each sampling event – were submitted for laboratory analysis. Results for VOCs were compared to the corresponding ambient air sample results. A summary of laboratory results is provided in Tables 6a and 6b. Full laboratory reports are included in Appendix J.

Total VOCs ranged from 62.71 micrograms per cubic meter (µg/m³) in SV04 to 1,552 µg/m³ in SV13. VOCs detected at a greater concentration in soil vapor than ambient air include:

- 1,1,1-trichloroethane
- 1,1-dichloroethane
- 1,2,4-trimethylbenzene
- 1,3,5-trimethylbenzene
- 1,2-dichloroethane
- 1,3-butadiene
- 2-butanone
- 2-hexanone
- 4-methyl-2-pentanone
- acetone
- bromodichloromethane
- benzene
- carbon disulfide
- carbon tetrachloride
- chloroform
- chloromethane
- cis-1,2-dichloroethene
- cyclohexane
- dichlorodifluoromethane
- ethanol
- ethyl acetate
- ethylbenzene
- Freon-113
- heptane
- isopropanol
- methyl tert-butyl ether
- methylene chloride
- n-hexane
- n-heptane
- o-xylene
- p/m-xylene
- p-ethyltoluene
- styrene
- PCE
- trans-1,2-dichlroethene
- TCE
- tetrahydrofuran
- trichlorofluoromethane
- vinyl chloride

PCE and TCE were detected in the soil vapor samples and are considered soil vapor contaminants of concern. PCE was found in all soil vapor samples and ranged from 8.6 µg/m³ (SV10) to 1,500 µg/m³ (SV13). TCE was found in ten of twelve soil vapor samples and ranged from 2 µg/m³ in SV11 to 200 µg/m³ at SV09. A map showing soil vapor sample locations and results is presented as Figure 9.

5.5 Quality Control Results

Duplicates, field blanks, and trip blanks samples were collected during the RI and are listed in Table 1. Quality control sample results were evaluated during data validation. The analytical results of field blanks and trip blank samples are summarized in Table 7.

5.6 Data Usability

Category B laboratory reports for the soil, groundwater, soil vapor, and air samples were provided by York and Alpha and were forwarded to Langan's data validator for all samples collected during the RI. Copies of the DUSRs are provided in Appendix I. The results of the data validation review are summarized below.

The data were determined to be mostly acceptable. Completeness, defined as the percentage of analytical results that are judged to be valid, is 99%. The following results were flagged as unusable, indicating that the results are not sufficiently valid or technically supportable to be used for data interpretation:

- The continuing calibration analyzed on 2/28/14 displayed continuing relative response factors less than the control limit for hexachlorobenzene and pentachlorophenol. The associated non-detect field blank sample results are qualified as "R" for rejected.

- Caprolactam did not recover (i.e., 0%) in the laboratory control sample/control sample duplicate (LCS/LCSD) associated with sample batch BC40084. The associated sample results were non-detect and are qualified as "R" for rejected.

5.7 Evaluation of Potential Areas of Concern

This section discusses the results of the RI with respect to the AOCs described in Section 3.5.

5.7.1 AOC-1: Historic Fill

During the RI, historic fill was observed from surface grade to between 1.5 and 11 feet bgs. All borings are included within AOC-1, as historic fill encompasses the entire site. Soil sample results are shown on Tables 4a and 4b, and a description of the sampled soil layer is included in Table 1. Twenty-seven samples were collected from the historic fill layer, and the analytical results are summarized as follows:

- SVOCs and metals were detected at concentrations exceeding RRU SCOs. SVOC and metal concentrations were observed to be in the range of typical concentrations found

in New York City historic fill, with the exception of isolated areas of anomalously high metals. Anomalously high concentrations of metals, particularly lead, barium, and mercury, were identified in the borings indicated below:

  - SB02 – lead, barium
  - SB04 – mercury
  - SB05, SB06, SB08, SB12, SB16 – lead

- PCBs and pesticides were detected at concentrations exceeding UU SCOs.

AOC-1 Conclusions

Fill material on the site was found to have one or more exceedances of both the UU and RRU SCOs for SVOCs, metals, pesticides, and PCBs. The presence of historic fill does not appear to be impacting the groundwater and soil vapor on the Site.

The anomalously high concentrations of lead, barium, and mercury are potentially hazardous. Based on the prevalence and magnitude of the lead concentrations, and the relatively higher solubility of lead than barium and mercury, lead is the most likely to exist in hazardous concentrations.

5.7.2 AOC-2: Historic USTs and Petroleum-Impacted Soil

AOC-2 represents the location of two USTs that were identified on the 1947 and 1950 Sanborn maps, and the petroleum-impacted soil identified during Langan's Phase II ESI. Based on the potential presence of USTs, the presumed age of the tanks (at least 67 years), and lack of tank closure documentation, the potential tanks are an AOC. In addition, visual, olfactory, and instrumental evidence of petroleum impacts was observed in three borings (SB01, SB03, and SB05) during Langan's Phase II ESI. Contaminants of concern include petroleum-related VOCs and SVOCs in soil and groundwater and VOCs in soil vapor. Investigation locations include the southern portion of the Site, which incorporates the suspected USTs and observations of petroleum impacts in Phase II ESI borings SB05 and SB03, and the northeastern portion of the Site, which incorporates observations of petroleum impacts in Phase II ESI boring SB01.

A summary of findings associated with AOC-2 is presented below:

AOC-2 USTs

The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. While drilling

boring SB05, refusal was encountered at approximately 3 feet bgs. Refusal may have been caused by a UST structure.

AOC-2 Soil

- Southern Portion of the Site
    - Petroleum-impacted soil exhibiting staining, odor and PID readings up to 240 ppm was observed at depths of approximately 2 to 3 feet bgs in boring SB05, prior to refusal. No evidence of petroleum impacts was observed at the off-site location of SB05. Boring SB10 was advanced within the suspected UST area to the north of SB05, and no evidence of petroleum impacts was observed.
    - In boring SB17, located approximately 25 feet south of the suspected UST area, petroleum-impacted soil exhibiting odor was observed below the water table at a depth of approximately 10 feet bgs.
    - In boring SB03, located approximately 25 feet southwest of the suspected UST area, petroleum-impacted soil exhibiting staining, odor, and PID readings up to 91.7 ppm was observed straddling the water table.
    - Despite field observations of petroleum impacts, there were no VOCs detected at concentrations above the SCOs. Five SVOCs, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene, were detected at concentrations exceeding UU and/or RRU SCOs in sample SB05_1-3, which was collected at the location where refusal was encountered at 3 feet bgs. There were no SVOCs detected at concentrations above the SCOs in any other samples collected from the off-set location of SB05, SB03, SB10, or SB17.
- Northeastern Portion of the Site
    - Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 14.9 ppm was observed straddling the water table in boring SB01.
    - In boring SB13, advanced off-site and approximately 15 feet east of boring SB01, petroleum-impacted soil exhibiting odor, and PID readings up to 5.8 ppm was observed within the water table at approximately 8 to 10 feet bgs.
    - In boring SB19, advanced approximately 25 feet west of boring SB01, there was no observed evidence of petroleum-impacts.

- Despite the field observations of petroleum impacts, there were no elevated petroleum-related VOCs or SVOCs detected above the SCOs in soil samples collected from these depths.

- Additional Observed Impacts

  - In boring SB14, advanced in the western portion of the Site near the Site boundary, petroleum-impacted soil exhibiting staining, odor, and PID readings up to 8.9 ppm were observed straddling the water table at a depth of approximately 7 to 10 feet bgs. There were no VOCs or SVOCs detected above the SCOs in the soil sample collected at 8 to 9 feet bgs.

AOC-2 Groundwater

There were no petroleum-related VOCs or SVOCs detected at concentrations exceeding their respective Class GA AWQS in any of the groundwater samples. Elevated PID readings were recorded in the well headspace during the sampling of well MW03 (12.8 ppm), and during the development and purging and well MW13 (64.4 ppm). Additionally, a sheen was observed on groundwater purged from well MW13. There was no evidence of petroleum impacts on groundwater during the development and sampling of monitoring well MW10, located within the suspected UST area. The PID headspace reading in MW10 was 0.0 ppm.

AOC-2 Soil Vapor

Several VOCs, including petroleum-related compounds, were detected in soil vapor at concentrations above the anticipated range of background concentrations.

AOC-2 Conclusions

Conclusions relevant to AOC-2 include:

- Although not found during the RI, USTs may still be present;
- Field observations indicate a possible petroleum release from the suspected USTs at the location of boring SB05.
- Field observations indicate the possibility of petroleum impacts resulting from historic use of the Site or off-site sources, since USTs were not found and petroleum impacts were observed up-gradient form the suspected UST location.
- Analytical results indicate VOC impacts to soil vapor and SVOC impacts to soil, however no evidence of petroleum-related VOC or SVOC impacts to groundwater was observed.

5.7.3 AOC-3: Chlorinated VOC Contamination in Groundwater

CVOCs including 1,1,1-trichloroethane, cis-1,2-dichloroethylene, PCE, TCE, and vinyl chloride were identified in groundwater at concentrations exceeding the Class GA AWQS in monitoring wells located along the eastern site border and off-site (MW01, MW04, MW09, MW12 and MW13), with the highest total CVOC concentration (871 µg/L) detected in the off-site well (MW13). Additionally, sheen was observed on groundwater purged from MW13 and a PID reading of 64.4 ppm was recorded in the headspace of MW13. CVOCs were also detected at concentrations above the UU SCO in soil samples collected from within the water table at boring SB13. No on-site soil samples found CVOC concentrations above the UU SCO.

The adjoining site to the north (Block 268, Lot 23) is also in the NYSDEC BCP (Site No. C241164). Data from a December 2013 investigation at this site further delineates the extent of CVOC impacts to groundwater. The sample locations and analytical results for the Lot 23 investigation are shown on Figure 8. The highest total CVOC concentration (3,436 µg/L) from the adjoining site investigation was found at an off-site well in the Purves Street sidewalk (Lot 23 location MW01).

AOC-4 Conclusions

The data, including groundwater, soil, and soil vapor results, show that the highest CVOC concentrations on the Site are in the northeastern corner of the Site and off-site. The data and field observations indicate an off-site CVOC source to the east in the direction of Purves Street.

5.7.4 AOC-4: Potential Soil Vapor Contamination

AOC-4 represents the potential impacts to soil vapor resulting from the use of the Site and surrounding properties for various industrial and manufacturing uses.

Soil vapor analytical results were compared to ambient air sample results collected on each day of sampling. Several VOCs, including petroleum and chlorinated-solvent related VOCs, were detected at concentrations above background ambient air concentrations in all soil vapor samples. Chlorinated VOCs, specifically PCE and TCE, are considered soil vapor contaminants of concern. The highest PCE and TCE concentrations were detected in samples collected on the eastern side of the Site adjacent to Purves Street and the southeastern portion of the Site adjacent to Lot 31. At these locations (SV03, SV06, SV07, SV09, SV12, and SV13), TCE was detected at concentrations up to 200 µg/m^3 (SV09), and PCE was detected at concentrations up to 1,500 µg/m^3 (SV13). The maximum TCE concentration was at least 1,300 times greater than

the ambient air concentration, and the maximum PCE concentration was 1,765 times greater than the ambient air concentration.

AOC-5 Conclusions

Soil vapor at the Site contains VOCs, most notably PCE and TCE. The highest PCE concentrations were detected in soil vapor samples collected on the eastern side of the Site adjacent to Purves Street, which corresponds to PCE detections in groundwater.

6.0 QUALITATIVE HUMAN AND FISH/WILDLIFE EXPOSURE ASSESSMENT

Human health exposure risk was evaluated for both current and future site and off-site conditions, in accordance with the May 2010 NYSDEC Final DER-10 Technical Guidance for Site Investigation and Remediation. The assessment includes an evaluation of potential sources and migration pathways of site contamination, potential receptors, exposure media, and receptor intake routes and exposure pathways.

In addition to the human health exposure assessment, NYSDEC DER-10 requires an on-site and off-site Fish and Wildlife Resources Impact Analysis (FWRIA) if certain criteria are met. Based on the requirements stipulated in Section 3.10 and Appendix 3C of DER-10, there was no need to prepare an FWRIA for the Site. A completed form of DER-10 Appendix 3C is enclosed in Appendix K.

6.1 Current Conditions

The Site consists of an irregularly-shaped lot that is approximately 27,100 square feet (±0.62 acres). The Site has been a vacant lot for nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes.

6.2 Proposed Conditions

The proposed project will include the construction of a 33-story, approximately 263-unit residential apartment building and a one-story building with residential amenity space and retail along Thomson Avenue and 44th Street. One level of approximately at-grade parking will span an area of approximately 14,000 square feet. The anticipated excavation depth necessary for the at-grade first floor slab is approximately 1.2 to 3.4 feet bgs. Additional excavations to facilitate foundation elements and an elevator pit are anticipated but have not been finalized. Proposed development plans are provided in Appendix A.

6.3 Summary of Environmental Conditions

Soil sample analysis revealed SVOCs, metals, pesticides, and PCBs at concentrations that exceeded their respective UU SCOs, with SVOC and metal concentrations also above RRU SCOs. Additionally, VOCs were detected at concentrations above the UU SCOs in samples collected from off-site boring SB13. Soil contaminants of concern (COC) include VOCs, SVOCs, PCBs, pesticides, and metals.

SVOC and metal impacts are widespread on the Site. SVOC concentrations above RRU SCOs were detected in samples collected from 10 of 19 borings (SB02, SB05, SB06, SB07, SB08,

SB09, SB11, SB12, SB16, and SB19) at depths ranging from grade surface to 8 feet bgs. Metal concentrations above RRU SCOs were detected in samples collected from 13 of 19 borings (SB01, SB02, SB03, SB04, SB05, SB06, SB07, SB08, SB12, SB14, SB15, SB16, SB18, and SB19) at depths ranging from surface grade to 13 feet bgs.

Groundwater samples had concentrations of VOCs, SVOCs, pesticides, and metals that exceeded their respective Class GA AWQS. Chlorinated VOCs were detected in groundwater at the highest concentrations in off-site monitoring well MW13, located on Purves Street sidewalk close to the northern boundary of the Site, and MW01, located in the northeast corner of the site near Purves Street. Chlorinated VOCs were also detected in samples from monitoring wells MW04 and MW09 at concentrations above the Class GA AWQS. Metal concentrations above the Class GA AWQS were detected throughout the site, and are likely attributable to regional groundwater conditions. One SVOC, benzo(a)anthracene, and one pesticide, alpha-chlordane, were detected above the Class GA AWQS in off-site monitoring well MW13.

Several VOCs, including chlorinated VOCs, were detected in soil vapor samples at concentrations above background ambient air levels throughout the Site.

6.4 Conceptual Site Model

A conceptual site model has been developed based on the findings of the RI. The purpose of the conceptual site model is to develop a simplified framework for understanding the distribution of impacted materials, potential migration pathways, and potentially complete exposure pathways, as discussed below.

6.4.1 Potential Sources of Contamination

Potential sources of contamination have been identified in Section 3.3 and are based on previous investigations. The site-wide layer of historic fill has been established as a source of SVOCs, metals, pesticides, and PCBs. Historic fill, however, does not appear to be impacting groundwater. Groundwater appears to be primarily impacted by off-site sources.

6.4.2 Exposure Media

The impacted media include soil, groundwater, and soil vapor. Site soil may have been impacted by former operations, the nature of the historic fill throughout the Site, and by possible historic petroleum releases. Analytical data indicates that the historic fill material underlying the Site contains SVOCs, metals, pesticides, and PCBs. Groundwater impacts include chlorinated VOCs and metals. Soil vapor throughout the Site is impacted with VOCs.

Because VOCs are present at elevated concentrations in soil vapor and portions of the proposed building slabs will be above the groundwater table, there is potential for vapors to accumulate under the proposed building slabs.

6.4.3 Receptor Populations

The Site is currently vacant and locked, preventing public access; therefore, human receptors are limited to occasional site visitors and workers involved in pre-development (e.g., investigation) activities. During site development, human receptors are limited to construction and remediation workers, authorized guests visiting the Site and the public adjacent to the Site. Under future conditions, receptors will include the new building tenants, workers, and visitors to the residential properties including children.

6.5 Potential Exposure Pathways – On-Site

6.5.1 Current Conditions

On-Site soil has been contaminated with SVOCs, metals, PCBs and pesticides. Approximately 55% of the Site is covered with a concrete slab, and the remaining 45% is covered with overgrown vegetation. In areas where human exposure to contaminated soil is possible, the potential migration pathway is likely complete for dermal absorption, inhalation and ingestion. The Site is surrounded by construction fencing and locked, which limits activity within the Site boundary to authorized guests.

On-Site groundwater is contaminated with VOCs and metals. Because groundwater in New York City is not used as a potable water source, there is no completion of the exposure pathway under current Site conditions. There is a potential exposure pathway during groundwater sampling associated with Site investigation. The potential pathway is through dermal absorption, inhalation, and ingestion. Site access is currently limited to authorized guests.

Soil vapor results indicate the presence of VOCs. There is a potential exposure pathway during soil vapor sampling associated with Site investigation. The potential pathway is through inhalation. Site access is currently limited to authorized guests.

6.5.2 Construction/Remediation Condition

Construction and remediation activities may result in potential exposures to Site contaminants in the absence of a Health and Safety Plan (HASP) and a Community Air Monitoring Plan (CAMP). Soil contains SVOCs and metals at concentrations that exceed Unrestricted and

Restricted Residential Use SCOs, and PCBs and pesticides at concentrations that exceed Unrestricted Use SCOs. Construction and remedial activities include construction of foundation components and excavation and off-site disposal of impacted soil. In the absence of a HASP and CAMP, this scenario presents the potential for exposure of soil COCs to construction and remediation workers via dermal absorption, ingestion, and inhalation of particulate matter. In the absence of CAMP, activities may result in exposure to the public adjacent to the Site through potential generation and off-site migration of dust containing Site COCs.

Site groundwater contains VOCs and metals at concentrations that exceed their respective Class GA AWQS. Groundwater will be encountered during excavation activities by workers, and there is potential for exposure to groundwater COCs, in the absence of a HASP, to construction workers via dermal absorption, ingestion, or inhalation.

Soil vapor results indicated the presence of petroleum-related and chlorinated VOCs. During site development, construction and remediation workers may be exposed to soil vapor COCs via inhalation in the absence of a HASP. In the absence CAMP, activities may also result in exposure to the public adjacent to the Site through volatilization of vapors into the air and potential off-site migration.

6.5.3 Proposed Future Conditions

The proposed development will include residential use. Upon completion of the new development, the entire Site will be capped with the concrete building foundation. These barriers will prevent direct human exposure to impacted soil and groundwater.

In the absence of engineering controls (e.g., vapor barrier and/or depressurization system), the presence of VOCs in the groundwater and soil vapor creates potential for VOCs to volatilize and accumulate in the proposed building, completing an exposure pathway for future users. In the absence of engineering controls, routes of exposure may include inhalation of vapors that accumulate in the building.

There is no risk of ingesting groundwater COCs because the Site and surrounding areas obtain their drinking water supply from surface water reservoirs located upstate and not from groundwater; groundwater is not intended for consumption.

6.6 Potential Exposure Pathways – Off-Site

In the absence of CAMP, soil has the potential to be transported off-site by wind in the form of dust or on the tires of vehicles or equipment leaving the Site during development and

remediation activities. Metal impacts to groundwater are considered a regional problem and are not considered a localized concern. Chlorinated VOC impacts to the groundwater in the northeast corner of the Site are likely from an off-site source. The off-site chlorinated VOC impacts migrating onto the Site and are likely migrating onto other properties as well and represent a potential exposure pathway via soil vapor intrusion.

The potential off-site migration of site contaminants is not expected to result in a complete exposure pathway for current, construction and remediation, or future conditions for the following reasons:

- Air monitoring will be conducted for particulates (i.e., dust) and VOCs during all intrusive activities as part of a community air monitoring program. Dust and/or vapor suppression techniques will be employed to limit potential for off-site migration of site soil and vapors.
- Vehicle tires and undercarriages will be washed as necessary prior to leaving the Site to prevent tracking material off-site.
- The Site is located in a highly urbanized area with continuous impervious (i.e. concrete) surface covering.
- Groundwater in New York City is not used as a potable water source.

6.7 Evaluation of Human Health Exposure

Based upon the conceptual site model and the review of environmental data, complete on-site exposure pathways appear to be present, in the absence of institutional and engineering controls, in current, construction and remediation, and future conditions. The complete exposure pathways indicate there is a risk of exposure to humans from Site contaminants via exposure to soil, groundwater, and soil vapor if institutional and engineering controls are not implemented.

Complete exposure pathways have the following five elements: 1) a contaminant source; 2) a contaminant release and transport mechanism; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population. A discussion of the five elements comprising a complete pathway as they pertain to the Site is provided below.

6.7.1 Current Conditions

Contaminant sources include historic fill with varying levels of SVOCs, metals, pesticides, and PCBs, two potential USTs, chlorinated VOCs in groundwater, and PCE, TCE, and other VOCs in soil vapor.

Contaminant release and transport mechanisms include contaminated soil transported as dust and volatilization of contaminants from the soil and groundwater matrices to the soil vapor phase, and existing soil vapor contaminants. Under current conditions, the likelihood of exposure to humans is limited, as the Site surface cover, consisting of a partial concrete slab and vegetation, generally prevents contact with soils, groundwater is not currently accessible and soils are not currently being disturbed except during investigation. In addition, the Site property is kept locked and activity is limited to authorized guests. All five elements exist; therefore, the potential for completed exposure pathways is present. However, the risk can be avoided or minimized by applying appropriate health and safety measures during investigation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate personal protective equipment (PPE).

In accordance with a HASP and CAMP, measures such as conducting an air-monitoring program, donning PPE, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

6.7.2 Construction/Remediation Activities

During development and remediation activities, points of exposure include disturbed and exposed soil during excavation, dust and organic vapors generated during excavation activities, and contaminated groundwater that will be encountered during excavation and dewatering operations. Routes of exposure include ingestion and dermal absorption of contaminated soil and groundwater, inhalation of organic vapors arising from contaminated soil and groundwater, and inhalation of dust arising from contaminated soil. The receptor population includes the construction and remediation workers and, to a lesser extent, the public adjacent to the Site. All five elements exist; therefore, the potential for completed exposure pathways is present. However, the risk can be avoided or minimized by applying appropriate health and safety measures during construction and remediation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate PPE.

In accordance with a HASP, a Soil Management Plan (SMP), and a CAMP, measures such as conducting an air-monitoring program, donning PPE, covering soil stockpiles, altering work sequencing, proper housekeeping, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

6.7.3 Proposed Future Conditions

For the proposed future conditions, some residual contaminants may remain and may include those listed under current conditions. Contaminant release and transport mechanisms include volatilization of contaminants from soil vapor or the groundwater matrix to the soil vapor phase. If institutional and/or engineering controls are not implemented, points of exposure include potential cracks in the foundation or lower-level slab of the proposed development. Routes of exposure may include inhalation of vapors entering the building; these routes may not exist depending on the effectiveness of the remediation. The receptor population includes the building tenants, residential property employees, and visitors. The possible routes of exposure will be avoided or mitigated by proper installation of soil vapor mitigation measures (e.g., vapor barrier and depressurization system) and the impermeable (concrete) site cap.

6.7.4 Human Health Exposure Assessment Conclusions

The following conclusions were developed from this human health exposure assessment:

1. Under current conditions there is a moderate risk to exposure. Contaminated soil transport off-site as dust is limited by the site cover consisting of a concrete slab and vegetation. The exposure risks can be avoided or minimized by maintaining site security and limiting access to authorized guests, and by following the appropriate health and safety and vapor and dust suppression measures during investigation activities.

2. In the absence of institutional and engineering controls, there is a moderate risk of exposure during the construction and remediation activities. This risk can be avoided or minimized by following the appropriate health and safety, vapor and dust suppression, and site security measures.

3. The existence of a complete exposure pathway for Site contaminants to human receptors during proposed future conditions is unlikely, as a large quantity of soil will be excavated and transported to an off-site disposal facility, groundwater is not used as a potable water source in New York City, and the potential pathway for soil vapor

intrusion into the building would be addressed through the use of soil vapor mitigation measures (e.g., vapor barrier and depressurization system).

4. It is unlikely that a complete exposure pathway exists for the migration of site contaminants to off-site human receptors for current, construction phase, or future conditions. Monitoring and control measures would be used during investigation and construction to prevent completion of this pathway. Under future conditions, the site will be remediated and engineering controls can be implemented to prevent completion of this pathway.

7.0 NATURE AND EXTENT OF CONTAMINATION

This Section evaluates the nature and extent of soil, groundwater and soil vapor contamination at the Site. The nature and extent of the contamination is derived from a combination of field observations and analytical data that were discussed in Section 5.0.

7.1 Historic Fill

The site-wide fill layer extends from surface grade to depths up to approximately 11 feet bgs and contains varying levels of SVOCs, pesticides, PCBs, and metals that are discussed in detail in this Section. The discussion is divided by the following contaminant classifications:

1. SVOC-Contaminated Material
2. Metals-Contaminated Material
3. Pesticide-contaminated Material
4. PCB-contaminated Material

7.1.1 SVOC Contaminated Material

SVOCs were detected at concentrations exceeding UU SCOs in soil samples collected from eleven of nineteen boring locations. At least one SVOC was detected at a concentration above its respective RRU SCO in ten of nineteen borings. There was one historic fill sample, SB14_8-9, that had no SVOC detections. Total SVOC concentrations in historic fill samples with detections ranged from 0.10 mg/kg in sample SB11_2-3.5 to 61 mg/kg in sample SB06_6-8. The contaminants of concern (COCs) include:

- benzo(a)anthracene
- benzo(a)pyrene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- chrysene
- dibenzo(a,h)anthracene
- indeno(1,2,3-cd)pyrene

These SVOCs are typically found in historic fill throughout New York City. Although these compounds can be associated with motor vehicle exhausts and fuels, they are likely incomplete combustion byproducts from the burning of wood or coal that were a component of the backfill source use for Site infilling. Each COC was detected above its respective RRU SCO in at least one sample. COCs were detected above the RRU SCOs in samples collected from throughout the Site, at depths ranging from surface grade to 8 feet bgs. The highest concentrations of

COCs were detected in samples collected from the shallow and deep fill in the northwest portion of the Site (borings SB02 and SB06), and the shallow fill in the northeast corner of the Site (SB19). Total SVOC concentrations in these areas are summarized in the following table:

Boring	Layer	Total SVOCs (mg/kg)
SB02	shallow fill	27.19
	deep fill	20.63
SB06	shallow fill	23.78
	deep fill	61.22
SB19	shallow fill	48.41

7.1.2 Metals-Contaminated Material

Metals were detected at concentrations above the UU SCOs in samples collected from all nineteen soil borings, and at concentrations above the RRU SCOs in samples collected from thirteen of nineteen soil borings. Metals that were detected above RRU SCOs are in **bold**. The COCs include (maximum concentration observed and corresponding sample name are shown in parenthesis):

- **arsenic**
  (35.8 mg/kg in SB05A_2-4)
- **barium**
  (4,340 mg/kg in SB02_2-4)
- **cadmium**
  (7.21 mg/kg in SB18_11-13)
- **hexavalent chromium**
  (8.52 mg/kg in SB06_6-8)
- **trivalent chromium**
  (251 mg/kg in SB02_2-4)
- **lead**
  (61,000 mg/kg in SB08_0-2)
- **copper**
  (860 mg/kg in DUP01_022014, parent sample SB04_1-3)
- **mercury**
  (14.9 mg/kg in DUP01_022014, parent sample SB04_1-3)
- nickel
  (54.7 mg/kg in SB08_0-2)
- selenium
  (6.17 mg/kg in SB14_8-9)
- zinc
  (3,260 mg/kg in SB02_2-4)

Metal concentrations above the RRU SCOs were detected within historic fill throughout the Site at depths ranging from surface grade to 9 feet bgs. The potential source of metals contamination is likely the quality of historic fill. The former chromium plating use in the southern-adjoining site (Block 268, Lot 31) may have contributed to the presence of hexavalent

chromium in borings SB09, SB17, SB04, and SB18. The elevated metals concentrations in shallow and deep fill in SB02 may be the result of the former site use as a chemical laboratory. Anomalously high and potentially hazardous concentrations of metals, particularly lead, barium, and mercury, were identified in the borings indicated below:

- Lead – SB02, SB05, SB08, SB12 and SB16
- Barium – SB02
- Mercury – SB04

The highest lead concentrations were observed in samples collected from the shallow fill in borings SB08 and SB12, which are both located in northeastern corner of Lot 1. Potential sources of metal contamination include historical site uses and the quality of fill placed at the Site. Given the magnitude of lead concentration, the Site fill may be been impacted by releases of lead-based paints from demolition of the former buildings or lead paint mixing operations.

7.1.3 Pesticide-Contaminated Material

Pesticides, specifically 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin, exceeded their respective UU SCOs in shallow fill samples (0 to 3 feet bgs) in borings SB10, SB14, SB15 and SB19. There were no pesticides detected at concentrations above their respective RRU SCOs. The elevated pesticide concentrations were scattered throughout the Site with no discernable pattern. Pesticides were not detected in deeper samples within the impacted borings. Sources of the pesticides are likely prior usage by inhabitants of the former buildings or quality of the historic fill.

7.1.4 PCB-Contaminated Material

Two PCBs, Aroclor 1260 and Aroclor 1262, were detected at concentrations exceeding the UU SCO. The PCB concentrations did not exceed the RRU SCO. PCBs were detected in borings SB03 and SB15, located in the southwestern part of the Site, between 0 and 3 feet bgs, and in boring SB04, located the southeastern part of the Site, between 4 and 6 feet bgs.

7.2 Groundwater Contamination

Evaluation of the groundwater analytical results identified the following COCs for groundwater, which are discussed in more detail in this Section:

1. CVOC Contamination
2. Metals Contamination

7.2.1 CVOC Contamination

CVOC concentrations exceeding Class GA AWQS were found in groundwater at monitoring wells MW01, MW04, MW09, and off-site well MW13. CVOCs were also identified in groundwater samples collected from wells on the northern-adjoining site (Lot 23, NYSDEC BCP Site No. C241164), specifically off-site wells MW01 (Purves Street Sidewalk) and MW02 (Lot 23). The COCs include the following: 1,1,1-trichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride.

Monitoring well MW04 and MW09 each contained one CVOC at a concentration above Class GA AWQS: PCE (MW04) and cis-1,2-dichloroethene (MW09). CVOC concentrations in groundwater were highest in the northeast corner of the Site (MW01), on Lot 23 (MW02), and on the Purves Street sidewalk (MW13 and MW01). Total CVOC concentrations in these wells are summarized in the following table:

Well ID	Location	Total CVOCs (µg/L)
MW01	Lot 1	793
MW13	Purves Street Sidewalk	871
MW02	Lot 23	733
MW01	Purves Street Sidewalk	3,436

On-site soil sampling did not reveal a source of CVOCs. CVOCs were detected in multiple on-site soil samples; however, the concentrations did not exceed UU SCOs and were typically one to two orders of magnitude lower than the UU SCO of 1.3 mg/kg. The highest on-site CVOC concentration was found to be 0.32 mg/kg in sample SB19_17-19. PCE, TCE, cis-1,2-dichloroethene, and vinyl chloride, were detected at concentrations above UU SCOs in the two soil samples collected from off-site boring SB13, at depths of 9 to 10 feet bgs and 14 to 15 feet bgs. Petroleum-like odors and elevated PID readings were observed at these depths during sample collection.

Based on soil and groundwater sampling results and field observations, the source of the chlorinated VOC contamination appears to be off-site.

7.2.2 Metals Contamination

Groundwater sample results revealed one or more of the following metals at concentrations that exceed their TOGS Class GA AWQS: manganese, selenium, and sodium. The presence of sodium and selenium is consistent with regional groundwater quality. Concentrations of

manganese were found above the TOGS Class GA AWQS in 7 of the 9 monitoring wells, with concentrations generally higher on the eastern Site boundary, and highest in off-site monitoring well MW13. Manganese concentrations ranged from 17 to 13,400 µg/L and are considered indicative of regional groundwater quality or potential off-site sources. No manganese UU SCO exceedances were found in Site soil samples.

7.3 Soil Vapor Contamination

Total VOCs ranged from 62.71 µg/m³ at SV04 to 1,552 µg/m³ at SV13. PCE and TCE concentrations in soil vapor were prevalent throughout the Site. PCE was found in all soil vapor samples and ranged from 8.6 µg/m³ (SV10) to 1,500 µg/m³ (SV13). TCE was found in ten of twelve soil vapor samples (SV04 and SV08) and ranged from 2 µg/m³ in SV11 to 200 µg/m³ at SV09. The PCE and TCE concentrations were highest along the eastern portion of the Site along Purves Street and in the southeastern portion of the Site adjacent to Lot 31.

Site-wide VOC impacts to soil vapor may result from the potential USTs, historical uses of the Site and surrounding properties, or an unknown off-site source along Purves Street.

8.0 CONCLUSIONS

The RI was implemented between February 20 and April 24, 2014. The findings summarized herein are based on both qualitative data (field observations and instrumental readings), and laboratory analytical results of soil, groundwater, and soil vapor samples. Findings and conclusions are as follows:

1. Stratigraphy: Beneath the partial Site surface cover (i.e., concrete), overburden at the Site includes a historic fill layer, which extends to depths of up to approximately 11 feet bgs. The historic fill layer generally consists of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Underlying the fill is a layer of gray-brown and brown/tan fine- to medium-grained sand, which is underlain by layers of brown silt, gray clay and peat. Bedrock was not encountered during this investigation; however, based on Langan's previous geotechnical investigations, depth to bedrock at the Site ranges from approximately 43 to 61 feet bgs. The top of rock contour generally slopes down from the northwest to the southeast.

2. Hydrogeology: Synoptic groundwater level measurements were collected on February 28, 2014 and April 24, 2014. Groundwater was encountered between approximately 4 and 6.5 feet bgs (el 4.89 feet to el 6.09 feet NAVD88) during the February gauging event and between approximately 4.8 and 7.1 feet bgs (el 4.24 feet to el 5.32 feet NAVD88) during the April gauging event. The groundwater elevation is highest in the western portion of the Site and appears to slope toward the east/northeast across the majority of the Site. Groundwater flow appears to be locally influenced by the sewer beneath the Purves Street sidewalk.

3. Suspected USTs: Two USTs were identified on the Site in the 1947 and 1950 Sanborn Maps and there is no record of UST removal. The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Boring SB05, advanced in the geophysical anomaly, encountered refusal at 3 feet bgs, which may be related to the presence of UST structures. Borings in the vicinity of the UST found petroleum staining, odors, and elevated PID readings. A spill was reported to NYSDEC based on the observation of petroleum impacts. Petroleum impacts were also found in the western and northeastern parts of the Site and may be related to potential site USTs or potential off-site sources. Petroleum impacts are further described below.

4. Soil Impacts:

    a. Historic Fill – The historic fill layer contains concentrations of SVOCs, metals, pesticides, and PCBs at concentrations that exceed their respective UU or RRU SCOs.

        i. SVOCs were detected at concentrations above RRU SCOs within the fill layer throughout the Site at levels considered typical of historic fill found in New York City.

        ii. PCB and pesticide concentrations above the UU SCO, but below the RRU SCOs, were detected in the fill.

        iii. Metals were detected at concentrations above RRU SCOs within the fill layer throughout the Site. Anomalously high and potentially hazardous concentrations of lead were detected in samples from five borings, with the highest concentrations found in the shallow fill of borings SB08 and SB12 located in the northeastern corner of Lot 1, and the shallow and deep fill of boring SB02 in the northwest corner of Lot 1. An anomalously high concentration of barium was detected in the shallow fill of boring SB02, and an anomalously high concentration of mercury was detected in the shallow fill of boring SB04, located in the southeastern portion of the Site.

    b. Petroleum-Impacted Soil: Petroleum impacts, evidenced by odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, SB05, SB13 and SB14. Odors and elevated PID readings were observed in the northeast corner of the Site (boring SB01 and off-site boring SB13), and sheen was observed on groundwater during purging and development of off-site monitoring well MW13. Odors, staining, and elevated PID readings were observed straddling the water table in borings SB03 and SB14 in the western portion of the Site. There was no free product observed in any of the monitoring wells. Potential sources of petroleum-impacted soil on the Site include the various historical industrial and manufacturing uses, the on-site USTs and off-site sources.

5. Groundwater Impacts: Groundwater VOC, SVOC, metal, and pesticide concentrations exceeded Class GA AWQS.

a. Chlorinated VOCs (1,1,1-trichloroethane, PCE, TCE, cis-1,2-dichloroethene, vinyl chloride) were found at concentrations above Class GA AWQS on the northeastern and southeastern parts of the Site, with the highest concentrations in northeastern well MW01 and off-site well MW13. Groundwater data obtained from an investigation at adjacent Lot 23 (NYSDEC BCP Site No. C241164) revealed a total CVOC concentration in groundwater in an off-site well on the Purves Street sidewalk (to the northeast of the Site) that was greater than concentrations in samples collected for this RI. Additionally, CVOC concentrations were detected in soil in off-site boring SB13 at concentrations above Unrestricted Use SCOs, indicating the CVOC impacts are likely originating from an off-site source.

b. Sodium and selenium impacts to groundwater are consistent with regional groundwater quality. Manganese impacts along the western part of the Site are consistent with regional groundwater quality or off-site sources.

c. SVOC and pesticide contaminants were only detected in off-site well MW13, and do not appear to be impacting Site groundwater.

6. Soil Vapor Impacts: Soil vapor sampling results indicate the presence of several VOCs, including CVOC and petroleum-related compounds, above the range of ambient air concentrations. The highest concentrations of TCE and PCE were identified along the eastern boundary of the Site along Purves Street and the southeastern boundary of the Site adjacent to Lot 31. VOCs may be due to historic releases of petroleum and chlorinated solvents originating from former off-site manufacturing/industrial processes.

7. Sufficient analytical data were gathered during the RI to establish site-specific soil cleanup levels and to develop a remedy for the Site. The remedy will be described and evaluated in a Remedial Action Work Plan (RAWP) prepared in accordance with NYS BCP guidelines. The remedy will need to address petroleum-impacted soil, historic fill impacted with metals and SVOCs, the potential for soil vapor intrusion, groundwater impacted with chlorinated VOCs from an off-site source, and a contingency for the removal and closure of unknown USTs.

9.0 REFERENCES

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2. *in* Hanson, G.N., *chm.*, Fourteenth Annual Conference on Geology of Long Island and Metropolitan New York, 14 April 2007, State University of New York at Stony Brook, NY, Long Island Geologists Program with Abstracts, 19 p.

3. IVI Assessment Services, Inc., "Phase I Environmental Site Assessment", dated December 9, 2011.

4. Middleton Environmental, Inc., "Phase I Environmental Site Assessment Report", dated April 26, 2006.

5. Middleton Environmental Inc., "Update to the Phase I Environmental Site Assessment Report", dated April 27, 2006.

6. Langan Engineering, Environmental, Surveying, and Landscape Architecture, D.P.C, "Geotechnical Engineering Study", dated May 12, 2014.

7. New York State Department of Health, Final Guidance for the Evaluation of Soil Vapor Intrusion in the State of New York, dated October 2006.

8. New York State Department of Environmental Conservation, Division of Environmental Remediation, Draft Brownfield Cleanup Program Guide, dated May 2004.

9. New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, issued May 3, 2010; effective June 18, 2010.

10. New York State Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) dated June 1998.

11. United States Environmental Protection Agency, Low Flow Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, EQASOP-GW 001, January 19, 2010.

12. New York State Department of Environmental Conservation, Part 375 of Title 6 of the New York Compilation of Codes, Rules, and Regulations, Effective December 14, 2006.

9.0 REFERENCES

1. Environmental Business Consultants, "Phase II Environmental Site Investigation", dated November 5, 2006.

2. *in* Hanson, G.N., *chm.*, Fourteenth Annual Conference on Geology of Long Island and Metropolitan New York, 14 April 2007, State University of New York at Stony Brook, NY, Long Island Geologists Program with Abstracts, 19 p.

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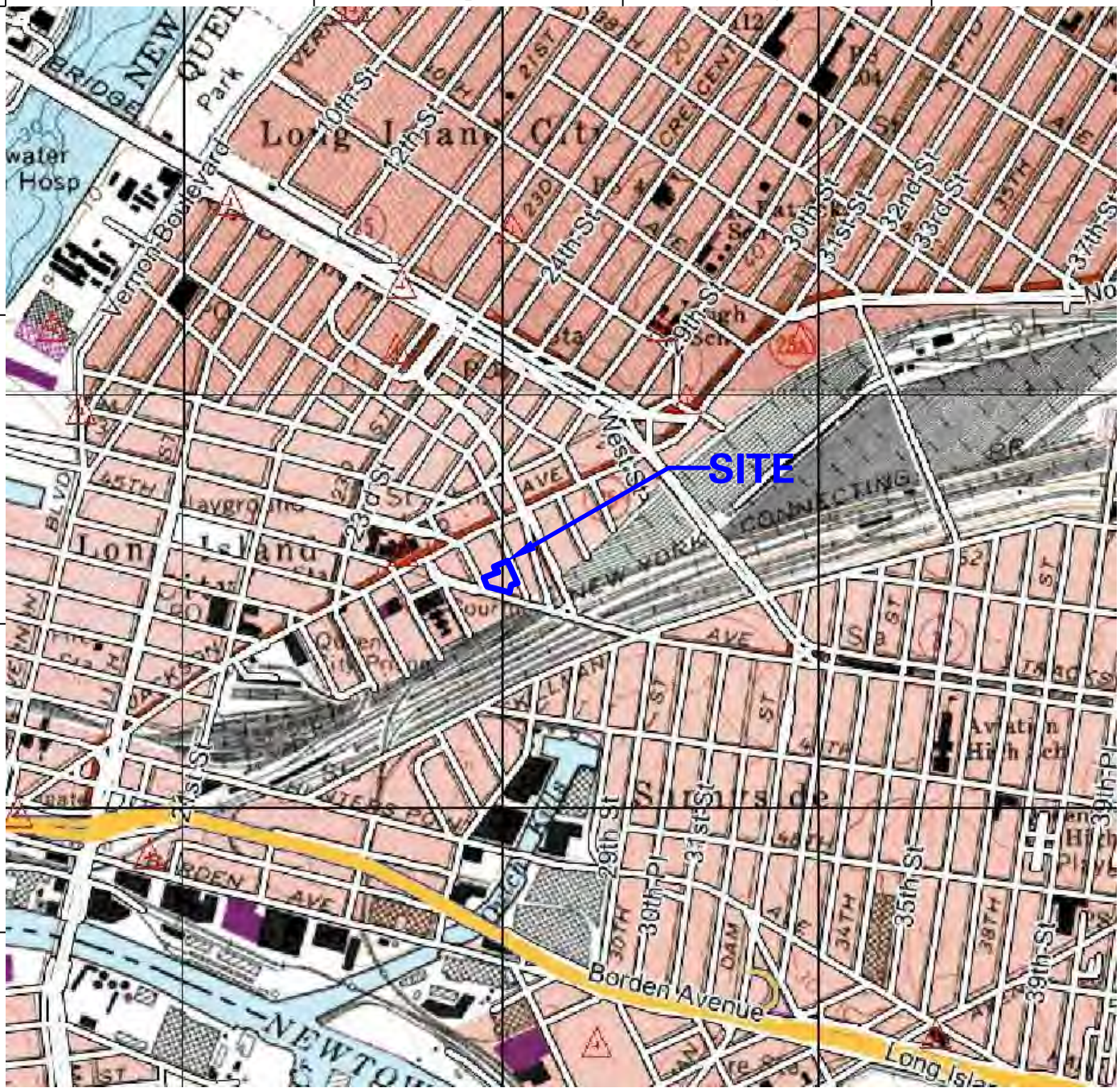
12. New York State Department of Environmental Conservation, Part 375 of Title 6 of the New York Compilation of Codes, Rules, and Regulations, Effective December 14, 2006.

FIGURES



LEGEND:

SITE BOUNDARY

NOTES:

1. BASE MAP TAKEN FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 1927 NORTH AMERICAN DATUM, REVISED IN 1979.

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Project	44-30 PURVES STREET BLOCK No. 268, LOT Nos. 1, 24, 25, 26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	SITE LOCATION MAP
Project No.	170282501
Date	2/24/2014
Scale	NTS
Drawn By	PM
Submission Date	–
Figure No.	1
Sheet	1 of 9

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LEGEND

BROWNFIELD PROPERTY BOUNDARY

LAND USE LEGEND

- 1 & 2 FAMILY RESIDENTIAL
- MULTI–FAMILY RESIDENTIAL
- MIXED USE
- OPEN SPACE & OUTDOOR RECREATION
- COMMERCIAL
- INSTITUTIONS
- INDUSTRIAL
- PARKING
- TRANSPORTATION/UTILITIES
- VACANT LOTS

NOTES

1. BASE MAP TAKEN FROM WWW.OASISNYC.NET

250 0 100 250

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Project

44-30 PURVES STREET

BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS NEW YORK

Drawing Title

SURROUNDING LAND USE AND SENSITIVE RECEPTOR MAP

Project No. 170282501	Drawing No. 2
Date 3/07/2014	
Scale 1" = 250'	
Drawn By MLP / Checked By	
Submission Date	Sheet 2 of 9

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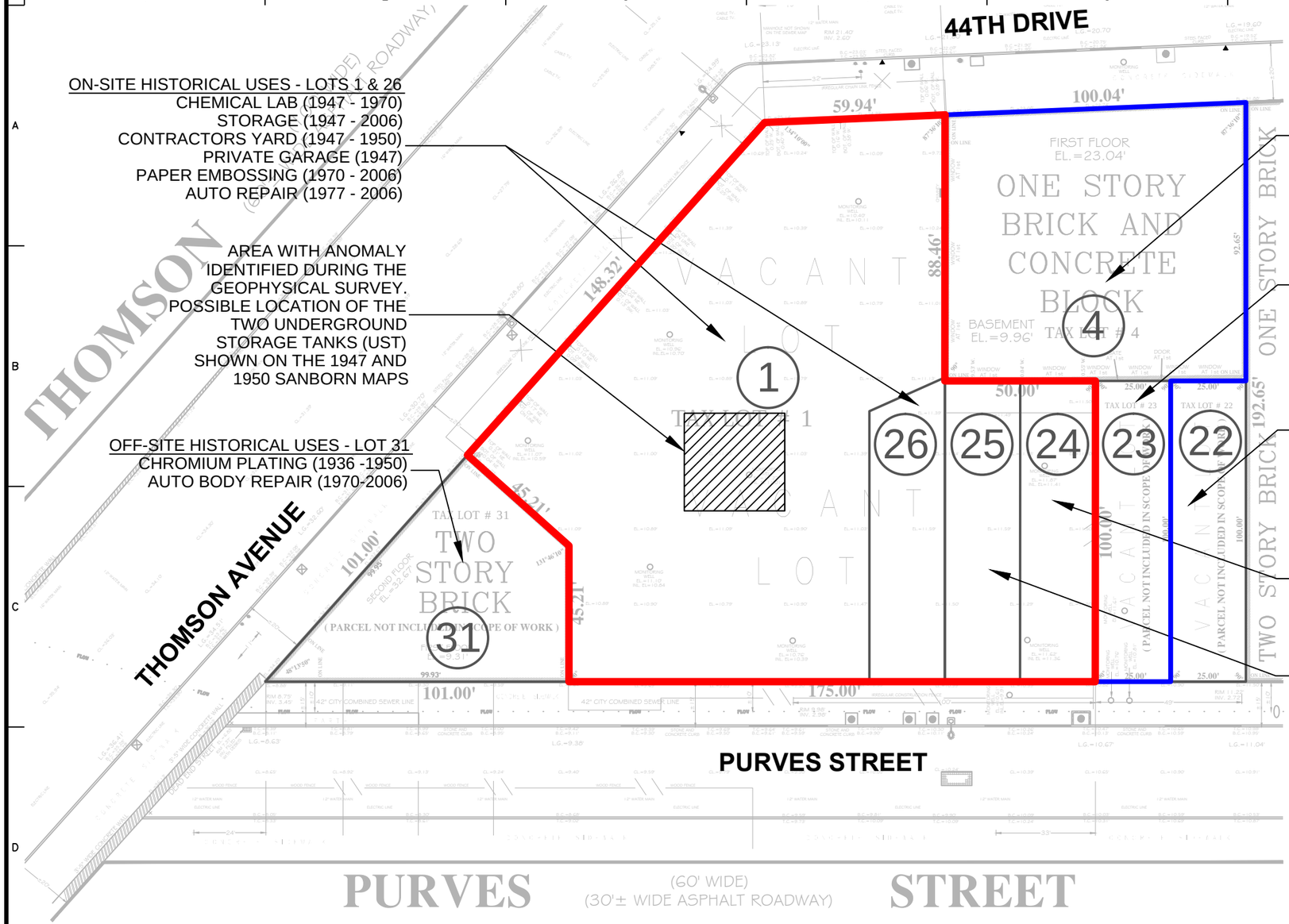
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 2 Adacent Property Uses.dwg Date: 8/30/2014 Time: 19:24 User: pmcmahon Style Table: Langan.stb Layout: FIGURE 3 Land Use



ON-SITE HISTORICAL USES - LOTS 1 & 26
CHEMICAL LAB (1947 - 1970)
STORAGE (1947 - 2006)
CONTRACTORS YARD (1947 - 1950)
PRIVATE GARAGE (1947)
PAPER EMBOSSING (1970 - 2006)
AUTO REPAIR (1977 - 2006)

AREA WITH ANOMALY IDENTIFIED DURING THE GEOPHYSICAL SURVEY. POSSIBLE LOCATION OF THE TWO UNDERGROUND STORAGE TANKS (UST) SHOWN ON THE 1947 AND 1950 SANBORN MAPS

OFF-SITE HISTORICAL USES - LOT 31
CHROMIUM PLATING (1936 -1950)
AUTO BODY REPAIR (1970-2006)

OFF-SITE HISTORICAL USES - LOT 4
GARAGE (1936)
FURNITURE STORAGE (1936)
PHOTO CHEMICAL WAREHOUSE (1947 -1950)
AUTO BODY SHOP (1977 - 2003)

OFF-SITE HISTORICAL USES - LOT 23
STORAGE (2001 - 2006)

OFF-SITE HISTORICAL USES - LOT 22
CONTROLLER MANUFACTURING (1936 -1950)
WELDING AND REPAIRS (1970 - 2006)

ON-SITE HISTORICAL USES - LOT 24
FINE CHEMICALS MANUFACTURING (1947 -1950)
STORAGE (2001 - 2006)

ON-SITE HISTORICAL USES - LOT 25
CONTROLLER MANUFACTURING (1947 -1950)
STORAGE (2001 - 2006)

LEGEND
- SITE BOUNDARY
- BCP SITE No. C241164 BOUNDARY
- TAX LOT BOUNDARY
- 1 TAX LOT NUMBER

NOTES:
1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.
2. HISTORICAL USES OF THE SITE AND SURROUNDING PROPERTIES ARE BASED ON THE SANBORN FIRE INSURANCE MAPS FOR THE FOLLOWING YEARS: 1898, 1915, 1936, 1947, 1950, 1970, 1977, 1980, 1985, 1990, 1995, 2001, 2003, 2004, AND 2006.

40 0 10 25 40
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Project
44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
HISTORICAL SITE AND SURROUNDING PROPERTY USAGE

Project No. 170282501	Drawing No. 3
Date 05/16/2014	
Scale 1" = 40'	
Drawn By EB / Checked By	
Submission Date	Sheet 3 of 9

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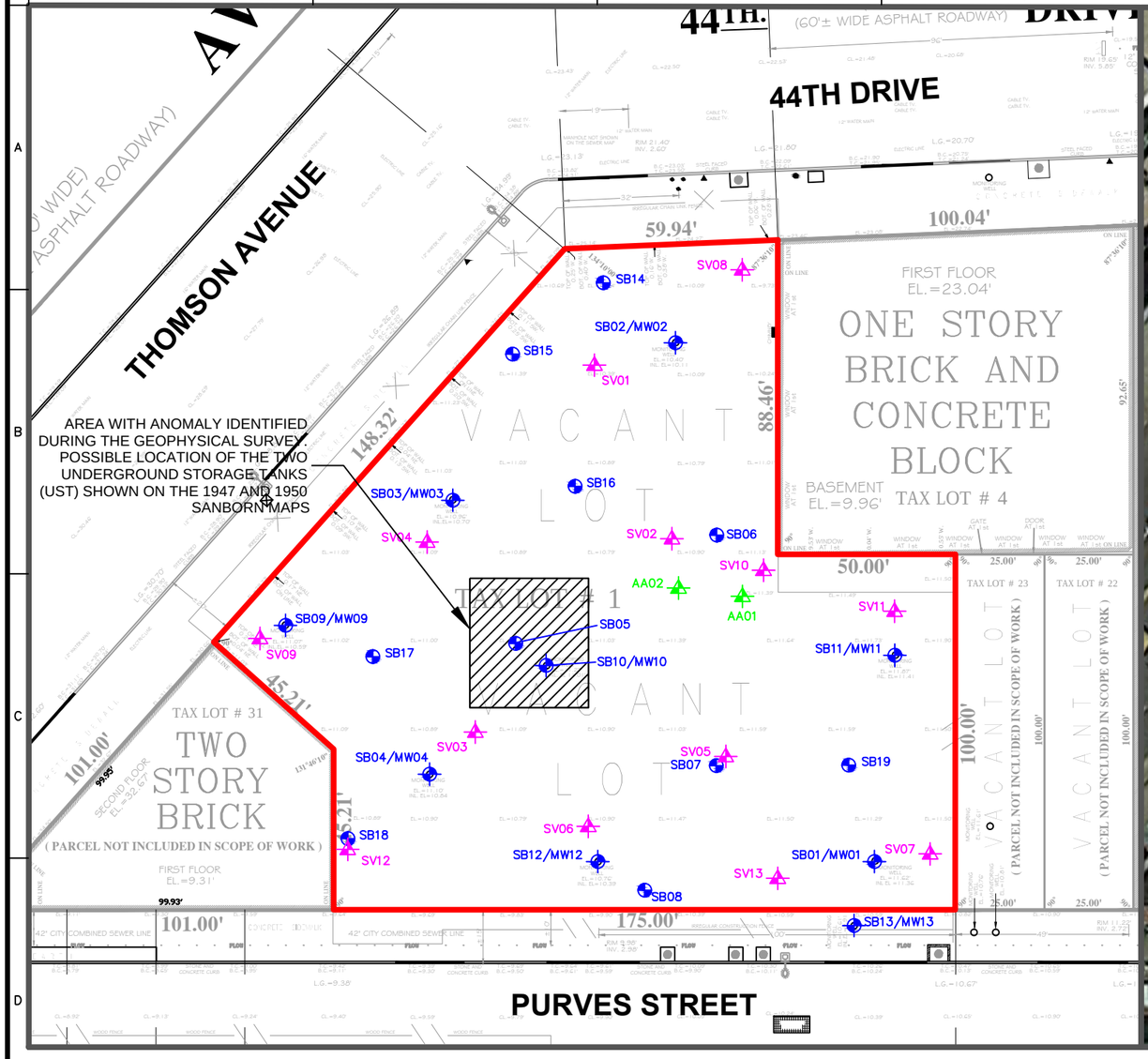
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 2 - Historic Site use.dwg Date: 8/30/2014 Time: 18:37 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL



LEGEND

- SITE BOUNDARY
- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- SV02 — SOIL VAPOR SAMPLE LOCATION
- AA01 — AMBIENT AIR SAMPLE LOCATION

NOTES:

1. DRAWING BASED ON APRIL 11, 2014 SURVEY BY APPLE SURVEYING.
2. AERIAL PHOTO OBTAINED FROM GOOGLE EARTH PRO ON JULY 6, 2014.
3. MONITORING WELL LOCATIONS WERE SURVEYED. BORING LOCATIONS, SOIL VAPOR AND AMBIENT AIR SAMPLE LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.

40 0 10 25 40
SCALE IN FEET

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Project
44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
SITE MAP AND SAMPLE LOCATION PLAN

Project No. 170282501	Drawing No. 4
Date 05/16/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By	
Submission Date	Sheet 4 of 9

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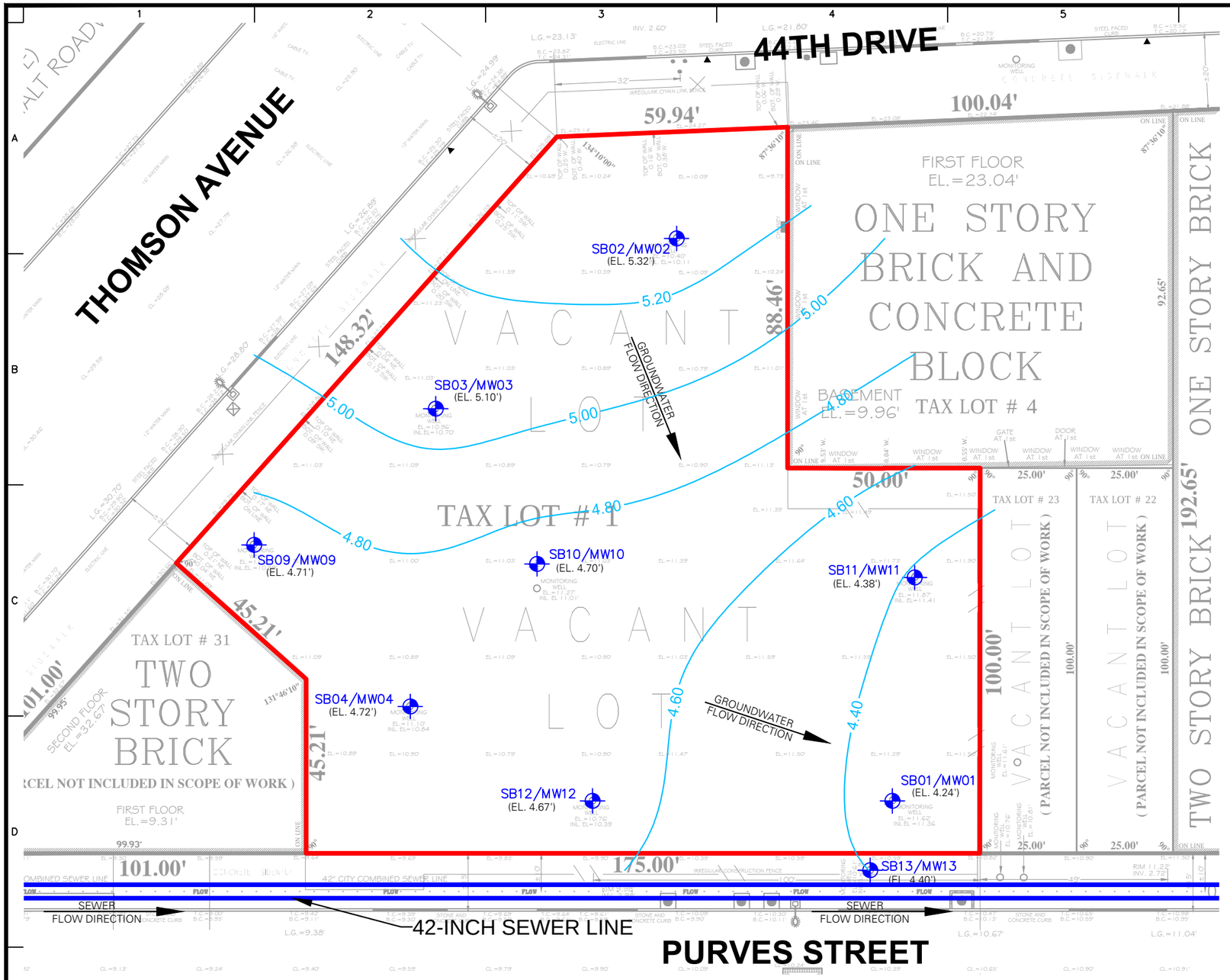
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 3 - Site plan w Aerial.dwg Date: 8/30/2014 Time: 19:26 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL



LEGEND

SB01/MW01 (EL. 4.24') — BORING AND MONITORING WELL LOCATION (GROUNDWATER ELEVATION IN PARENTHESIS)

SITE BOUNDARY

4.60 — GROUNDWATER CONTOUR

NOTES:

1. DRAWING BASED ON MAY 5, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED.
3. ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. CONTOUR INTERVAL IS 0.2 FEET.
5. GROUNDWATER ELEVATION WERE MEASURED DURING THE REMEDIAL INVESTIGATION (RI) ON APRIL 24, 2014.
6. SEWER LINE INVERT ELEVATION IS APPROXIMATELY 3 FEET.

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Drawing Title
GROUNDWATER CONTOUR MAP

Project No. 170282501	Drawing No. 5
Date 05/19/2014	
Scale 1" = 30'	
Drawn By EB / Checked By	
Submission Date	Sheet 5 of 9

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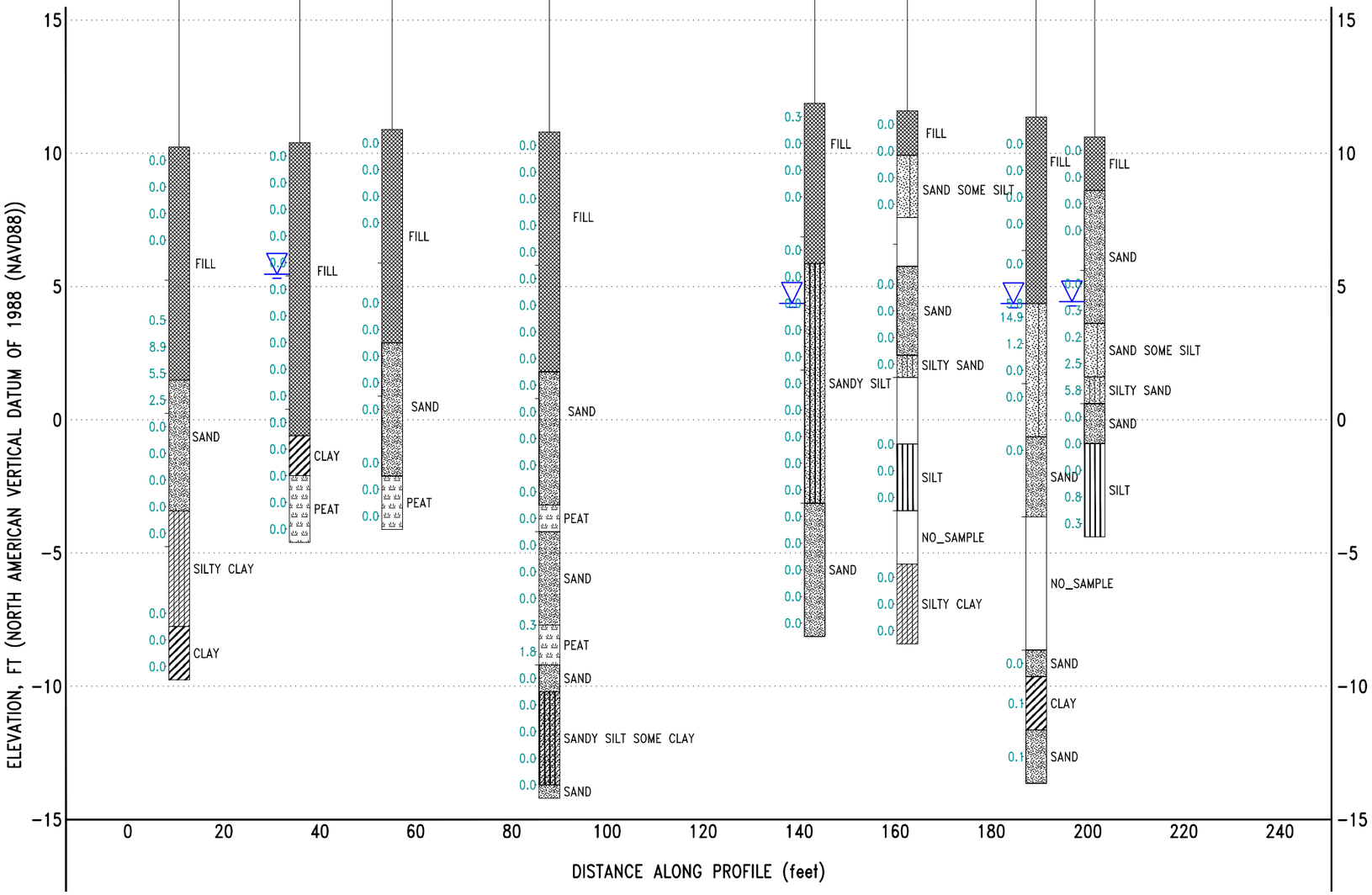
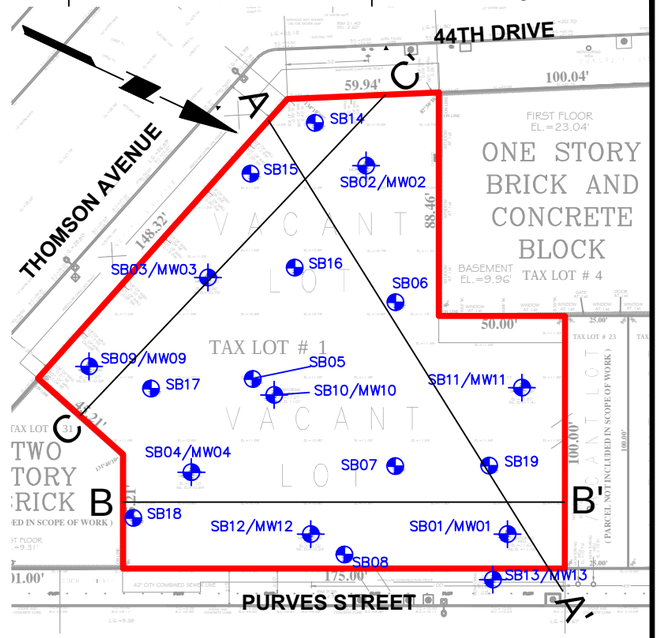
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure XX - Groundwater Contour Map - RI.dwg Date: 9/2/2014 Time: 11:52 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL

SECTION A
FACING NORTH





LEGEND

- Fill
- Sand with some silt
- SB01/MW01 (el. xx) — Borehole Number (elevation)
- Borehole Legend
- PID Reading — 0.0
- SAND
- No Sample Recovered
- Clay
- Peat/Organics
- Water Level Reading From Well Gauging.
- Sandy silty some clay (intermixed)
- Sandy silt
- Silty sand
- Silt
- USCS Silt

NOTES:

1. ELEVATIONS ARE WITH RESPECT TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON APRIL 24, 2014 WELL GAUGING EVENT.

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Drawing Title
SUBSURFACE PROFILE A-A'

Project No. 170282501	Drawing No. 6A
Date 05/16/2014	
Scale SHOWN	
Drawn By PM / Checked By	
Submission Date	Sheet 6A of 9

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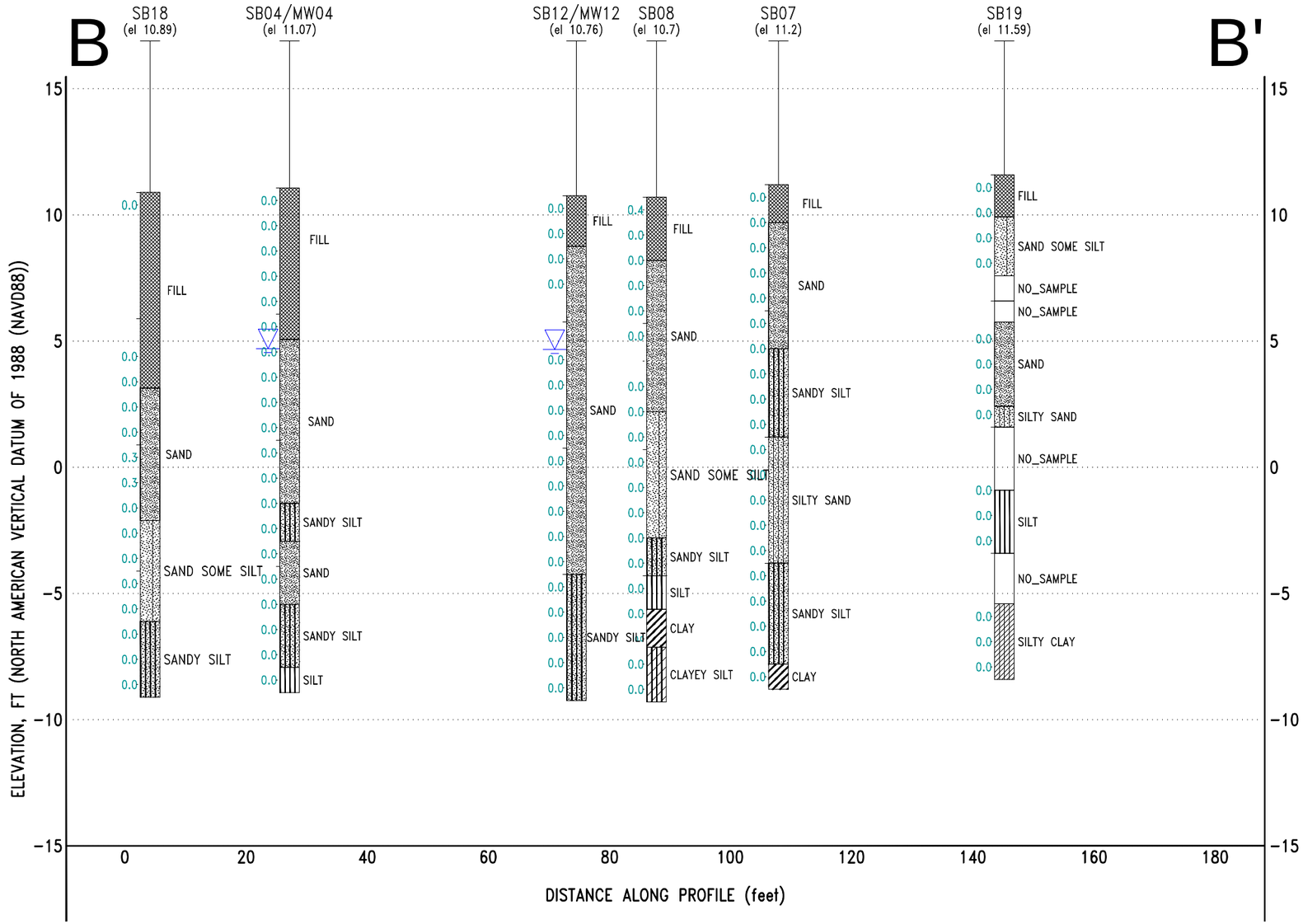
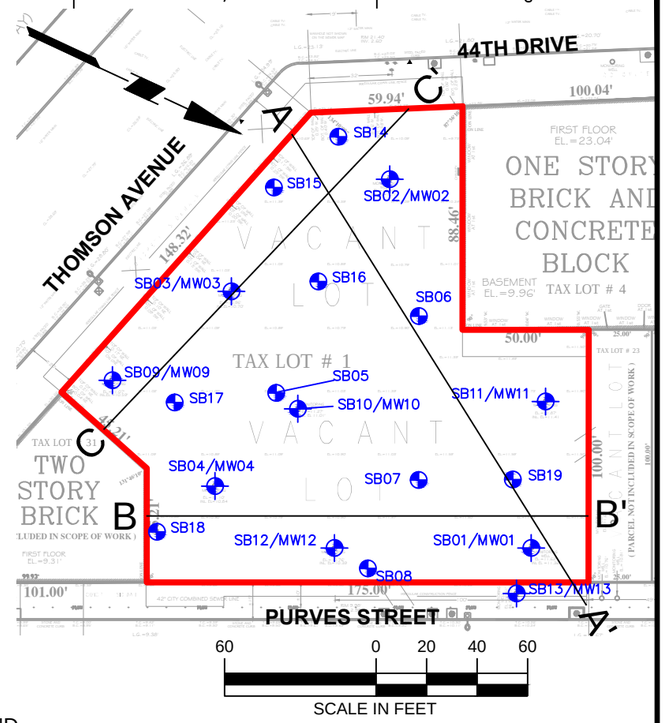
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 5 - Subsurface Profiles.dwg Date: 9/2/2014 Time: 11:58 User: pmcmahon Style Table: Langan.stb Layout: FIGURE 5A

SECTION B
FACING WEST





LEGEND

- Fill
- SAND
- Clay
- Sandy silty some clay (intermixed)
- Silty sand
- USCS Silt
- Sand with some silt
- No Sample Recovered
- Peat/Organics
- Sandy silt
- Silt
- SB01/MW01 (el. xx) — Borehole Number (elevation)
- Borehole Legend
- PID Reading — 0.0
- Water Level Reading From Well Gauging.

NOTES:

1. ELEVATIONS ARE WITH RESPECT TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON APRIL 24, 2014 WELL GAUGING EVENT.

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Project	44-30 PURVES STREET BLOCK No. 268, LOT Nos. 1, 24, 25, 26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	SUBSURFACE PROFILE B-B'
Project No.	170282501
Date	05/16/2014
Scale	SHOWN
Drawn By / Checked By	PMM
Submission Date	
Drawing No.	6B
Sheet	6B of 9

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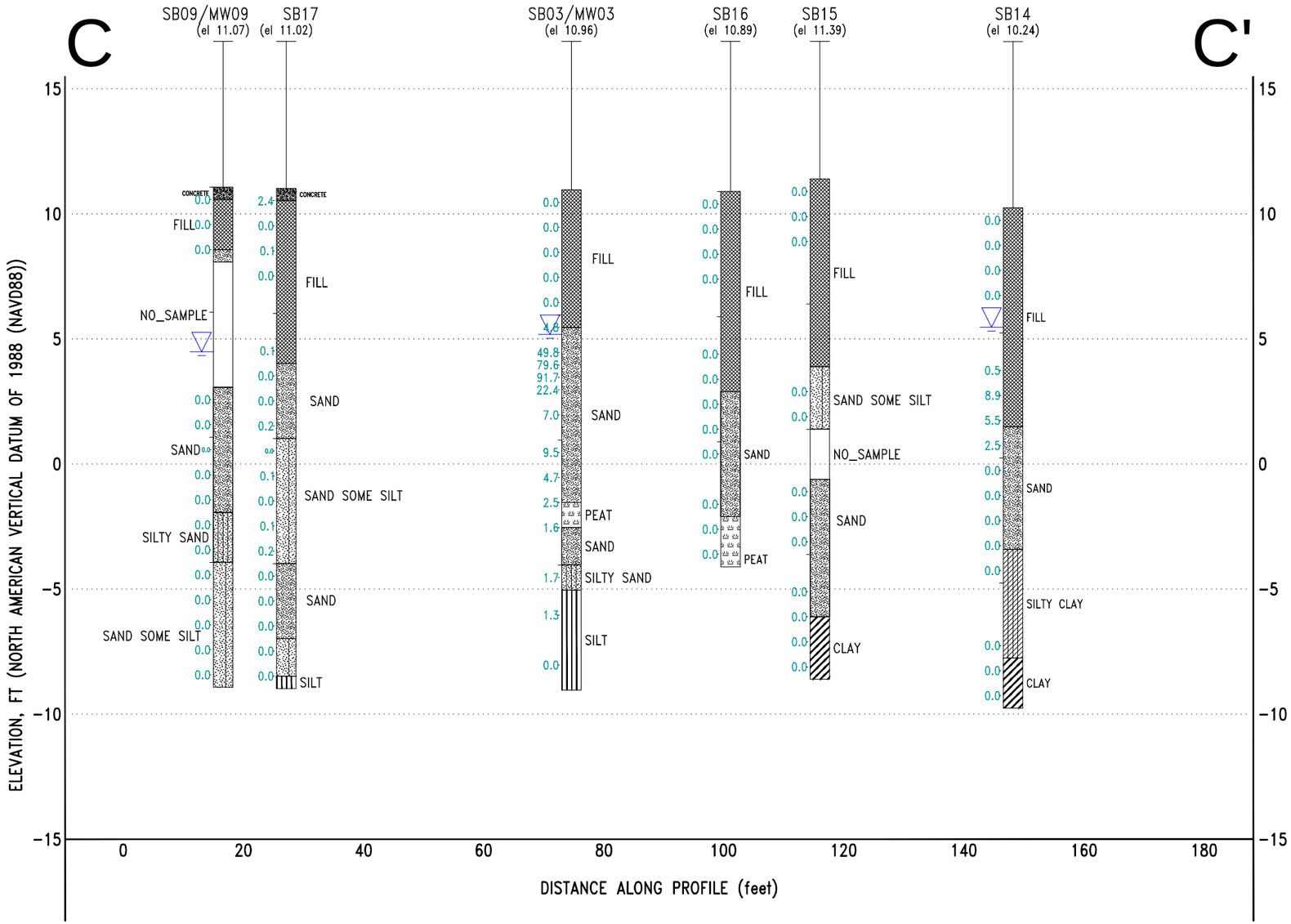
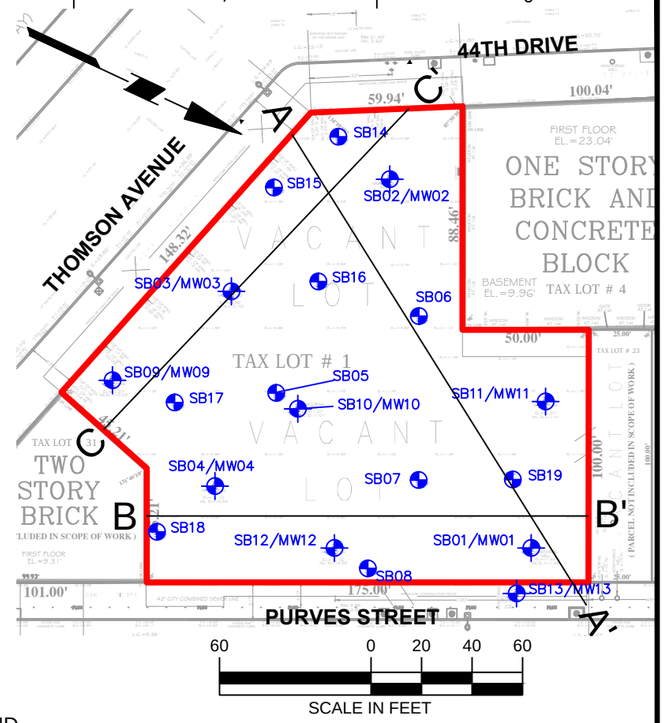
SECTION C

FACING SOUTHWEST





LEGEND

- Fill
- SAND
- Clay
- Sandy silty some clay (intermixed)
- Silty sand
- USCS Silt
- Sand with some silt
- No Sample Recovered
- Peat/Organics
- Sandy silt
- Silt

SB01/MW01 (el. xx) — Borehole Number (elevation)

Borehole Legend

PID Reading — 0.0

Water Level Reading From Well Gauging.

NOTES:

1. ELEVATIONS ARE WITH RESPECT TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON APRIL 24, 2014 WELL GAUGING EVENT.
3. GROUNDWATER ELEVATION SHOWN FOR BORING SB14 WAS MEASURED FROM ADJACENT WELL MW02.

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Drawing Title

SUBSURFACE PROFILE C-C'

Project No. 170282501	Drawing No. 6C
Date 05/16/2014	
Scale SHOWN	
Drawn By PMM / Checked By	
Submission Date	Sheet 6C of 9

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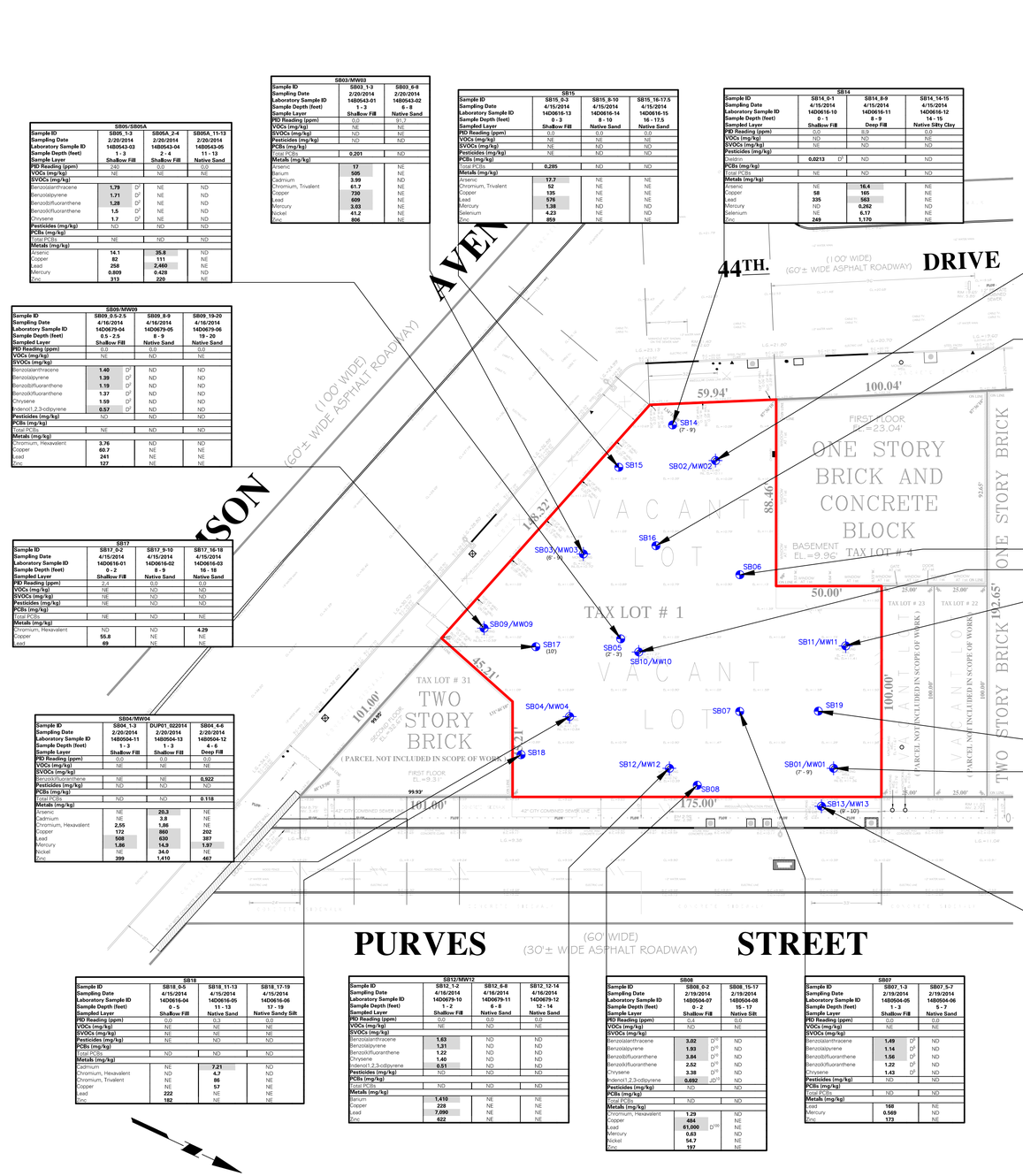

S805/S805A				
Sample ID	S805_1-3	S805A_2-4	S805A_11-13	
Sampling Date	2/20/2014	2/20/2014	2/20/2014	
Laboratory Sample ID	1480543-03	1480543-04	1480543-05	
Sample Depth (feet)	1 - 3	2 - 4	11 - 13	
Sample Layer	Shallow Fill	Shallow Fill	Native Sand	
PID Reading (ppm)	240	0.0	0.0	
VOCs (mg/kg)	NE	NE	NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	1.70	D[1] NE	ND	
Benzo(a)pyrene	1.71	D[1] NE	ND	
Benzo(b)fluoranthene	1.28	D[1] NE	ND	
Benzo(k)fluoranthene	1.5	D[1] NE	ND	
Chrysene	1.7	D[1] NE	ND	
Pesticides (mg/kg)	ND	ND	ND	
PCBs (mg/kg)				
Total PCBs	NE	ND	ND	
Metals (mg/kg)				
Arsenic	14.1	35.8	ND	
Copper	82	111	NE	
Lead	258	2,460	NE	
Mercury	0.809	0.428	NE	
Zinc	313	220	NE	

S803/MW03			
Sample ID	S803_1-3	S803_6-8	
Sampling Date	2/20/2014	2/20/2014	
Laboratory Sample ID	1480543-01	1480543-02	
Sample Depth (feet)	1 - 3	6 - 8	
Sample Layer	Shallow Fill	Native Sand	
PID Reading (ppm)	0.0	0.0	
VOCs (mg/kg)	NE	NE	
SVOCs (mg/kg)	ND	NE	
Pesticides (mg/kg)	ND	ND	
PCBs (mg/kg)			
Total PCBs	0.201	ND	
Metals (mg/kg)			
Arsenic	17	NE	
Barium	505	NE	
Cadmium	3.99	ND	
Chromium, Trivalent	61.7	NE	
Copper	730	NE	
Lead	609	NE	
Mercury	3.03	NE	
Nickel	41.2	NE	
Zinc	806	NE	

S815				
Sample ID	S815_0-3	S815_8-10	S815_16-17.5	
Sampling Date	4/15/2014	4/15/2014	4/15/2014	
Laboratory Sample ID	14D0616-13	14D0616-14	14D0616-15	
Sample Depth (feet)	0 - 3	8 - 10	16 - 17.5	
Sampled Layer	Shallow Fill	Native Sand	Native Sand	
PID Reading (ppm)	0.0	0.0	0.0	
SVOCs (mg/kg)	NE	NE	NE	
Pesticides (mg/kg)	ND	ND	ND	
PCBs (mg/kg)				
Total PCBs	0.285	ND	ND	
Metals (mg/kg)				
Arsenic	17.7	NE	NE	
Chromium, Trivalent	52	NE	NE	
Copper	135	NE	NE	
Lead	576	NE	NE	
Mercury	1.38	ND	ND	
Selenium	4.23	NE	ND	
Zinc	959	NE	NE	

S814				
Sample ID	S814_0-1	S814_8-9	S814_14-15	
Sampling Date	4/15/2014	4/15/2014	4/15/2014	
Laboratory Sample ID	14D0616-10	14D0616-11	14D0616-12	
Sample Depth (feet)	0 - 1	8 - 9	14 - 15	
Sampled Layer	Shallow Fill	Deep Fill	Native Silty Clay	
PID Reading (ppm)	0.0	0.0	0.0	
VOCs (mg/kg)	ND	ND	ND	
SVOCs (mg/kg)	ND	ND	ND	
Pesticides (mg/kg)				
Dieldrin	0.0213	D[1] ND	ND	
PCBs (mg/kg)				
Total PCBs	NE	ND	ND	
Metals (mg/kg)				
Arsenic	NE	16.4	NE	
Copper	58	165	NE	
Lead	335	503	NE	
Mercury	ND	0.262	ND	
Selenium	NE	6.17	NE	
Zinc	249	1,170	NE	

S802/MW02				
Sample ID	S802_2-4	S802_6-8	S802_11-13	
Sampling Date	2/21/2014	2/21/2014	2/21/2014	
Laboratory Sample ID	1480579-01	1480579-02	1480579-03	
Sample Depth (feet)	2 - 4	6 - 8	11 - 13	
Sample Layer	Shallow Fill	Deep Fill	Native Clay	
PID Reading (ppm)	0.0	0.0	0.0	
VOCs (mg/kg)				
Acetone	NE	B NE	0.06	
SVOCs (mg/kg)				
Benzo(a)anthracene	2.06	JD[1] 1.61	D[1] ND	
Benzo(a)pyrene	2.52	JD[1] 1.98	D[1] ND	
Benzo(b)fluoranthene	2.62	JD[1] 1.56	D[1] ND	
Benzo(k)fluoranthene	2.62	JD[1] 1.41	D[1] ND	
Chrysene	2.32	JD[1] 1.62	D[1] ND	
Indeno(1,2,3-cd)pyrene	1.2	JD[1] 0.764	D[1] ND	
Pesticides (mg/kg)	ND	ND	ND	
PCBs (mg/kg)				
Total PCBs	ND	ND	ND	

S816				
Sample ID	SB16_0-2	SB16_6.5-8	DUP802_041614	SB16_14-15
Sampling Date	4/16/2014	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-01	14D0679-02	14D0679-17	14D0679-03
Sample Depth (feet)	0 - 2	6.5 - 8	6.5 - 8	14 - 15
Sampled Layer	Shallow Fill	Deep Fill	Deep Fill	Native Peat
PID Reading (ppm)	0.0	0.0	0.0	0.0
VOCs (mg/kg)				
Acetone	ND	NE	0.0640 J	0.075
SVOCs (mg/kg)				
Benzo(a)anthracene	2.64	D[1] NE	1.14	ND
Benzo(a)pyrene	2.26	D[1] NE	NE	ND
Benzo(b)fluoranthene	2.38	D[1] NE	NE	ND
Benzo(k)fluoranthene	2.19	D[1] NE	0.92	ND
Chrysene	2.35	D[1] NE	NE	ND
Dibenzo(a,h)anthracene	0.68	JD[1] NE	NE	ND
Indeno(1,2,3-cd)pyrene	1.24	D[1] NE	NE	ND
Pesticides (mg/kg)	ND	ND	ND	ND
PCBs (mg/kg)				
Total PCBs	NE	ND	ND	ND
Metals (mg/kg)				
Barium	426	NE	470	NE
Cadmium	2.77	NE	2.53	ND
Chromium, Hexavalent	3.88	ND	ND	ND
Chromium, Trivalent	81.72	NE	30.2	NE
Copper	434	75.5	185	NE
Lead	715	2,190	4,140	84
Mercury	ND	ND	0.208	ND
Selenium	3.94	NE	4.29	ND
Zinc	2,990	403	1,190	NE

S809/MW09			
Sample ID	S809_0.5-2.5	S809_8-9	S809_19-20
Sampling Date	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-04	14D0679-05	14D0679-06
Sample Depth (feet)	0.5 - 2.5	9 - 9	19 - 20
Sampled Layer	Shallow Fill	Native Sand	Native Sand
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	NE	ND	NE
SVOCs (mg/kg)			
Benzo(a)anthracene	1.40	D[1] ND	ND
Benzo(a)pyrene	1.39	D[1] ND	ND
Benzo(b)fluoranthene	1.19	D[1] ND	ND
Benzo(k)fluoranthene	1.37	D[1] ND	ND
Chrysene	1.59	D[1] ND	ND
Indeno(1,2,3-cd)pyrene	0.57	D[1] ND	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	NE	ND	ND
Metals (mg/kg)			
Chromium, Hexavalent	3.76	ND	ND
Copper	60.7	NE	NE
Lead	241	NE	NE
Zinc	127	NE	NE

S806			
Sample ID	S806_0-3	S806_6-8	
Sampling Date	2/19/2014	2/19/2014	
Laboratory Sample ID	1480504-03	1480504-04	
Sample Depth (feet)	0 - 3	6 - 8	
Sample Layer	Shallow Fill	Deep Fill	
PID Reading (ppm)	0.0	0.0	
VOCs (mg/kg)			
Acetone	NE	0.170	J
SVOCs (mg/kg)			
Benzo(a)anthracene	2.04	D[1] 4.16	D[1]
Benzo(a)pyrene	NE	3.34	D[1]
Benzo(b)fluoranthene	1.47	D[1] 3.82	D[1]
Benzo(k)fluoranthene	1.68	D[1] 6.29	D[1]
Chrysene	2.53	D[1] 5.72	D[1]
Indeno(1,2,3-cd)pyrene	NE	1.24	JD[1]
Pesticides (mg/kg)	ND	ND	
PCBs (mg/kg)			
Total PCBs	ND	ND	
Metals (mg/kg)			
Chromium, Hexavalent	NE	8.52	
Copper	334	86.6	
Lead	240	1,090	
Mercury	0.452	1.29	
Zinc	655	897	

S811/MW11			
Sample ID	S811_2-3.5	S811_6-7	S811_17-18
Sampling Date	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-07	14D0679-08	14D0679-09
Sample Depth (feet)	2 - 3.5	6 - 7	17 - 18
Sampled Layer	Shallow Fill	Native Sandy Silt	Native Sand
PID Reading (ppm)	0.0	0.0	0.0
VOCs (mg/kg)	ND	ND	ND
SVOCs (mg/kg)			
Benzo(a)anthracene	ND	1.04	ND
Pesticides (mg/kg)	ND	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Chromium, Trivalent	NE	35.5	NE
Lead	NE	76	NE
Mercury	ND	0.317	ND

S810/MW10				
Sample ID	SB10_0-2	SB10_9-11	DUP801_041614	SB10_19-20
Sampling Date	4/16/2014	4/16/2014	4/16/2014	4/16/2014
Laboratory Sample ID	14D0679-13	14D0679-14	14D0679-16	14D0679-15
Sample Depth (feet)	0 - 2	9 - 11	9 - 11	19 - 20
Sampled Layer	Shallow Fill	Native Sand	Native Sand	Native Sandy Silt
PID Reading (ppm)	0.0	0.0	0.0	0.0
VOCs (mg/kg)	ND	NE	ND	ND
SVOCs (mg/kg)	NE	ND	ND	ND
Pesticides (mg/kg)				
4,4'-DDD	0.0097	D[1] ND	ND	ND
4,4'-DDT	0.0038	D[1] ND	ND	ND
Dieldrin	0.0063	D[1] ND	ND	ND
PCBs (mg/kg)				
Total PCBs	ND	ND	ND	ND
Metals (mg/kg)				
Lead	93	NE	NE	NE

SB19				
Sample ID	SB19_0-2	SB19_7-9	SB19_17-19	
Sampling Date	4/15/2014	4/15/2014	4/15/2014	
Laboratory Sample ID	14D0616-07	14D0616-08	14D0616-09	
Sample Depth (feet)	0 - 2	7 - 9	17 - 19	
Sampled Layer	Shallow Fill	Native Sand	Native Silty Clay	
PID Reading (ppm)	0.0	0.0	0.0	
VOCs (mg/kg)	NE	ND	NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	4.54	D[1] ND	ND	
Benzo(a)pyrene	4.66	D[1] ND	ND	
Benzo(b)fluoranthene	3.54	JD[1] ND	ND	
Benzo(k)fluoranthene	5.16	D[1] ND	ND	
Chrysene	4.38	D[1] ND	ND	
Dibenzo(a,h)anthracene	1.11	JD[1] ND	ND	
Indeno(1,2,3-cd)pyrene	1.92	JD[1] ND	ND	
Pentachlorophenol	2.79	JD[1] ND	ND	
Pesticides (mg/kg)				
4,4'-DDE	0.0037	D[1] ND	ND	
4,4'-DDT	0.0134	D[1] ND	ND	
PCBs (mg/kg)				
Total PCBs	NE	ND	ND	
Metals (mg/kg)				
Arsenic	14.4	ND	NE	
Copper	103	NE	NE	
Lead	857	NE	NE	
Zinc	263	NE	NE	

SB01/MW01			
Sample ID	SB01_4-6	SB01_7-9	
Sampling Date	2/19/2014	2/19/2014	
Laboratory Sample ID	1480504-01	1480504-02	
Sample Depth (feet)	4 - 6	7 - 9	
Sample Layer	Deep Fill	Native Sand	
PID Reading (ppm)	0.0	14.9	
VOCs (mg/kg)	NE	NE	
SVOCs (mg/kg)	ND	ND	
Pesticides (mg/kg)	ND	ND	
PCBs (mg/kg)			
Total PCBs	ND	ND	
Metals (mg/kg)			
Chromium, Trivalent	33.0	NE	
Copper	699	NE	
Lead	410	NE	
Mercury	0.29	ND	
Nickel	48	NE	
Zinc	532	121	

SB13/MW13				
Sample ID	SB13_0-2	SB13_9-10	SB13_14-15	
Sampling Date	4/17/2014	4/17/2014	4/17/2014	
Laboratory Sample ID	14D0716-01	14D0716-02	14D0716-03	
Sample Depth (feet)	0 - 2	9 - 10	14 - 15	
Sampled Layer	Shallow Fill	Native Silty Sand	Native Silt	
PID Reading (ppm)	0.0	9.8	0.0	
VOCs (mg/kg)	NE	NE	NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	1.49	D[1] ND		
Benzo(a)pyrene	1.14	D[1] ND		
Benzo(b)fluoranthene	1.56	D[1] ND		
Benzo(k)fluoranthene	1.22	D[1] ND		
Chrysene	1.43	D[1] ND		
Pesticides (mg/kg)	ND	ND		
PCBs (mg/kg)				
Total PCBs	ND	ND		
Metals (mg/kg)				
Lead	168	NE		
Mercury	0.569	ND		
Zinc	173	NE		

SB18			
Sample ID	SB18_0-5	SB18_11-13	SB18_17-19
Sampling Date	4/15/2014	4/15/2014	4/15/2014
Laboratory Sample ID	14D0616-04	14D0616-05	14D0616-06
Sample Depth (feet)	0 - 5	11 - 13	17 - 19
Sampled Layer	Shallow Fill	Native Sand	Native Sandy Silt
PID Reading (ppm)	0.0	0.3	0.0
VOCs (mg/kg)	NE	NE	NE
SVOCs (mg/kg)	NE	NE	NE
Pesticides (mg/kg)	NE	ND	ND
PCBs (mg/kg)			
Total PCBs	ND	ND	ND
Metals (mg/kg)			
Cadmium	NE	7.21	ND
Chromium, Hexavalent	ND	4.7	ND
Chromium, Trivalent	NE	86	NE
Copper	NE	57	NE
Lead	222	NE	NE
Zinc	182	NE	NE

SB12/MW12				
Sample ID	SB12_1-2	SB12_6-8	SB12_12-14	
Sampling Date	4/16/2014	4/16/2014	4/16/2014	
Laboratory Sample ID	14D0679-10	14D0679-11	14D0679-12	
Sample Depth (feet)	1 - 2	6 - 8	12 - 14	
Sampled Layer	Shallow Fill	Native Sand	Native Sand	
PID Reading (ppm)	0.0	0.0	0.0	
VOCs (mg/kg)	NE	ND	NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	1.63	ND	ND	
Benzo(a)pyrene	1.31	ND	ND	
Benzo(k)fluoranthene	1.22	ND	ND	
Chrysene	1.40	ND	ND	
Indeno(1,2,3-cd)pyrene	0.51	ND	ND	
Pesticides (mg/kg)	ND	ND	ND	
PCBs (mg/kg)				
Total PCBs	ND	ND	ND	
Metals (mg/kg)				
Barium	1,410	NE	NE	
Copper	228	NE	NE	
Lead	7,090	NE	NE	
Zinc	622	NE	NE	

SB08			
Sample ID	SB08_0-2	SB08_15-17	
Sampling Date	2/19/2014	2/19/2014	
Laboratory Sample ID	1480504-07	1480504-08	
Sample Depth (feet)	0 - 2	15 - 17	
Sample Layer	Shallow Fill	Native Silt	
PID Reading (ppm)	0.3	0.0	
VOCs (mg/kg)	ND	NE	
SVOCs (mg/kg)			
Benzo(a)anthracene	3.02	D[1] ND	
Benzo(a)pyrene	1.93	D[1] ND	
Benzo(b)fluoranthene	3.84	D[1] ND	
Benzo(k)fluoranthene	2.52	D[1] ND	
Chrysene	3.38	D[1] ND	
Indeno(1,2,3-cd)pyrene	0.692	JD[1] ND	
Pesticides (mg/kg)	ND	ND	
PCBs (mg/kg)			
Total PCBs	ND	ND	
Metals (mg/kg)			
Chromium, Hexavalent	1.29	ND	
Copper	484	NE	
Lead	81,000	D[100] NE	
Mercury	0.63	NE	
Nickel	54.7	NE	
Zinc	197	NE	

SB07			
Sample ID	SB07_1-3	SB07_5-7	
Sampling Date	2/19/2014	2/19/2014	
Laboratory Sample ID	1480504-05	1480504-06	
Sample Depth (feet)	1 - 3	5 - 7	
Sample Layer	Shallow Fill	Native Sand	
PID Reading (ppm)	0.0	0.0	
VOCs (mg/kg)	NE	NE	
SVOCs (mg/kg)			
Benzo(a)anthracene	1.49	D[1] ND	
Benzo(a)pyrene	1.14	D[1] ND	
Benzo(b)fluoranthene	1.56	D[1] ND	
Benzo(k)fluoranthene	1.22	D[1] ND	
Chrysene	1.43	D[1] ND	
Pesticides (mg/kg)	ND	ND	
PCBs (mg/kg)			
Total PCBs	ND	ND	
Metals (mg/kg)			
Lead	87	NE	

LEGEND

- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- SITE BOUNDARY
- (2' - 3') — DEPTH INTERVAL AT WHICH PETROLEUM IMPACTS, INCLUDING ODORS, STAINING, AND PHOTOIONIZATION DETECTOR (PID) READINGS ABOVE BACKGROUND LEVELS, WERE OBSERVED IN THE BORING

NOTES:

1. DRAWING BASED ON MAY 5, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED, BORING LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.
3. SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (SCOS) AND RESTRICTED RESIDENTIAL RESTRICTED USE SCOs.
4. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE SCOs ARE SHOWN.
5. CONCENTRATIONS ABOVE THE NYSDEC PART 375 UNRESTRICTED USE SCOs ARE IN BOLD.
5. CONCENTRATIONS ABOVE THE NYSDEC PART 375 RESTRICTED RESIDENTIAL RESTRICTED SCOs ARE HIGHLIGHTED.
6. DUP01_022014 IS A DUPLICATE OF SAMPLE SB04_1-3; DUPR01_041614 IS A DUPLICATE OF SAMPLE SB10_9-10; AND DUPR02_041614 IS A DUPLICATE OF SAMPLE SB16_6.5-8.
7. VOC = VOLATILE ORGANIC COMPOUND
8. SVOC = SEMIVOLATILE ORGANIC COMPOUND
9. PCB = POLYCHLORINATED BIPHENYL
10. mg/kg = MILLIGRAM PER KILOGRAM
11. ND = NOT DETECTED
12. NE = COMPOUND DETECTED AT A CONCENTRATION THAT DID NOT EXCEED THE NYSDEC PART 375 UNRESTRICTED USE SCOs AND RESTRICTED RESIDENTIAL RESTRICTED SCOs .

QUALIFIERS:

J = DETECTED ABOVE THE METHOD DETECTION LIMIT BUT BELOW THE REPORTING LIMIT; THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION
B = ANALYTE WAS DETECTED IN THE ASSOCIATED LABORATORY ANALYSIS BATCH BLANK
DI = RESULT IS FOR A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR

	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Residential Restricted Use SCOs
VOCs (mg/kg)		
Acetone	0.05	100
cis-1,2-Dichloroethylene	0.25	100
Tetrachloroethylene	1.3	19
Trichloroethylene	0.47	21
Vinyl Chloride	0.02	0.9
SVOCs (mg/kg)		
Benzo(a)anthracene	1	1
Benzo(a)pyrene	1	1
Benzo(b)fluoranthene	1	1
Benzo(k)fluoranthene	0.8	3.9
Chrysene	1	3.9
Dibenzo(a,h)anthracene	0.33	0.33
Indeno(1,2,3-cd)pyrene	0.5	0.5
Pentachlorophenol	0.8	6.7
Pesticides (mg/kg)		
4,4'-DDD	0.0033	13
4,4'-DDE	0.0033	8.9
4,4'-DDT	0.0033	7.9
alpha-Chlordane	0.094	4.2
Dieldrin	0.005	0.2
PCBs (mg/kg)		
Total PCBs	0.1	1
Metals (mg/kg)		
Arsenic	13	16
Barium	350	400
Cadmium	2.5	4.3
Chromium, Hexavalent	1	110
Chromium, Trivalent	30	180
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Selenium	3.9	180
Zinc	109	10000

SUBMISSION DATE: XXXXX ##, ####

PROJECT No. 170282501

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Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project: 44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS NEW YORK

Figure Title: SOIL SAMPLE RESULTS MAP

Project No.	170282501
Date	05/13/2014
Scale	1" = 30'
Drawn By	PMM
Submission Date	X
Figure No.	7
Sheet	7 of 9

Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 7 - Soil Sample Results Map.dwg Date: 9/2/2014 Time: 12:04 User: pmcmahon Style Table: Langan.stb Layout: ARCHD-BL

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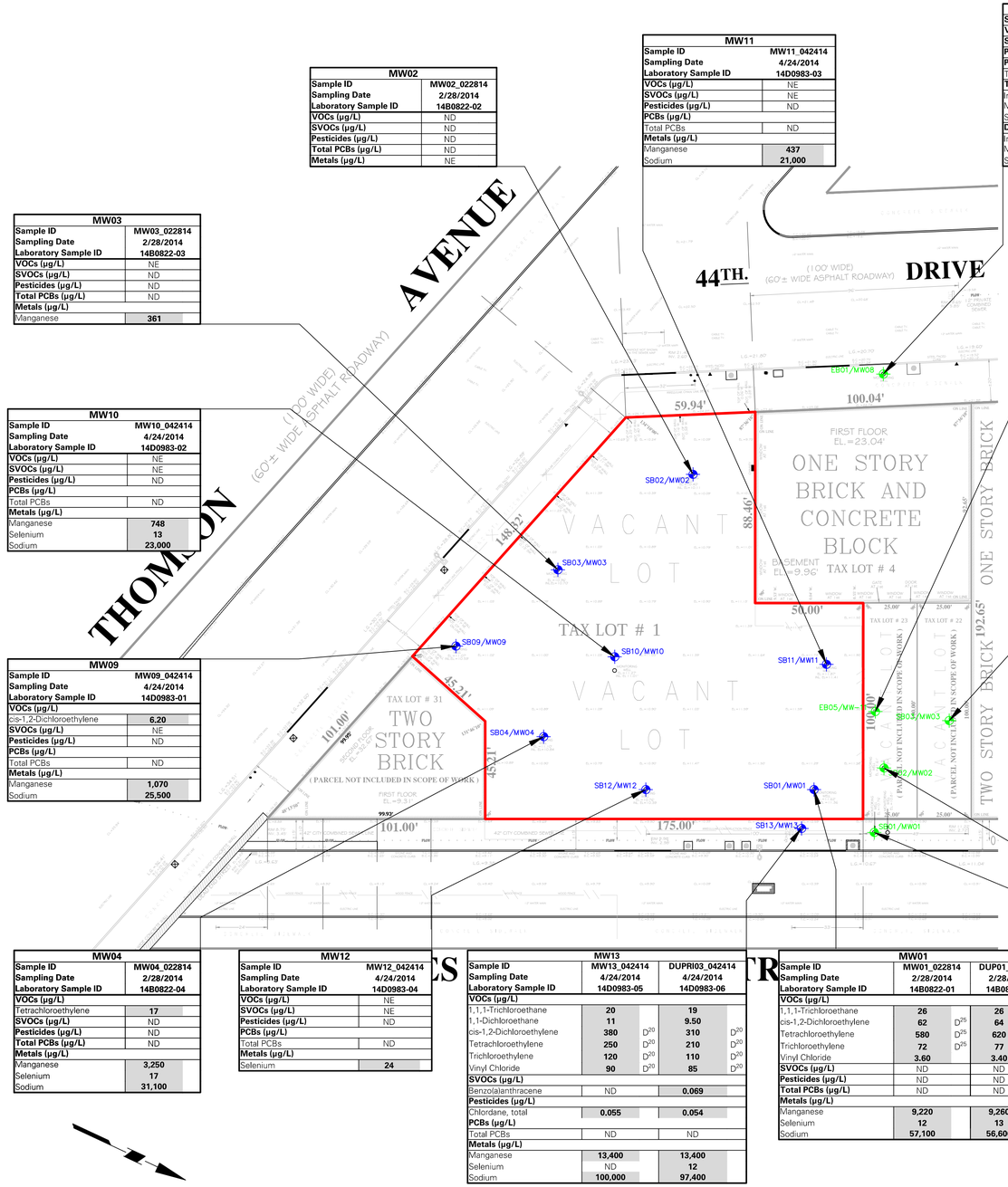

MW02	
Sample ID	**MW02_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-02**
VOCs (µg/L)	ND
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	NE

MW11	
Sample ID	**MW11_042414**
Sampling Date	**4/24/2014**
Laboratory Sample ID	**14D0983-03**
VOCs (µg/L)	NE
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Metals (µg/L)	
Manganese	**437**
Sodium	**21,000**

Off-Site Well MW08	
Sampling Date	**3/14/2014**
VOCs (µg/L)	ND
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Total Metals (µg/L)	
Iron	**17,400**
Manganese	**929.2**
Sodium	**211,000**
Dissolved Metals (µg/L)	
Iron	**16,400**
Manganese	**912**
Sodium	**225,000**

MW03	
Sample ID	**MW03_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-03**
VOCs (µg/L)	NE
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	
Manganese	**361**

Off-Site Well MW11		
Sample	**MW11**	**Duplicate**
Sampling Date	**3/14/2014**	**3/14/2014**
VOCs (µg/L)	NE	NE
SVOCs (µg/L)	ND	ND
Pesticides (µg/L)	ND	ND
PCBs (µg/L)		
Total PCBs	ND	ND
Total Metals (µg/L)		
Manganese	**480.8**	**479.6**
Dissolved Metals (µg/L)		
Iron	**604**	**612**
Manganese	**439**	**442.4**

MW10	
Sample ID	**MW10_042414**
Sampling Date	**4/24/2014**
Laboratory Sample ID	**14D0983-02**
VOCs (µg/L)	NE
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Metals (µg/L)	
Manganese	**748**
Selenium	**13**
Sodium	**23,000**

Off-Site Well MW03	
Sampling Date	**12/10/2013**
VOCs (µg/L)	
Tetrachloroethylene	**7.3**
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Total Metals (µg/L)	
Chromium	**55.55**
Iron	**482**
Sodium	**32,400**
Dissolved Metals (µg/L)	
Chromium	**59.17**
Iron	**433**
Selenium	**11.2**
Sodium	**31,700**

MW09	
Sample ID	**MW09_042414**
Sampling Date	**4/24/2014**
Laboratory Sample ID	**14D0983-01**
VOCs (µg/L)	
cis-1,2-Dichloroethylene	**6.20**
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Metals (µg/L)	
Manganese	**1,070**
Sodium	**25,500**

Off-Site Well MW02	
Sampling Date	**12/10/2013**
VOCs (µg/L)	
1,1,1-Trichloroethane	**18**
cis-1,2-Dichloroethylene	**26**
Tetrachloroethylene	**630**
Trichloroethylene	**59**
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Total Metals (µg/L)	
Iron	**692**
Manganese	**414**
Sodium	**27,400**
Dissolved Metals (µg/L)	
Iron	**660**
Manganese	**421.4**
Sodium	**27,500**

MW04	
Sample ID	**MW04_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-04**
VOCs (µg/L)	
Tetrachloroethylene	**17**
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	
Manganese	**3,250**
Selenium	**17**
Sodium	**31,100**

MW12	
Sample ID	**MW12_042414**
Sampling Date	**4/24/2014**
Laboratory Sample ID	**14D0983-04**
VOCs (µg/L)	NE
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Metals (µg/L)	
Selenium	**24**

MW13				
Sample ID	**MW13_042414**		**DUPRI03_042414**	
Sampling Date	**4/24/2014**		**4/24/2014**	
Laboratory Sample ID	**14D0983-05**		**14D0983-06**	
VOCs (µg/L)				
1,1,1-Trichloroethane	**20**		**19**	
1,1-Dichloroethane	**11**		**9.50**	
cis-1,2-Dichloroethylene	**380**	D[20]	**310**	D[20]
Tetrachloroethylene	**250**	D[20]	**210**	D[20]
Trichloroethylene	**120**	D[20]	**110**	D[20]
Vinyl Chloride	**90**	D[20]	**85**	D[20]
SVOCs (µg/L)				
Benzo(a)anthracene	ND		**0.069**	
Pesticides (µg/L)				
Chlordane, total	**0.055**		**0.054**	
PCBs (µg/L)				
Total PCBs	ND		ND	
Metals (µg/L)				
Manganese	**13,400**		**13,400**	
Selenium	ND		**12**	
Sodium	**100,000**		**97,400**	

MW01				
Sample ID	**MW01_022814**		**DUP01_022814**	
Sampling Date	**2/28/2014**		**2/28/2014**	
Laboratory Sample ID	**14B0822-01**		**14B0822-05**	
VOCs (µg/L)				
1,1,1-Trichloroethane	**26**		**26**	
cis-1,2-Dichloroethylene	**62**	D[25]	**64**	D[20]
Tetrachloroethylene	**580**	D[25]	**620**	D[20]
Trichloroethylene	**72**	D[25]	**77**	D[20]
Vinyl Chloride	**3.60**		**3.40**	
SVOCs (µg/L)	ND		ND	
Pesticides (µg/L)	ND		ND	
Total PCBs (µg/L)	ND		ND	
Metals (µg/L)				
Manganese	**9,220**		**9,260**	
Selenium	**12**		**13**	
Sodium	**57,100**		**56,600**	

Off-Site Well MW01	
Sampling Date	**12/10/2013**
VOCs (µg/L)	
1,1,1-Trichloroethane	**51**
1,1-Dichloroethane	**45**
cis-1,2-Dichloroethylene	**1,200**
Tetrachloroethylene	**1,500**
Trichloroethylene	**440**
Vinyl Chloride	**200**
SVOCs (µg/L)	
1,2-Dichlorobenzene	**5.6**
1,3-Dichlorobenzene	**6**
Pesticides (µg/L)	ND
PCBs (µg/L)	
Total PCBs	ND
Total Metals (µg/L)	
Iron	**439**
Manganese	**2,626**
Sodium	**120,000**
Dissolved Metals (µg/L)	
Iron	**358**
Manganese	**2,626**
Sodium	**122,000**

LEGEND

SB01/MW01 — BORING AND MONITORING WELL LOCATION

SB01/MW01 — MONITORING WELL LOCATION SAMPLED FOR BCP SITE No. C241164 REMEDIAL INVESTIGATION

SITE BOUNDARY

NOTES:

1. DRAWING BASED ON MAY 5, 2014 SURVEY BY APPLE SURVEYING.
2. MONITORING WELL LOCATIONS WERE SURVEYED.
3. GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS (AWQS) AND GUIDANCE VALUES FOR CLASS GA - DRINKING WATER.
4. OFF-SITE MONITORING WELL DATA FOR BCP SITE No. C241164 WAS OBTAINED FROM THE REMEDIAL INVESTIGATION REPORT FOR 27-21 44TH DRIVE AND 44-18 PURVES STREET, DATED MARCH 26, 2014, PREPARED BY LANGAN.
5. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE NYSDEC TOGS AWQS CRITERIA ARE SHOWN.
6. CONCENTRATIONS EXCEEDING THE CRITERIA ARE HIGHLIGHTED AND IN BOLD.
7. DUPRI03_042414 IS A DUPLICATE OF SAMPLE MW13_042414.
8. µg/L = MICROGRAM PER LITER
9. VOC = VOLATILE ORGANIC COMPOUND
10. SVOC = SEMIVOLATILE ORGANIC COMPOUND
11. PCB = POLYCHLORINATED BIPHENYLS
12. NE = COMPOUND DETECTED AT A CONCENTRATION THAT DID NOT EXCEED THE NYSDEC TOGS AWQS OR GUIDANCE VALUE FOR CLASS GA - DRINKING WATER.
13. ND = NOT DETECTED

QUALIFIERS:

D# = RESULT IS FROM A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR

NYSDEC TOGS Class GA	
VOCs (µg/L)	
1,1,1-Trichloroethane	5
1,1-Dichloroethane	5
cis-1,2-Dichloroethylene	5
Tetrachloroethylene	5
Trichloroethylene	5
Vinyl Chloride	2
SVOCs (µg/L)	
1,2-Dichlorobenzene	3
1,3-Dichlorobenzene	3
Benzo(a)anthracene	0.002
Pesticides (µg/L)	
Chlordane, total	0.05
Total Metals (µg/L)	
Chromium	50
Iron	300
Manganese	300
Selenium	10
Sodium	20000
Dissolved metals (µg/L)	
Chromium	50
Iron	300
Manganese	300
Selenium	10
Sodium	20000

30 0 15 30
SCALE IN FEET

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Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project: 44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS NEW YORK

Figure Title: GROUNDWATER SAMPLE RESULTS MAP

Project No. 170282501	Figure No. 8
Date 05/13/2014	
Scale 1" = 30'	
Drawn By PMM	
Submission Date X	Sheet 8 of 9

SUBMISSION DATE: XXXXX ##, ####
PROJECT No. 170282501

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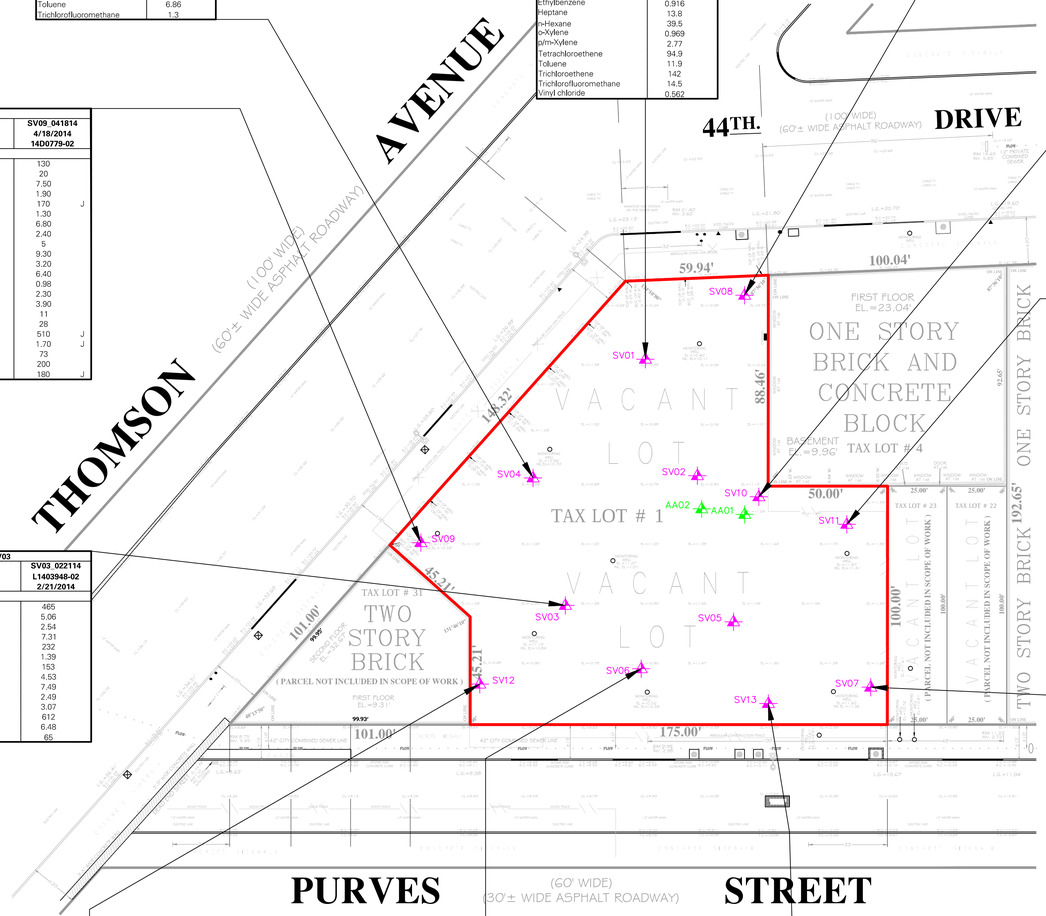

SV04	
Sample Name	**SV04_022114**
Lab Sample ID	**L1403948-03**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	2.66
2-Butanone	3.07
Acetone	11.2 J
Benzene	1.16
Chloroform	1.37
Chloromethane	1.22
Dichlorodifluoromethane	2.03
Ethanol	12.1
Ethylbenzene	1.19
Heptane	0.914
Isopropanol	4.94
n-Hexane	0.966
o-Xylene	1.46
p/m-Xylene	4.28
Tetrachloroethene	5.99
Toluene	6.86
Trichlorofluoromethane	1.3

SV01	
Sample Name	**SV01_022114**
Lab Sample ID	**L1403948-01**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	34.7
1,1-Dichloroethane	2.02
1,2-Dichloroethane	7.97
1,3-Butadiene	5.4
2-Butanone	6.78
Acetone	323
Benzene	10.3
Carbon disulfide	7.35
Carbon tetrachloride	37.6
Chloroform	37.6
cis-1,2-Dichloroethene	1.05
Cyclohexane	2.57
Dichlorodifluoromethane	6.33
Ethanol	10.1
Ethyl Acetate	1.88
Ethylbenzene	0.916
Heptane	13.8
n-Hexane	39.5
o-Xylene	0.969
p/m-Xylene	2.77
Tetrachloroethene	94.9
Toluene	11.9
Trichloroethene	142
Trichlorofluoromethane	14.5
Vinyl chloride	0.562

SV08		
Sample ID	**SV08_041814**	
Sampling Date	**4/18/2014**	
Laboratory Sample ID	**14D0779-01**	
VOCs (µg/m³)		
2-Butanone	29	
Acetone	1,500	B
Carbon disulfide	23	
Chloroform	17	
Cyclohexane	33	
Isopropanol	250	
n-Hexane	21	
Styrene	30	
Tetrachloroethene	44	
Toluene	110	

SV09		
Sample ID	**SV09_041814**	
Sampling Date	**4/18/2014**	
Laboratory Sample ID	**14D0779-02**	
VOCs (µg/m³)		
1,1,1-Trichloroethane	130	
1,1-Dichloroethane	20	
1,2,4-Trimethylbenzene	7.50	
2-Butanone	1.90	
Acetone	170	J
Benzene	1.30	
Carbon disulfide	6.80	
Carbon tetrachloride	2.40	
Chloroform	5	
cis-1,2-Dichloroethene	9.30	
Dichlorodifluoromethane	3.20	
Ethylbenzene	6.40	
Methyl tert-butyl ether (MTBE)	0.98	
Methylene chloride	2.30	
o-Xylene	3.90	
p/m-Xylene	11	
Styrene	28	
Tetrachloroethene	510	J
Tetrahydrofuran	1.70	J
Toluene	73	
Trichloroethene	200	
Trichlorofluoromethane (Freon 11)	180	J

SV10		
Sample ID	**SV10_041814**	
Sampling Date	**4/18/2014**	
Laboratory Sample ID	**14D0779-03**	
VOCs (µg/m³)		
1,1,1-Trichloroethane	3.60	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.89	
1,2,4-Trimethylbenzene	2.30	
1,3,5-Trimethylbenzene	0.93	
2-Butanone	4.70	
Acetone	43	B
Benzene	2.10	
Bromodichloromethane	4.20	
Carbon disulfide	10	
Chloroform	7.90	
cis-1,2-Dichloroethene	2	
Cyclohexane	1.20	
Ethylbenzene	2.60	
n-Heptane	15	
n-Hexane	5.40	
o-Xylene	3.40	
p/m-Xylene	10	
p-Ethyltoluene	5.10	J
Styrene	13	
Tetrachloroethene	8.60	
Toluene	6.30	
Trichloroethene	1.90	
Trichlorofluoromethane (Freon 11)	4.30	J

SV11		
Sample ID	**SV11_041814**	
Sampling Date	**4/18/2014**	
Laboratory Sample ID	**14D0779-04**	
VOCs (µg/m³)		
1,1,1-Trichloroethane	370	J
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.70	
1,2,4-Trimethylbenzene	8.50	
2-Butanone	5.30	
Acetone	53	B
Benzene	4.90	
Bromodichloromethane	3.90	
Carbon disulfide	15	
Carbon tetrachloride	1.80	
Chloroform	11	
cis-1,2-Dichloroethene	1.70	
Cyclohexane	2.60	
Dichlorodifluoromethane	2.10	
Ethylbenzene	2.40	
Isopropanol	2	
Methyl tert-butyl ether (MTBE)	4.20	
n-Heptane	7.40	
n-Hexane	5.60	
o-Xylene	6.90	
p/m-Xylene	10	
Tetrachloroethene	12	
Toluene	14	
Trichloroethene	2	
Trichlorofluoromethane (Freon 11)	2	J

SV03	
Sample Name	**SV03_022114**
Lab Sample ID	**L1403948-02**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	465
1,1-Dichloroethane	5.06
1,3-Butadiene	2.54
2-Butanone	7.31
Acetone	232
Benzene	1.39
Carbon disulfide	153
Chloroform	4.53
cis-1,2-Dichloroethene	7.49
Dichlorodifluoromethane	2.49
Freon-113	3.07
Tetrachloroethene	612
Toluene	6.48
Trichloroethene	65

SV07	
Sample Name	**SV07_022114**
Lab Sample ID	**L1403948-05**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	12.5
1,1-Dichloroethane	1.62
2-Butanone	5.66
2-Hexanone	0.885
4-Methyl-2-pentanone	0.926
Acetone	114
Benzene	1.12
Carbon disulfide	30.1
Carbon tetrachloride	1.72
Chloroform	11.6
cis-1,2-Dichloroethene	4.2
Dichlorodifluoromethane	1.23
Ethanol	25.1
Ethylbenzene	1.09
Heptane	1.13
n-Hexane	0.895
o-Xylene	1.24
p/m-Xylene	3.41
Tetrachloroethene	298
Toluene	8.52
trans-1,2-Dichloroethene	1.34
Trichloroethene	198
Trichlorofluoromethane	1.42

SV12		
Sample ID	**SV12_041814**	
Sampling Date	**4/18/2014**	
Laboratory Sample ID	**14D0779-05**	
VOCs (µg/m³)		
1,1,1-Trichloroethane	560	J
1,1-Dichloroethane	2	
2-Butanone	2.20	
Acetone	160	B
Bromodichloromethane	2.80	
Carbon disulfide	3.70	
Chloroform	9.80	
cis-1,2-Dichloroethene	3.10	
Cyclohexane	47	
Dichlorodifluoromethane	2.20	
Ethylbenzene	2.70	
Tetrachloroethene	570	
Toluene	55	
Trichloroethene	97	
Trichlorofluoromethane (Freon 11)	5.50	J

SV06	
Sample Name	**SV06_022114**
Lab Sample ID	**L1403948-04**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	67.1
1,3-Butadiene	0.655
2-Butanone	6.55
Acetone	234
Benzene	0.642
Carbon disulfide	1.01
Carbon tetrachloride	2.22
Chloroform	4.54
cis-1,2-Dichloroethene	1.07
Dichlorodifluoromethane	1.69
Ethanol	9.31
Ethyl Acetate	2.1
Ethylbenzene	0.96
Isopropanol	1.23
o-Xylene	1.28
p/m-Xylene	3.33
Tetrachloroethene	634
Toluene	7.46
Trichloroethene	75.2
Trichlorofluoromethane	2.64

SV13			
Sample ID	**SV13_041814**		**SVDUPRI_041814**
Sampling Date	**4/18/2014**		**4/18/2014**
Laboratory Sample ID	**14D0779-06**		**14D0779-07**
VOCs (µg/m³)			
1,1,1-Trichloroethane	29		31
1,2,4-Trimethylbenzene	10		10
Acetone	46	J	ND
Chloroform	32		31
Styrene	16	J	ND
Tetrachloroethene	1,400		1,500
Trichloroethene	19		20

LEGEND

- SV01 — SOIL VAPOR SAMPLE LOCATION
- AA01 — AMBIENT AIR SAMPLE LOCATION
- SITE BOUNDARY

NOTES:

1. DRAWING BASED ON APRIL 5, 2014 SURVEY BY APPLE SURVEYING.
2. SOIL VAPOR LOCATIONS WERE LOCATED BY FIELD MEASUREMENTS OFF OF SURVEYED STRUCTURES.
3. AMBIENT AIR SAMPLE (AA01_022114 & AA02_041814) CONCENTRATIONS ARE SHOWN FOR REFERENCE.
4. µg/m³ = MICROGRAM PER CUBIC METER
5. VOC = VOLATILE ORGANIC COMPOUND
6. ONLY COMPOUNDS WITH CONCENTRATIONS GREATER THAN AMBIENT AIR CONCENTRATIONS ARE SHOWN.
7. DUE TO GROUNDWATER INFILTRATION, SAMPLES COLLECTED FROM SV02 AND SV05 WERE NOT ANALYZED.

QUALIFIERS:

J = THE ANALYTE WAS POSITIVELY IDENTIFIED AND THE ASSOCIATED NUMERICAL VALUE IS THE APPROXIMATE CONCENTRATION OF THE ANALYTE IN THE SAMPLE.
UJ = THE ANALYTE WAS NOT DETECTED AT A LEVEL GREATER THAN OR EQUAL TO THE REPORTING LIMIT (RL); HOWEVER, THE REPORTED RL IS APPROXIMATE AND MAY BE INACCURATE OR IMPRECISE.
U = THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED AT A LEVEL GREATER THAN OR EQUAL TO THE LEVEL OF TEH RL OR THE SAMPLE CONCENTRATION FOR RESULTS IMPACTED BY BLANK CONTAMINATION
B = THE ANALYTE IS FOUND IN THE ASSOCIATED LABORATORY ANALYSIS BATCH BLANK
"-" = THIS COMPOUND WAS NOT DETECTED AT A CONCENTRATION GREATER THAN THE AMBIENT AIR CONCENTRATION DURING THE ASSOCIATED INVESTIGATION.

AMBIENT AIR SAMPLES				
	AA01		**AA02**	
Sample Name	**AA01_022114**		**AA02_041814**	
Lab Sample ID	**L1403948-06**		**4/18/2014**	
Sample Date	**2/21/2014**		**14D0779-08**	
VOCs (µg/m³)				
1,1,1-Trichloroethane	1.09	U	0.62	U
1,1-Dichloroethane	0.809	U	0.46	U
1,2,4-Trimethylbenzene	0.983	U	0.56	U
1,2-Dichloroethane	0.809	U	-	
1,3-Butadiene	0.442	U	-	
2-Butanone	0.902		0.94	
2-Hexanone	0.82	U	-	
4-Methyl-2-pentanone	0.82	U	-	
Acetone	6.6	J	6.10	B
Benzene	0.987		-	
Carbon disulfide	0.623	U	0.35	U
Carbon tetrachloride	1.26	U	0.18	U
Chloroform	0.977	U	0.56	U
Chloromethane	1.15		-	
cis-1,2-Dichloroethene	0.793	U	0.45	U
Cyclohexane	0.688	U	0.39	U
Dichlorodifluoromethane	2.26		-	
Ethanol	8.37		-	
Ethyl Acetate	1.8	U	-	
Ethylbenzene	0.869	U	0.49	U
Freon-113	1.53	U	-	
Heptane	0.82	U	-	
Isopropanol	1.44		0.56	U
Methyl tert-butyl ether (MTBE)	-		0.41	U
n-Heptane	-		0.47	U
n-Hexane	0.796		0.60	
o-Xylene	0.869	U	0.49	U
p/m-Xylene	1.74	U	0.99	U
Styrene	-		0.49	U
Tetrachloroethene	2.7		0.85	
Tetrahydrofuran	-		0.34	UJ
Toluene	3.73		1	
trans-1,2-Dichloroethene	0.793	U	-	
Trichloroethene	1.07	U	0.15	U
Trichlorofluoromethane (Freon 11)	1.31		1.30	J
Vinyl chloride	0.511	U	-	

30 0 15 30
SCALE IN FEET

LANGAN
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS NEW YORK

Figure Title
SOIL VAPOR SAMPLE RESULTS MAP

Project No. 170282501	Figure No. 9
Date 05/13/2014	
Scale 1" = 30'	
Drawn By PMM	
Submission Date X	Sheet 9 of 9

SUBMISSION DATE: XX/XX/##,#### PROJECT No. 170282501

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Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 9 - Soil Vapor Results Tag Map.dwg Date: 9/2/2014 Time: 12:09 User: pmcmahon Style Table: Langan.stb Layout: ARCHD-BL

TABLES

Table 1
Sample Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample Location	Sample Name	Sample Depth / Screened Interval (feet bgs)	Date	Observations	Maximum PID Reading (ppm)	Sample Analyses
Soil Samples						
SB01/MW01	SB01_4-6	4 to 6	19-Feb-14	FILL	0.0	Part 375 List VOCs, SVOCs, Pesticides, PCBs, and Metals
	SB01_7-9	7 to 9		PETROLEUM IMPACTS	14.9	
SB02/MW02	SB02_2-4	2 to 4	21-Feb-14	FILL	0.0	Part 375 List VOCs, SVOCs, Pesticides, PCBs, Metals, and Cyanide
	SB02_6-8	6 to 8		FILL	0.0	
	SB02_11-13	11 to 13		ORGANIC CLAY	0.0	
SB03/MW03	SB03_1-3	1 to 3	20-Feb-14	FILL	0.0	
	SB03_6-8	6 to 8		PETROLEUM IMPACTS	91.7	
SB04/MW04	SB04_1-3	1 to 3	20-Feb-14	FILL	0.0	Part 375 List VOCs, SVOCs, Pesticides, PCBs, and Metals
	DUP01_022014	1 to 3		FILL		
	SB04_4-6	4 to 6		FILL	0.0	
SB05	SB05_1-3	1 to 3	20-Feb-14	PETROLEUM IMPACTS	240	Part 375 List VOCs, SVOCs, Pesticides, PCBs, Metals, and Cyanide
	SB05A_2-4	2 to 4		FILL	0.0	
	SB05A_11-13	11 to 13		SAND	0.0	
SB06	SB06_3-5	3 to 5	19-Feb-14	FILL	0.0	Part 375 List VOCs, SVOCs, Pesticides, PCBs, and Metals
	SB06_6-8	6 to 8		FILL	0.0	
SB07	SB07_1-3	1 to 3	19-Feb-14	FILL	0.0	
	SB07_5-7	5 to 7		SANDY SILT	0.0	
SB08	SB08_0-2	0 to 2	19-Feb-14	FILL	0.4	
	SB08_15-17	15 to 17		SILT	0.0	
SB09/MW09	SB09_0-5-2.5	0.5 to 2.5	16-Apr-14	FILL	0.0	Part 375 and TCL List VOCs, SVOCs, Pesticides, PCBs, Part 375 and TAL List Metals, and Cyanide
	SB09_8-9	8 to 9		SAND	0.0	
	SB09_19-20	19 to 20		SAND	0.0	
SB10/MW10	SB10_0-2	0 to 2	16-Apr-14	FILL	0.0	
	SB10_9-11	9 to 11		SAND	0.0	
	DUPRI01_041614	9 to 11		SAND		
	SB10_19-20	19 to 20		SANDY SILT	0.0	
SB11/MW11	SB11_2-3.5	2 to 3.5	16-Apr-14	FILL	0.0	
	SB11_6-7	6 to 7		SANDY SILT	0.0	
	SB11_17-18	17 to 18		SAND	0.0	
SB12/MW12	SB12_1-2	1 to 2	16-Apr-14	FILL	0.0	
	SB12_6-8	6 to 8		SAND	0.0	
	SB12_12-14	12 to 14		SAND	0.0	
SB13/MW13	SB13_0-2	0 to 2	17-Apr-14	FILL	0.0	
	SB13_9-10	9 to 10		SILTY SAND	5.8	
	SB13_14-15	14 to 15		SILT	0.3	
SB14	SB14_0-1	0 to 1	15-Apr-14	FILL	0.0	
	SB14_8-9	8 to 9		PETROLEUM IMPACTS	5.5	
	SB14_14-15	14 to 15		SILTY CLAY	0.0	
SB15	SB15_0-3	0 to 3	15-Apr-14	FILL	0.0	
	SB15_8-10	8 to 10		SAND	0.0	
	SB15_16-17.5	16 to 17.5		SAND	0.0	
SB16	SB16_0-2	0 to 2	16-Apr-14	FILL	0.0	
	SB16_6.5-8	6.5 to 8		FILL	0.0	
	DUPRI02_041614	6.5 to 8		FILL		
	SB16_14-15	14 to 15		PEAT	0.0	
SB17	SB17_0-2	0 to 2	15-Apr-14	FILL	2.4	
	SB17_9-10	9 to 10		SAND	0.2	
	SB17_16-18	16 to 18		SAND	0.0	
SB18	SB18_0-5	0 to 5	15-Apr-14	FILL	0.0	
	SB18_11-13	11 to 13		SAND	0.3	
	SB18_17-19	17 to 19		SANDY SILT	0.0	
SB19	SB19_0-2	0 to 2	15-Apr-14	FILL	0.0	
	SB19_7-9	7 to 9		SAND	0.0	
	SB19_17-19	17 to 19		SILTY CLAY	0.0	
Groundwater Samples						
SB01/MW01	MW01_022814	4 to 14	28-Feb-14	GROUNDWATER	0.0	TCL List VOCs, SVOCs, Pesticides, PCBs, TAL List Metals
	DUP02_022814				0.0	
SB02/MW02	MW02_022814				0.0	
SB03/MW03	MW03_022814				12.8	
SB04/MW04	MW04_022814				0.0	
SB09/MW09	MW09_042414	4 to 14	24-Apr-14	GROUNDWATER	2.9	Part 375 and TCL List VOCs, SVOCs, Pesticides, PCBs, Part 375 and TAL List Metals, Total Cyanide
SB10/MW10	MW10_042414				0.0	
SB11/MW11	MW11_042414				0.4	
SB12/MW12	MW12_042414				0.2	
SB13/MW13	MW13_042414				64.4	
	DUPRI03_042414					
Soil Vapor Samples						
SV01	SV01_022114	NA	21-Feb-14	SOIL VAPOR	0.0	TO-15 VOCs
	SV03_022114				0.0	
SV04	SV04_022114				0.0	
SV06	SV06_022114				0.0	
SV07	SV07_022114				0.0	
AA01	AA01_022114			AMBIENT AIR	0.0	
SV08	SV08_041814	NA	18-Apr-14	SOIL VAPOR	2.6	
SV09	SV09_041814				9.4	
SV10	SV10_041814				0.0	
SV11	SV11_041814				0.6	
SV12	SV12_041814				4.2	
SV13	SV13_041814				0.5	
	SVDUPRI_041814					
AA02	AA02_041814			AMBIENT AIR	0.0	
QA/QC Samples						
Soil Field Blank	FB_022014	NA	20-Feb-14	FIELD BLANK	NA	VOCs, SVOCs, Pesticides, PCBs, and Metals
GW Field Blank	FB02_022814	NA	28-Feb-14	FIELD BLANK		
Soil Field Blank	FBRI01_041614	NA	16-Apr-14	FIELD BLANK		VOCs, SVOCs, Pesticides, PCBs, Metals, and Cyanide
Soil Field Blank	FBRI02_041714	NA	17-Apr-14	FIELD BLANK		
GW Field Blank	FBRI03_042414	NA	24-Apr-14	FIELD BLANK		
Soil Trip Blank	TB_022014	NA	20-Feb-14	TRIP BLANK		VOCs
Soil Trip Blank	TB_022114	NA	21-Feb-14	TRIP BLANK		
Soil Trip Blank	TB02_022114	NA	21-Feb-14	TRIP BLANK		
GW Trip Blank	TB04_022814	NA	28-Feb-14	TRIP BLANK		
GW Trip Blank	Trip Blank	NA	24-Apr-14	TRIP BLANK		

Notes:
1) bgs = below grade surface
2) ppm = parts per million
3) PID = photoionization detector
4) DUP01_022014 is a duplicate of sample SB04_1-3
5) DUP01_022814 is a duplicate of sample MW01_022814
6) NA = Not applicable
7) VOCs = volatile organic compounds
8) SVOCs = semivolatile organic compounds
9) PCBs = polychlorinated biphenyls
10) Soil types based on field observations.

Table 2
Monitoring Well Construction Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Monitoring Well ID	Installation Date	Equipment Used and/or Technology	Associated Soil Boring	Well Diameter (inches)	Total Depth (feet bgs)	Screened Interval (feet bgs)	Screen Length (feet)	Screen Material	Riser Interval (feet bgs)	Riser Material	Sand Pack Interval (feet bgs)	Bentonite Seal Interval (feet bgs)	Casing Depth (feet bgs)	Casing Elevation (feet)
MW01	2/19/2014	Geoprobe 6610DT	SB01	2	14.55	4.55 to 14.55	10	0.010-inch PVC	0.26 to 4.55	PVC	2.76 to 14.55	1.26 to 2.76	0.26	11.36
MW02	2/21/2014	Geoprobe 6610DT	SB02	2	14.09	4.09 to 14.09	10	0.010-inch PVC	0.29 to 4.09	PVC	2.79 to 14.09	1.29 to 2.79	0.29	10.11
MW03	2/20/2014	Geoprobe 6610DT	SB03	2	14.35	4.35 to 14.35	10	0.010-inch PVC	0.26 to 4.35	PVC	2.76 to 14.35	1.26 to 2.76	0.26	10.7
MW04	2/20/2014	Geoprobe 6610DT	SB04	2	14.27	4.27 to 14.27	10	0.010-inch PVC	0.26 to 4.27	PVC	2.76 to 14.27	1.26 to 2.76	0.26	10.84
MW09	4/16/2014	Geoprobe 7822DT	SB09	2	14.08	4.08 to 14.08	10	0.010-inch PVC	0.48 to 14.08	PVC	2.98 to 14.08	1.48 to 2.98	0.48	10.59
MW10	4/16/2014	Geoprobe 7822DT	SB10	2	14.23	4.23 to 14.23	10	0.010-inch PVC	0.26 to 4.23	PVC	2.76 to 14.23	1.26 to 2.76	0.26	11.01
MW11	4/16/2014	Geoprobe 7822DT	SB11	2	14.17	4.17 to 14.17	10	0.010-inch PVC	0.46 to 4.17	PVC	2.96 to 14.17	1.46 to 2.96	0.46	11.41
MW12	4/16/2014	Geoprobe 7822DT	SB12	2	13.47	3.47 to 13.47	10	0.010-inch PVC	0.37 to 3.47	PVC	2.87 to 13.47	1.37 to 2.87	0.37	10.39
MW13	4/17/2014	Geoprobe 7822DT	SB13	2	13.53	3.53 to 13.53	10	0.010-inch PVC	0.73 to 3.53	PVC	3.23 to 13.53	1.73 to 3.23	0.73	9.91

Notes:

1. Elevations are relative to the North American Vertical Datum of 1988 (NAVD88).
2. USGS (1929 NGVD) Mean Sea Level at Sandy Hook, NJ is 1.095 feet lower than NAVD88 (NAVD88 - 1.095 = NGVD 1929 NGVD)
3. PVC = polyvinyl chloride
4. bgs = below grade surface

Table 3
Groundwater Elevation Data Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Well ID	Date/Time	Depth to Water (feet bgs)	Top of Casing Elevation[(1)] (feet)	Water Elevation[(1)] (feet)
MW01	2/28/14 8:55 AM	6.44	11.36	4.92
	2/28/14 9:30 AM	6.47	11.36	4.89
	4/24/14 9:27 AM	7.12	11.36	4.24
	7/9/14 9:25 AM	7.05	11.36	4.31
MW02	2/21/14 11:10 AM	3.52	10.11	6.59
	2/28/14 9:05 AM	4.02	10.11	6.09
	4/24/14 9:15 AM	4.79	10.11	5.32
	7/9/14 1:10 PM	4.55	10.11	5.56
MW03	2/28/14 9:00 AM	4.92	10.70	5.78
	2/28/14 11:45 AM	4.94	10.70	5.76
	4/24/14 9:17 AM	5.60	10.70	5.10
	7/9/14 12:56 PM	5.50	10.70	5.20
MW04	2/21/14 7:15 AM	5.73	10.84	5.11
	2/28/14 8:58 AM	5.77	10.84	5.07
	4/24/14 9:21 AM	6.12	10.84	4.72
	7/9/14 12:12 PM	6.05	10.84	4.79
MW09	4/17/14 11:05 AM	5.74	10.59	4.85
	4/24/14 9:19 AM	5.88	10.59	4.71
	7/9/14 9:40 AM	5.70	10.59	4.89
MW10	4/16/14 3:10 PM	6.13	11.01	4.88
	4/24/14 9:23 AM	6.31	11.01	4.70
	7/9/14 10:30 AM	6.20	11.01	4.81
MW11	4/18/14 2:00 PM	6.95	11.41	4.46
	4/24/14 9:32 AM	7.03	11.41	4.38
	7/9/14 9:15 AM	7.00	11.41	4.41
MW12	4/24/14 9:25 AM	5.72	10.39	4.67
	7/9/14 2:15 PM	5.65	10.39	4.74
MW13	4/17/14 2:40 PM	5.35	9.91	4.56
	4/24/14 9:30 AM	5.51	9.91	4.40
	7/9/14 2:25 PM	5.55	9.91	4.36

Notes:
1. Elevations are relative to the North American Vertical Datum of 1988 (NAVD88).
2. USGS (1929 NGVD) Mean Sea Level at Sandy Hook, NJ is 1.095 feet lower than NAVD88 (NAVD88 - 1.095 = NGVD 1929 N
3. Water Elevation = Top of Casing Elevation - Depth to Water.
4. bgs = below ground surface.

Table 4a
Soil Sample VOC and SVOC Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB01_4-6 2/19/2014 14B0504-01 4 - 6 Deep Fill		SB01_7-9 2/19/2014 14B0504-02 7 - 9 Native Sand		SB02_2-4 2/21/2014 14B0579-01 2 - 4 Shallow Fill		SB02_6-8 2/21/2014 14B0579-02 6 - 8 Deep Fill		SB02_11-13 2/21/2014 14B0579-03 11 - 13 Native Clay		SB03_1-3 2/20/2014 14B0543-01 1 - 3 Shallow Fill		SB03_6-8 2/20/2014 14B0543-02 6 - 8 Native Sand		SB04_1-3 2/20/2014 14B0504-11 1 - 3 Shallow Fill		DUP01_022014 2/20/2014 14B0504-13 1 - 3 Shallow Fill	
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	0.68	100	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	0.35	U	0.026	J	0.0052	J
1,1-Dichloroethane	0.27	26	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	*0.35*	U	0.0025	U	0.0019	U
1,1-Dichloroethylene	0.33	100	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	*0.35*	U	0.0025	U	0.0019	U
1,2,4-Trimethylbenzene	3.6	52	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.0025	UJ	0.0019	U
1,2-Dichlorobenzene	1.1	100	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.0025	UJ	0.0019	U
1,3,5-Trimethylbenzene	8.4	52	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.0025	UJ	0.0019	U
1,3-Dichlorobenzene	2.4	49	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.0025	UJ	0.0019	U
2-Butanone	0.12	100	0.0027	U	0.0072		0.0057	J	0.0039	J	0.018		0.0027	U	*0.35*	U	0.0025	U	0.0019	U
Acetone	0.05	100	0.0089	J	0.032	J	0.042	U	0.017		**0.06**		0.0089	U	*0.35*	U	0.0025	JB	0.0055	J
Carbon disulfide	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
cis-1,2-Dichloroethylene	0.25	100	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	*0.35*	U	0.0025	U	0.0019	U
Methyl acetate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Methylene chloride	0.05	100	0.011	U	0.0061	U	0.018	U	0.0082	U	0.003	UB	0.0042	JB	*0.53*	U	0.0032	U	0.0044	U
n-Butylbenzene	12	~	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	2.50	D^{200}	0.0025	UJ	0.0019	U
sec-Butylbenzene	11	100	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	3.10	D^{200}	0.0025	UJ	0.0019	U
Tetrachloroethylene	1.3	19	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.210	J	0.0210	
Toluene	0.7	100	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.0025	U	0.0019	U
trans-1,2-Dichloroethylene	0.19	100	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	*0.35*	U	0.0025	U	0.0019	U
Trichloroethylene	0.47	21	0.0027	U	0.003	U	0.0044	UJ	0.0021	U	0.003	U	0.0027	U	0.35	U	0.033	J	0.0042	J
Vinyl Chloride	0.02	0.9	0.0027	U	0.003	U	0.0044	U	0.0021	U	0.003	U	0.0027	U	*0.35*	U	0.0025	U	0.0019	U
Semivolatile Organic Compounds (mg/kg)																				
1,1'-Biphenyl	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dinitrophenol	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chlorophenol	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylnaphthalene	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acenaphthene	20	100	0.25	U	0.052	U	0.828	U	0.235	JD^{2}	0.095	U	0.048	U	2.34	JD^{20}	0.052	U	0.069	J
Acenaphthylene	100	100	0.25	U	0.052	U	0.828	U	0.184	U	0.095	U	0.048	U	0.99	U	0.052	U	0.054	U
Anthracene	100	100	0.25	U	0.052	U	1.07	JD^{10}	0.662	JD^{2}	0.095	U	0.048	U	0.99	U	0.134	J	0.149	J
Benzo(a)anthracene	1	1	0.31	JD^{5}	0.052	U	**2.06**	JD^{10}	**1.61**	D^{2}	0.095	U	0.156	J	0.99	U	0.393		0.464	
Benzo(a)pyrene	1	1	0.25	U	0.052	U	**2.52**	JD^{10}	**1.98**	D^{2}	0.095	U	0.2	J	0.99	U	0.482		0.516	
Benzo(b)fluoranthene	1	1	0.25	U	0.052	U	**2.62**	JD^{10}	**1.56**	D^{2}	0.095	U	0.145	J	0.99	U	0.494		0.397	
Benzo(g,h,i)perylene	100	100	0.51	U	0.1	U	1.66	U	0.72	JD^{2}	0.19	U	0.1	U	1.98	U	0.15	J	0.12	J
Benzo(k)fluoranthene	0.8	3.9	0.25	U	0.052	U	**2.62**	JD^{10}	**1.41**	D^{2}	0.095	U	0.165	J	*0.99*	U	0.324		0.585	
Bis(2-ethylhexyl)phthalate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Carbazole	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chrysene	1	3.9	0.29	J	0.052	U	**2.32**	JD^{10}	**1.62**	D^{2}	0.095	U	0.176	J	0.99	U	0.466	J	0.511	J
Dibenzo(a,h)anthracene	0.33	0.33	0.25	U	0.052	U	*0.828*	U	0.313	JD^{2}	0.095	U	0.048	U	*0.99*	U	0.062	J	0.064	J
Dibenzofuran	7	59	0.25	U	0.052	U	0.828	U	0.184	U	0.095	U	0.048	U	0.99	U	0.052	U	0.054	U
Dimethyl phthalate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluoranthene	100	100	0.92	JD^{5}	0.052	U	5.25	D^{10}	3.68	D^{2}	0.095	U	0.278		1.59	JD^{20}	0.924		1.05	
Fluorene	30	100	0.25	U	0.052	U	0.828	U	0.267	JD^{2}	0.095	U	0.048	U	2.89	JD^{20}	0.052	U	0.067	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.25	U	0.052	U	**1.2**	JD^{10}	**0.764**	D^{2}	0.095	U	0.075	J	*0.99*	U	0.165	J	0.135	J
Isophorone	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	12	100	0.25	U	0.052	U	0.828	U	0.195	JD^{2}	0.095	U	0.048	U	0.99	U	0.052	U	0.054	U
Pentachlorophenol	0.8	6.7	0.51	U	0.1	U	*1.66*	U	0.37	U	0.19	U	0.1	U	*1.98*	UJ	0.1	U	0.11	U
Phenanthrene	100	100	0.74	J	0.052	UJ	4.13	JD^{10}	2.780	D^{2}	0.095	U	0.143	J	5.2	J	0.408	J	0.681	J
Pyrene	100	100	0.56	JD^{5}	0.052	U	3.4	UJ	2.83	UJ	0.095	UJ	0.283		1.56	JD^{20}	0.798		0.959	

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4a
Soil Sample VOC and SVOC Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB04_4-6 2/20/2014 14B0504-12 4 - 6 Deep Fill		SB05_1-3 2/20/2014 14B0543-03 1 - 3 Shallow Fill		SB05A_2-4 2/20/2014 14B0543-04 2 - 4 Shallow Fill		SB05A_11-13 2/20/2014 14B0543-05 11 - 13 Native Sand		SB06_3-5 2/19/2014 14B0504-03 3 - 5 Shallow Fill		SB06_6-8 2/19/2014 14B0504-04 6 - 8 Deep Fill		SB07_1-3 2/19/2014 14B0504-05 1 - 3 Shallow Fill		SB07_5-7 2/19/2014 14B0504-06 5 - 7 Native Sand		SB08_0-2 2/19/2014 14B0504-07 0 - 2 Shallow fill	
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	0.68	100	0.017		0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,1-Dichloroethane	0.27	26	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,1-Dichloroethylene	0.33	100	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,2,4-Trimethylbenzene	3.6	52	0.0035	U	0.55	D^{100}	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,2-Dichlorobenzene	1.1	100	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,3,5-Trimethylbenzene	8.4	52	0.0035	U	0.48	D^{100}	0.0029	UJ	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
1,3-Dichlorobenzene	2.4	49	0.0035	U	0.19	U	0.0029	UJ	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
2-Butanone	0.12	100	0.0035	U	*0.19*	U	0.0029	U	0.0014	U	0.0022	U	0.062	J	0.0024	U	0.0021	U	0.0017	U
Acetone	0.05	100	0.011	J	*0.19*	U	0.011	J	0.0089		0.011	J	**0.170**	J	0.0024	U	0.0086	J	0.0084	
Carbon disulfide	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
cis-1,2-Dichloroethylene	0.25	100	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Methyl acetate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Methylene chloride	0.05	100	0.0066	U	*0.19*	U	0.0034	U	0.0028	JB	0.0067	U	0.0060	U	0.0043	U	0.0087	U	0.0032	U
n-Butylbenzene	12	~	0.0035	U	0.19	U	0.0029	UJ	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
sec-Butylbenzene	11	100	0.0035	U	0.19	U	0.0029	UJ	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Tetrachloroethylene	1.3	19	0.034		0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Toluene	0.7	100	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
trans-1,2-Dichloroethylene	0.19	100	0.0035	U	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Trichloroethylene	0.47	21	0.0061	J	0.19	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Vinyl Chloride	0.02	0.9	0.0035	U	*0.19*	U	0.0029	U	0.0014	U	0.0022	U	0.0036	U	0.0024	U	0.0021	U	0.0017	U
Semivolatile Organic Compounds (mg/kg)																				
1,1'-Biphenyl	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dinitrophenol	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chlorophenol	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylnaphthalene	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acenaphthene	20	100	0.052	J	0.388	D^{2}	0.058	J	0.051	U	0.458	JD^{5}	1.5	JD^{10}	0.232	U	0.05	U	0.466	U
Acenaphthylene	100	100	0.052	J	0.095	U	0.05	U	0.051	U	0.249	U	0.739	U	0.232	U	0.05	U	0.466	U
Anthracene	100	100	0.106	J	0.95	D^{2}	0.147	J	0.051	U	0.887	JD^{5}	3.35	D^{10}	0.613	JD^{5}	0.05	U	0.577	JD^{10}
Benzo(a)anthracene	1	1	0.905		**1.79**	D^{2}	0.459		0.051	U	**2.04**	D^{5}	**4.16**	D^{10}	**1.49**	D^{5}	0.05	U	**3.02**	D^{10}
Benzo(a)pyrene	1	1	0.976		**1.71**	D^{2}	0.522		0.051	U	0.498	JD^{5}	**3.34**	D^{10}	**1.14**	D^{5}	0.05	U	**1.93**	D^{10}
Benzo(b)fluoranthene	1	1	0.843		**1.28**	D^{2}	0.364		0.051	U	**1.47**	D^{5}	**3.82**	D^{10}	**1.56**	D^{5}	0.05	U	**3.84**	D^{10}
Benzo(g,h,i)perylene	100	100	0.28	J	0.46	J	0.16	J	0.10	U	0.5	U	1.48	U	0.46	U	0.10	U	0.93	U
Benzo(k)fluoranthene	0.8	3.9	**0.922**		**1.5**	D^{2}	0.426		0.051	U	**1.68**	D^{5}	**6.29**	D^{10}	**1.22**	D^{5}	0.05	U	**2.52**	D^{10}
Bis(2-ethylhexyl)phthalate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Carbazole	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chrysene	1	3.9	0.983	J	**1.7**	D^{2}	0.484		0.051	U	**2.53**	J	**5.72**	J	**1.43**	J	0.05	U	**3.38**	J
Dibenzo(a,h)anthracene	0.33	0.33	0.131	J	0.122	JD^{2}	0.056	J	0.051	U	0.249	U	*0.739*	U	0.232	U	0.05	U	*0.466*	U
Dibenzofuran	7	59	0.048	U	0.333	JD^{2}	0.050	U	0.051	U	0.332	JD^{5}	0.915	JD^{10}	0.232	U	0.05	U	0.466	U
Dimethyl phthalate	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluoranthene	100	100	1.18		3.28	D^{2}	0.915		0.051	U	4.64	D^{5}	12.0	D	3.22	D^{5}	0.05	U	5.26	D^{10}
Fluorene	30	100	0.068	J	0.384	D^{2}	0.059	J	0.051	U	0.626	JD^{5}	2.21	JD^{10}	0.232	U	0.05	U	0.466	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.319	J	0.481	J	0.151	J	0.051	U	0.488	J	**1.24**	J	0.41	J	0.05	U	**0.692**	J
Isophorone	~	~	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	12	100	0.048	U	0.209	JD^{2}	0.05	U	0.051	U	0.249	U	0.739	U	0.232	U	0.05	U	0.466	U
Pentachlorophenol	0.8	6.7	0.10	U	0.19	U	0.10	U	0.10	U	0.50	U	*1.48*	U	0.46	U	0.10	U	*0.93*	U
Phenanthrene	100	100	0.622	J	3.23	D^{2}	0.671		0.051	U	4.59	J	10.0	J	1.73	J	0.05	UJ	2.54	U
Pyrene	100	100	1.24		2.96	D^{2}	0.876		0.051	U	3.54	D^{5}	6.67	D10	1.73	D^{5}	0.05	U	5.84	D^{10}

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4a
Soil Sample VOC and SVOC Detection Summary
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44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB08_15-17 2/19/2014 14B0504-08 15 - 17 Native Silt		SB09_0.5-2.5 4/16/2014 14D0679-04 0.5 - 2.5 Shallow Fill		SB09_8-9 4/16/2014 14D0679-05 8 - 9 Native Sand		SB09_19-20 4/16/2014 14D0679-06 19 - 20 Native Sand		SB10_0-2 4/16/2014 14D0679-13 0 - 2 Shallow Fill		SB10_9-11 4/16/2014 14D0679-14 9 - 11 Native Sand		DUPRI01_041614 4/16/2014 14D0679-16 9 - 11 Native Sand		SB10_19-20 4/16/2014 14D0679-15 19 - 20 Native Sandy Silt		SB11_2-3.5 4/16/2014 14D0679-07 2 - 3.5 Shallow Fill	
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	0.68	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,1-Dichloroethane	0.27	26	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,1-Dichloroethylene	0.33	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,2,4-Trimethylbenzene	3.6	52	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,2-Dichlorobenzene	1.1	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,3,5-Trimethylbenzene	8.4	52	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
1,3-Dichlorobenzene	2.4	49	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
2-Butanone	0.12	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Acetone	0.05	100	0.004	J	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0053	U	0.0079	U	0.0017	UB	0.0019	U
Carbon disulfide	~	~	NA		0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
cis-1,2-Dichloroethylene	0.25	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Methyl acetate	~	~	NA		0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Methylene chloride	0.05	100	0.0049	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	J	0.0026	U	0.0017	U	0.0019	U
n-Butylbenzene	12	~	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
sec-Butylbenzene	11	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Tetrachloroethylene	1.3	19	0.048		0.0033	J	0.0015	U	0.0015	J	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Toluene	0.7	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
trans-1,2-Dichloroethylene	0.19	100	0.0022	U	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Trichloroethylene	0.47	21	0.0027	J	0.0019	U	0.0015	U	0.0014	U	0.0018	U	0.0013	U	0.0026	U	0.0017	U	0.0019	U
Vinyl Chloride	0.02	0.9	0.0022	U	0.0019	UJ	0.0015	UJ	0.0014	UJ	0.0018	UJ	0.0013	U	0.0026	U	0.0017	U	0.0019	UJ
Semivolatile Organic Compounds (mg/kg)																				
1,1'-Biphenyl	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
2,4-Dinitrophenol	~	~	NA		0.361	U	0.188	U	0.21	U	0.189	U	0.202	U	0.201	U	0.215	U	0.18	U
2-Chlorophenol	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
2-Methylnaphthalene	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
Acenaphthene	20	100	0.054	U	0.17	JD[2]	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Acenaphthylene	100	100	0.054	U	0.12	JD[2]	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Anthracene	100	100	0.054	U	0.36	D[2]	0.05	U	0.05	U	0.06	J	0.05	U	0.05	U	0.05	U	0.05	U
Benzo(a)anthracene	1	1	0.054	U	**1.40**	D[2]	0.05	U	0.05	U	0.36		0.05	U	0.05	U	0.05	U	0.05	U
Benzo(a)pyrene	1	1	0.054	U	**1.39**	D[2]	0.05	U	0.05	U	0.34		0.05	U	0.05	U	0.05	U	0.05	U
Benzo(b)fluoranthene	1	1	0.054	U	**1.19**	D[2]	0.05	U	0.05	U	0.37		0.05	U	0.05	U	0.05	U	0.05	U
Benzo(g,h,i)perylene	100	100	0.11	U	0.59	D[2]	0.09	U	0.11	U	0.12	J	0.10	U	0.10	U	0.11	U	0.09	U
Benzo(k)fluoranthene	0.8	3.9	0.054	U	**1.37**	D[2]	0.05	U	0.05	U	0.31		0.05	U	0.05	U	0.05	U	0.05	U
Bis(2-ethylhexyl)phthalate	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
Carbazole	~	~	NA		0.193	JD	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
Chrysene	1	3.9	0.054	U	**1.59**	D[2]	0.05	U	0.05	U	0.36		0.05	U	0.05	U	0.05	U	0.05	U
Dibenzo(a,h)anthracene	0.33	0.33	0.054	U	0.29	JD[2]	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Dibenzofuran	7	59	0.054	U	0.11	JD[2]	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Dimethyl phthalate	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
Fluoranthene	100	100	0.054	U	2.16	D[2]	0.05	U	0.05	U	0.53		0.05	U	0.05	U	0.05	U	0.05	J
Fluorene	30	100	0.054	U	0.17	JD[2]	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.054	U	**0.57**	D[2]	0.05	U	0.05	U	0.13	J	0.05	U	0.05	U	0.05	U	0.05	U
Isophorone	~	~	NA		0.0908	U	0.0474	U	0.0529	U	0.0476	U	0.0509	U	0.0506	U	0.054	U	0.0453	U
Naphthalene	12	100	0.054	U	0.091	U	0.047	U	0.053	U	0.048	U	0.051	U	0.051	U	0.054	U	0.045	U
Pentachlorophenol	0.8	6.7	0.11	U	0.18	UJ	0.09	UJ	0.11	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.11	UJ	0.09	UJ
Phenanthrene	100	100	0.054	UJ	1.59	D[2]	0.05	U	0.05	U	0.26		0.05	U	0.05	U	0.05	U	0.05	J
Pyrene	100	100	0.054	U	2.04	D[2]	0.05	U	0.05	U	0.49		0.05	U	0.05	U	0.05	U	0.05	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4a
Soil Sample VOC and SVOC Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB11_6-7 4/16/2014 14D0679-08 6 - 7 Native Sandy Silt	SB11_17-18 4/16/2014 14D0679-09 17 - 18 Native Sand	SB12_1-2 4/16/2014 14D0679-10 1 - 2 Shallow Fill	SB12_6-8 4/16/2014 14D0679-11 6 - 8 Native Sand	SB12_12-14 4/16/2014 14D0679-12 12 - 14 Native Sand	SB13_0-2 4/17/2014 14D0716-01 0 - 2 Shallow Fill	SB13_9-10 4/17/2014 14D0716-02 9 - 10 Native Silty Sand	SB13_14-15 4/17/2014 14D0716-03 14 - 15 Native Silt	SB14_0-1 4/15/2014 14D0616-10 0 - 1 Shallow Fill
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	0.68	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.049	0.099	0.0017 U
1,1-Dichloroethane	0.27	26	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.034	0.0017 J	0.0017 U
1,1-Dichloroethylene	0.33	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0034	0.0056	0.0017 U
1,2,4-Trimethylbenzene	3.6	52	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
1,2-Dichlorobenzene	1.1	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.016	0.0029	0.0017 U
1,3,5-Trimethylbenzene	8.4	52	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
1,3-Dichlorobenzene	2.4	49	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.017	0.0034	0.0017 U
2-Butanone	0.12	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
Acetone	0.05	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.011 U	0.016 U	0.0045 U	0.0042 U
Carbon disulfide	~	~	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.002 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
cis-1,2-Dichloroethylene	0.25	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0034 J	0.0026 U	**0.75** D^{100}	**0.32** D	0.0017 U
Methyl acetate	~	~	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.002 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
Methylene chloride	0.05	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
n-Butylbenzene	12	~	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
sec-Butylbenzene	11	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0017 U	0.0014 U	0.0017 U
Tetrachloroethylene	1.3	19	0.0025 U	0.0015 U	0.0250	0.0013 U	0.0020 U	0.028	**5.6** D^{100}	**5.3** D^{100}	0.0017 U
Toluene	0.7	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0021 J	0.0014 U	0.0017 U
trans-1,2-Dichloroethylene	0.19	100	0.0025 U	0.0015 U	0.0022 U	0.0013 U	0.0020 U	0.0026 U	0.0046	0.0014 U	0.0017 U
Trichloroethylene	0.47	21	0.0025 U	0.0015 U	0.0033 J	0.0013 U	0.0020 U	0.0026 J	**0.72** D^{100}	**1.4** D^{100}	0.0017 U
Vinyl Chloride	0.02	0.9	0.0025 UJ	0.0015 UJ	0.0022 UJ	0.0013 UJ	0.0020 UJ	0.0026 U	**0.12**	0.0014 U	0.0017 U
Semivolatile Organic Compounds (mg/kg)											
1,1'-Biphenyl	~	~	0.0508 J	0.049 U	0.0465 U	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
2,4-Dinitrophenol	~	~	0.196 U	0.195 U	0.185 U	0.187 U	0.214 U	0.369 U	0.198 U	0.212 U	0.369 U
2-Chlorophenol	~	~	0.129 J	0.049 U	0.0513 J	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
2-Methylnaphthalene	~	~	0.119 J	0.049 U	0.0542 J	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
Acenaphthene	20	100	0.41	0.05 U	0.29	0.05 U	0.05 U	0.09 U	0.05 U	0.05 U	0.09 U
Acenaphthylene	100	100	0.05 U	0.05 U	0.15 J	0.05 U	0.05 U	0.09 U	0.05 U	0.05 U	0.09 U
Anthracene	100	100	0.49	0.05 U	0.56	0.05 U	0.05 U	0.20 JD^2	0.05 U	0.05 U	0.10 JD^2
Benzo(a)anthracene	1	1	**1.04**	0.05 U	**1.63**	0.05 U	0.05 U	0.53 D^2	0.05 U	0.05 U	0.46 D^2
Benzo(a)pyrene	1	1	0.68	0.05 U	**1.31**	0.05 U	0.05 U	0.28 JD^2	0.05 U	0.05 U	0.45 D^2
Benzo(b)fluoranthene	1	1	0.49	0.05 U	0.85	0.05 U	0.05 U	0.26 JD^2	0.05 U	0.05 U	0.44 D^2
Benzo(g,h,i)perylene	100	100	0.26	0.10 U	0.49	0.09 U	0.11 U	0.19 U	0.10 UJ	0.11 UJ	0.22 JD^2
Benzo(k)fluoranthene	0.8	3.9	0.61	0.05 U	**1.22**	0.05 U	0.05 U	0.30 JD^2	0.05 U	0.05 U	0.45 D^2
Bis(2-ethylhexyl)phthalate	~	~	0.0493 U	0.049 U	0.0465 U	0.0471 U	0.0537 U	0.119 JD	0.0499 U	0.0562 J	0.0927 U
Carbazole	~	~	0.42	0.049 U	0.296	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
Chrysene	1	3.9	0.82	0.05 U	**1.40**	0.05 U	0.05 U	0.49 D^2	0.05 U	0.05 U	0.45 D^2
Dibenzo(a,h)anthracene	0.33	0.33	0.14 J	0.05 U	0.15 J	0.05 U	0.05 U	0.09 U	0.05 UJ	0.05 UJ	0.10 JD^2
Dibenzofuran	7	59	0.36	0.05 U	0.16 J	0.05 U	0.05 U	0.09 U	0.05 U	0.05 U	0.09 U
Dimethyl phthalate	~	~	0.0493 U	0.049 U	0.182 J	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
Fluoranthene	100	100	1.49	0.05 U	2.04	0.05 U	0.05 U	1.18 D^2	0.05 U	0.05 U	0.97 D^2
Fluorene	30	100	0.52	0.05 U	0.25	0.05 U	0.05 U	0.09 U	0.05 UJ	0.05 UJ	0.09 U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.27	0.05 U	**0.51**	0.05 U	0.05 U	0.09 U	0.05 UJ	0.05 UJ	0.23 JD^2
Isophorone	~	~	0.0493 U	0.049 U	0.0465 U	0.0471 U	0.0537 U	0.0929 U	0.0499 U	0.0532 U	0.0927 U
Naphthalene	12	100	0.347	0.049 U	0.047 J	0.047 U	0.054 U	0.093 U	0.050 U	0.053 U	0.093 U
Pentachlorophenol	0.8	6.7	0.10 UJ	0.10 UJ	0.09 UJ	0.09 UJ	0.11 UJ	0.19 U	0.10 UJ	0.11 UJ	0.19 UJ
Phenanthrene	100	100	1.71	0.05 U	1.54	0.05 U	0.05 U	0.86 D^2	0.05 U	0.05 U	0.32 JD^2
Pyrene	100	100	1.35	0.05 U	1.81	0.05 U	0.05 U	1.06 D^2	0.05 U	0.05 U	0.64 D^2

Notes:
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4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
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UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4a
Soil Sample VOC and SVOC Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB14_8-9 4/15/2014 14D0616-11 8 - 9 Deep Fill		SB14_14-15 4/15/2014 14D0616-12 14 - 15 Native Silty Clay		SB15_0-3 4/15/2014 14D0616-13 0 - 3 Shallow Fill		SB15_8-10 4/15/2014 14D0616-14 8 - 10 Native Sand		SB15_16-17.5 4/15/2014 14D0616-15 16 - 17.5 Native Sand		SB16_0-2 4/16/2014 14D0679-01 0 - 2 Shallow Fill		SB16_6.5-8 4/16/2014 14D0679-02 6.5 - 8 Deep Fill		DUPRI02_041614 4/16/2014 14D0679-17 6.5 - 8 Deep Fill		SB16_14-15 4/16/2014 14D0679-03 14 - 15 Native Peat	
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	0.68	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,1-Dichloroethane	0.27	26	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,1-Dichloroethylene	0.33	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,2,4-Trimethylbenzene	3.6	52	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,2-Dichlorobenzene	1.1	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,3,5-Trimethylbenzene	8.4	52	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
1,3-Dichlorobenzene	2.4	49	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
2-Butanone	0.12	100	*0.22*	U	0.0200		0.0023	U	0.0025	J	0.0023	J	0.0015	U	0.0026	U	0.018		0.026	
Acetone	0.05	100	*0.32*	U	*0.0640*	U	0.0023	U	0.0110	U	0.0110	U	0.0015	U	0.0200	J	**0.0640**	J	**0.075**	
Carbon disulfide	~	~	0.22	U	0.009		0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
cis-1,2-Dichloroethylene	0.25	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Methyl acetate	~	~	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Methylene chloride	0.05	100	*0.22*	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
n-Butylbenzene	12	~	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
sec-Butylbenzene	11	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Tetrachloroethylene	1.3	19	0.22	U	0.0037	U	0.0047		0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Toluene	0.7	100	0.22	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
trans-1,2-Dichloroethylene	0.19	100	*0.22*	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Trichloroethylene	0.47	21	0.22	U	0.0037	U	0.0100		0.0015	U	0.0012	U	0.0015	U	0.0026	U	0.0042	U	0.01	U
Vinyl Chloride	0.02	0.9	*0.22*	U	0.0037	U	0.0023	U	0.0015	U	0.0012	U	0.0015	U	0.0026	UJ	0.0042	U	0.01	UJ
Semivolatile Organic Compounds (mg/kg)																				
1,1'-Biphenyl	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.246	U	0.0593	U	0.0672	U	0.165	U
2,4-Dinitrophenol	~	~	1.37	U	0.284	U	0.412	U	0.186	U	0.199	U	0.976	U	0.236	U	0.267	U	0.657	U
2-Chlorophenol	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.246	U	0.0593	U	0.0672	U	0.165	U
2-Methylnaphthalene	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.246	U	0.0593	U	0.0672	U	0.165	U
Acenaphthene	20	100	0.34	U	0.07	U	0.10	U	0.05	U	0.05	U	0.55	JD[5]	0.06	U	0.19	J	0.17	U
Acenaphthylene	100	100	0.34	U	0.07	U	0.10	U	0.05	U	0.05	U	0.25	U	0.06	U	0.15	J	0.17	U
Anthracene	100	100	0.34	U	0.07	U	0.10	U	0.05	U	0.05	U	1.02	D[5]	0.10	J	0.34	J	0.17	U
Benzo(a)anthracene	1	1	0.34	U	0.07	U	0.26	JD[2]	0.05	U	0.05	U	**2.64**	D[5]	0.42	J	**1.14**		0.17	U
Benzo(a)pyrene	1	1	0.34	U	0.07	U	0.25	JD[2]	0.05	U	0.05	U	**2.26**	D[5]	0.39	J	0.94	J	0.17	U
Benzo(b)fluoranthene	1	1	0.34	U	0.07	U	0.29	JD[2]	0.05	U	0.05	U	**2.38**	D[5]	0.37	J	0.81	J	0.17	U
Benzo(g,h,i)perylene	100	100	0.69	U	0.14	U	0.21	U	0.09	U	0.10	U	1.32	D[5]	0.18	J	0.26	J	0.33	U
Benzo(k)fluoranthene	0.8	3.9	0.34	U	0.07	U	0.25	JD[2]	0.05	U	0.05	U	**2.19**	D[5]	0.38		**0.92**		0.17	U
Bis(2-ethylhexyl)phthalate	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.362	JD	0.0593	U	0.0672	U	0.165	U
Carbazole	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.775	JD	0.0593	U	0.0976	J	0.165	U
Chrysene	1	3.9	0.34	U	0.07	U	0.25	JD[2]	0.05	U	0.05	U	**2.35**	D[5]	0.32	J	0.91	J	0.17	U
Dibenzo(a,h)anthracene	0.33	0.33	*0.34*	U	0.07	U	0.10	U	0.05	U	0.05	U	**0.68**	JD[5]	0.09	J	0.14	J	0.17	U
Dibenzofuran	7	59	0.34	U	0.07	U	0.10	U	0.05	U	0.05	U	0.26	JD[5]	0.06	U	0.11	J	0.17	U
Dimethyl phthalate	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.246	U	0.0593	U	0.0672	U	0.165	U
Fluoranthene	100	100	0.34	U	0.07	U	0.48	D[2]	0.05	U	0.05	U	3.42	D[5]	0.79		1.97		0.17	U
Fluorene	30	100	0.34	U	0.07	U	0.10	U	0.05	U	0.05	U	0.56	JD[5]	0.06	U	0.22	J	0.17	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.34	U	0.07	U	0.13	JD[2]	0.05	U	0.05	U	**1.34**	D[5]	0.17	J	0.25	J	0.17	U
Isophorone	~	~	0.343	U	0.0714	U	0.104	U	0.0468	U	0.0499	U	0.246	U	0.0593	U	0.0672	U	0.165	U
Naphthalene	12	100	0.343	U	0.071	U	0.104	U	0.047	U	0.050	U	0.246	U	0.059	U	0.067	U	0.165	U
Pentachlorophenol	0.8	6.7	0.69	UJ	0.14	UJ	0.21	UJ	0.09	UJ	0.10	UJ	0.49	UJ	0.12	UJ	0.13	UJ	0.33	U
Phenanthrene	100	100	0.34	U	0.07	U	0.24	JD[2]	0.05	U	0.05	U	3.38	D[5]	0.48	J	1.03	J	0.17	U
Pyrene	100	100	0.34	U	0.07	U	0.32	JD[2]	0.05	U	0.05	U	4.28	D[5]	0.50	J	1.53	J	0.17	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
D# = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4a
Soil Sample VOC and SVOC Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB17_0-2 4/15/2014 14D0616-01 0 - 2 Shallow Fill		SB17_9-10 4/15/2014 14D0616-02 8 - 9 Native Sand		SB17_16-18 4/15/2014 14D0616-03 16 - 18 Native Sand		SB18_0-5 4/15/2014 14D0616-04 0 - 5 Shallow Fill		SB18_11-13 4/15/2014 14D0616-05 11 - 13 Native Sand		SB18_17-19 4/15/2014 14D0616-06 17 - 19 Native Sandy Silt		SB19_0-2 4/15/2014 14D0616-07 0 - 2 Shallow Fill		SB19_7-9 4/15/2014 14D0616-08 7 - 9 Native Sand		SB19_17-19 4/15/2014 14D0616-09 17 - 19 Native Silty Clay	
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	0.68	100	0.0053	J	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0052	
1,1-Dichloroethane	0.27	26	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
1,1-Dichloroethylene	0.33	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0017	J	0.0023	U	0.0016	U	0.0043	
1,2,4-Trimethylbenzene	3.6	52	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
1,2-Dichlorobenzene	1.1	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
1,3,5-Trimethylbenzene	8.4	52	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
1,3-Dichlorobenzene	2.4	49	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
2-Butanone	0.12	100	0.0036	J	0.0016	U	0.0021	U	0.0012	U	0.0018	J	0.0015	U	0.0023	U	0.0016	U	0.0011	U
Acetone	0.05	100	0.0180	U	0.0050	U	0.0024	U	0.0012	U	0.0100	U	0.0023	U	0.0030	U	0.0016	U	0.0011	U
Carbon disulfide	~	~	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
cis-1,2-Dichloroethylene	0.25	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0130		0.0081		0.0023	U	0.0016	U	0.0022	J
Methyl acetate	~	~	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0032	J	0.0016	U	0.0011	U
Methylene chloride	0.05	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
n-Butylbenzene	12	~	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
sec-Butylbenzene	11	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
Tetrachloroethylene	1.3	19	0.0027	U	0.0016	U	0.0021	U	0.0022	J	0.0017	U	0.0570		0.0023	U	0.0016	U	0.3200	D^{100}
Toluene	0.7	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
trans-1,2-Dichloroethylene	0.19	100	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0015	U	0.0023	U	0.0016	U	0.0011	U
Trichloroethylene	0.47	21	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0017	U	0.0092		0.0023	U	0.0016	U	0.0170	
Vinyl Chloride	0.02	0.9	0.0027	U	0.0016	U	0.0021	U	0.0012	U	0.0034	J	0.0015	U	0.0023	U	0.0016	U	0.0011	U
Semivolatile Organic Compounds (mg/kg)																				
1,1'-Biphenyl	~	~	0.0445	U	0.051	U	0.0543	U	0.0467	U	0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
2,4-Dinitrophenol	~	~	0.177	U	0.203	U	0.216	U	0.186	U	0.209	U	0.26	J	3.68	U	0.223	U	0.213	U
2-Chlorophenol	~	~	0.0688	J	0.051	U	0.0543	U	0.0467	U	0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
2-Methylnaphthalene	~	~	0.0625	J	0.051	U	0.0543	U	0.0467	U	0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
Acenaphthene	20	100	0.04	U	0.05	U	0.05	U	0.08	J	0.05	U	0.05	UJ	0.92	U	0.06	U	0.05	U
Acenaphthylene	100	100	0.04	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	UJ	0.92	U	0.06	U	0.05	U
Anthracene	100	100	0.10	J	0.05	U	0.05	U	0.16	J	0.05	U	0.05	U	0.98	JD^{20}	0.06	U	0.05	U
Benzo(a)anthracene	1	1	0.35		0.05	U	0.05	U	0.50		0.05	U	0.05	U	**4.54**	D^{20}	0.06	U	0.05	U
Benzo(a)pyrene	1	1	0.33		0.05	U	0.05	U	0.51		0.05	U	0.05	U	**4.66**	D^{20}	0.06	U	0.05	U
Benzo(b)fluoranthene	1	1	0.28		0.05	U	0.05	U	0.60		0.05	U	0.05	U	**3.54**	JD^{20}	0.06	U	0.05	U
Benzo(g,h,i)perylene	100	100	0.20		0.10	U	0.11	U	0.22		0.11	U	0.11	U	2.22	JD^{20}	0.11	U	0.11	U
Benzo(k)fluoranthene	0.8	3.9	0.35		0.05	U	0.05	U	0.48		0.05	U	0.05	U	**5.16**	D^{20}	0.06	U	0.05	U
Bis(2-ethylhexyl)phthalate	~	~	0.273		0.051	U	0.0543	U	0.082	J	0.0671	J	0.0529	U	0.924	U	0.056	U	0.0535	U
Carbazole	~	~	0.0445	U	0.051	U	0.0543	U	0.0597	J	0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
Chrysene	1	3.9	0.36		0.05	U	0.05	U	0.46		0.05	U	0.05	U	**4.38**	D^{20}	0.06	U	0.05	U
Dibenzo(a,h)anthracene	0.33	0.33	0.05	J	0.05	U	0.05	U	0.11	J	0.05	U	0.05	U	**1.11**	JD^{20}	0.06	U	0.05	U
Dibenzofuran	7	59	0.04	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.92	U	0.06	U	0.05	U
Dimethyl phthalate	~	~	0.0445	U	0.051	U	0.0543	U	0.0467	U	0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
Fluoranthene	100	100	0.59		0.05	U	0.05	U	0.94		0.05	U	0.05	U	7.04	D^{20}	0.06	U	0.05	U
Fluorene	30	100	0.04	U	0.05	U	0.05	U	0.07	J	0.05	U	0.05	UJ	0.92	U	0.06	U	0.05	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.19		0.05	U	0.05	U	0.23		0.05	U	0.05	U	**1.92**	JD^{20}	0.06	U	0.05	U
Isophorone	~	~	0.0445	U	0.051	U	0.0543	U	0.401		0.0525	U	0.0529	U	0.924	U	0.056	U	0.0535	U
Naphthalene	12	100	0.045	U	0.051	U	0.054	U	0.047	U	0.053	U	0.053	U	0.924	U	0.056	U	0.054	U
Pentachlorophenol	0.8	6.7	0.09	UJ	0.10	UJ	0.11	UJ	0.09	UJ	0.11	UJ	0.11	UJ	**2.79**	J	0.11	UJ	0.11	UJ
Phenanthrene	100	100	0.52		0.05	U	0.05	U	0.67		0.05	U	0.05	U	3.57	JD^{20}	0.06	U	0.05	U
Pyrene	100	100	0.57		0.05	U	0.05	U	0.79		0.05	U	0.05	U	6.50	D^{20}	0.06	U	0.05	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
B = Analyte is found in the associated laboratory analysis batch blank

Table 4b
Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB01_4-6 2/19/2014 14B0504-01 4 - 6 Deep Fill	SB01_7-9 2/19/2014 14B0504-02 7 - 9 Native Sand	SB02_2-4 2/21/2014 14B0579-01 2 - 4 Shallow Fill	SB02_6-8 2/21/2014 14B0579-02 6 - 8 Deep Fill	SB02_11-13 2/21/2014 14B0579-03 11 - 13 Native Clay	SB03_1-3 2/20/2014 14B0543-01 1 - 3 Shallow Fill	SB03_6-8 2/20/2014 14B0543-02 6 - 8 Native Sand	SB04_1-3 2/20/2014 14B0504-11 1 - 3 Shallow Fill	DUP01_022014 2/20/2014 14B0504-13 1 - 3 Shallow Fill
Pesticides (mg/kg)											
4,4'-DDD	0.0033	13	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U	0.0017 U
4,4'-DDE	0.0033	8.9	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U	0.0017 U
4,4'-DDT	0.0033	7.9	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U	0.0017 U
alpha-Chlordane	0.094	4.2	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U	0.0017 U
Chlordane, total	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.005	0.2	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U	0.0017 U
gamma-Chlordane	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Bipheyls (PCBs) (mg/kg)											
Aroclor 1254	~	~	0.021 U	0.021 U	0.022 U	0.025 U	0.026 UJ	0.02 U	0.02 U	0.021 U	0.022 U
Aroclor 1260	~	~	0.021 U	0.021 U	0.022 U	0.025 U	0.026 UJ	0.02 U	0.02 U	0.021 U	0.022 U
Total PCBs	0.1	1	0.021 U	0.021 U	0.022 U	0.025 U	0.026 UJ	**0.201**	0.02 U	0.021 U	0.022 U
Metals (mg/kg)											
Aluminum	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	13	16	7.92	2.9	**25.5**	12.9	6.34	**17**	1.37	8.73 J	**20.3** J
Barium	350	400	136	46.5	**4,340**	**900**	120	**505**	26.2	330 J	191 J
Cadmium	2.5	4.3	1.03	0.37 U	**5.62**	1.23	0.76	**3.99**	0.35 U	0.89 J	**3.8** J
Calcium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Hexavalent	1	110	0.72	0.62 U	**1.42**	**1.52**	0.76 U	0.58 U	0.59 U	**2.55**	**1.86**
Chromium, Trivalent	30	180	**33.0**	17.4	**251**	**32.9**	**31.6**	**61.7**	14.9	16.9	14.5
Cobalt	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	50	270	**699**	41.1	**434**	**310**	**50.5**	**730**	12.9	**172** J	**860** J
Iron	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	63	400	**410**	8.67	**7,380**	**7,010**	**105**	**609**	5.92	**508**	**630**
Magnesium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	1600	2000	431	106	271	104	797	254	60	318	327
Mercury	0.18	0.81	**0.29**	0.037 U	**2.13**	**2.42**	**1.26**	**3.03**	0.117	**1.86** J	**14.9** J
Nickel	30	310	**48**	22.9	**40.6**	13.3	**30.1**	**41.2**	11.5	18.6 J	**34.0** J
Potassium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	3.9	180	1.21 U	1.24 U	1.42	2.54	1.51 U	1.15 U	1.18 U	1.23 U	1.29 U
Sodium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	109	10000	**532**	**121**	**3,260**	**414**	**140**	**806**	21	**399** J	**1,410** J
Cyanide											
Total Cyanide	27	27	NA	NA	4.93	0.73 U	0.76 U	0.58 U	0.59 U	NA	NA

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
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5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor

Table 4b
Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB04_4-6 2/20/2014 14B0504-12 4 - 6 Deep Fill	SB05_1-3 2/20/2014 14B0543-03 1 - 3 Shallow Fill	SB05A_2-4 2/20/2014 14B0543-04 2 - 4 Shallow Fill	SB05A_11-13 2/20/2014 14B0543-05 11 - 13 Native Sand	SB06_3-5 2/19/2014 14B0504-03 3 - 5 Shallow Fill	SB06_6-8 2/19/2014 14B0504-04 6 - 8 Deep Fill	SB07_1-3 2/19/2014 14B0504-05 1 - 3 Shallow Fill	SB07_5-7 2/19/2014 14B0504-06 5 - 7 Native Sand	SB08_0-2 2/19/2014 14B0504-07 0 - 2 Shallow fill
Pesticides (mg/kg)											
4,4'-DDD	0.0033	13	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U
4,4'-DDE	0.0033	8.9	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U
4,4'-DDT	0.0033	7.9	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U
alpha-Chlordane	0.094	4.2	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U
Chlordane, total	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.005	0.2	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 UJ	0.0017 UJ	0.0017 U	0.0017 U	0.0017 U
gamma-Chlordane	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Bipheyls (PCBs) (mg/kg)											
Aroclor 1254	~	~	0.02 U	0.019 U	0.02 U	0.021 U	0.020 U	0.03 UJ	0.019 U	0.02 U	0.019 U
Aroclor 1260	~	~	0.02 U	0.019 U	0.02 U	0.021 U	0.020 U	0.03 UJ	0.019 U	0.02 U	0.019 U
Total PCBs	0.1	1	**0.118**	0.035	0.02 U	0.021 U	0.020 U	0.03 UJ	0.019 U	0.02 U	0.019 U
Metals (mg/kg)											
Aluminum	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	13	16	6.54	**14.1**	**35.8**	1.21 U	9.01	12.5	4.21	1.72	8.0
Barium	350	400	162	104	102	17.9	253	306	90.2	25.2	258
Cadmium	2.5	4.3	0.85	0.76	1.48	0.36 U	1.52	1.38	1.21	0.36 U	1.3
Calcium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Hexavalent	1	110	0.74	0.57 U	0.60 U	0.61 U	0.71	**8.52**	0.55 U	0.60 U	**1.29**
Chromium, Trivalent	30	180	20.2	17.0	13.3	15.1	16.3	22.1	15.7	21.4	10.6
Cobalt	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	50	270	**202**	**82**	**111**	7.5	**334**	**86.6**	49.9	13.7	**484**
Iron	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	63	400	**387**	**258**	**2,460**	3.31	**240**	**1,090**	**168**	5.57	**61,000** D[100]
Magnesium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	1600	2000	269	145	164	48	156	189	345	243	220
Mercury	0.18	0.81	**1.97**	**0.809**	**0.428**	0.036 U	**0.452**	**1.29**	**0.569**	0.036 U	**0.63**
Nickel	30	310	18.2	24.9	21	9.48	21.8	22.8	15.4	15.2	**54.7**
Potassium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	3.9	180	1.15 U	1.13 U	1.2 U	1.21 U	1.19 U	1.76 U	1.1 U	1.19 U	1.11 U
Sodium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	~	~	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	109	10000	**467**	**313**	**220**	14	**655**	**897**	**173**	30	**197**
Cyanide											
Total Cyanide	27	27	NA	0.57 U	0.60 U	0.61 U	NA	NA	NA	NA	NA

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
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4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
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UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise
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D[#] = Results for a diluted sample, # indicates the dilution factor

Table 4b
Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB08_15-17 2/19/2014 14B0504-08 15 - 17 Native Silt		SB09_0.5-2.5 4/16/2014 14D0679-04 0.5 - 2.5 Shallow Fill		SB09_8-9 4/16/2014 14D0679-05 8 - 9 Native Sand		SB09_19-20 4/16/2014 14D0679-06 19 - 20 Native Sand		SB10_0-2 4/16/2014 14D0679-13 0 - 2 Shallow Fill		SB10_9-11 4/16/2014 14D0679-14 9 - 11 Native Sand		DUPRI01_041614 4/16/2014 14D0679-16 9 - 11 Native Sand		SB10_19-20 4/16/2014 14D0679-15 19 - 20 Native Sandy Silt		SB11_2-3.5 4/16/2014 14D0679-07 2 - 3.5 Shallow Fill	
Pesticides (mg/kg)																				
4,4'-DDD	0.0033	13	0.0017	U	0.0018	UJ	0.0019	UJ	0.0021	UJ	**0.0097**	J	0.0020	UJ	0.0020	UJ	0.0021	UJ	0.0018	UJ
4,4'-DDE	0.0033	8.9	0.0017	U	0.0018	UJ	0.0019	UJ	0.0021	UJ	0.0019	UJ	0.0020	UJ	0.0020	UJ	0.0021	UJ	0.0018	UJ
4,4'-DDT	0.0033	7.9	0.0017	U	0.0018	U	0.0019	U	0.0021	U	**0.0038**	D^5	0.0020	U	0.0020	U	0.0021	U	0.0018	U
alpha-Chlordane	0.094	4.2	0.0017	U	0.00178	UJ	0.00186	UJ	0.00208	UJ	0.0393	J	0.00200	UJ	0.00199	UJ	0.00212	UJ	0.00178	UJ
Chlordane, total	~	~	NA		0.00714	U	0.00745	U	0.00831	U	0.226	D	0.008	U	0.00795	U	0.00848	U	0.00712	U
Dieldrin	0.005	0.2	0.0017	U	0.0018	U	0.0019	U	0.0021	U	**0.0063**	D^5	0.0020	U	0.0020	U	0.0021	U	0.0018	U
gamma-Chlordane	~	~	NA		0.00178	U	0.00186	U	0.00208	U	0.0393	D	0.002	U	0.00199	U	0.00212	U	0.00178	U
Polychlorinated Bipheyls (PCBs) (mg/kg)																				
Aroclor 1254	~	~	0.022	U	0.059		0.019	U	0.021	U	0.019	U	0.021	U	0.021	U	0.022	U	0.018	U
Aroclor 1260	~	~	0.022	U	0.018	U	0.019	U	0.021	U	0.019	U	0.021	U	0.021	U	0.022	U	0.018	U
Total PCBs	0.1	1	0.022	U	0.059		0.019	U	0.021	U	0.019	U	0.021	U	0.021	U	0.022	U	0.018	U
Metals (mg/kg)																				
Aluminum	~	~	NA		4,400		2,640		4,840		8,170		2,820		2,400		6,730		8,790	
Antimony	~	~	NA		1.46		0.56	U	0.63	U	0.57	U	0.61	U	0.60	U	0.64	U	0.54	U
Arsenic	13	16	2.3		5.44		1.13	U	1.26	U	6.17		1.21	U	1.20	U	2.23		2.13	
Barium	350	400	69.1		110		19		30		84		10		9		44		49	
Cadmium	2.5	4.3	0.38	U	1.12		0.34	U	0.38	U	0.52		0.36	U	0.36	U	0.39	U	0.32	U
Calcium	~	~	NA		4,860		763		1,820		7,180		448		367		2,130		1,500	
Chromium, Hexavalent	1	110	0.64	U	**3.76**		0.56	U	0.63	U	0.57	U	0.61	U	0.60	U	0.64	U	0.54	U
Chromium, Trivalent	30	180	18.5		22.34		8.98		11.80		19.50		8.51		8.55		13.80		17.40	
Cobalt	~	~	NA		4.50		3.07		6.36		7.57		2.65		2.36		7.84		7.97	
Copper	50	270	22.8		**60.70**		8.17		12.8		28.7		8.38		6.67		14.3		16.9	
Iron	~	~	NA		15,700		5,660		11,000		15,000		5,000		4,730		14,100		14,400	
Lead	63	400	20.4		**241**		2		3		**93**		2		2		4		19	
Magnesium	~	~	NA		1,780		1,460		2,860		2,620		1,200		1,050		3,540		3,460	
Manganese	1600	2000	487		226		235		368		294		37		36		426		396	
Mercury	0.18	0.81	0.038	U	0.036	U	0.037	U	0.042	U	0.125		0.040	U	0.040	U	0.042	U	0.036	U
Nickel	30	310	22.4		8.58		6.37		11.7		14.3		4.25		4.36		11.8		13.2	
Potassium	~	~	NA		623		537		1,180		976		403		403		1,860		1,370	
Selenium	3.9	180	1.28	U	2.43		1.13	U	1.72		2.18		1.21	U	1.20	U	2.23		1.68	
Sodium	~	~	NA		171		11	U	13	U	11	U	12	U	12	U	13	U	11	U
Vanadium	~	~	NA		14.60		10.50		18.00		23.40		8.96		7.72		21.00		26.20	
Zinc	109	10000	44.8		**127**		15		27		99		13		11		33		45	
Cyanide																				
Total Cyanide	27	27	NA		0.54	U	0.56	U	0.63	U	0.57	U	0.61	U	0.60	U	0.64	U	0.54	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
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9. mg/kg = milligrams per kilogram
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Table 4b
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Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
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Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB11_6-7 4/16/2014 14D0679-08 6 - 7 Native Sandy Silt		SB11_17-18 4/16/2014 14D0679-09 17 - 18 Native Sand		SB12_1-2 4/16/2014 14D0679-10 1 - 2 Shallow Fill		SB12_6-8 4/16/2014 14D0679-11 6 - 8 Native Sand		SB12_12-14 4/16/2014 14D0679-12 12 - 14 Native Sand		SB13_0-2 4/17/2014 14D0716-01 0 - 2 Shallow Fill		SB13_9-10 4/17/2014 14D0716-02 9 - 10 Native Silty Sand		SB13_14-15 4/17/2014 14D0716-03 14 - 15 Native Silt		SB14_0-1 4/15/2014 14D0616-10 0 - 1 Shallow Fill	
Pesticides (mg/kg)																				
4,4'-DDD	0.0033	13	0.0019	UJ	0.0019	UJ	0.0018	UJ	0.0019	UJ	0.0021	UJ	0.0017	U	0.0017	U	0.0017	U	0.0018	U
4,4'-DDE	0.0033	8.9	0.0019	UJ	0.0019	UJ	0.0018	UJ	0.0019	UJ	0.0021	UJ	0.0017	U	0.0017	U	0.0017	U	0.0018	U
4,4'-DDT	0.0033	7.9	0.0019	U	0.0019	U	0.0018	U	0.0019	U	0.0021	U	0.0017	U	0.0017	U	0.0017	U	0.0018	U
alpha-Chlordane	0.094	4.2	0.00194	UJ	0.00193	UJ	0.00183	U	0.00185	UJ	0.00211	UJ	0.00182	U	0.00196	U	0.00209	U	0.0288	D
Chlordane, total	~	~	0.00774	U	0.0077	U	0.0073	U	0.0074	U	0.00844	U	0.0073	U	0.00784	U	0.00836	U	0.201	D
Dieldrin	0.005	0.2	0.0019	U	0.0019	U	0.0018	U	0.0019	U	0.0021	U	0.0017	U	0.0017	U	0.0017	U	**0.0213**	D[5]
gamma-Chlordane	~	~	0.00194	U	0.00193	U	0.00183	U	0.00185	U	0.00211	U	0.00182	U	0.00196	U	0.00209	U	0.0198	D
Polychlorinated Bipheyls (PCBs) (mg/kg)																				
Aroclor 1254	~	~	0.020	U	0.020	U	0.019	U	0.019	U	0.022	U	0.019	U	0.020	U	0.022	U	0.019	U
Aroclor 1260	~	~	0.020	U	0.020	U	0.019	U	0.019	U	0.022	U	0.019	U	0.020	U	0.022	U	0.066	
Total PCBs	0.1	1	0.020	U	0.020	U	0.019	U	0.019	U	0.022	U	0.019	U	0.020	U	0.022	U	0.066	
Metals (mg/kg)																				
Aluminum	~	~	9,900		3,070		3,750		2,890		4,540		6,050		5,640		8,540		8,430	
Antimony	~	~	0.66		0.58	U	1.53		0.56	U	0.64	U	0.55	U	0.59	U	0.63	U	0.84	
Arsenic	13	16	3.66		1.17	U	6.51		1.12	U	1.28	U	3.46		1.75		2.05		5.70	
Barium	350	400	57		16		**1,410**		14		22		56		40		60		98	
Cadmium	2.5	4.3	0.35	U	0.35	U	0.57		0.34	U	0.38	U	0.56		0.36	U	0.53		0.81	
Calcium	~	~	1,530		810		4,920		515		1,200		2,010		1,390		32,200		4,430	
Chromium, Hexavalent	1	110	0.59	U	0.58	U	0.55	U	0.56	U	0.64	U	0.55	U	0.59	U	0.63	U	0.55	U
Chromium, Trivalent	30	180	**35.50**		9.91		12.30		6.89		11.70		13.40		15.10		18.80		19.30	
Cobalt	~	~	6.96		3.66		2.40		3.36		5.33		5.66		7.19		9.17		6.60	
Copper	50	270	16		8.62		**228**		7.77		10.3		32.7		21.5		20.2		**58.00**	
Iron	~	~	14,700		8,210		11,400		5,720		9,480		10,400		14,700		14,500		16,500	
Lead	63	400	**76**		2		**7,090**		3		2		**87**		4		3	J	**335**	
Magnesium	~	~	2,320		1,090		1,130		1,280		2,560		2,790		2,300		17,700		2,130	
Manganese	1600	2000	441		173		180		228		286		233		228		323		277	
Mercury	0.18	0.81	**0.317**		0.039	U	0.155		0.037	U	0.042	U	0.037	U	0.039	U	0.042	U	0.036	U
Nickel	30	310	10.1		5.81		6.12		5.21		8.23		11.7		11.9		15.2	J	10.9	
Potassium	~	~	592		505		555		325		1,100		1,010		1,440		2,600		887	
Selenium	3.9	180	2.49		1.35		2.28		1.12	U	1.64		1.11	U	1.49		1.27	U	2.45	
Sodium	~	~	12	U	12	U	923		11	U	13	U	102		156		373		351	
Vanadium	~	~	20.90		11.50		13.20		8.91		16.50		17.00		20.20		25.10		21.30	
Zinc	109	10000	59		15		**622**		15		22		74		30		42	J	**249**	
Cyanide																				
Total Cyanide	27	27	0.59	U	0.58	U	0.55	U	0.56	U	0.64	U	0.55	U	0.59	U	0.63	U	0.55	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination
D# = Results for a diluted sample, # indicates the dilution factor

Table 4b
Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB14_8-9 4/15/2014 14D0616-11 8 - 9 Deep Fill		SB14_14-15 4/15/2014 14D0616-12 14 - 15 Native Silty Clay		SB15_0-3 4/15/2014 14D0616-13 0 - 3 Shallow Fill		SB15_8-10 4/15/2014 14D0616-14 8 - 10 Native Sand		SB15_16-17.5 4/15/2014 14D0616-15 16 - 17.5 Native Sand		SB16_0-2 4/16/2014 14D0679-01 0 - 2 Shallow Fill		SB16_6.5-8 4/16/2014 14D0679-02 6.5 - 8 Deep Fill		DUPRI02_041614 4/16/2014 14D0679-17 6.5 - 8 Deep Fill		SB16_14-15 4/16/2014 14D0679-03 14 - 15 Native Peat	
Pesticides (mg/kg)																				
4,4'-DDD	0.0033	13	0.0027	U	0.0028	UJ	0.0020	U	0.0018	U	0.0020	U	0.0019	UJ	0.0023	UJ	0.0026	UJ	*0.0065*	UJ
4,4'-DDE	0.0033	8.9	0.0027	U	0.0028	UJ	0.0020	U	0.0018	U	0.0020	U	0.0019	UJ	0.0023	UJ	0.0026	UJ	*0.0065*	UJ
4,4'-DDT	0.0033	7.9	0.0027	U	0.0028	UJ	0.0020	U	0.0018	U	0.0020	U	0.0019	U	0.0023	U	0.0026	U	*0.0065*	UJ
alpha-Chlordane	0.094	4.2	0.00270	U	0.00281	UJ	0.0313	D	0.00184	U	0.00196	U	0.00193	U	0.00233	UJ	0.00264	UJ	0.00649	UJ
Chlordane, total	~	~	0.0108	U	0.0112	U	0.243	D	0.00736	U	0.00785	U	0.00772	U	0.00932	U	0.0106	U	0.026	U
Dieldrin	0.005	0.2	0.0027	U	0.0028	UJ	0.0020	U	0.0018	U	0.0020	U	0.0019	U	0.0023	U	0.0026	U	*0.0065*	UJ
gamma-Chlordane	~	~	0.0027	U	0.00281	U	0.0235	D	0.00184	U	0.00196	U	0.00193	U	0.00233	U	0.00264	U	0.00649	U
Polychlorinated Bipheyls (PCBs) (mg/kg)																				
Aroclor 1254	~	~	0.028	U	0.029	UJ	0.021	U	0.019	U	0.020	U	0.020	U	0.024	U	0.027	U	0.067	UJ
Aroclor 1260	~	~	0.028	U	0.029	UJ	0.285		0.019	U	0.020	U	0.022		0.024	U	0.027	U	0.067	UJ
Total PCBs	0.1	1	0.028	U	0.029	UJ	**0.285**		0.019	U	0.020	U	0.022		0.024	U	0.027	U	0.067	UJ
Metals (mg/kg)																				
Aluminum	~	~	8,710		12,700		8,270		4,180		4,000		6,940		8,790		9,160		7,610	
Antimony	~	~	1.90		0.85	U	4.60		0.56	U	0.60	U	8.15		3.27		1.72		1.97	U
Arsenic	13	16	**16.40**		5.86		**17.7**		3.69		1.19	U	11.70		9.75		12.40		3.93	U
Barium	350	400	196		26		298		25		22		**426**		221	J	**470**	J	38	
Cadmium	2.5	4.3	1.92		0.55		1.68		0.33	U	0.36	U	**2.77**		0.92	J	**3.53**	J	1.18	U
Calcium	~	~	4,180		3,310		5,190		1,100		394		48,800		7,950		6,640		7,730	
Chromium, Hexavalent	1	110	0.82	U	0.85	U	0.62	U	0.56	U	0.60	U	**3.88**		0.71	U	0.80	U	*1.97*	U
Chromium, Trivalent	30	180	27.60		25.20		**52**		9.22		7.67		**81.72**		20.90		**30.2**		14.9	
Cobalt	~	~	8.45		7.73		10.3		4.52		2.59		249.00		8.82		7.87		3.21	
Copper	50	270	**165.00**		12.10		**135**		11.10		6.03		**434**		**75.5**		**165**		15.30	
Iron	~	~	20,500		21,300		20,800		7,910		4,850		42,700		17,500		21,600		14,700	
Lead	63	400	**563**		12		**576**		4		3		**715**		**2,190**		**4,140**		**84**	
Magnesium	~	~	2,660		4,760		2,330		1,830		1,420		3,570		2,770		2,710		3,090	
Manganese	1600	2000	194		266		338		103		44		312		221		245		76	
Mercury	0.18	0.81	**0.262**		0.056	U	**1.380**		0.037	U	0.039	U	0.039	U	0.047	U	**0.208**		0.130	U
Nickel	30	310	11.9		10.40		13.6		6.76		5.93		18.2		12.00		11.4	J	7.81	
Potassium	~	~	1,320		2,290		876		780		283		1,130		1,260		1,140		1,410	
Selenium	3.9	180	**6.17**		3.40		**4.23**		1.50		1.19	U	**3.94**		2.42		**4.29**		*3.93*	U
Sodium	~	~	1,940		444		1,300		11	U	12	U	4,930		478		1,750		255	
Vanadium	~	~	24.20		29.10		29.30		12.80		7.99		20.10		22.80		24.80		21.90	
Zinc	109	10000	**1,170**		53		**859**		18		13		**2,990**		**403**	J	**1,190**	J	33	
Cyanide																				
Total Cyanide	27	27	0.82	U	0.85	U	0.62	U	0.56	U	0.60	U	0.70		0.85		1.28		1.97	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
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4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
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UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor

Table 4b
Soil Sample Pesticide, PCB, Metal, and Cyanide Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	SB17_0-2 4/15/2014 14D0616-01 0 - 2 Shallow Fill		SB17_9-10 4/15/2014 14D0616-02 8 - 9 Native Sand		SB17_16-18 4/15/2014 14D0616-03 16 - 18 Native Sand		SB18_0-5 4/15/2014 14D0616-04 0 - 5 Shallow Fill		SB18_11-13 4/15/2014 14D0616-05 11 - 13 Native Sand		SB18_17-19 4/15/2014 14D0616-06 17 - 19 Native Sandy Silt		SB19_0-2 4/15/2014 14D0616-07 0 - 2 Shallow Fill		SB19_7-9 4/15/2014 14D0616-08 7 - 9 Native Sand		SB19_17-19 4/15/2014 14D0616-09 17 - 19 Native Silty Clay	
Pesticides (mg/kg)																				
4,4'-DDD	0.0033	13	0.0018	U	0.0020	U	0.0021	U	0.0018	U	0.0021	U	0.0021	U	0.0022	D[5]	0.0022	U	0.0021	U
4,4'-DDE	0.0033	8.9	0.0018	U	0.0020	U	0.0021	U	0.0018	U	0.0021	U	0.0021	U	**0.0037**	D[5]	0.0022	U	0.0021	U
4,4'-DDT	0.0033	7.9	0.0018	U	0.0020	U	0.0021	U	0.0018	U	0.0021	U	0.0021	U	**0.0134**	D[5]	0.0022	U	0.0021	U
alpha-Chlordane	0.094	4.2	0.00634	D	0.00200	U	0.00213	U	0.00691	D	0.00206	U	0.00208	U	0.00182	U	0.00220	U	0.00210	U
Chlordane, total	~	~	0.0512	D	0.00801	U	0.00854	U	0.0668	D	0.00825	U	0.00831	U	0.00726	U	0.0088	U	0.00841	U
Dieldrin	0.005	0.2	0.0018	U	0.0020	U	0.0021	U	0.0018	U	0.0021	U	0.0021	U	0.0018	U	0.0022	U	0.0021	U
gamma-Chlordane	~	~	0.00452	D	0.002	U	0.00213	U	0.00483	D	0.00206	U	0.00208	U	0.00182	U	0.0022	U	0.0021	U
Polychlorinated Bipheyls (PCBs) (mg/kg)																				
Aroclor 1254	~	~	0.018	U	0.021	U	0.022	U	0.019	U	0.021	U	0.021	U	0.019	U	0.023	U	0.022	U
Aroclor 1260	~	~	0.058		0.021	U	0.022	U	0.019	U	0.021	U	0.021	U	0.049		0.023	U	0.022	U
Total PCBs	0.1	1	0.058		0.021	U	0.022	U	0.019	U	0.021	U	0.021	U	0.049		0.023	U	0.022	U
Metals (mg/kg)																				
Aluminum	~	~	5,020		2,420		8,470		4,220		2,850		5,180		6,480		5,030		7,470	
Antimony	~	~	1.77		0.61	U	0.78		2.64		1.26		0.63	U	2.83		0.67	U	0.64	U
Arsenic	13	16	3.17		1.21	U	1.79		6.31		1.25	U	1.28		**14.4**		1.33	U	2.25	
Barium	350	400	57		12		58		150		12		31		280		18		60	
Cadmium	2.5	4.3	0.49		0.36	U	0.39	U	1.16		**7.21**		0.38	U	1.54		0.40	U	0.42	
Calcium	~	~	23,500		712		1,700		3,470		522		3,580		21,900		1,090		2,750	
Chromium, Hexavalent	1	110	0.53	U	0.61	U	**4.29**		0.56	U	**4.7**		0.63	U	0.55	U	0.67	U	0.64	U
Chromium, Trivalent	30	180	14.2		8.57		29.01		21.7		**86**		14.8		27.40		11.7		15.9	
Cobalt	~	~	4.81		3.65		8.85		4.54		2.08		5.71		5.21		5.60		8.63	
Copper	50	270	**55.8**		8.70		18.30		43.80		**57**		13.70		**103**		10.60		22.20	
Iron	~	~	11,000		6,170		15,000		10,400		6,440		10,500		16,700		9,560		15,000	
Lead	63	400	**69**		2		3		**222**		2		2		**857**		2		4	
Magnesium	~	~	2,730		1,370		4,130		1,750		1,290		3,790		3,220		2,780		4,250	
Manganese	1600	2000	229		60		442		191		47		271		214		350		399	
Mercury	0.18	0.81	0.035	U	0.040	U	0.043	U	0.037	U	0.041	U	0.042	U	0.036	U	0.044	U	0.042	U
Nickel	30	310	11		5.93		15.9		14.6		13.4		11		11.8		9.37		12.8	
Potassium	~	~	865		509		2,240		722		466		1,080		937		1,270		1,880	
Selenium	3.9	180	1.23		1.21	U	1.29	U	1.32		1.25	U	1.45		2.24		1.44		2.01	
Sodium	~	~	470		181		13	U	264		58		82		473		16		111	
Vanadium	~	~	16.30		7.88		22.40		14.50		12.80		15.90		21.40		15.60		23.40	
Zinc	109	10000	83		23		39		**182**		34		28		**263**		82		43	
Cyanide																				
Total Cyanide	27	27	0.53	U	0.61	U	0.65	U	0.56	U	0.63	U	0.63	U	0.99		0.67	U	0.64	U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential Restricted Use SCO.
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are in bold.
4. NYSDEC Part 375 Restricted Residential Restricted Use SCO exceedances are highlighted.
5. Method Detection Limits exceeding SCO Criteria are italicized.
6. DUP01_022014 is a duplicate of sample SB04_1-3.
7. DUPRI01_041614 is a duplicate of sample SB10_9-10.
8. DUPRI02_041614 is a duplicate of sample SB16_6.5-8.
9. mg/kg = milligrams per kilogram
10. NA = not analyzed
11. ~ = No corresponding comparison criteria

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample
UJ = The analyte was not detected at a level greater than or equal to the reporting limite (RL); however, the reported RL is approximate and may be inaccurate or imprecise
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor

Table 5
Groundwater Sample Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID	NYSDEC TOGS Standards and Guidance Values - GA	MW01_022814 2/28/2014 14B0822-01	DUP01_022814 2/28/2014 14B0822-05	MW02_022814 2/28/2014 14B0822-02	MW03_022814 2/28/2014 14B0822-03	MW04_022814 2/28/2014 14B0822-04	MW09_042414 4/24/2014 14D0983-01	MW10_042414 4/24/2014 14D0983-02	MW11_042414 4/24/2014 14D0983-03	MW12_042414 4/24/2014 14D0983-04	MW13_042414 4/24/2014 14D0983-05	DUPRI03_042414 4/24/2014 14D0983-06
Volatile Organic Compounds (µg/L)												
1,1,1-Trichloroethane	5	**26**	**26**	0.20 U	0.20 U	1.80	0.28 J	0.20 U	0.20 U	0.22 J	**20**	**19**
1,1-Dichloroethane	5	1.20	1.20	0.20 U	0.20 U	0.64	1.10	0.20 U	0.20 U	0.20 U	**11**	**9.50**
1,1-Dichloroethylene	5	1.80	2	0.20 U	0.20 U	0.39 J	0.20 U	0.20 U	0.20 U	0.20 U	2.70	2.60
1,2,4-Trichlorobenzene	5	0.46 J	0.45 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	3.80 U	3.80 U
1,2-Dichlorobenzene	3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	1.60 J	1.50 J
1,3-Dichlorobenzene	3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	2.10	2
1,4-Dichlorobenzene	3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.10	1.20
2-Butanone	50	0.71	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.30	0.50 U	0.50 U	0.50 U
Acetone	50	3	2.50	1 U	1.50 J	2.30	1 U	1 U	19 U	2.20 U	1 U	1 U
Chlorobenzene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.41 J	0.44 J
Chloroform	7	0.23 J	0.22 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethylene	5	**62** D^{25}	**64** D^{20}	0.20 U	0.20 U	4.40	**6.20**	0.20 U	0.20 U	0.20 U	**380** D^{20}	**310** D^{20}
Isopropylbenzene	5	0.20 U	0.20 U	0.20 U	0.64	0.20 U	0.23 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methyl tert-butyl ether (MTBE)	10	0.20 U	0.20 U	0.20 U	0.24 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene chloride	5	1 U	1 U	1 U	1 U	1 U	1.20 U	1.10 J	1.50 U	1.10 U	1.10 U	1.20 U
sec-Butylbenzene	5	NA	NA	NA	NA	NA	0.48 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Tetrachloroethylene	5	**580** D^{25}	**620** D^{20}	0.20 U	0.41 U	**17**	2 U	0.20 U	0.20 U	3.30	**250** D^{20}	**210** D^{20}
Toluene	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.31 J	0.29 J
trans-1,2-Dichloroethylene	5	0.49 J	0.43 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	2.30	1.70
Trichloroethylene	5	**72** D^{25}	**77** D^{20}	0.20 U	0.20 U	4.10	1.70	0.20 U	0.20 U	1.60	**120** D^{20}	**110** D^{20}
Vinyl Chloride	2	**3.60**	**3.40**	0.50 U	0.50 U	0.50 U	0.89	0.50 U	0.50 U	0.50 U	**90** D^{20}	**85** D^{20}
Semivolatile Organic Compounds (µg/L)												
Acenaphthene	20	0.12	0.14	0.051 U	2.86	0.053 U	0.076	0.084	0.057 U	0.051 U	0.053 U	0.057 U
Acenaphthylene	~	0.051 U	0.053 U	0.051 U	0.70	0.053 U	0.054 U	0.053 U	0.069	0.051 U	0.053 U	0.057 U
Anthracene	50	0.051 U	0.053 U	0.051 U	0.43	0.053 U	0.054 U	0.053 U	0.057 U	0.051 U	0.053 U	0.057 U
Benzo(a)anthracene	0.002	*0.051* U	*0.053* U	*0.051* U	*0.053* U	*0.053* U	*0.054* U	*0.053* U	*0.057* U	*0.051* U	*0.053* U	**0.069**
Bis(2-ethylhexyl)phthalate	5	0.051 U	0.053 U	0.051 U	0.053 U	0.053 U	0.54 U	0.53 U	1.05 U	1.28 U	0.53 U	0.57 U
Fluoranthene	50	0.051	0.084	0.051 U	0.25	0.053 U	0.054 U	0.053 U	0.057 U	0.051 U	0.20	0.19
Fluorene	50	0.072	0.084	0.051 U	2.86	0.053 U	0.12	0.053 U	0.057 U	0.051 U	0.053 U	0.057 U
Naphthalene	10	0.30	0.32	0.051 U	0.14	0.053 U	0.20	0.053 U	0.057 U	0.051 U	0.053 U	0.057 U
Phenanthrene	50	0.14	0.18	0.051 U	1.23	0.053 U	0.054 U	0.14	0.057 U	0.051 U	0.053 U	0.057 U
Pyrene	50	0.051 U	0.084	0.051 U	0.18	0.053 U	0.054 U	0.053 U	0.057 U	0.051 U	0.14	0.15
Pesticides (µg/L)												
alpha-Chlordane	~	NA	NA	NA	NA	NA	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0069	0.0061
Chlordane, total	0.05	0.042 U	0.041 UJ	0.041 U	0.041 UJ	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	**0.055**	**0.054**
PCBs (µg/L)												
Total PCBs	0.09	0.053 U	0.051 U	0.051 U	0.051 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.054 U	0.053 U
Metals (µg/L)												
Aluminum	~	782	890	10 U	88	100	116	156	2,690	40 U	426	308
Arsenic	25	4 U	4 U	9	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Barium	1000	75	83	54	73	104	75	46	46	41	77	73
Calcium	~	199,000	196,000	64,900	107,000	135,000	82,700	125,000	101,000	95,400	138,000	137,000
Chromium	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	14	5 U	5 U	5 U
Cobalt	~	8	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	200	12	15	3 U	3 U	3 U	3 U	3 U	4	3 U	3 U	3 U
Iron	~	633	805	115	3,120	331	6,850	9,650	3,740	44	794 J	373 J
Lead	25	8	11	7	3 U	4	3 U	3 U	10	3 U	4	4
Magnesium	35000	22,100	21,400	4,750	11,000	13,800	8,800	8,250	5,460	9,350	14,800	14,400
Manganese	300	**9,220**	**9,260**	97	**361**	**3,250**	**1,070**	**748**	**437**	17	**13,400**	**13,400**
Nickel	100	26	23	5 U	5 U	6	6	5 U	8	5 U	5 U	5 U
Potassium	~	10,300	10,200	5,220	11,400	15,100	7,450	9,730	9,390	8,580	14,400	14,200
Selenium	10	**12**	**13**	10 U	10 U	**17**	10 U	**13**	10 U	**24**	10 U	**12**
Sodium	20000	**57,100**	**56,600**	12,700	18,700	**31,100**	**25,500**	**23,000**	**21,000**	15,000	**100,000**	**97,400**
Zinc	2000	357	320	51	17	29	11	11	30	13	17	14
Cyanide (µg/L)												
Cyanide, total	200	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND

Notes:
1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. Only detected compounds are shown in the table.
3. Concentrations exceeding the NYSDEC TOGS AWQS Criteria are highlighted and in bold.
4. DUP01_022814 is a duplicate of sample MW01_022814.
5. DUPRI03_042414 is a duplicate of sample MW13_042414.
6. µg/L = micrograms per liter
7. PCBs = polychlorinated biphenyls
8. ~ = no corresponding comparison criteria
9. NA = not analyzed

Qualifiers:
U = Analyte included in the analysis, but not detected
J = Detected above the Method Detection Limit but below the Reporting Limit (RL); therefore, the reported result is an estimated concentration
UJ = The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
B = Analyte is found in the associated laboratory analysis batch blank
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor

Table 6a
February 2014 Soil Vapor and Ambient Air Sample Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample Name	AA01_022114		SV01_022114		SV03_022114		SV04_022114		SV06_022114		SV07_022114	
Lab Sample ID	L1403948-06		L1403948-01		L1403948-02		L1403948-03		L1403948-04		L1403948-05	
Sample Date	2/21/2014		2/21/2014		2/21/2014		2/21/2014		2/21/2014		2/21/2014	
Volatile Organic Compounds (µg/m³)												
1,1,1-Trichloroethane	1.09	U	**34.7**		**465**		1.09	U	**67.1**		**12.5**	
1,1-Dichloroethane	0.809	U	**2.02**		**5.06**		0.809	U	0.809	U	**1.62**	
1,2,4-Trimethylbenzene	0.983	U	0.983	U	1.97	U	**2.66**		0.983	U	0.983	U
1,2-Dichloroethane	0.809	U	**7.97**		1.62	U	0.809	U	0.809	U	0.809	U
1,3-Butadiene	0.442	U	**5.4**		**2.54**		0.442	U	**0.655**		0.442	U
2-Butanone	0.902		**6.78**		**7.31**		**3.07**		**6.55**		**5.66**	
2-Hexanone	0.82	U	0.82	U	1.64	U	0.82	U	0.82	U	**0.885**	
4-Methyl-2-pentanone	0.82	U	0.82	U	1.64	U	0.82	U	0.82	U	**0.926**	
Acetone	6.6	J	**323**		**232**		**11.2**	J	**234**		**114**	
Benzene	0.987		**10.3**		**1.39**		**1.16**		0.642		**1.12**	
Carbon disulfide	0.623	U	**7.35**		**153**		0.623	U	**1.01**		**30.1**	
Carbon tetrachloride	1.26	U	**37.6**		2.52	U	1.26	U	**2.22**		**1.72**	
Chloroform	0.977	U	**37.6**		**4.53**		**1.37**		**4.54**		**11.6**	
Chloromethane	1.15		0.413	U	0.826	U	**1.22**		0.413	U	0.413	U
cis-1,2-Dichloroethene	0.793	U	**1.05**		**7.49**		0.793	U	**1.07**		**4.2**	
Cyclohexane	0.688	U	**2.57**		1.38	U	0.688	U	0.688	U	0.688	U
Dichlorodifluoromethane	2.26		**6.33**		**2.49**		2.03		1.69		1.23	
Ethanol	8.37		**10.1**		9.42	U	**12.1**		**9.31**		**25.1**	
Ethyl Acetate	1.8	U	**1.88**		3.6	U	1.8	U	**2.1**		1.8	U
Ethylbenzene	0.869	U	**0.916**		1.74	U	**1.19**		**0.96**		**1.09**	
Freon-113	1.53	U	1.53	U	**3.07**		1.53	U	1.53	U	1.53	U
Heptane	0.82	U	**13.8**		1.64	U	**0.914**		0.82	U	**1.13**	
Isopropanol	1.44		1.23	U	2.46	U	**4.94**		1.23		1.23	U
n-Hexane	0.796		**39.5**		1.41	U	**0.966**		0.705	U	**0.895**	
o-Xylene	0.869	U	**0.969**		1.74	U	**1.46**		**1.28**		**1.24**	
p/m-Xylene	1.74	U	**2.77**		3.47	U	**4.28**		**3.33**		**3.41**	
Tetrachloroethene	2.7		**94.9**		**612**		**5.99**		**634**		**298**	
Toluene	3.73		**11.9**		**6.48**		**6.86**		**7.46**		**8.52**	
trans-1,2-Dichloroethene	0.793	U	0.793	U	1.59	U	0.793	U	0.793	U	**1.34**	
Trichloroethene	1.07	U	**142**		**65**		1.07	U	**75.2**		**198**	
Trichlorofluoromethane	1.31		**14.5**		2.25	U	1.3		**2.64**		**1.42**	
Vinyl chloride	0.511	U	**0.562**		1.02	U	0.511	U	0.511	U	0.511	U

Notes and Qualifiers:

1. Only detected compounds are shown in table.
2. AA01_022114 is an ambient air sample.
3. Soil vapor sample concentrations above the ambient air conentration are in bold.
3. VOC = volatile organic compound
4. µg/m³ = micrograms per cubic meter
5. ~ = This indicates that no regulatory limit has been established for this analyte
6. J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
7. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the reporting limit or the sample concentration for results impacted by blank contaminati

Table 6b
April 2014 Soil Vapor and Ambient Air Sample Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID	AA02_041814		SV08_041814		SV09_041814		SV10_041814		SV11_041814		SV12_041814		SV13_041814		SVDUPRI_041814	
Laboratory Sample ID	14D0779-08		14D0779-01		14D0779-02		14D0779-03		14D0779-04		14D0779-05		14D0779-06		14D0779-07	
Sampling Date	4/18/2014		4/18/2014		4/18/2014		4/18/2014		4/18/2014		4/18/2014		4/18/2014		4/18/2014	
Volatile Organic Compounds (µg/m³)																
1,1,1-Trichloroethane	0.62	U	15	U	**130**		**3.60**		**370**	J	**560**	J	**29**		**31**	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.87	U	21	U	1.60	U	**0.89**		**5.70**		3.10	U	15	U	16	U
1,1-Dichloroethane	0.46	U	11	U	**20**		0.43	U	0.77	U	**2**		7.70	U	8.30	U
1,2,4-Trimethylbenzene	0.56	U	13	U	**7.50**		**2.30**		**8.50**		2	U	**10**		**10**	
1,3,5-Trimethylbenzene	0.56	U	13	U	1	U	**0.93**		0.93	U	2	U	9.30	U	10	U
2-Butanone	0.94		**29**		**1.90**		**4.70**		**5.30**		**2.20**		5.60	U	6	U
Acetone	6.10	B	**1,500**	B	**170**	J	**43**	B	**53**	B	**160**	B	**46**	J	4.90	UJ
Benzene	0.58		8.60	U	**1.30**		**2.10**		**4.90**		1.30	U	6.10	U	6.60	U
Bromodichloromethane	0.71	U	17	U	1.30	U	**4.20**		**3.90**		**2.80**		12	U	13	U
Carbon disulfide	0.35	U	**23**		**6.80**		**10**		**15**		**3.70**		5.90	U	6.40	U
Carbon tetrachloride	0.18	U	4.20	U	**2.40**		0.17	U	**1.80**		0.64	U	3	U	3.20	U
Chloroform	0.56	U	**17**		**5**		**7.90**		**11**		**9.80**		**32**		**31**	
cis-1,2-Dichloroethylene	0.45	U	11	U	**9.30**		**2**		**1.70**		**3.10**		7.50	U	8.10	U
Cyclohexane	0.39	U	**33**		0.72	U	**1.20**		**2.60**		**47**		6.50	U	7.10	U
Dichlorodifluoromethane	1.70		13	U	**3.20**		1.70		**2.10**		**2.20**		9.40	U	10	U
Ethyl Benzene	0.49	U	12	U	**6.40**		**2.60**		**2.40**		**2.70**		8.20	U	8.90	U
Isopropanol	0.56	U	**250**		1	U	0.52	U	**2**		2	U	9.30	U	10	U
Methyl tert-butyl ether (MTBE)	0.41	U	9.70	U	**0.98**		0.38	U	**4.20**		1.50	U	6.80	U	7.40	U
Methylene chloride	2		19	U	**2.30**		1.50		2		2.80	U	13	U	14	U
n-Heptane	0.47	U	11	U	0.86	U	**15**		**7.40**		1.70	U	7.80	U	8.40	U
n-Hexane	0.60		**21**		0.74	U	**5.40**		**5.60**		1.40	U	6.70	U	7.20	U
o-Xylene	0.49	U	12	U	**3.90**		**3.40**		**6.90**		1.80	U	8.20	U	8.90	U
p- & m- Xylenes	0.99	U	23	U	**11**		**10**		**10**		3.60	U	16	U	18	U
p-Ethyltoluene	0.56	UJ	13	UJ	1	UJ	**5.10**	J	0.93	UJ	2	UJ	9.30	UJ	10	UJ
Styrene	0.49	U	**30**		**28**		**13**		0.81	U	1.70	U	**16**	J	8.70	UJ
Tetrachloroethene	0.85		**44**		**510**	J	**8.60**		**12**		**570**		**1,400**		**1,500**	
Tetrahydrofuran	0.34	UJ	8	UJ	**1.70**	J	0.31	UJ	0.56	UJ	1.20	UJ	5.60	UJ	6	UJ
Toluene	1		**110**		**73**		**6.30**		**14**		**55**		7.20	U	7.70	U
Trichloroethene	0.15	U	3.60	U	**200**		**1.90**		**2**		**97**		**19**		**20**	
Trichlorofluoromethane (Freon 11)	1.30	J	15	U	**180**	J	**4.30**	J	**2**	J	**5.50**	J	11	U	12	U

Notes and Qualifiers:

1. Only detected compounds are shown in table.
2. AA02_041814 is an ambient air sample.
3. Soil vapor sample concentrations above the ambient air conentration are in bold.
3. VOC = volatile organic compound
4. µg/m³ = micrograms per cubic meter
5. J = The analyte was positively identified and the associcated numerical value is the approximate concentration of the analyte in the sample
6. UJ = The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
7. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
8. B = The analyte was detected in the analysis batch blank

Table 7
Trip Blank and Field Blank Sample Detection Summary
Remedial Investigation Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

		FIELD BLANKS					TRIP BLANKS				
Sample ID		**FB_022014**	**FB02_022814**	**FBRI01_041614**	**FBRI02_041714**	**FBRI03_042414**	**TB_022014**	**TB_022114**	**TB02_022114**	**TB04_022814**	**Trip Blank**
Laboratory ID	**NYSDEC TOGS AWQS**	**14B0504-09**	**14B0822-06**	**14D0679-18**	**14D0716-04**	**14D0983-07**	**14B0504-10**	**14B0543-06**	**14B0579-04**	**14B0822-07**	**14D0983-08**
Sampling Date	**and Guidance Values**	**2/20/2014**	**2/28/2014**	**4/16/2014**	**4/17/2014**	**4/24/2014**	**2/20/2014**	**2/21/2014**	**2/21/2014**	**2/28/2014**	**4/24/2014**
QA/QC Matrix		**Soil**	**Groundwater**	**Soil**	**Soil**	**Groundwater**	**Soil**	**Soil**	**Soil**	**Groundwater**	**Groundwater**
Volatile Organic Compounds (VOCs) (µg/L)											
1,2,4-Trichlorobenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND
Acetone	50	1.8 J	ND	4	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24 J
Methylene chloride	5	ND	ND	1.3 J	ND	1.2 J	ND	ND	ND	1.5 J	4.9
Tetrachloroethylene	5	ND	0.5	ND	ND	ND	ND	ND	ND	ND	0.31 J
Trichloroethylene	5	ND	ND	ND	ND	0.44 J	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) (µg/L)											
Bis(2-ethylhexyl)phthalate	5	NA	NA	1.39	0.96	0.97	NA	NA	NA	NA	NA
Pesticides and Polychlorinated Biphenyls (PCBs) (µg/L)											
Total Pesticides	~	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
Total PCBs	~	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
Total Metals (µg/L)											
Aluminum	~	ND	ND	ND	ND	11	NA	NA	NA	NA	NA
Lead	25	ND	ND	3	ND	ND	NA	NA	NA	NA	NA
Total Cyanide (µg/L)											
Cyanide, total	200	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA

Notes:
1. Field and trip blank sample analytical results are compared to the New York State Department of Environmental Conservation NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1. Ambient Water Quality Standards (AWQS) and guidance values for drinking water (Class GA).
2. Only detected compunds are shown in table.
3. µg/L = micrograms per liter
4. QA/QC Matrix = Corresponding sample matrix/rationale for each quality assurance/quality control sample
5. NA = not analyzed
6. ND = analyte included in the analysis, but not detected
7. ~ = no regulatory limit has been established for this analyte

Qualifiers:
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

APPENDIX A
PROPOSED DEVELOPMENT PLANS

GENERAL NOTES NEW YORK - NEW SPEC NEW CONSTRUCTION:

I - CODES

1. BUILDING CODE OF THE CITY OF NEW YORK, INCLUDING LATEST AMENDMENTS ("2008 N.Y.C. CODE"), CONSISTING OF THE 2003 INTERNATIONAL BUILDING CODE.
2. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318-02 ("ACI") AS MODIFIED BY CHAPTER 19 OF THE N.Y.C. BUILDING CODE.
3. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530-02 ("ACI 530") AS MODIFIED CHAPTER 21 OF THE N.Y.C. BUILDING CODE.

II - MATERIALS

UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS:

1. STRUCTURAL STEEL:
   ALL ROLLED SHAPES: ASTM A572 OR A992, GRADE 50
   ALL PLATES AND CONNECTION MATERIAL: ASTM A36
   ALL TUBULAR SECTIONS: ASTM A500, GRADE B
   ANCHOR BOLTS, U.O.N.: ASTM F1554
2. CAST-IN-PLACE CONCRETE:
   FOUNDATION WALLS & BUTTRESSES: 5000 PSI NORMAL WT. (145 PCF)
   MAT FOUNDATIONS AND PILE CAPS: 6000 PSI NORMAL WT. (145 PCF)
   GRADE BEAMS: 6000 PSI NORMAL WT. (145 PCF)
   FORMED SLABS: AS NOTED ON PLAN DRAWINGS
   COLUMNS AND WALLS: AS NOTED ON COLUMN SCHEDULE
3. REINFORCEMENT:
   DEFORMED BARS: ASTM A615, GRADE 60, GRADE 75 FOR #10 & #11
   WELDED WIRE FABRIC: ASTM A185.
   WELDED DEFORMED WIRE FABRIC: ASTM A467, GRADE 60.
4. WELDING ELECTRODES: E70XX LOW HYDROGEN.
5. BOLTING MATERIALS: ASTM A325 OR F1852 (TWIST-OFFTYPE). OR A490. U.O.N.

III - GENERAL

1. NOTES, TYPICAL DETAILS AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, ARCHITECTURAL AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO PERFORMING WORK.
3. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.
4. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATER/DAMPROOFING AND FIREPROOFING DETAILS AND REQUIREMENTS.
5. TOP OF CONCRETE SLABS ARE AT FLOOR REFERENCE ELEVATIONS EXCEPT AS NOTED. FOR FLOOR REFERENCE ELEVATIONS SEE COLUMN SCHEDULE.
6. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTS. SEE CONSTRUCTION MANAGER'S DOCUMENTS.
7. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECTS OR ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.
8. SHORING, BRACING AND PROTECTION OF EXISTING AND ADJACENT STRUCTURES DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PROTECT AND MAINTAIN THE INTEGRITY OF ADJACENT STREETS, BUILDINGS AND STRUCTURES.
9. ALL EXISTING DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY FIELD MEASUREMENTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
10. DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE KNOWLEDGE OF EXISTING CONDITIONS. IF, DURING DEMOLITION, EXCAVATION OR CONSTRUCTION, ACTUAL CONDITIONS ARE DISCOVERED TO DIFFER FROM THOSE INDICATED ON DRAWINGS, ENGINEER SHALL BINOTIFIED.
11. CONSTRUCTION DOCUMENTS ARE IN COMPLIANCE WITH SECTION BC 1603 OF NEW YORK CITY BUILDING CODE.

IV - FOUNDATION NOTES

1. ALL THE COLUMNS AND SHEAR WALLS SHALL BEAR ON DEEP FOUNDATIONS SUCH AS H-PILES, PIPE PILES, OR CAISSONS.
2. NO BACKFILL SHALL BE PLACED AGAINST FOUNDATION WALLS UNLESS SUPPORTING SLABS ARE IN PLACE AND SET OR THE WALLS ARE ADEQUATELY BRACED.
3. UNDERPINNING OF EXISTING ADJACENT FOUNDATIONS MAY BE REQUIRED. ALL ENGINEERING, DESIGNS AND MEANS AND METHODS OF CONSTRUCTION RELATED TO UNDERPINNING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. DEWATERING OF THE SITE DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR NOT TO UNDERMINE EXISTING FOUNDATIONS. METHOD OF DEWATERING AND CALCULATIONS FOR THE APPROPRIATE SYSTEM ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL PILE CAPS ARE TO BE CENTERED ON COLUMNS ABOVE, U.O.N.
6. PROVIDE DOWELS IN FOUNDATIONS FOR ALL WALLS, COLUMNS, AND SHEAR WALLS OF SAME NUMBER AND SIZE AS THE VERTICAL REINFORCEMENT ABOVE, U.O.N.
7. PROVIDE WATERSTOPS IN ALL VERTICAL CONSTRUCTION JOINTS IN BASEMENT WALLS.
8. SLABS ON GROUND SHALL BE PLACED ON SELECT FILL COMPACTED TO 95 PERCENT MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557).

V - UNDERPINNING NOTES

1. CONTRACTOR SHALL RETAIN THE SERVICE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK TO PREPARE SIGNED AND SEALED DESIGN DRAWINGS AND CALCULATIONS FOR ALL REQUIRED UNDERPINNING OF ADJACENT STRUCTURES. THE CONTRACTOR SHALL FILE THE DRAWINGS WITH THE BUILDING DEPARTMENT.
2. SUBMIT COPY OF FILED DRAWINGS TO DESIMONE FOR INFORMATION ONLY. ALL UNDERPINNING WORK SHALL BE SUBJECT TO SPECIAL INSPECTION IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
3. THE FULL SCOPE OF THIS WORK IS TO BE DETERMINED BY THE CONTRACTOR BY THE REVIEW OF ALL AVAILABLE DOCUMENTATION SUCH AS SURVEYS, GEOTECHNICAL REPORTS AND THE LIKE AND BY SITE REVIEW PRIOR TO BIDDING.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF ALL EXISTING ADJACENT BUILDINGS, STRUCTURES, SIDEWALKS, VAULTS AND THE LIKE DURING AND AS A RESULT OF UNDERPINNING OPERATIONS.

VI - CONCRETE NOTES

1. REINFORCING STEEL SHALL HAVE A MINIMUM CLEAR COVER AS FOLLOWS, U.O.N. IN DRAWINGS:

   CONCRETE POURED AGAINST EARTH..... 3"

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #5 OR SMALLER..... 11/2"
   #6 OR LARGER..... 2"

   CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   COLUMNS (TIES AND MAIN REINFORCING)..... 11/2"
   SLABS, WALLS,
   #11 OR SMALLER..... 3/4"
   BEAMS (STIRRUPS AND MAIN REINF)..... 11/2"

   CLEAR COVER SHALL BE CLEARLY SHOWN ON ALL REBAR DETAIL DRAWINGS.
2. ALL REINFORCEMENT SHALL BE SECURELY HELD IN POSITION WHILE PLACING CONCRETE. IF NECESSARY, ADDITIONAL BARS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES, BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, AS WELL AS THE STRUCTURAL DRAWINGS FOR THE LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED.
4. LOCATION OF ALL CONSTRUCTION JOINTS NOT SHOWN IN DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO DETAILING OF REINFORCING. ALL CONSTRUCTION JOINTS TO BE CLEARLY SHOWN IN REBAR DETAIL DRAWINGS. ENGINEER MAY REQUIRE ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS.
5. DIMENSIONS "Ld" AS NOTED ON DRAWINGS SHALL BE AS FOLLOWS:

BEAMS		
BAR SIZE	BOTTOM BARS	OTHER BARS
#3	13	17
#4	17	23
#5	22	28
#6	26	34
#7	38	49
#8	43	56
#9	48	63
#10	54	71
#11	60	78

COLUMNS	
BAR SIZE	Ld
#3	13
#4	17
#5	22
#6	26
#7	38
#8	43
#9	48
#10	54
#11	60

TABLE ASSUMPTIONS:
1. f'c = 5 ksi
2. A MINIMUM CLEAR COVER AS SHOWN IN NOTE 1 ABOVE
3. A MINIMUM CLEAR SPACING OF 3" BETWEEN ANY BARS
4. fy = 60 ksi
5. NORMAL WEIGHT CONCRETE
6. FOR WALLS:
   CASE 1 = CLEAR SPACING > 2db AND CLEAR COVER > db
   CASE 2 = OTHER THAN CASE 1

WALLS				
BAR SIZE	VERTICAL BARS		HORIZONTAL BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	13	20	17	25
#4	17	26	23	34
#5	22	32	28	42
#6	26	39	34	50
#7	38	56	49	73
#8	43	64	56	83
#9	48	72	63	94
#10	54	81	70	106
#11	60	90	78	117

SLABS / MATS			
BAR SIZE	THICKNESS 12" OR LESS	THICKNESS GREATER THEN 12"	
	ALL BARS	BOTTOM BARS	OTHER BARS
#3	13	13	17
#4	17	17	23
#5	22	22	28
#6	26	26	34
#7	56	56	73
#8	64	64	83
#9	72	72	94
#10	81	81	106
#11	90	90	117

FOR: f'c = 3 ksi Ld =1.29 x TABLE VALUE
f'c = 4 ksi Ld =1.12 x TABLE VALUE
f'c = 6 ksi Ld =0.92 x TABLE VALUE
f'c = 8 ksi Ld =0.79 x TABLE VALUE

6. ALL LAP SPLICES SHALL BE 1.3LD UNLESS NOTED OTHERWISE ON DRAWINGS.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
8. COMBINATIONS OF EFFECTS DUE TO CONCRETE STRENGTH, CONCRETE WEIGHT ARE CUMULATIVE. Ld SHALL BE MULTIPLIED BY EACH FACTOR TO FIND THE CORRECT VALUE.
9. DOWEL BAR SUBSTITUTIONS SHALL BE PERMITTED PROVIDED THAT MANUFACTURER'S DATA SUPPORTS FULL TENSION SPLICES.
10. ALL SLEEVES AND PENETRATIONS SHALL BE PROVIDED BY THE SUB-CONTRACTOR REQUIRING THE OPENING.
11. CONCRETE COLUMN LENGTH ADJUSTMENT FOR ELASTIC SHORTENING, SHRINKAGE AND CREEP EFFECTS SHALL BE DISCUSSED WITH THE CONCRETE CONTRACTOR.
12. CONDUIT PLACED IN CONCRETE SLABS MUST BE PLACED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
    a. CONTRACTOR SHALL NOT INSTALL CONDUIT THAT IS NOT SHOWN ON MECHANICAL DRAWINGS.
    b. DO NOT CROSS MORE THAN ONE LAYER OF CONDUIT OVER ANOTHER IN ANY GIVEN AREA.
    c. PLACE CENTROID OF CONDUIT OR CONDUIT GROUP AT THE MID-HEIGHT OF THE SLAB.
    d. CONDUIT OR CONDUIT GROUP CAN NOT EXTEND OUTSIDE THE MIDDLE 1/3 OF THE SLAB.
    e. MAINTAIN A MINIMUM CLEAR SPACING BETWEEN THE CONDUIT OF 3 DIAMETERS. THIS REQUIREMENT APPLIES EXCEPT WHERE CONDUIT ACCUMULATES AT "TURN DOWNS". THE CONDITIONS AT "TURN DOWNS" LOCATIONS MUST BE EVALUATED AT EACH LOCATION BY THE STRUCTURAL ENGINEER. "TURN DOWNS" CAN NOT OCCUR AT COLUMN OR BUTTRESS LOCATIONS.
    f. DO NOT PLACE ANY CONDUIT IN THE SLAB WITHIN 36" FROM THE EDGE OF ANY COLUMN OR WALL ABOVE OR BELOW THE SLAB.
    g. SLAB REINFORCEMENT MUST NOT BE MOVED, CUT, OR BENT TO ACCOMODATE CONDUIT PLACEMENT.
    h. CONDUIT IS NOT TO RUN THROUGH G/I WITHIN A COLUMN OR WALL.
    i. ALUMINUM CONDUIT SHALL NOT BE EMBEDDED IN A SLAB UNLESS IT IS EFFECTIVELY COATED.

    IF THE ABOVE REQUIREMENTS ARE ALL MET, CONDUIT LOCATIONS NEED NOT BE REVIEWED BY THE STRUCTURAL ENGINEER. ANY DEVIATIONS MUST BE SUBMITTED ON A SHOP DRAWING FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO CONDUIT PLACEMENT.

    THE FOLLOWING CASES MUST BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER:

    a. LOCATIONS OF ANY CONDUIT LARGER THAN 2" IN OUTSIDE DIAMETER.
    b. LOCATIONS OF ANY BUNDLED CONDUITS.

VII - SURVEYING

1. PRIOR TO REMOVING RESHORES THE UNDERSIDE OF THE SLAB SHALL BE SURVEYED TO DETERMINE THE RELATIVE ELEVATION OF THE SLAB. AT A MINIMUM, SURVEY POINTS ARE TO BE LOCATED NEXT TO COLUMNS AND AT CENTER OF COLUMN STRIPS AND MIDDLE STRIPS. SLAB EDGES AND CANTILEVERS ARE TO BE SURVEYED AT POINTS OF THEORETICAL MAXIMUM AND MINIMUM DEFLECTIONS WITHIN EACH SPAN. SURVEYOR IS TO SUBMIT A GENERAL LAYOUT OF POINTS TO ENGINEER FOR APPROVAL PRIOR TO SURVEYING THE SLABS. ADDITIONAL POINTS MAY BE REQUIRED AT ENGINEER'S DISCRETION. THE C.M. IS TO CONTRACT OUT THE SURVEYING SERVICE TO A SURVEYOR NOT AFFILIATED WITH THE CONCRETE CONTRACTOR. THE COST OF THIS SURVEY IS TO BE INCLUDED IN THE CONSTRUCTION COST.

VIII - MASONRY NOTES

1. STRUCTURAL CONCRETE MASONRY, AS SHOWN ON THESE DRAWINGS, SHALL HAVE A COMPRESSIVE STRENGTH (F'M) OF 2,000 PSI.
2. MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE II, NORMAL WEIGHT, HOLLOW UNLESS SPECIFICALLY NOTED OTHERWISE ON THESE DRAWINGS, WITH A UNIT STRENGTH AS REQUIRED TO ACHIEVE COMPRESSIVE STRENGTH SPECIFIED ABOVE.
3. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S FOR ABOVE GRADE, TYPE M FOR BELOW GRADE.
4. GROUT FOR FILLED CELLS SHALL CONFORM TO ASTM C476 WITH 3000 PSI STRENGTH AT 28 DAYS. CELLS SHALL BE GROUTED IN INCREMENTS NOT EXCEEDING 5 FEET VERTICALLY. FILL ALL CELLS BELOW GRADE.
5. VERTICAL REINFORCING SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. MINIMUM LAP SPLICES SHALL BE AS FOLLOWS:

   # 3 BARS - 1'-6"
   # 4 BARS - 2'-0"
   # 5 BARS - 2'-6"
   # 6 BARS - 3'-0"
6. HORIZONTAL REINFORCING SHALL BE NO. 9 GAGE "DUROWALL" OR EQUIVALENT AND SHALL BE PLACED EVERY OTHER COURSE U.O.N.
7. ALL BLOCK SHALL BE PLACED IN RUNNING BOND.

IX - SPECIAL INSPECTIONS

OWNER WILL ENGAGE AND PAY FOR A SPECIAL INSPECTOR AND AN INDEPENDENT TESTING AGENCY TO PERFORM THE FOLLOWING SPECIAL INSPECTION AND TESTING AS SPECIFIED ON THE APPLICABLE SECTIONS OF THE NEW YORK CITY BUILDING CODE, CHAPTER 17, SECTION 1704. TECHNICAL REPORT STATEMENT OF RESPONSIBILITY TR-1 FORM SHALL BE FILLED WITH THE BUILDING DEPARTMENT FOR APPROVAL OF SPECIAL INSPECTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE PRIOR NOTICE FOR COMPLETION OF INSPECTIONS.

1. CONCRETE:
   ALL CONCRETE WORK SHALL BE SUBJECT TO SPECIAL INSPECTION BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AS REQUIRED BY SUBCHAPTERS 1704.4 AND 1905.3 AND TABLE 1704.4 OF THE N.Y.C. BUILDING CODE.
   A. THE OWNER SHALL ENGAGE A LICENSED PROFESSIONAL ENGINEER, APPROVED BY THE ENGINEER OF RECORD, TO SUPERVISE THE TESTING OF THE MATERIALS AND THE INSPECTION OF CONCRETE CONSTRUCTION.
   B. THE PRELIMINARY TEST FOR CONTROLLED CONCRETE SHALL BE MADE IN ACCORDANCE WITH SUBCHAPTER 1905.3 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE AND THE APPROVED DESIGN MIXES FILED ON TECHNICAL REPORT TR-3. NO CONCRETE SHALL BE PLACED BEFORE ACCEPTANCE BY ENGINEER.
   C. QUALITY CONTROL AND INSPECTION OF MATERIALS AND OF BATCHING SHALL BE MADE IN ACCORDANCE WITH SUBCHAPTER 1905.3 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE.
   D. ALL FIELD TESTS AND INSPECTIONS SHALL BE PERFORMED AS REQUIRED BY SUBCHAPTER 1905.6 OF SECTION 1905 OF THE N.Y.C. BUILDING CODE. CONCRETE TEST CYLINDER RESULTS SHALL BE FILED ON TECHNICAL REPORT TR-2.
   E. PRIOR TO PERMIT OWNER TO ENGAGE CONCRETE TESTING AGENCY FOR TR-2 AND TR-3 FORMS.

GRAVITY LOADS

CDL CONSTRUCTION DEAD LOAD: SELF WEIGHT OF STRUCTURE.

SDL SUPERIMPOSED DEAD LOAD: WEIGHT OF ALL MATERIALS SUPPORTED ON OR HUNG FROM STRUCTURAL FLOOR.

LL LIVE LOAD

PSF POUNDS PER SQUARE FOOT

1ST FLOOR
CDL: 125 PSF - 10" NORMAL WT CONCRETE SLAB
SDL: 50 PSF - RETAIL/PUBLIC LOBBY
20 PSF - UTILITIES/STORAGE/PARKING/OTHER AREAS
10 PSF - CORRIDORS
LL: 150 PSF - RETAIL/PUBLIC LOBBY/STORAGE/UTILITIES
50 PSF - PARKING/OTHER AREAS

2ND FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - UTILITIES/STORAGE/PARKING/OTHER AREAS
LL: 400 PSF - POOL
150 PSF - MECHANICAL
100 PSF - PUBLIC

3RD FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ROOF
20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL
30 PSF - ROOF

4TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL

5TH - 14TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - PUBLIC/ELEVATOR LOBBY
40 PSF - RESIDENTIAL

15TH FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ROOF
20 PSF - RESIDENTIAL
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - ELEVATOR LOBBY
40 PSF - RESIDENTIAL
60 PSF - PRIVATE TERRACE

16TH - 32ND FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL/BALCONY
10 PSF - ELEVATOR LOBBY
LL: 100 PSF - ELEVATOR LOBBY/BALCONY
40 PSF - RESIDENTIAL

33RD FLOOR
CDL: 112.5 PSF - 9" NORMAL WT CONCRETE SLAB
150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 20 PSF - RESIDENTIAL/BALCONY
10 PSF - ELEVATOR LOBBY/MECHANICAL
LL: 150 PSF - MECHANICAL
100 PSF - ELEVATOR LOBBY/PUBLIC TERRACE
40 PSF - RESIDENTIAL

34TH LOW ROOF
CDL: 125 PSF - 10" NORMAL WT CONCRETE SLAB
SDL: 10 PSF - ELEVATOR LOBBY
LL: 600 PSF - WATER TANK
150 PSF - MECHANICAL
100 PSF - ELEVATOR LOBBY/BALCONY

35TH EMR FLOOR
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 10 PSF - ELEVATOR LOBBY
LL: 400 PSF - EMR
100 PSF - ELEVATOR LOBBY

36TH UPPER ROOF
CDL: 150 PSF - 12" NORMAL WT CONCRETE SLAB
SDL: 30 PSF - ELEVATOR LOBBY
LL: 30 PSF - ELEVATOR LOBBY/BALCONY

THE DESIGN, DETAILS, AND NOTES HEREIN ARE IN COMPLIANCE WITH LOCAL LAW 17/95 AND SECTIONS 1613 TO 1620 AND 1624 TO 1626 OF THE 2008 NEW YORK CITY BUILDING CODE.

SEISMIC LOADING CRITERIA	VALUE	CODE REFERENCE
SITE CLASS	D	PER GEOTECH REPORTS
SEISMIC USE GROUP	I	1616.2 - NYC CODE 2008
SEISMIC DESIGN CATEGORY	C	1616.3 - NYC CODE 2008
EARTHQUAKE IMPORTANCE FACTOR, I	1.00	TABLE 1604.5, NYC CODE 2008
PLAN/VERT. STRUCTURAL IRREGULARITIES	NONE	TABLE 12.3-1 & 12.3-2, ASCE 7-05
SHORT PERIOD MAPPED SPECTURAL ACC., Ss	0.365 g	PER GEOTECH REPORTS
1 SEC. PERIOD MAPPED SPECTRAL ACC., S1	0.071 g	PER GEOTECH REPORTS
ACCELERATION SITE COEFFICIENT, Fa	1.51	TABLE 1615.1(1), NYC CODE 2008
VELOCITY SITE COEFFICIENT, Fv	2.4	TABLE 1615.1.2, NYC CODE 2008
MAX. SHORT PERIOD SPECTRAL ACC., SMS	0.550 g	SECTION 1615.1.2, NYC CODE 2008
MAX. 1 SEC. PERIOD SPECTRAL ACC., SM1	0.170 g	SECTION 1615.1.2, NYC CODE 2008
DESIGN SHORT PERIOD SPECTRAL ACC., SDS	0.367 g	SECTION 1615.1.3, NYC CODE 2008
DESIGN 1 SEC. PERIOD SPECTRAL ACC., SD1	0.114 g	SECTION 1615.1.3, NYC CODE 2008
BUILDING PERIOD COEFFICIENT, Ct	0.020	TABLE 12.8-2, ASCE 7-05
BUILDING HEIGHT ABOVE BASE, hn	374 FT	SECTION 12.8.2.1, ASCE 7-05
FUNDAMENTAL PERIOD, Ta	1.7 SEC	PER 3-D LATERAL ANALYSIS
MAX. FUNDAMENTAL PERIOD, T	2.85 SEC	SECTION 12.8.2.1, ASCE 7-05
ANALYSIS PROCEDURE	EQ. LAT. FORCE	SECTION 12.8, ASCE 7-05
RESPONSE MODIFICATION FACTOR, R	5	TABLE 1617.6.2, NYC CODE 2008
DEFLECTION AMPLITDUDE FACTOR, Cd	4 1/2	TABLE 1617.6.2, NYC CODE 2008
SEISMIC RESPONSE COEFFICIENT, Cs	0.073	SECTION 12.8.1.1, ASCE 7-05
BUILDING WEIGHT, W	- KIPS	
SEISMIC BASE SHEAR, V	- KIPS	SECTION 12.8.1, ASCE 7-05

WIND DESIGN DATA

THE DESIGN, DETAILS, AND NOTES HEREIN ARE IN COMPLIANCE WITH ASCE7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

BASIC WIND SPEED: 98 MPH
BUILDING TYPE: ENCLOSED
OCCUPANCY CATEGORY: II
WIND IMPORTANCE FACTOR Iw: 1.0
DIRECTION FACTOR, Kd: 0.85
WIND EXPOSURE CATEGORY: X DIRECTION: B
Y DIRECTION: B

SNOW DESIGN DATA

SNOW LOADING CRITERIA	VALUE	SNOW LOADING CRITERIA
GROUND SNOW LOAD, pg	25 PSF	SECT. 1608.2, NYC BC 2008
SNOW IMPORTANCE FACTOR, I	1.0	TABLE 1604.5, NYC BC 2008
SNOW EXPOSURE FACTOR, Ce	0.9	TABLE 7-2, ASCE 7-05
THERMAL FACTOR, Ct	1.0	TABLE 7-3, ASCE 7-05
FLAT ROOF SNOW LOAD, pf	20.0 PSF	SECT. 7-3, ASCE 7-05
SNOW DENSITY, GAMMA	17.25 PCF	EQN. 7-3, ASCE 7-05
MAX DRIFT LOADS	-	

REINFORCEMENT QUANTITIES

FLOOR SLABS	
THICKNESS	REINFORCEMENT QUANTITIES
9"	2.8PSF
10"	3.5PSF
12"	4.5PSF
14"	6.0PSF

TOWER COLUMNS	
FLOORS	REINFORCEMENT QUANTITIES
BASE - 10TH	250 PCY
11TH - 20TH	200 PCY
21ST - ROOF	150 PCY
PODIUM COLUMNS	
BASE - ROOF	150 PCY

TOWER SW CORE	
FLOORS	REINFORCEMENT QUANTITIES
BASE - 10TH	200 PCY
11TH - 20TH	150 PCY
21ST - ROOF	100 PCY
PODIUM SW	
BASE - ROOF	150 PCY

SHEET INDEX

SHEET NUMBER	SHEET NAME
S-001	DRAWING NOTES , DRAWING INDEX
FO-101	FOUNDATION PLAN
FO-111	FOUNDATION TYPICAL DETAILS
FO-112	FOUNDATION DETAILS
S-201	GROUND FLOOR PLAN
S-202	2ND FLOOR PLAN
S-203	3RD FLOOR PLANS
S-204	4TH & 5TH - 14TH FLOOR PLANS
S-215	15TH & 16TH - 32ND FLOOR PLANS
S-233	33RD & LOWER ROOF PLANS
S-235	EMR & UPPER ROOF PLANS
S-301	COLUMN SCHEDULE
S-501	TYPICAL CONCRETE DETAILS
S-502	TYPICAL CONCRETE DETAILS

MATERIAL KEYING LEGEND:

DOB FILING 06.27.2014
DESIGN DEVELOPMENT 05.30.2014

NO. REVISIONS | SUBMISSIONS DATE

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VAN DEUSEN & ASSOCIATES
5 Regent Street, Livingston, NJ 07039 973.994.9220

44-30 Purves Street

DRAWING TITLE:
DRAWING NOTES , DRAWING INDEX

Seal:

Drawn: Author
Checked: Checker
Reviewed:
Date: 05/12/14
Scale: 12" = 1'-0"

Project No.: 13434
Cad File:
Drawing No.:

S-001.00
SHEET 1 OF 14

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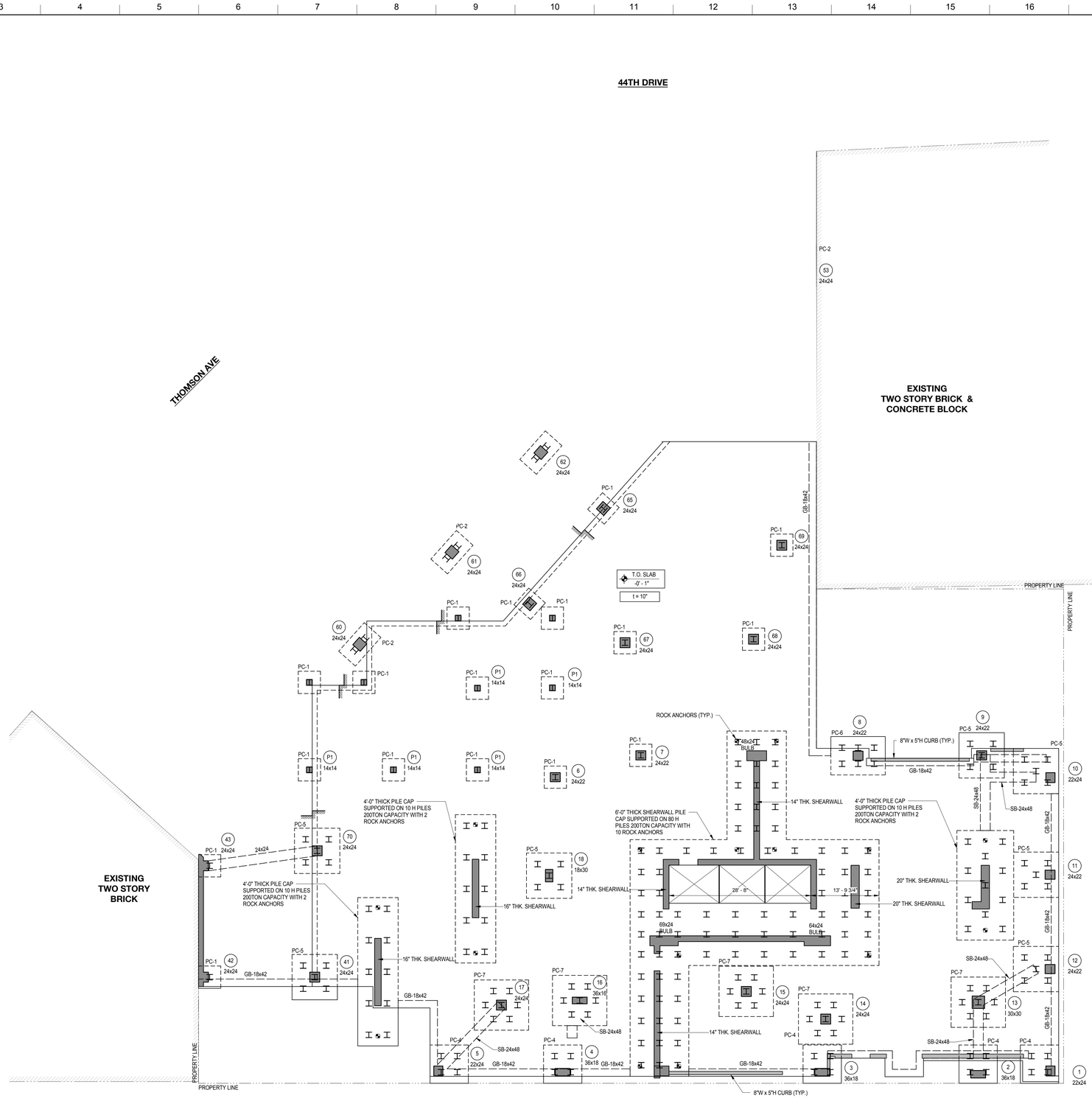
6/27/2014 3:00:28 PM



FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

MATERIAL KEYING LEGEND:

DRAWING NOTES:

1. SEE S-001FOR GENERAL NOTES, DRAWING INDEX, DESIGN CRITERIA/LOADS, AND REINFORCEMENT QUANTITIES.
2. SEE FO-110 SERIES DRAWINGS FOR FOUNDATION SECTIONS AND DETAILS.
3. SEE 500 SERIES DRAWINGS FOR CONCRETE SECTIONS AND DETAILS.
4. SEE S-601 FOR TYPICAL MASONRY DETAILS.
5. GB INDICATES CONCRETE GRADE BEAM.
6. SB INDICATES CONCRETE STRAP BEAM.
7. PC-X INDICATES PILE CAPS SUPPORTED ON H PILES WITH 200 KIPS COMPRESSION CAPACITY. SEE FO-112 FOR SCHEDULE AND DETAILS.
8. TOP OF PILE CAP AND GRADE BEAMS ARE 1'-2" FROM TOP OF SLAB.
9. ◪ INDICATES ROCK ANCHOR WITH 150 KIPS CAPACITY.

DOB FILING	06.27.2014
DESIGN DEVELOPMENT	05.30.2014

NO. REVISIONS | SUBMISSIONS DATE

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44-30 Purves Street

DRAWING TITLE:
FOUNDATION PLAN

Seal:

Drawn: Author	Project No.: 13434
Checked: Checker	Cad File:
Reviewed:	Drawing No.:
Date: 05/12/14	
Scale: 1/8" = 1'-0"	FO-101.00

SHEET 2 OF 14

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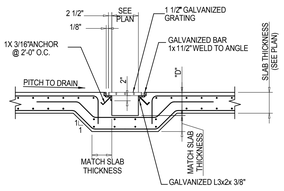
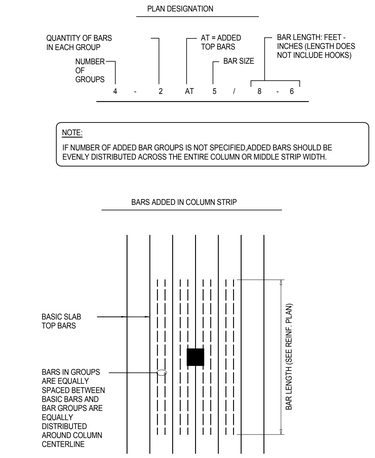
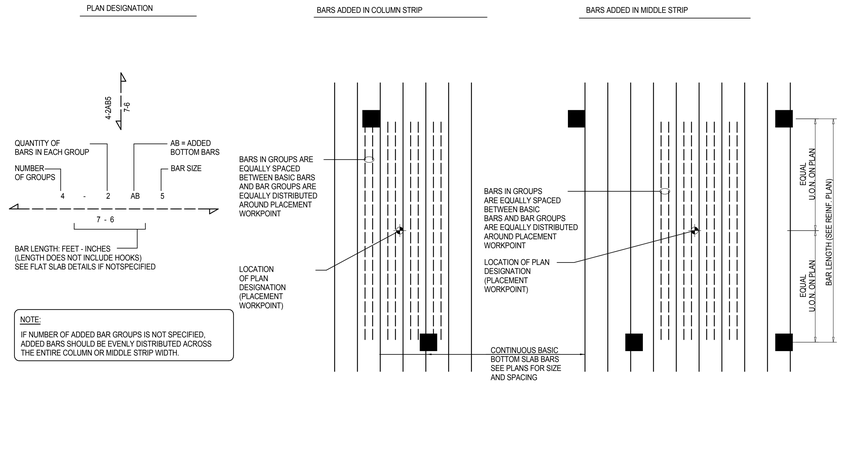
6/27/2014 3:00:34 PM



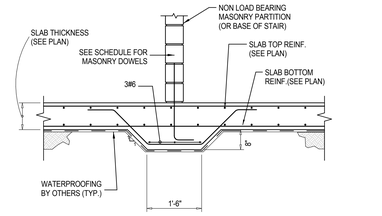
4 TYPICAL SECTIONS THROUGH TRENCH DRAINS ON STRUCTURAL SLAB



3 ADDED TOP BAR PLACEMENT

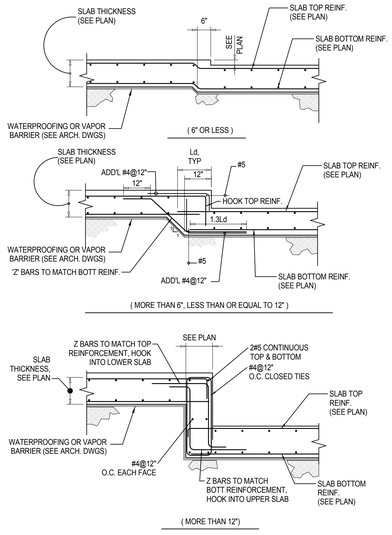


2 ADDED BOTTOM BAR PLACEMENT

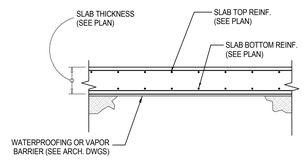


1 TYPICAL THICKENED SLAB UNDER MASONRY PARTITION

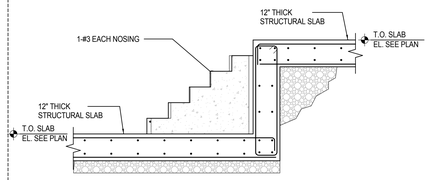
MATERIAL KEYING LEGEND:



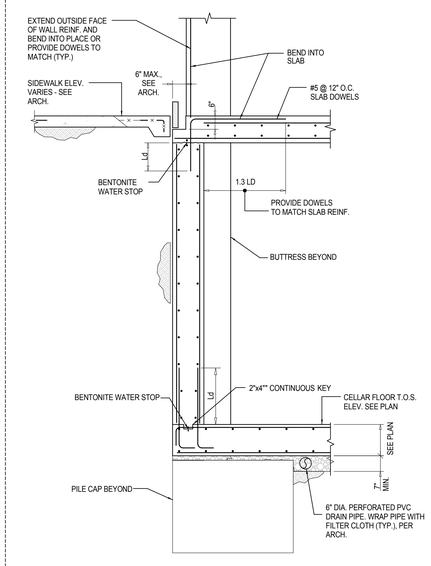
8 TYPICAL SLAB ON GROUND DEPRESSIONS



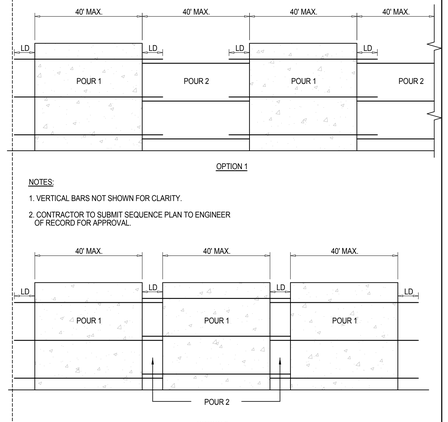
7 TYPICAL SLAB ON GROUND DETAIL



6 SECTION THROUGH STAIRS



5 TYPICAL FOUNDATION WALL SECTION



10 FOUNDATION POUR SEQUENCE OPTIONS

DOB FILING	06.27.2014
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DRAWING TITLE:
FOUNDATION TYPICAL DETAILS

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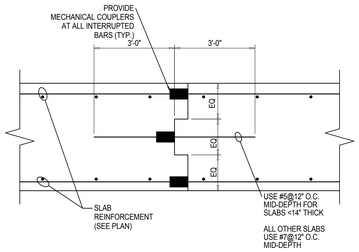
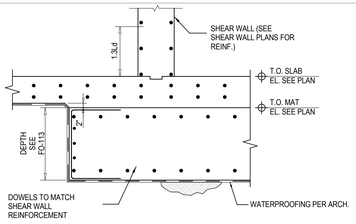
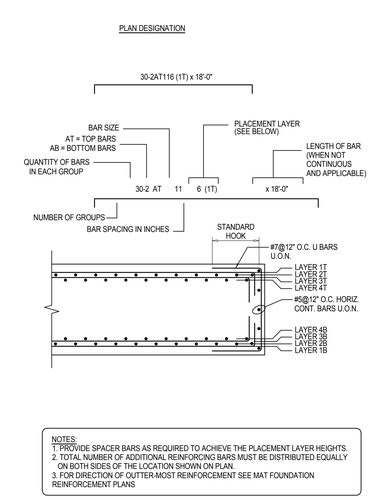


4 TYPICAL SLAB CONSTRUCTION JOINT DETAIL

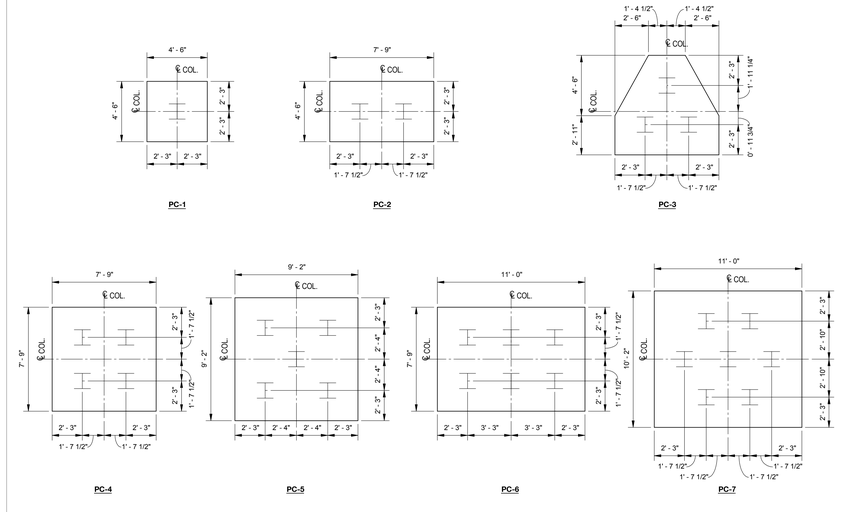


5 TYPICAL REINFORCING DETAIL AT SHEAR WALL MAT INTERFACE



NOTES:
1. PROVIDE SPACER BARS AS REQUIRED TO ACHIEVE THE PLACEMENT LAYER HEIGHTS.
2. TOTAL NUMBER OF ADDITIONAL REINFORCING BARS MUST BE DISTRIBUTED EQUALLY ON BOTH SIDES OF THE LOCATION SHOWN ON PLAN.
3. FOR DIRECTION OF OUTTER-MOST REINFORCEMENT SEE MAT FOUNDATION REINFORCEMENT PLANS

3 MAT REINFORCEMENT DETAIL



2 PILE CAP DETAILS

PILE CAP SCHEDULE					
MARK	SIZE	DEPTH	BOTTOM REINFORCING		REMARKS
			LONG WAY	SHORT WAY	
PC-1	4'-6" x 4'-6"	4'-0"	5 #9H	5 #9H	
PC-2	7'-9" x 4'-6"	4'-0"	7 #9H	12 #9H	
PC-3	SEE 3/FO-112	4'-0"	11 #9H	11 #9H	
PC-4	7'-9" x 7'-9"	4'-6"	8 #10H	8 #10H	
PC-5	9'-2" x 9'-2"	5'-0"	10 #9H	10 #9H	
PC-6	11'-0" x 7'-9"	5'-0"	8 #9H	11 #9H	
PC-7	10'-2" x 11'-0"	5'-6"	10 #9H	11 #9H	

"H" - USE HOOKED OR HEADED BARS

PROVIDE 6000PSI CONCRETE FOR PILE CAPS.

ALLOWABLE LATERAL CAPACITY TO BE VERIFIED BY FIELD LOAD TEST IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02350.

1 PILE CAP SCHEDULE

MATERIAL KEYING LEGEND:

10 TYPICAL REINFORCING DETAIL AT FOUNDATION WALL CORNERS

9 TYPICAL REINFORCING DETAIL AT SHEAR WALL CAP INTERFACE

NOTES:
1. INDICATES TIE DOWN ROCK ANCHOR WITH A REQUIRED DESIGN LOAD CAPACITY OF 150 KIPS. CONTRACTOR AND/OR GEOTECHNICAL ENGINEER MUST PROVIDE CALCULATIONS INDICATING THE SOCKET LENGTH OF ANCHOR REQ'D TO ACHIEVE REQ'D CAPACITY.

8 TYPICAL TIE DOWN ROCK ANCHOR DETAIL

7 TYPICAL PILE CAP DETAIL AT SLAB STEP

TYPICAL UNLESS TYPE B IS INDICATED ON PLAN

6 TYPICAL PILE CAP DETAIL

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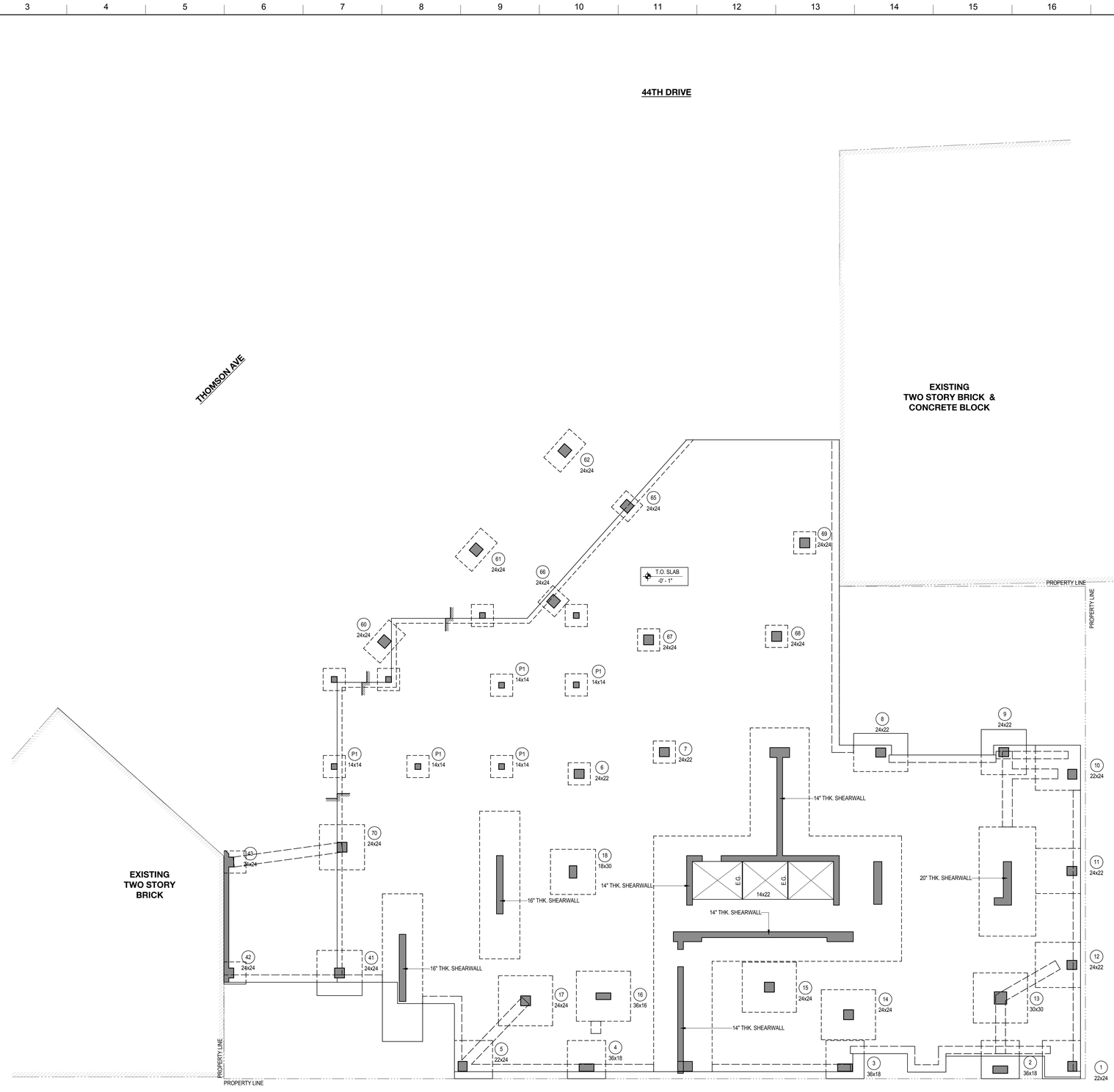

PURVES STREET

GROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

MATERIAL KEYING LEGEND:

TOP OF SLAB ELEVATION U.O.N.:	**SEE PLAN**
SLAB THICKNESS U.O.N.:	**10"**
CONCRETE STRENGTH:	**COLUMN / WALLS 8 ksi**
	SLAB / BEAMS 6 ksi

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
2. SEE FO-101 FOR FOUNDATION PLANS.
3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
5. SEE S-601 FOR TYPICAL MASONRY DETAILS.
6. "BM-XX x YY" INDICATES CONCRETE FLOOR BEAM.
7. "LB-XX x YY" - INDICATES CONCRETE LINK BEAM.
8. (W) - INDICATES COLUMN WALK.
9. (T) - INDICATES COLUMN TRANSFER.
10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.

DOB FILING	06.27.2014
DESIGN DEVELOPMENT	05.30.2014

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DRAWING TITLE:
GROUND FLOOR PLAN

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Date:	05/12/14
Scale:	1/8" = 1'-0"
Project No.:	13434
Cad File:	
Drawing No.:	S-201.00

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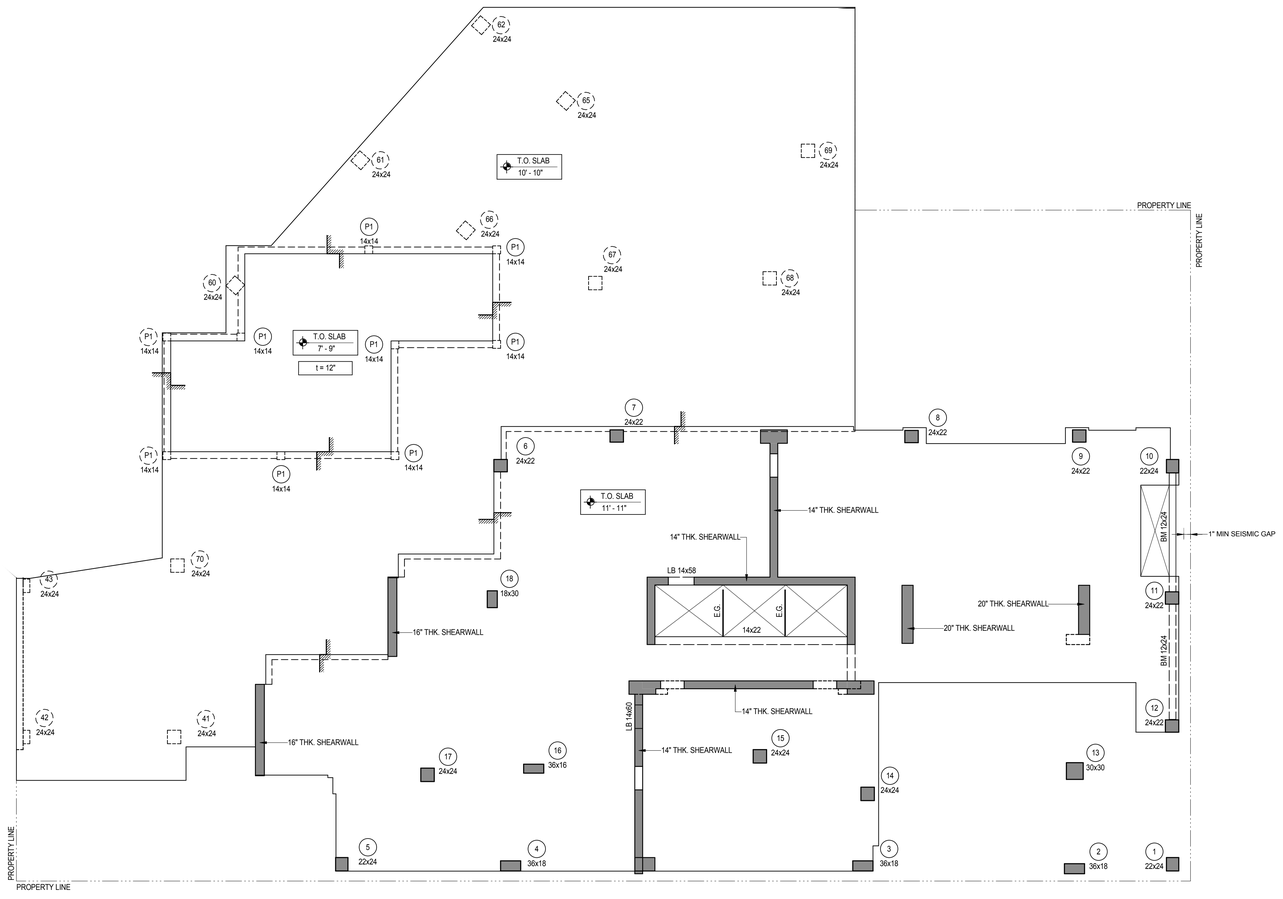

2ND FLOOR PLAN

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **12"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS. 2. SEE FO-101 FOR FOUNDATION PLANS. 3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS. 4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS. 5. SEE S-601 FOR TYPICAL MASONRY DETAILS. 6. 'BM-XX x YY' INDICATES CONCRETE FLOOR BEAM. 7. 'LB-XX x YY' - INDICATES CONCRETE LINK BEAM. 8. (W) - INDICATES COLUMN WALK. 9. (T) - INDICATES COLUMN TRANSFER. 10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.
CONCRETE STRENGTH: **COLUMN / WALLS 8 ksi** **SLAB / BEAMS 6 ksi**	

MATERIAL KEYING LEGEND:

NO.	REVISIONS | SUBMISSIONS	DATE
	DOB FILING	06.27.2014
	DESIGN DEVELOPMENT	05.30.2014

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DRAWING TITLE:
2ND FLOOR PLAN

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Reviewed:		Drawing No.:	
Date:	05/12/14		S-202.00
Scale:	1/8" = 1'-0"		SHEET 6 OF 14

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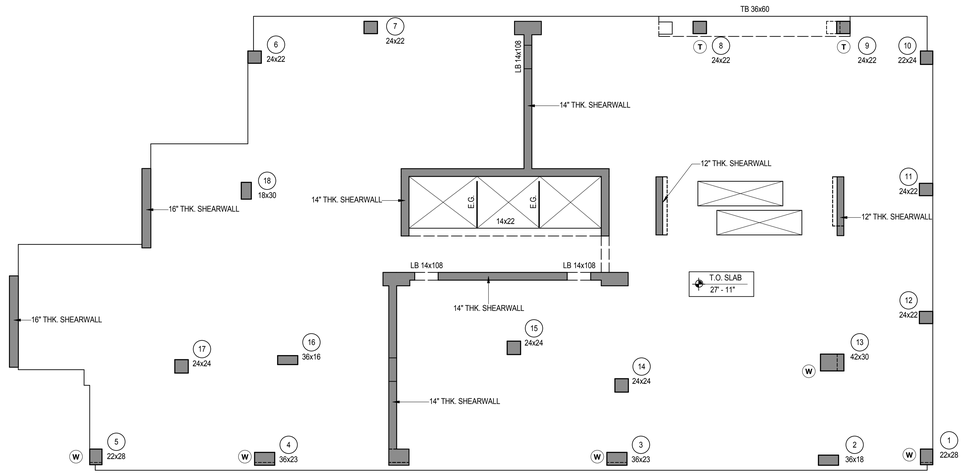

3RD FLOOR PLAN

SCALE: 1/8" = 1'-0"

MATERIAL KEYING LEGEND:

TOP OF SLAB ELEVATION U.O.N.:	**SEE PLAN**
SLAB THICKNESS U.O.N.:	**9"**
CONCRETE STRENGTH:	**COLUMN / WALLS 8 ksi**
	SLAB / BEAMS 6 ksi

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
2. SEE FO-101 FOR FOUNDATION PLANS.
3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
5. SEE S-601 FOR TYPICAL MASONRY DETAILS.
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10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.

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3RD FLOOR PLANS

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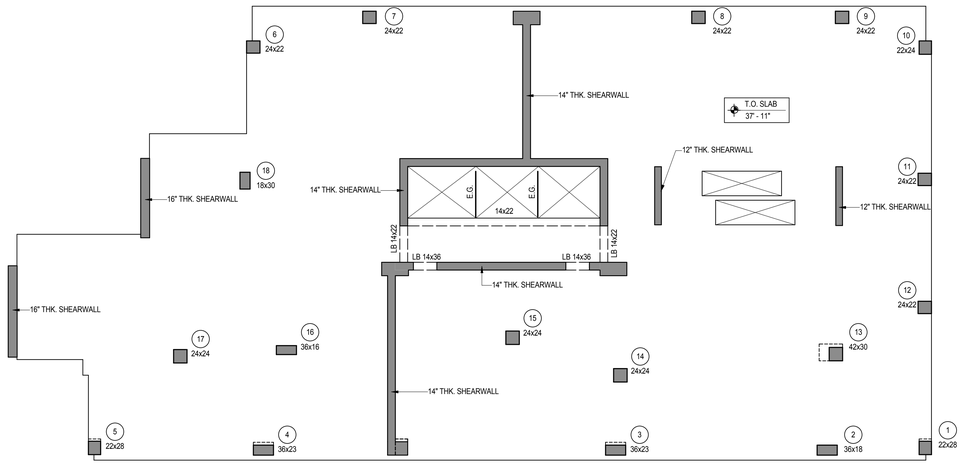
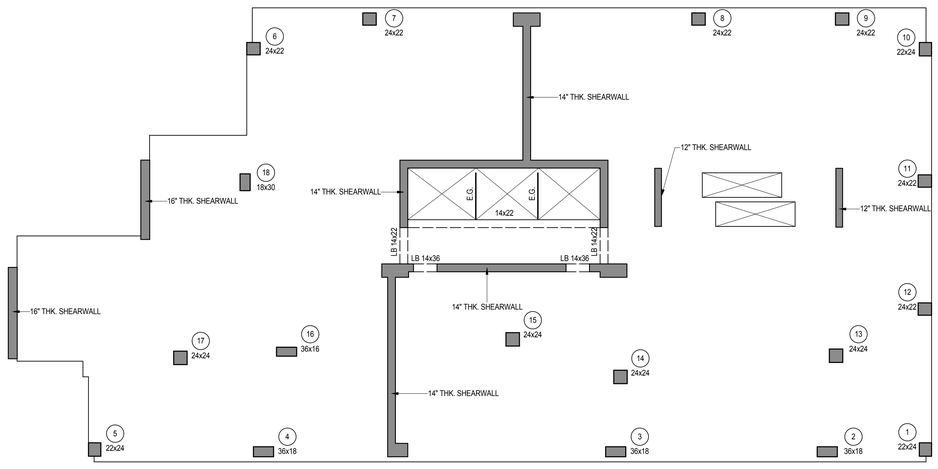


4TH FLOOR PLAN

SCALE: 1/8" = 1'-0"



5TH-14TH FLOOR PLAN

SCALE: 1/8" = 1'-0"

FLOOR ELEVATION 5TH - 14TH	
FLOORS	ELEVATION
5th Floor T.O.SL.	47' - 11"
6th Floor T.O.SL.	57' - 11"
7th Floor T.O.SL.	67' - 11"
8th Floor T.O.SL.	77' - 11"
9th Floor T.O.SL.	87' - 11"
10th Floor T.O.SL.	97' - 11"
11th Floor T.O.SL.	107' - 11"
12th Floor T.O.SL.	117' - 11"
13th Floor T.O.SL.	127' - 11"
14th Floor T.O.SL.	137' - 11"

TOP OF SLAB ELEVATION U.O.N.:

SEE PLAN & SCHEDULE

SLAB THICKNESS U.O.N.:

9"

CONCRETE STRENGTH:

COLUMN / WALLS 8 ksi

SLAB / BEAMS 6 ksi

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
2. SEE FO-101 FOR FOUNDATION PLANS.
3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
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4TH & 5TH - 14TH FLOOR PLANS

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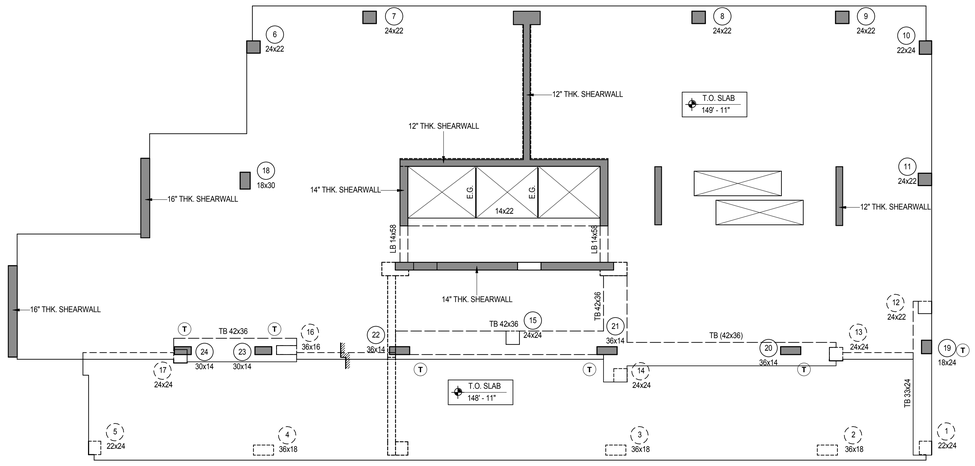
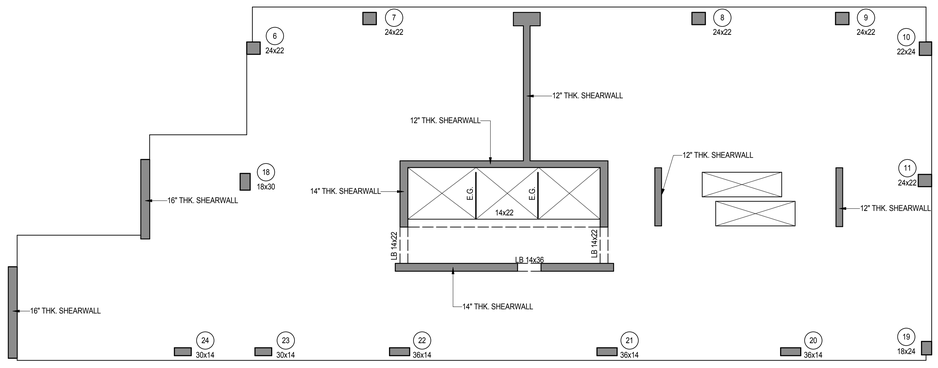


15TH FLOOR PLAN

SCALE: 1/8" = 1'-0"



16TH-32ND FLOOR PLAN

SCALE: 1/8" = 1'-0"

FLOOR ELEVATION 16TH - 32ND

FLOORS	ELEVATION
16th Floor T.O.SL.	159' - 11"
17th Floor T.O.SL.	169' - 11"
18th Floor T.O.SL.	179' - 11"
19th Floor T.O.SL.	189' - 11"
20th Floor T.O.SL.	199' - 11"
21st Floor T.O.SL.	209' - 11"
22nd Floor T.O.SL.	219' - 11"
23rd Floor T.O.SL.	229' - 11"
24th Floor T.O.SL.	239' - 11"
25th Floor T.O.SL.	249' - 11"
26th Floor T.O.SL.	259' - 11"
27th Floor T.O.SL.	271' - 11"
28th Floor T.O.SL.	281' - 11"
29th Floor T.O.SL.	291' - 11"
30th Floor T.O.SL.	301' - 11"
31st Floor T.O.SL.	311' - 11"
32nd Floor T.O.SL.	321' - 11"

TOP OF SLAB ELEVATION U.O.N.:

SEE PLAN

SLAB THICKNESS U.O.N.:

9"

CONCRETE STRENGTH:

COLUMN / WALLS:
15TH-30TH 7 ksi
31TH-32ND 6 ksi

SLAB / BEAMS:
15TH-30TH 6 ksi
31ST-32ND 5 ksi

DRAWING NOTES:

1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
2. SEE FO-101 FOR FOUNDATION PLANS.
3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
5. SEE S-601 FOR TYPICAL MASONRY DETAILS.
6. "BM-XX x YY" INDICATES CONCRETE FLOOR BEAM.
7. "LB-XX x YY" - INDICATES CONCRETE LINK BEAM.
8. (W) - INDICATES COLUMN WALK.
9. (T) - INDICATES COLUMN TRANSFER.
10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.

PROJECT NORTH
TRUE NORTH

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15TH & 16TH - 32ND FLOOR PLANS

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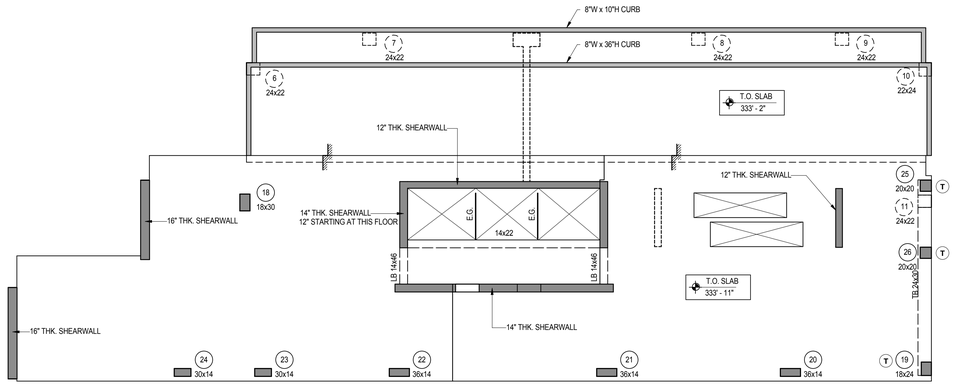
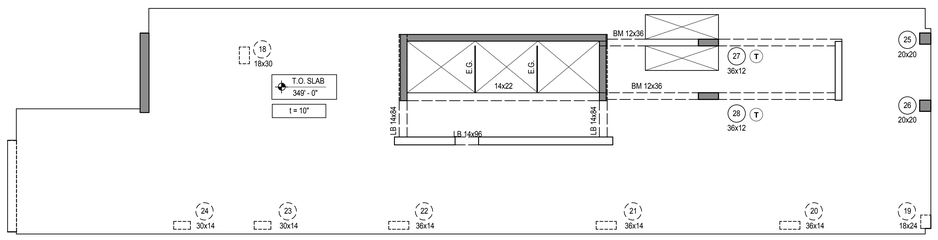


33RD FLOOR PLAN

SCALE: 1/8" = 1'-0"



LOW ROOF PLAN

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **9"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
CONCRETE STRENGTH: **COLUMN / WALLS 6 ksi**	2. SEE FO-101 FOR FOUNDATION PLANS.
SLAB / BEAMS 5 ksi	3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
	4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
	5. SEE S-601 FOR TYPICAL MASONRY DETAILS.
	6. 'BM-XX x YY' INDICATES CONCRETE FLOOR BEAM.
	7. 'LB-XX x YY' - INDICATES CONCRETE LINK BEAM.
	8. (W) - INDICATES COLUMN WALK.
	9. (T) - INDICATES COLUMN TRANSFER.
	10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.

PROJECT NORTH
TRUE NORTH

MATERIAL KEYING LEGEND:

NO.	REVISIONS | SUBMISSIONS	DATE
	DOB FILING	06.27.2014
	DESIGN DEVELOPMENT	05.30.2014

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DRAWING TITLE:

33RD & LOWER ROOF PLANS

Seal:

Drawn: Author
Checked: Checker
Reviewed:
Date: 05/12/14
Scale: 1/8" = 1'-0"

Project No.: 13434
Cad File:
Drawing No.:

S-233.00

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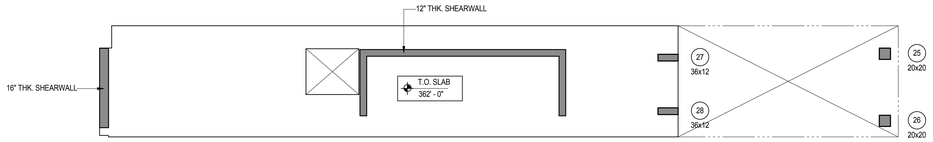
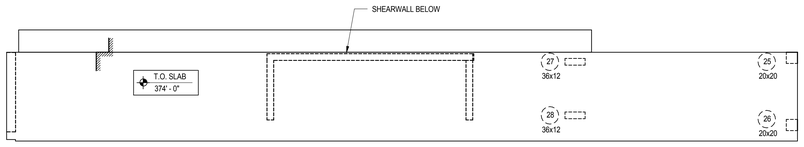


EMR PLAN

SCALE: 1/8" = 1'-0"



UPPER ROOF PLAN

SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION U.O.N.: **SEE PLAN**	**DRAWING NOTES:**
SLAB THICKNESS U.O.N.: **12"**	1. SEE S-001 FOR GENERAL NOTES, DRAWING INDEX, AND DESIGN CRITERIA/LOADS.
CONCRETE STRENGTH: **COLUMN / WALLS 6 ksi**	2. SEE FO-101 FOR FOUNDATION PLANS.
SLAB / BEAMS 5 ksi	3. SEE FO-110 SERIES DWGS. FOR FOUNDATION SECTIONS AND DETAILS.
	4. SEE 500 SERIES DWGS. FOR CONCRETE SECTIONS AND DETAILS.
	5. SEE S-601 FOR TYPICAL MASONRY DETAILS.
	6. 'BM-XX x YY' INDICATES CONCRETE FLOOR BEAM.
	7. 'LB-XX x YY' - INDICATES CONCRETE LINK BEAM.
	8. (W) - INDICATES COLUMN WALK.
	9. (T) - INDICATES COLUMN TRANSFER.
	10. CONTRACTOR TO LOCATE/VERIFY ALL THE SLAB OPENINGS FROM THE ARCHITECTURAL AND MEP DRAWINGS.

MATERIAL KEYING LEGEND:

PROJECT NORTH
TRUE NORTH

DOB FILING 06.27.2014
DESIGN DEVELOPMENT 05.30.2014

NO. REVISIONS | SUBMISSIONS DATE

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DRAWING TITLE:

EMR & UPPER ROOF PLANS

Seal:

Drawn: Author
Checked: Checker
Reviewed:
Date: 05/12/14
Scale: 1/8" = 1'-0"

Project No.: 13434
Cad File:
Drawing No.:

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LEVEL \ COLUMN	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		41	42	43
36TH UPPER ROOF																									20x20 12" SW #3@12"	20x20 12" SW #3@12"	36x12 12" SW #4@12"	36x12 12" SW #4@12"						
35TH EMR FLOOR																											36x12 12" SW #4@12"	36x12 12" SW #4@12"						
34TH LOW ROOF																																		
33RD FLOOR											TRANSFER																TRANSFER TO SW	TRANSFER TO SW						
32ND FLOOR						24x22 24" SW #4@12"	24x22 24" SW #4@12"	24x22 12" SW #4@12"	24x22 12" SW #4@12"	22x24 24" SW #4@12"	24x22 24" SW #4@12"							18x30 24" SW #4@12"	18x24 24" SW #4@12"	36x14 12" SW #4@12"	36x14 12" SW #4@12"	30x14 24" SW #4@12"	30x14 24" SW #4@12"	25x20 24" SW #4@12"	25x20 12" SW #4@12"								
31ST FLOOR																									TRANSFER TO 11	TRANSFER TO 11 & 19								
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15TH FLOOR	TRANSFER											TRANSFER	TRANSFER	TRANSFER	TRANSFER	TRANSFER	TRANSFER		18x24 24" SW #4@12"	36x14 12" SW #4@12"	36x14 12" SW #4@12"	30x14 24" SW #4@12"	30x14 24" SW #4@12"											
14TH FLOOR	22x24 12" SW #3@12"	36x18 12" SW #3@12"	30x18 12" SW #3@12"	36x18 12" SW #3@12"	22x24 12" SW #3@12"							24x22 12" SW #3@12"	30x30 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	36x18 12" SW #3@12"	24x24 12" SW #3@12"		TRANSFER TO 1 & 12	TRANSFER TO 13 & 14	TRANSFER TO 14 & 15	TRANSFER TO SW	TRANSFER TO 16 & 17	TRANSFER TO 16 & 17										
13TH FLOOR																																		
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6TH FLOOR																																		
5TH FLOOR																																		
4TH FLOOR																																		
3RD FLOOR	COLUMN WALK		COLUMN WALK	COLUMN WALK	COLUMN WALK			TRANSFER	TRANSFER																								
2ND FLOOR																																24x24 24" SW #3@12"		
1ST FLOOR	22x24 12" SW #3@12"	36x18 12" SW #3@12"	30x18 12" SW #3@12"	36x18 12" SW #3@12"	22x24 12" SW #3@12"	24x22 24" SW #3@12"	24x22 12" SW #3@12"	24x22 12" SW #3@12"	24x22 12" SW #3@12"	22x24 24" SW #3@12"	24x22 24" SW #3@12"	24x22 12" SW #3@12"	30x30 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	36x18 12" SW #3@12"	24x24 12" SW #3@12"	18x30 24" SW #3@12"												24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"
FOUNDATION																																		
LEVEL \ COLUMN	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		41	42	43

LEVEL \ COLUMN	60	61	62	63	64	65	66	67	68	69	70		P1
36TH UPPER ROOF													
35TH EMR FLOOR													
34TH LOW ROOF													
33RD FLOOR													
32ND FLOOR													
31ST FLOOR													
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5TH FLOOR													
4TH FLOOR													
3RD FLOOR													
2ND FLOOR	24x24 24" SW #3@12"				24x24 24" SW #3@12"								
1ST FLOOR	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"	24x24 12" SW #3@12"		14x14 24" SW #3@12" (10 LOCATIONS)
FOUNDATION													
LEVEL \ COLUMN	60	61	62	63	64	65	66	67	68	69	70		P1

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COLUMN SCHEDULE

Seal:

Drawn: Author
Checked: Checker
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Project No.: 13434
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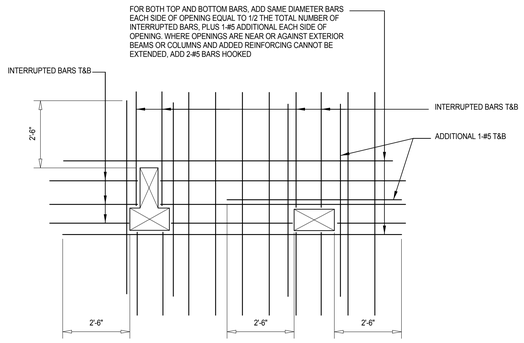
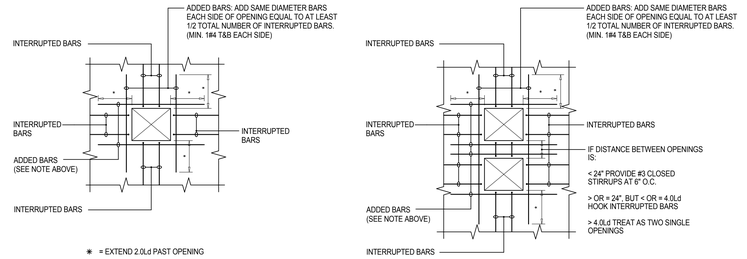


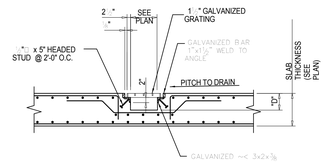
5 **TYPICAL BATHROOM OPENING DETAIL**



NOTES:

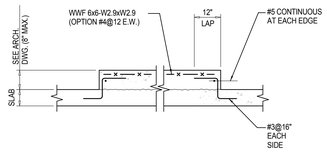
1. HOOK ALL INTERRUPTED BARS.
2. OMIT ADDED BARS IF STANDARD BAR SPACING CAN BE PLACED ON EITHER SIDE OF THE OPENING
3. WHERE OPENINGS ARE NEAR OR AGAINST EXTERIOR BEAMS OR COLUMNS AND ADDED REINFORCEMENT CANNOT BE EXTENDED 2.0Ld, HOOK ADDED BARS.

3 **TYPICAL DETAIL OF REINFORCEMENT AT OPENING IN SLAB**
TYPICAL UNLESS SHOWN OTHERWISE OTHERWISE ON PLANS

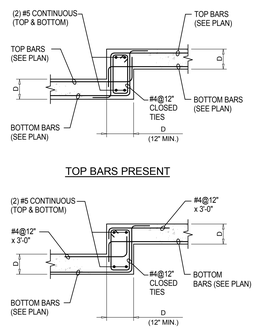


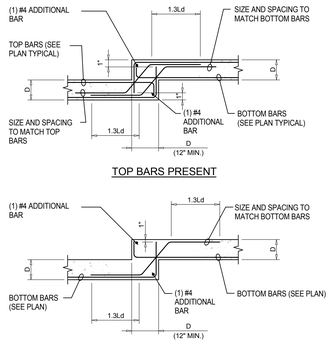
1 **TYPICAL SECTION AT TRENCH DRAIN**

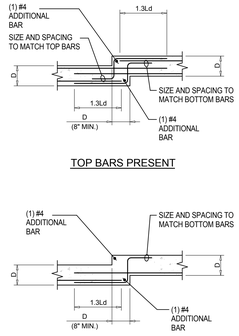
MATERIAL KEYING LEGEND:

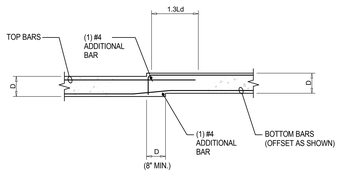


10 **TYPICAL HOUSEKEEPING PAD DETAIL**

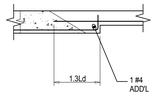




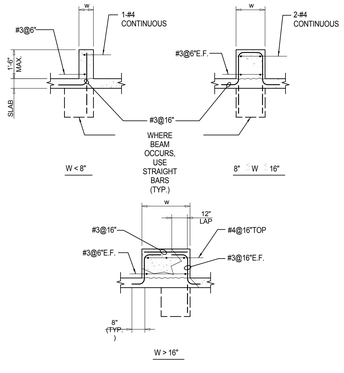




9 **TYPICAL SLAB DROP DETAILS**



12 **TYPICAL DETAIL OF CHANGE IN SLAB THICKNESS**



11 **TYPICAL CONCRETE CURB DETAILS**

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TYPICAL CONCRETE DETAILS

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Drawn: Author
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Date: 05/29/14
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Project No.: 13434
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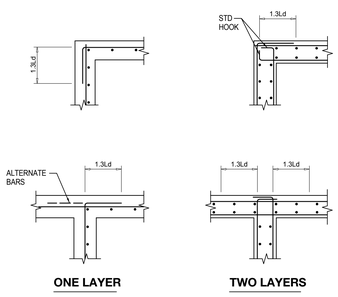
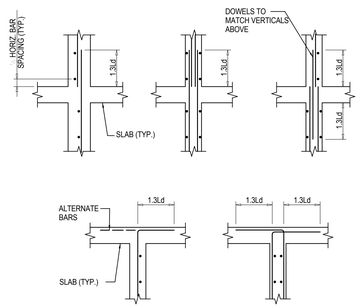
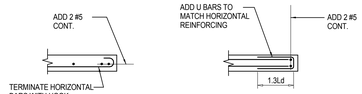


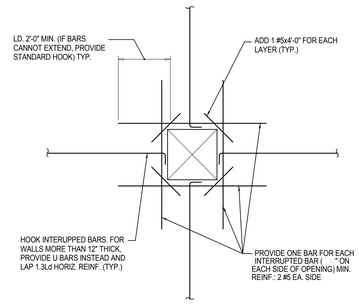
5 TYPICAL WALL INTERSECTION DETAILS



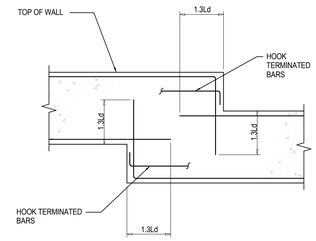
4 TYPICAL WALL-SLAB INTERSECTION DETAILS



3 TYPICAL WALL END DETAILS

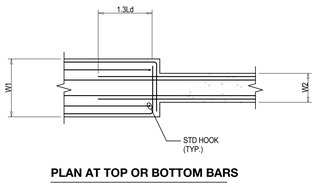


2 TYPICAL REINFORCEMENT AT WALL OPENING



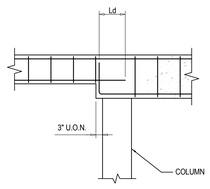
1 TYPICAL REINFORCEMENT DETAILS AT STEPS IN TOP OR BOTTOM OF WALL

MATERIAL KEYING LEGEND:

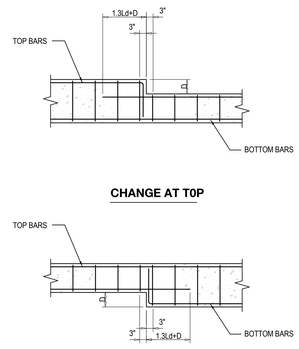


PLAN AT TOP OR BOTTOM BARS

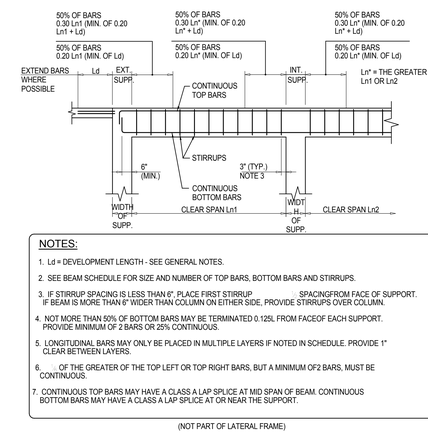
9 TYPICAL DETAIL OF CHANGE OF BEAM WIDTH



8 TYPICAL DETAIL OF CHANGE IN BEAM DEPTH AT COLUMN



7 TYPICAL DETAIL OF CHANGE IN BEAM DEPTH BETWEEN SUPPORTS

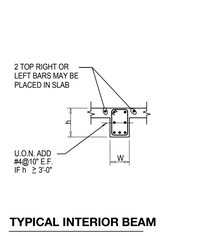


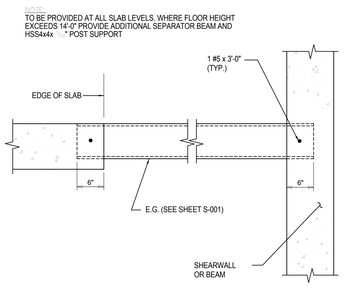
NOTES:

1. Ld = DEVELOPMENT LENGTH - SEE GENERAL NOTES.
2. SEE BEAM SCHEDULE FOR SIZE AND NUMBER OF TOP BARS, BOTTOM BARS AND STIRRUPS.
3. IF STIRRUP SPACING IS LESS THAN 6", PLACE FIRST STIRRUP SPACINGFROM FACE OF SUPPORT. IF BEAM IS MORE THAN 6" WIDER THAN COLUMN ON EITHER SIDE, PROVIDE STIRRUPS OVER COLUMN.
4. NOT MORE THAN 50% OF BOTTOM BARS MAY BE TERMINATED 0.125L FROM FACEOF EACH SUPPORT. PROVIDE MINIMUM OF 2 BARS OR 25% CONTINUOUS.
5. LONGITUDINAL BARS MAY ONLY BE PLACED IN MULTIPLE LAYERS IF NOTED IN SCHEDULE. PROVIDE 1" CLEAR BETWEEN LAYERS.
6. OF THE GREATER OF THE TOP LEFT OR TOP RIGHT BARS, BUT A MINIMUM OF2 BARS, MUST BE CONTINUOUS.
7. CONTINUOUS TOP BARS MAY HAVE A CLASS A LAP SPLICE AT MID SPAN OF BEAM. CONTINUOUS BOTTOM BARS MAY HAVE A CLASS A LAP SPLICE AT OR NEAR THE SUPPORT.

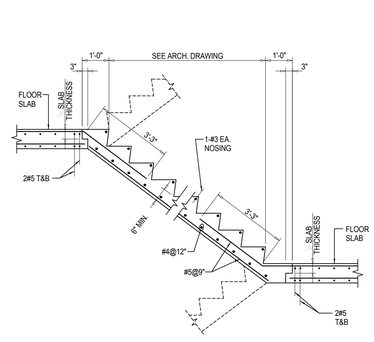
(NOT PART OF LATERAL FRAME)

6 TYPICAL CONCRETE BEAM DETAIL

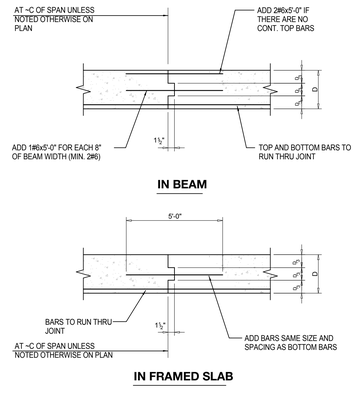




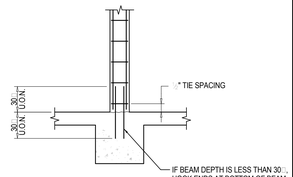
13 TYPICAL ELEVATOR SEPARATOR BEAM DETAIL



12 TYPICAL STAIR DETAIL



11 TYPICAL CONSTRUCTION JOINT DETAILS



NOTE:
SEE TYPICAL COLUMN DETAIL FOR ADD'L. INFORMATION.

10 TYPICAL DETAIL COLUMN SUPPORTED BY CONCRETE BEAM

DOB FILING	06.27.2014
DESIGN DEVELOPMENT	05.30.2014

NO. REVISIONS | SUBMISSIONS DATE

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44-30 Purves Street

DRAWING TITLE:
TYPICAL CONCRETE DETAILS

Seal:

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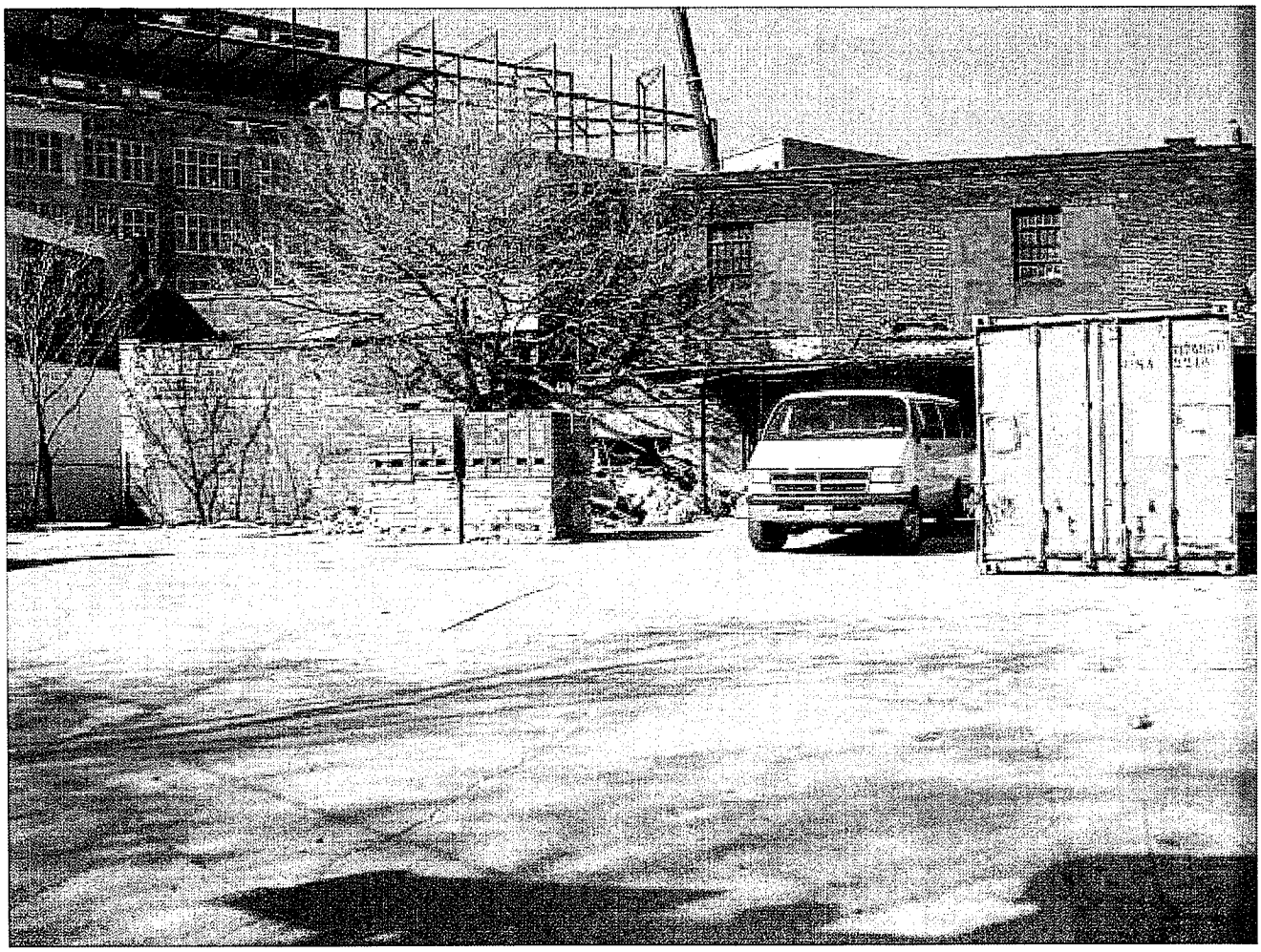
APPENDIX B
PREVIOUS REPORTS

MIDDLETON ENVIRONMENTAL, INC.
Environmental Consultants and Engineers

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Property located at 4426/30 Purves Street

In Long Island City, New York



Prepared for Weiss and Company

April 26, 2006

50 PARK AVENUE, BABYLON, NY 11702
631 321-4300 • FAX: 631 321-4349 • middletonenvironmental.com

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A. EXECUTIVE SUMMARY:

The subject site is located at 4426/30 Purves Street in Long Island City, New York. The site is approximately .17 acres in size and is vacant land (no buildings on the site).

It was determined from the physical site inspection, records review and interviews that there were recognized environmental conditions with regard to the subject site. Recognized environmental conditions are those conditions that could adversely affect the environmental integrity of the property.

There were no oil fill ports or fuel vents noticed on the subject site (such ports or vents could indicate the presence of an underground storage tank on the site). A review of the New York City Fire Department (NYCFD), storage tank files and New York State Department of Environmental Conservation's (NYSDEC), Petroleum Bulk Storage Tank database did not indicate the presence of any underground storage tanks on the site. A review of available Sanborn Fire Insurance Maps did not indicate the presence of any underground storage tanks on the site.

There were no above ground storage tanks or any above ground electrical transformers noticed on the site. There were several small piles of miscellaneous debris and construction/demolition debris noticed on the site. There were also two (2) 55 gallon drums noticed on this site. It is recommended that these drums and piles of debris be removed from the site prior to any planned construction activities on the property. There were no signs of improper disposal of fill material or any signs of stressed vegetation or soil contamination noticed on the subject site. There were no signs of friable Presumed Asbestos Containing Material (PACM), noticed on the subject site (given the fact that there are no buildings on the site the potential for asbestos exposure is negligible).

There were no signs of wetlands observed on the east side of the property. There were no outside above ground storage tanks noticed on the subject site. There were no signs of stressed vegetation or soil contamination noticed on the subject site.

It is the opinion of Middleton Environmental Incorporated that no further testing (subsurface or otherwise), is required on the subject site.

B. INTRODUCTION:

1. Purpose;

The general purpose of this Phase I Environmental Site Assessment is to determine whether or not the property is subject to certain recognized environmental conditions that may affect property use or increase the risk of liability exposure associated with the property. Recognized environmental conditions include the presence or possible presence of hazardous substances or petroleum related products that indicate an existing release, past release, or a significant threat of a release into structures on the property, into the ground, groundwater or surface water. Recognized environmental conditions can include past uses, disposal practices, spills, off-site contamination, and regulatory compliance.

The findings and conclusions of this report can be found in Sections F. Sections C, D, E describe the property, reviews records related to the property and contains information gathered during site reconnaissance and interviews. MEI Phase I Site Assessments are prepared by environmental professionals, supervised by Professional Engineers. Signatures and qualification statements can be found in Sections G and H of this report.

2. Limiting Conditions and Methodology Utilized;

The limiting conditions and methodology used in preparing this Phase I Environmental Site Assessment Report are those contained in ASTM Standard E1527-00. This practice does not address requirements of any state or local laws or any federal laws other than the appropriate inquiry provisions of CERCLA's "Innocent Landowner Defense". Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance.

The report is not, and should not be construed as, a guaranty, warranty, or certification of the presence or absence of any toxic substances, (which can be made only with testing), and contains no formal plans or recommendations to rectify or remediate the presence of any toxic substances, (which may be subject to regulatory approval). No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice under ASTM Standards is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property.

Except for acts and omissions by Middleton Environmental Incorporated (MEI), or its employees which are shown to be grossly negligent and which represent intentional misconduct, Weiss and Company has agreed, to the maximum extent permitted by law, to hold harmless and indemnify MEI from and against any and all claims and liabilities arising in respect to the Environmental Site Assessment performed by MEI on behalf of Weiss and Company All liability on the part of MEI shall be limited solely to the cost of this report. MEI shall have no liability for any other damages, whether consequential, compensatory, punitive, or special arising out of, incidental to, or as a result of this report. MEI assumes no liability for the use of this report by any person or entity other than the client for whom the report was prepared.

C. SITE INFORMATION:

1. Location and Legal Description;

The subject site is located at 4426/30 Purves Street in Long Island City, New York (Block 268 Lots 24, 25 and 26). The site is approximately .17 acres in size is zoned for industrial usage.

2. Site and Vicinity Characteristics;

The property site and vicinity characteristics listed below were analyzed utilizing a current USGS 7.5 Minute Topographic Map. This information is useful in determining the grade and topography of the subject site. It was determined that the property is primarily flat and there were no slopes, depressions or rolling hills observed on the subject site. The site has been graded for commercial usage and slopes on the subject site range from 0 to 3 percent. The groundwater flow beneath the subject site is in a generally southwesterly direction as obtained from groundwater contour maps developed by the United States Geologic Survey (USGS Groundwater Flow and USGS Contour Map).

3. Information Reported by User Regarding Environmental Liens or Specialized Knowledge or Experience;

No information concerning any environmental liens that may be currently recorded against the property was reported to MEI. Moreover, no specialized knowledge or experience related to recognized environmental conditions at the property was reported to MEI prior to site examination.

4. Current Uses of the Property;

The current use of the property is vacant. The site is approximately .17 acres in size and is vacant land (no buildings on the site).

5. Historical Usage of the Property;

A review of all reasonably ascertainable standard historical sources from the present to 1900 was conducted in order to identify any prior use of the property or adjoining properties that could lead to the presence of recognized environmental conditions that may adversely affect the property. A review of available Sanborn Fire Insurance Maps indicated that the site originally contained three (3) dwellings that were constructed prior to 1898 and were demolished between 1950 and 1936. The 1950 Sanborn Fire Insurance Map indicated that there were three (3) small buildings on the site that were utilized by a controller manufacturing company, a pine chemical company, an air freight company and these buildings were demolished prior to 1970. The property has been vacant since that time.

6. Current and Past Uses of the Surrounding Properties;

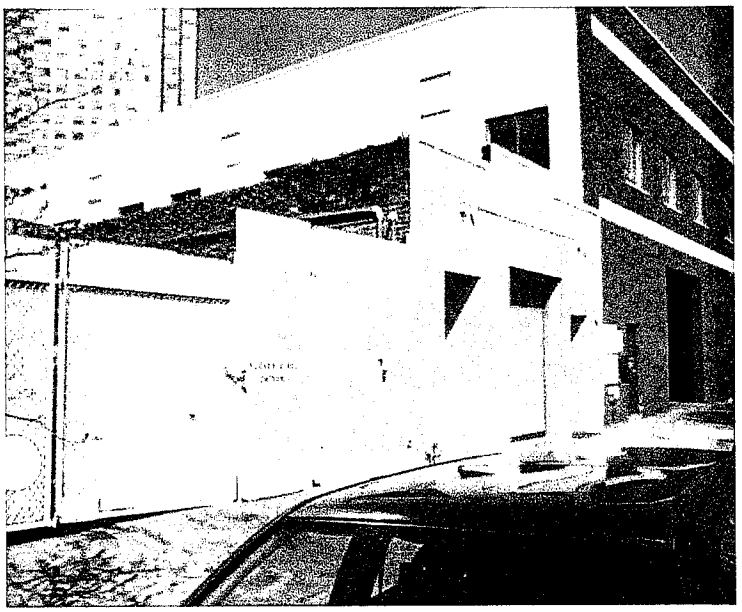
The past and current use of the adjoining properties is industrial. The property is bordered on all sides oy industrial properties. The site borders are as follows:

North - The property is bordered to the north by a vacant lot and a welding company building.

South - The property is bordered to the south by a vacant industrial building.

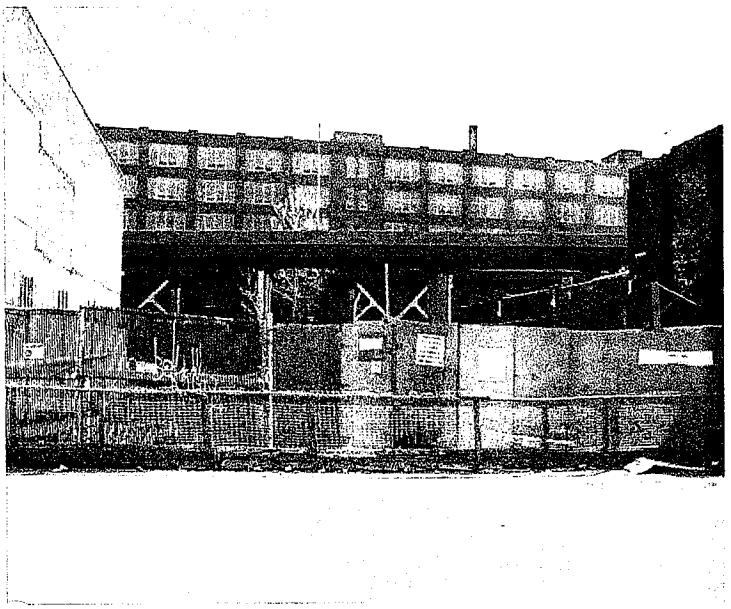
East - The property is bordered to the east by Purves Street and a building under construction.

West - The property is bordered to the west by an automobile repair facility.



BORDER TO THE NORTH

BORDER TO THE SOUTH



BORDER TO THE EAST

BORDER TO THE WEST

7. General Description of Structure;

A. Improvements;

The subject site is located at 4426/30 Purves Street in Long Island City, New York. The site is approximately .17 acres in size and is vacant land (no buildings on the site).

B. Heating and Cooling System;

There are no buildings on the site and no heating systems.

C. Roads;

The subject site is entered via Purves Street that is located to the east of the site.

D. Potable Water Supply;

There is no potable water supply to the subject site.

E. Sewage Disposal;

There are no sanitary disposal systems on the subject site.

D. RECORD REVIEW:

1. Standard Environmental Record Source, Federal and State;

In preparing this Phase I Environmental Site Assessment Report the following reasonably ascertainable standard environmental record sources were reviewed. Search radii are those that are suggested under ASTM 1527-00.

Federal NPL Site List (Federal Superfund)	-	*Within 1 mile*
Federal RCRA-TSD List (Treatment, Storage or Disposal facilities)	-	*Within 1 mile*
Federal CERCLIS List	-	*Within 1/2 mile*
Federal RCRA Hazardous Waste Generators List	-	*Site & Surrounding Sites*
State List of Inactive Hazardous Waste Disposal Sites	-	*Within 1 mile*
State Leaking Underground Storage Tank (LUST) List	-	*Within 1/2 mile*
State Landfill Site List	-	*Within 1/2 mile*
Local Department of Health Records (if accessible for Underground Storage Tanks and Environmental Data)	-	*Subject Site*
Local Sources	-	*Fire Department, Building Department, Water/Electric/Utility Company*

2. Summary of Environmental Records Review:

NPL;

The National Priorities List did not indicated the presence of any USEPA confirmed hazardous waste facilities within a mile radius of the subject site.

RCRA-TSD;

There were no USEPA RCRA-TSD (Treatment, Storage or Disposal), facilities within a half radius of the subject site.

CERCLIS;

The USEPA CERCLIS (Comprehensive Environmental Responsibility Cleanup Liability Information Systems), database did not indicate the presence of any treatment, storage or disposal facilities within a half mile radius of the subject site.

RCRA HAZARDOUS WASTE GENERATORS LIST;

Neither the subject site nor any of the surrounding sites were identified as RCRA Hazardous Waste Generators.

STATE HAZARDOUS WASTE SITES;

There were six (6) New York State Department of Environmental Conservation Inactive Hazardous Waste Sites within a mile radius of the subject site (National Rubber Adhesives site at 38-31 9th Street, the Amtrak Sunnyside Yard at 39-39 Honeywell Street, Roehr Chemicals at 52-30 37th Street, Standard Motor Products site at 37-18 Northern Boulevard, Quanta Resources at 37-80 Review Avenue and Manhattan Adhesives at 425 Greenpoint Avenue). None of these sites would have an apparent adverse impact on the site based upon the distance to the site and direction of groundwater flow.

STATE HAZARDOUS SUBSTANCE WASTE DISPOSAL SITE STUDY:

A review of the NYSDEC Hazardous Substance Waste Disposal Site Study did not indicate the presence of any known or suspected hazardous waste sites within a half mile radius of the subject site.

STATE LEAKING UNDERGROUND STORAGE TANK DATABASE (LUST)/SPILL LIST:

The NYSDEC Spill Information System Database was searched in order to ascertain whether any spill incidents or leaking underground storage tank (LUST), sites were reported within a half mile radius of the subject site. The search indicated that there have not been any reported incidents with regard to the subject site (property located at 44-30 Purves Street in Long Island City, New York). The search indicated that there were forty (40) leaking underground storage tank sites within a half mile radius of the subject site. The nearest site was located at 42-64 Hunter Street (.12 of a mile northeast of the site). This site has been remedied and the spill file for this incident has been closed. Neither this site nor any of the other LUST sites would have an adverse impact on the subject site (see Environmental Data section in appendix information regarding the above referenced LUST sites).

STATE LANDFILL SITE LIST:

The NYSDEC Landfill List did not indicate the presence of any known or suspected landfill sites within a half mile radius of the subject site.

NEW YORK CITY FIRE DEPARTMENT/NYSDEC PETROLEUM BULK STORAGE DATABASE (PBS):

A review of the NYCFD storage tank files and New York State Department of Environmental Conservation (NYSDEC) PBS database did not indicate the presence of any registered storage tanks on the site (underground or above ground).

E. INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS:

The purpose of site reconnaissance is to identify any recognized environmental conditions that could adversely affect the property. Mr. Donald J. Middleton Jr. conducted the site reconnaissance on April 13, 2006. The site and the periphery of the site were inspected visually and physically.

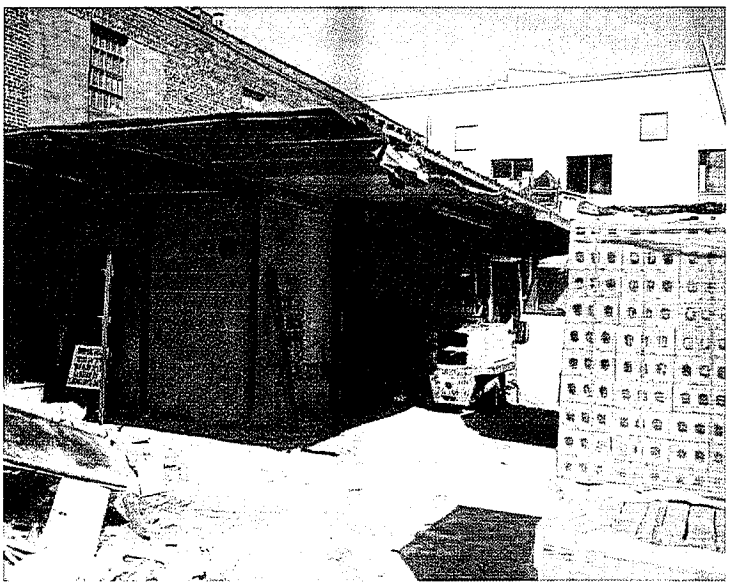
1. Physical Site Inspection;

The subject site is located at 4426/30 Purves Street in Long Island City, New York. The site is approximately .17 acres in size and is vacant land (no buildings on the site).

The first area examined was the outside grounds. There were no oil fill ports or fuel vents noticed on the subject site (such ports or vents could indicate the presence of an underground storage tank on the site). A review of the New York City Fire Department (NYCFD), storage tank files and New York State Department of Environmental Conservation's (NYSDEC), Petroleum Bulk Storage Tank database did not indicate the presence of any underground storage tanks on the site. A review of available Sanborn Fire Insurance Maps did not indicate the presence of any buried tanks on the site.

There were no above ground storage tanks or any above ground electrical transformers noticed on the site. There were several small piles of miscellaneous debris and construction/demolition debris noticed on the site. There were also two (2) 55 gallon drums noticed on this site. It is recommended that these drums and piles of debris be removed from the site prior to any planned construction activities on the property. There were no signs of improper disposal of fill material or any signs of stressed vegetation or soil contamination noticed on the subject site. There were no signs of friable Presumed Asbestos Containing Material (PACM), noticed on the subject site (given the fact that there are no buildings on the site the potential for asbestos exposure is negligible).

There were no signs of wetlands observed on the east side of the property. There were no outside above ground storage tanks noticed on the subject site. There were no signs of stressed vegetation or soil contamination noticed on the subject site.



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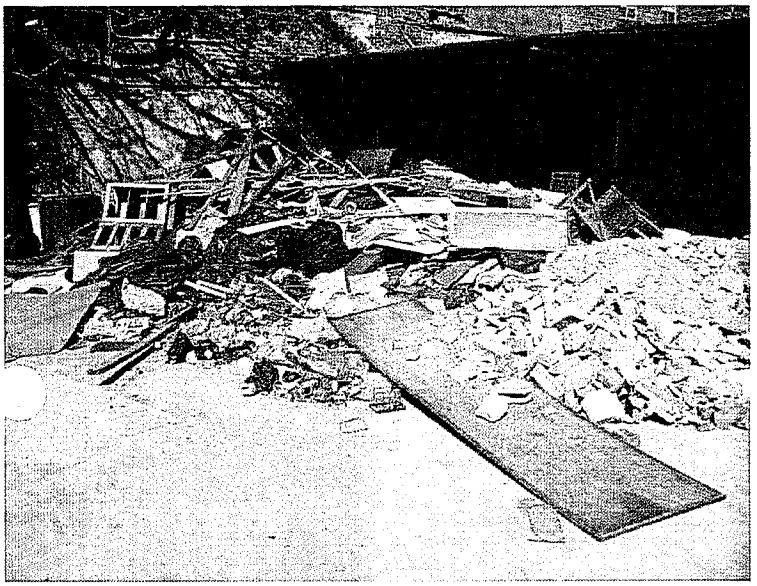

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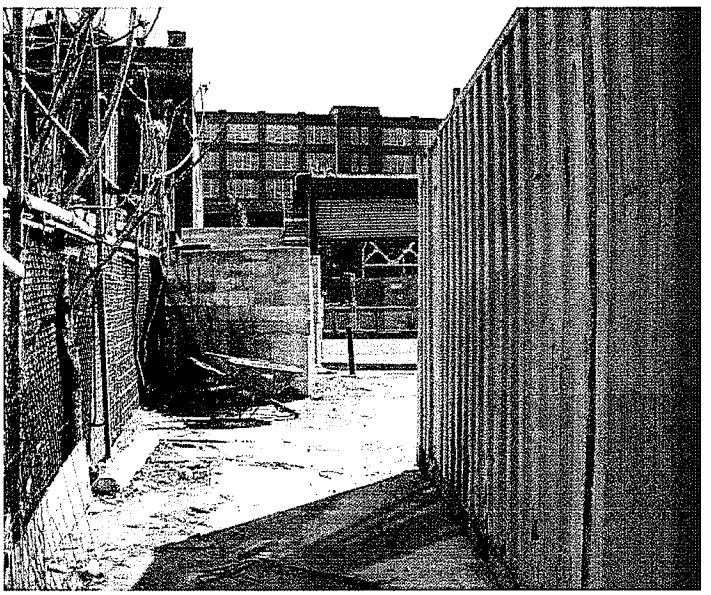


SITE AREA

DEBRIS ON SITE AREA

2. Current Uses of the Property:

The current uses are not likely to involve the use, treatment, disposal or generation of hazardous substances or petroleum products.

3. Past Uses of the Property:

To the extent that indications of past uses of the property were visually or physically observed on the site visit, or were identified in the interviews or records review, the past uses were not likely to involve the use, treatment, storage, disposal or generation of hazardous substances or petroleum products. However, there were two (2) small buildings on the site between 1950 and 1970 that were utilized by a small controller manufacturing facility and by a pine chemical company. No determination regarding the usage, storage or disposal of hazardous wastes while these facilities were in operation could be made.

4. Presumed Asbestos Containing Material (PACM):

There were no signs of friable PACM noticed on the subject site.

5. Above Ground Tanks:

There were no above ground storage tanks noticed on the subject site.

6. PCB's:

There were no above ground electrical transformers noticed on the subject site.

7. Drums (Interior or Exterior);

There were also two (2) 55 gallon drums noticed on this site. It is recommended that these drums and piles of debris be removed from the site prior to any planned construction activities on the property.

8. Pavement Stains or Corrosion;

There were no signs of severe staining or corrosion on any floors on the subject site.

9. Pools of Liquid;

There were no unusual pools of liquid or sheens detected on the subject site.

10. Odors;

There were no strong, pungent or noxious odors with regard to the subject site.

11. Interior Wall Coverings (if Lead Based Paint is an issue);

There are no buildings on the subject site and lead based paint is not a concern.

12. Radon;

Radon is a colorless, odorless, radioactive gas. Radon comes from the natural decay of uranium that is found in nearly all soils. Radon typically moves through the ground and into building through cracks and openings in the foundation. The USEPA has developed a "Map of Radon Zones" indicating the levels of radon concentrations from testing and aerial surveys conducted in all counties in New York State. It was determined that Kings County was designated as "Zone 3" areas where the concentrations are the lowest in the state (see "Map of Radon Zones" in Appendix for more information).

13. Underground Storage Tanks;

There were no oil fill ports or fuel vents noticed on the subject site (such ports or vents could indicate the presence of an underground storage tank on the site). A review of the New York City Fire Department (NYCFD), storage tank files and New York State Department of Environmental Conservation's (NYSDEC), Petroleum Bulk Storage Tank database did not indicate the presence of any underground storage tanks on the site. A review of available Sanborn Fire Insurance Maps did not indicate the presence of any buried tanks on the site.

14. Solid Wastes;

All solid wastes generated on-site are carted away by a licensed waste hauler to an approved solid waste facility and are not disposed on-site. There were no areas on site that appeared to be filled or graded by non-natural causes. There were several small piles of demolition debris noticed on the site and it is recommended that these piles be removed from the site prior to any planned construction activities on the property.

15. Stressed Vegetation or Stained Soil;

There were no signs of stressed vegetation or stained soil noticed on the subject site.

16. Sumps, Pits, Ponds, Lagoons or Wetlands;

There were no visible sumps, pits, ponds, lagoons or wetlands noticed on the subject site.

17. Waste Water;

There were no signs of improper disposal of waste water into drains, ditches or streams on the site.

18. Wells;

There were no irrigation wells or any groundwater monitoring wells noticed on the site.

19. Underground Injection Control (floor drains or interior drywells);

The Federal Environmental Protection Agency Underground Injection Control (UIC) Program is Congressionally mandated under the Safe Drinking Water Act. The UIC Program is designed to prevent any contamination of underground sources of drinking water by any man-made well, drywell or other subsurface hole that is deeper than its largest surface dimension. Generally, State and local regulatory programs implement UIC. Currently, regulatory efforts are concentrating on testing and sealing floor drains in industrial, automobile repair and dry cleaning facilities. It is expected that this initial focus will expand in the near future to include other facilities, drywells, etc.. There were no areas on the subject site that would be subject to immediate UIC Protocol.

20. Possibility of Migrating Hazardous Substances;

Due to the distance, groundwater flow direction and nature of the contamination, the nearest known identified hazardous waste site was not judged to have the potential for adversely impacting the subject site.

21. Additional Concerns;

There were no additional concerns with regard to the subject site.

22. Interviews;

The following persons were interviewed with regard to the subject site.

1. *Dani Weiss – Potential buyer of the property (for site inspection)*
2. *Paul Richards – New York City Department of Assessment (for property information)*
3. *Lisa Horsley – New York City Fire Department (for storage tank information)*

F. FINDINGS AND CONCLUSIONS:

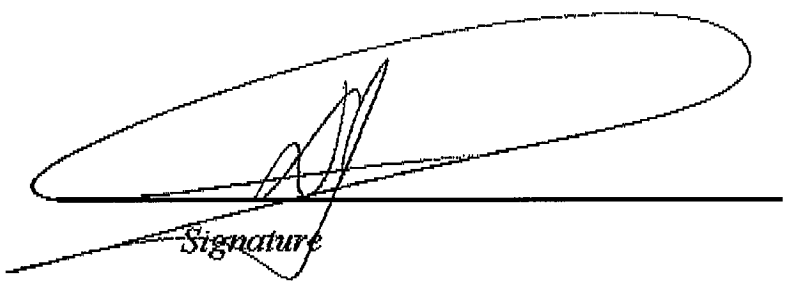
We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527 on the property located at 4426/30 Purves Street in Long Island City, New York. This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

The site reconnaissance, interviews and review of records have not found the presence or possible presence of hazardous substances or petroleum related products that could indicate an existing release, past release or significant threat of a release into structures on the property, into ground, groundwater or surface water.

It is the opinion of Middleton Environmental Incorporated that no further testing (subsurface or otherwise), is required on the subject site. However, there were several small piles of construction/demolition debris noticed on the site. There were also two (2) 55 gallon drums noticed on this site. It is recommended that these drums and piles of debris be removed from the site prior to any planned construction activities on the property.

G. SIGNATURES OF ENVIRONMENTAL PROFESSIONALS:

This Phase I Environmental Site Assessment report was reviewed by;



H. PROFESSIONALS QUALIFICATIONS:

MEI Phase I Environmental Site Assessment reports are prepared by or under the supervision of the following professionals:

DONALD J. MIDDLETON JR.
PROFESSIONAL PROFILE

Don Middleton Jr. has been a Vice President at Middleton Environmental Incorporated from May 1988 to present. Serves as the manager of the Environmental Site Assessment Program. This program helps lenders to avoid clean-up liability and litigation cost often associated with asbestos and hazardous waste contaminated properties. Conducting and supervising field inspection of the subject property, a regulatory agency search and a survey of past and current property use. A "Phase One" report is then submitted and if analysis shows no sign of contamination, the service is concluded.

If contamination is suspected, air water, and soil samples are collected and a report on the laboratory analyses and findings is then submitted. This "Phase Two" report includes mortgage or loan recommendations and clean up costs. Environmental Site Assessments have been prepared for more than 35 lending institutions on Long Island, in the tri-state area and throughout the country. Assessments have also been conducted for real estate & law firms, the FDIC & RTC.

Don Jr. received his Bachelors of Science from Fordham University College of Business Administration in May of 1988 (where he completed his undergraduate education in three years). Don Jr. attended Iona College in New Rochelle, New York from September 1985 - May 1986. Don Jr. has also attended the NYU School for Continuing Education where he received his New York State Department of Health Asbestos Investigator & Management Planners Licenses in 1993.

THOMAS W. ROBINSON, III
PROFESSIONAL PROFILE

Thomas W. Robinson III has served as a Certified Environmental Inspector at Middleton Environmental Incorporated from November 2003 to present. Thomas has inspected several hundred pieces of commercial, industrial and multi-family apartment buildings for many lending institutions over the past 6 years.

Thomas received his Bachelors of Science in Civil Engineering from Clemson University in 1997. He conducted extensive course work in structural and environmental engineering.

I. APPENDICES:

The following sources were utilized in order to determine the physical setting of the subject site, current and past usage of the site and are researched in order to evaluate and recognized environmental conditions that might have an adverse affect on the subject site.

A. USGS 7.5 Minute Topographic Map

B. Zoning/Land Use Records

C. Department of Assessment Records

D. Sanborn or Belcher-Hyde Fire Insurance Maps (if available)

E. Coles Directory

F. Aerial Photographs

G. Local Street Directories

H. Building Department Records

I. Prior Environmental Site Assessment

J. Soils Conditions Report (from the U.S.G.S. Soil Conservation Service)

K. Groundwater Conditions (U.S.G.S. Groundwater Flow Map)

ENVIRONMENTAL DATABASE INFORMATION (SUPPLIED BY FIRSTSEARCH TECHNOLOGY)

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

TARGET PROPERTY:

4430 PURVES ST

QUEENS NY 11101

Job Number: 06-284

PREPARED FOR:

MEI

50 Park Avenue

Babylon, NY 11702

04-05-06

Tel: (201) 848-4789 *Fax: (201) 848-4789*

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Environmental FirstSearch
Search Summary Report

Target Site: 4430 PURVES ST
QUEENS NY 11101

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	01-13-06	1.00	0	0	0	0	0	0	0
CERCLIS	Y	01-13-06	0.50	0	0	0	0	-	0	0
RCRA TSD	Y	02-16-06	0.50	0	0	0	0	-	0	0
RCRA COR	Y	02-16-06	1.00	0	0	0	0	5	0	5
RCRA GEN	Y	02-16-06	0.25	0	5	17	-	-	4	26
ERNS	Y	12-31-05	0.15	0	1	0	-	-	2	3
State Sites	Y	02-09-06	1.00	0	0	0	0	7	0	7
Spills-1990	Y	10-15-05	0.25	0	16	27	-	-	28	71
Spills-1980	Y	10-18-00	0.25	0	2	1	-	-	2	5
SWL	Y	01-05-06	0.50	0	0	0	1	-	1	2
REG UST/AST	Y	01-01-02	0.25	0	9	25	-	-	0	34
Leaking UST	Y	10-15-05	0.50	0	1	5	33	-	1	40
- TOTALS -				0	34	75	34	12	38	193

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

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Environmental FirstSearch
Site Information Report

Request Date:	04-05-06	**Search Type:**	COORD
Requestor Name:	Karen	**Job Number:**	06-284
Standard:	AMY		**Filtered Report**

TARGET ADDRESS: 4430 PURVES ST
QUEENS NY 11101

Demographics

Sites:	193	**Non-Geocoded:**	38	**Population:**	NA
Radon:	OF THE 2 HOMES TESTED, THE AVG. PCI/L LEVEL WAS .7				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-73.94112	-73:56:28	**Easting:**	589396.738
Latitude:	40.746624	40:44:48	**Northing:**	4510958.314
			Zone:	18

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

TOTAL: 193 **GEOCODED:** 155 **NON GEOCODED:** 38 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
38	ERNS	MARISOL 571363/CONSUMER	44-43 PURVES STREET LONG ISLAND NY 11101	0.02 SE	N/A
	ERNS	581256/UNKNOWN	44TH DRIVE QUEENS NY	NON GC	N/A
	ERNS	NYC DEP 402345/FIXED FACILITY	127TH STREET AND COLLEGE PK QUEENS NY	NON GC	N/A
52	LUST	42-64 HUNTER STREET 9310213/CLOSED 11/22/1993	42-64 HUNTER STREET LONG ISLAND CI NY 11101	0.12 NE	N/A
36	LUST	OUTLET CITY 9600688/CLOSED 05/27/2003	42-16 WEST STREET LONG ISLAND CI NY 11101	0.21 NE	N/A
50	LUST	0303917/CLOSED	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.21 SE	N/A
50	***LUST***	***26-32 SKILLMAN AVE*** ***0209560/ACTIVE***	***26-32 SKILLMAN AVE*** ***LONG ISLAND CI NY 11101***	***0.21 SE***	***1***
29	LUST	ON THE STREET 0312740/CLOSED	2821 JACKSON AVE LONG ISLAND CI NY 11101	0.23 NE	N/A
83	***LUST***	***MIDTOWN OPERATING CROP*** ***8806043/ACTIVE***	***42050 24 ST*** ***QUEENS NY 11101***	***0.25 NW***	***2***
17	***LUST***	***CONDEA SUPPLY CORP*** ***0306979/ACTIVE***	***21-21 44TH RD*** ***LONG ISLAND CI NY 11101***	***0.26 NW***	***3***
12	***LUST***	***BUSINESS*** ***0512409/ACTIVE***	***28-11 QUEENS PLAZA NORTH*** ***QUEENS NY 11101***	***0.27 NE***	***4***
15	***LUST***	***FALIDAS ASSOCIATES*** ***0305348/ACTIVE***	***25-15 QUEENS PLAZA NORTH*** ***LONG ISLAND CI NY 11101***	***0.27 NE***	***5***
39	LUST	47-22 PEARSON PLACE 9206718/CLOSED 07/29/1993	47-22 PEARSON PLACE LONG ISLAND CI NY 11101	0.28 SW	N/A
34	LUST	NYC TRANSIT AUTHORITY 9100729/CLOSED 11/30/2000	29-50 NORTHERN BLVD QUEENS NY 11101	0.29 NE	N/A
10	***LUST***	***MAMM REALTY*** ***9803835/ACTIVE***	***25-11 41ST AVE*** ***LONG ISLAND NY 11101***	***0.37 NE***	***6***
18	LUST	47-20 30TH ST 8708435/CLOSED	47-20 30TH ST LONG ISLAND CI NY 11101	0.37 SE	N/A
18	LUST	JOMEIRA REALITY 0110569/CLOSED	47-20 30TH ST LONG ISLAND CI NY 11101	0.37 SE	N/A
63	***LUST***	***INTERNATIONAL MASONRY INS*** ***0103153/ACTIVE***	***12-07 44TH AVE*** ***LONG ISLAND CI NY 11101***	***0.38 NW***	***7***
74	LUST	0100062/CLOSED 06/16/2003	QUEENS PLAZA N/21ST ST QUEENS NY 11101	0.39 NW	N/A
25	LUST	GULF STATION 0308076/CLOSED	23-01 41ST AVE LONG ISLAND CI NY 11101	0.40 NE	N/A
48	***LUST***	***12-12 43RD AVE*** ***9814023/ACTIVE***	***12-12 23RD AVE*** ***LONG ISLAND CI NY 11101***	***0.40 NW***	***8***

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
16	*LUST*	*GETTY* *0009849/ACTIVE*	*31-05 QUEENS BLVD* *LONG ISLAND CI NY 11101*	*0.40 SE*	*9*
16	LUST	GETTY #344 9909630/CLOSED 12/02/2004	31-05 QUEENS BLVD LONG ISLAND CI NY 11101	0.40 SE	N/A
57	LUST	ANDREA ELECTRONICS 9709895/CLOSED 12/17/2002	11-40 45TH DRIVE LONG ISLAND CI NY 11101	0.40 SW	N/A
6	LUST	BLACK BEAR COMPANY 0501474/CLOSED	2710 HUNTER POINT AV QUEENS NY 11101	0.41 SW	N/A
6	LUST	27-11 49TH AVE 8800938/CLOSED	27-11 49TH AVE QUEENS NY 11101	0.41 SW	N/A
7	LUST	CLOSED-LACKOF RECENT INFO 9105613/CLOSED 03/14/2003	40-40 CRESCENT ST LONG ISLAND CI NY 11101	0.43 NE	N/A
37	LUST	COMMERCIAL BUILDING 0506977/CLOSED	40-23 24TH ST LONG ISLAND CI NY 11101	0.44 NE	N/A
56	*LUST*	*X* *0210116/ACTIVE*	*11-20 43RD RD* *LONG ISLAND CI NY 11101*	*0.44 NW*	*10*
58	LUST	CLOSED-LACKOF RECENT INFO 9207976/CLOSED 03/06/2003	32-00 SKILLMAN AVE. LONG ISLAND CI NY 11101	0.44 SE	N/A
31	LUST	NY ENVELOPE 0102148/CLOSED 06/17/2005	2910 HUNTERS POINT AV LONG ISLAND CI NY 11101	0.45 SE	N/A
79	LUST	0208486/CLOSED	23-30 50TH AVE LONG ISLAND CI NY 11101	0.45 SW	N/A
9	LUST	32-00 SKILLMAN AVE 0302379/CLOSED	32-00 SKILLMAN AVE QUEENS NY 11101	0.46 SE	N/A
78	*LUST*	*11-15 47TH AVE./QUEENS/H* *8707005/ACTIVE*	*11015 47TH AVE.* *QUEENS NY 11101*	*0.46 SW*	*11*
78	LUST	11-15 47 AVE/LIC 8707344/CLOSED	11-15 47 AVE. LONG ISLAND CI NY 11101	0.46 SW	N/A
64	LUST	KAL REALTY 9806658/CLOSED 06/15/2005	29-24 40TH AV LONG ISLAND CI NY 11101	0.47 NE	N/A
64	*LUST*	*INTERN L MRTG. SPECIALIST* *8709369/ACTIVE*	*29024 40TH AVENUE* *LONG ISLAND CI NY 11101*	*0.47 NE*	*12*
20	*LUST*	*42-30 11TH ST* *9509473/ACTIVE*	*42-30 11TH ST* *LONG ISLAND CI NY 11103*	*0.48 NW*	*13*
53	LUST	43-41 32ND PLACE 9303078/CLOSED 06/25/1993	43-41 32ND PLACE LONG ISLAND CI NY 11101	0.48 SE	N/A
62	*LUST*	*GENERAL INSULATION CORP* *0510695/ACTIVE*	*46-09 11TH STREET* *QUEENS NY 11101*	*0.48 SW*	*14*
47	LUST	10-22 44TH RD 9411116/CLOSED 01/20/1995	10-22 44TH ROAD LONG ISLAND CI NY 11101	0.49 NW	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
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JOB: 06-284

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
47	LUST	0103168/CLOSED 08/27/2002	10-20 44TH RD LONG ISLAND CI NY 11101	0.49 NW	N/A
	LUST	*CARLOS CORTEZ* *8709682/ACTIVE*	*39017 40TH AVENUE* *QUEENS NY*	*NON GC*	*15*
1	RCRACOR	ACCURATE ASSOCIATES NYD001264191/CA	5-36 46TH RD LONG ISLAND CI NY 11101	0.71 SW	N/A
2	RCRACOR	ACTIVE STEEL DRUM CO INC NYD003933355/CA	52-30 34TH ST LONG ISLAND CI NY 11101	0.76 SE	N/A
4	RCRACOR	KOSAN INDUSTRIAL CORP NYD061949228/CA	5-49 49TH AVE LONG ISLAND CI NY 11101	0.79 SW	N/A
3	RCRACOR	CON EDISON - RAVENSWOOD SITE NYD003917960/CA	38-54 VERNON BOULEVARD LONG ISLAND CI NY 11101	0.81 NW	N/A
5	RCRACOR	QUANTA RESOURCES CORP NYD980592562/CA	37-80 REVIEW AVE LONG ISLAND CI NY 11101	1.00 SE	N/A
38	RCRAGN	S N B INC NYR000003061/TRANSPORTER	44-16 PURVES ST LONG ISLAND CI NY 11101	0.02 SE	N/A
8	RCRAGN	A A A STAMP & SEAL NYR000055889/SGN	26-20 JACKSON AVE QUEENS NY 11101	0.03 NW	N/A
33	RCRAGN	NYCTA NYR000001032/VGN	44TH DR & JACKSON AVE LONG ISLAND CI NY 11101	0.05 NW	N/A
22	RCRAGN	KENT BRAGALINE INC NYR000075630/SGN	27-45 JACKSON AVE LONG ISLAND CI NY 11101	0.09 NE	N/A
26	RCRAGN	MTA EXISTING RAIL YARD NYR000113605/LGN	QUEENS ST - DEAD END LONG ISLAND CI NY 11101	0.12 SE	N/A
21	RCRAGN	J BROTHERS AUTO BODY INC NYR000039644/VGN	28-20 42ND RD LONG ISLAND CI NY 11101	0.14 NE	N/A
32	RCRAGN	NYCT - COURT SQUARE STA G LINE NYR000045062/SGN	JACKSON ST & COURT SQ QUEENS NY 11101	0.14 SW	N/A
13	RCRAGN	COOPER WIRING DEVICES (EAGLE ELECT NYD001287986/LGN	45-01 COURT SQ LONG ISLAND CI NY 11101	0.14 SW	N/A
11	RCRAGN	CON EDISION - TRF 6360 NYP004089918/LGN	ORCHARD ST E 107 S JACKSON LONG ISLAND CI NY 11101	0.16 NE	N/A
24	RCRAGN	LIRR - HUNTERS POINT YARD NYR000132985/SGN	SKILLMAN AVE & 27TH ST LONG ISLAND CI NY 11101	0.19 SE	N/A
23	RCRAGN	KOREA NEWS NYD987005857/SGN	42-22 27TH ST LONG ISLAND CI NY 11101	0.20 NE	N/A
36	RCRAGN	OUTLET CITY INC NYD053174041/SGN	42-16 WEST ST LONG ISLAND CI NY 11101	0.21 NE	N/A
28	RCRAGN	MTA NYCT - COURT SQUARE EFA LINE NYR000098988/SGN	23RD ST & 43RD RD LONG ISLAND CI NY 11101	0.21 NW	N/A

Environmental FirstSearch
Sites Summary Report

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I9	RCRAGN	STANDARD FINISHING CO INC NYR000025726/SGN	43-10 23RD ST 2ND FLOOR LONG ISLAND CI NY 11101	0.21 NW	N/A
19	RCRAGN	IDEAL LABEL INC NYR000065680/SGN	43-10 23RD ST 2ND FLOOR LONG ISLAND CI NY 11101	0.21 NW	N/A
40	RCRAGN	SUBACCHI FURNITURE NYD045440997/SGN	46-24 28TH ST LONG ISLAND CI NY 11101	0.22 SE	N/A
29	RCRAGN	MTA NYCT - JACKSON & WEST SUBSTA S NYR000078238/LGN	28-20 JACKSON AVE LONG ISLAND CI NY 11101	0.23 NE	N/A
27	RCRAGN	NYCT - FLUSHING AVENUE LINE (#7 LI NYR000103416/LGN	DAVIS & 23RD ST LONG ISLAND CI NY 11101	0.23 SW	N/A
27	RCRAGN	MTA NYCT - COURT HOUSE SQ STA 45TH NYR000099846/SGN	JACKSON AVE & 23RD ST LONG ISLAND CI NY 11101	0.23 SW	N/A
30	RCRAGN	MTA NYCT QUEENS BLVD PLAZA STATION NYR000072959/SGN	27TH ST & QUEENS BLVD LONG ISLAND CI NY 11101	0.24 NE	N/A
35	RCRAGN	NYCTA - QUEENS PLAZA STATION NYD987021482/SGN	QUEENS BLVD & JACKSON AVE LONG ISLAND CI NY 11101	0.25 NE	N/A
14	RCRAGN	E ZAPPI DERMATOPATHOLOGY LAB INC NYR000036426/VGN	21-51 44TH DR LONG ISLAND CI NY 11101	0.25 NW	N/A
	RCRAGN	NYCDOT BRIDGES BIN 2247260 NY0000263517/VGN	JACKSON AVE BRIDGE OVER QUEENS NY 11101	NON GC	N/A
	RCRAGN	CON EDISON - EXC 11101 NYP004116331/LGN	VERNON BLVD 250' S/O QUEENS QUEENS NY 11101	NON GC	N/A
	RCRAGN	CON EDISON-TRANSMISSION FEEDERS 61 NYR000110080/SGN	11TH ST BETW QUEENS PLZ S QUEENS NY 11101	NON GC	N/A
	RCRAGN	MTA NYCT - ASTORIA LINE BENTS 114- NYR000110569/LGN	NORTHERN BLVD FROM 41ST AVE QUEENS NY 11101	NON GC	N/A
38	SPILLS	44-43 PURVES ST 9713189/CLOSED 05/14/1998	44-43 PURVES ST LONG ISLAND CI NY 11101	0.02 SE	N/A
60	SPILLS	CONED MANHOLE#515 0405105/ACTIVE	PURVES STREET/JACKSON QUEENS NY 11101	0.03 NW	N/A
60	SPILLS	COMMERCIAL AREA 0405305/CLOSED	PERVES ST/ OF JACKSON AV QUEENS NY 11101	0.03 NW	N/A
33	SPILLS	0208224/CLOSED	JACKSON AV & 44TH DR QUEENS NY 11101	0.05 NW	N/A
67	SPILLS	MANHOLE # 2353 0409173/CLOSED	JACKSON VAE/DUTCHKILL STR QUEENS NY 11101	0.06 NE	N/A
72	SPILLS	RESIDENTS 9809062/CLOSED 10/21/1998	43-09 HUNTERS STREET LONG ISLAND CI NY 11101	0.07 NW	N/A
72	SPILLS	0105318/CLOSED 06/30/2003	43-09 HUNTER ST LONG ISLAND CI NY 11101	0.07 NW	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
76	SPILLS	VAULT#3073 0506520/ACTIVE	2740 THOMASON AVE QUEENS NY 11101	0.08 SW	N/A
22	SPILLS	GASGO 9913082/CLOSED 09/07/2005	27-01 JACKSON AV LONG ISLAND CI NY 11101	0.09 NE	N/A
22	SPILLS	MINI MICRO 0108045/CLOSED 11/14/2001	27-35 JACKSON AVE JACKSON HEIGHT NY 11101	0.09 NE	N/A
70	SPILLS	MANHOLE 4440 9901252/CLOSED 01/07/2000	4327 QUEENS ST QUEENS NY 11101	0.10 NE	N/A
46	SPILLS	1 COURT SQUARE 9110791/CLOSED 01/17/1992	1 COURT SQUARE LONG ISLAND CI NY 11101	0.10 SW	N/A
75	SPILLS	VS #2196 9912434/CLOSED 03/19/2002	QUEENS ST/JACKSON AVE QUEENS NY 11101	0.11 NE	N/A
75	SPILLS	VAULT 2196 0109680/CLOSED	QUEENS ST AND JACKSON AV QUEENS NY 11101	0.11 NE	N/A
77	SPILLS	VS# 2196 9914143/CLOSED 03/26/2002	43-22 QUEENS ST QUEENS NY 11101	0.12 NE	N/A
52	SPILLS	42-64 HUNTER STREET 9310213/CLOSED 11/22/1993	42-64 HUNTER STREET LONG ISLAND CI NY 11101	0.12 NE	N/A
66	SPILLS	MAN HOLE #4010 0405432/CLOSED	CRESCENT STREET/43RD AVE QUEENS NY 11101	0.13 NW	N/A
61	SPILLS	CONED MANHOLE # 2760 0405237/CLOSED	44 DRIVE/HUNTER QUEENS NY 11101	0.13 NW	N/A
11	SPILLS	TM 6360 0110006/CLOSED	ORCHARD ST/JACKSON AV QUEENS NY 11101	0.16 NE	N/A
11	SPILLS	MANHOLE 876 9902595/CLOSED 09/07/1999	JACKSON AVENUE ORCHID ST LONG ISLAND CI NY 11101	0.16 NE	N/A
51	SPILLS	VAULT VS3241 0000423/CLOSED 01/17/2002	42-15 CRESCENT ST ASTORIA NY 11101	0.17 NE	N/A
51	SPILLS	42-21 CRESENT ST/QUEENS 9006388/CLOSED 09/11/1990	42-21 CRESENT STREET QUEENS NY 11101	0.17 NE	N/A
51	SPILLS	4207 25TH AVENUE 9312123/CLOSED 06/13/1995	4207 25TH STREET LONG ISLAND CI NY 11101	0.17 NE	N/A
49	SPILLS	2301 44TH DRIVE 9401439/CLOSED 04/29/1994	2301 44TH DRIVE LONG ISLAND CI NY 11101	0.19 NW	N/A
59	SPILLS	COED MANHOLE # 456 0405238/CLOSED	44 DRIVE/23RD STREET QUEENS NY 11101	0.19 NW	N/A
80	SPILLS	0304876/CLOSED	4555 PEARSON STREET LONG ISLAND CI NY 11101	0.19 SW	N/A
69	SPILLS	MANHOLE #2531 9810540/CLOSED 10/31/2002	44TH AVE / 23RD ST LONG ISLAND CI NY 11101	0.20 NW	N/A

Environmental FirstSearch
Sites Summary Report

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36	SPILLS	OUTLET CITY 9813882/ACTIVE	42-16 WEST ST LONG ISLAND CI NY 11101	0.21 NE	N/A
36	SPILLS	OUTLET CITY 9600688/CLOSED 05/27/2003	42-16 WEST STREET L.I. C. NY 11101	0.21 NE	N/A
36	SPILLS	OUTLET CITY 0301857/CLOSED	42-16 WEST STREET LONG ISLAND CI NY 11101	0.21 NE	N/A
54	SPILLS	NOVATT BUILDING 0000121/CLOSED 05/18/2000	44-78 23RD ST QUEENS NY 11101	0.21 NW	N/A
54	SPILLS	44-67 23RD ST/CITIBANK 8910247/CLOSED 01/26/1990	44-67 23RD STREET QUEENS NY 11101	0.21 NW	N/A
50	SPILLS	0303917/CLOSED	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.21 SE	N/A
55	SPILLS	46-07 27TH ST 9002825/CLOSED 05/06/1991	46-07 27TH ST QUEENS NY 11101	0.21 SE	N/A
50	SPILLS	26-32 SKILLMAN AVE 0209560/ACTIVE	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.21 SE	N/A
73	SPILLS	ROADWAY 0103014/CLOSED 06/20/2001	23-10 JACKSON AVE QUEENS NY 11101	0.21 SW	N/A
29	SPILLS	ON THE STREET 0312740/CLOSED	2821 JACKSON AVE LONG ISLAND CI NY 11101	0.23 NE	N/A
29	SPILLS	311 CENTER 0211974/CLOSED	28-21 JACKSON AVENUE QUEENS NY 11101	0.23 NE	N/A
68	SPILLS	MANHOLE # 6390 0409172/CLOSED	SKILHAM AVE/AUSTELL PLACE QUEENS NY 11101	0.23 SW	N/A
65	SPILLS	LAGUARDIA COLLEGE 0412340/CLOSED	2910 THOMPSON AVE QUEENS NY 11101	0.24 SE	N/A
81	SPILLS	0111462/CLOSED	45-52 DAVIS ST LONG ISLAND CI NY 11101	0.24 SW	N/A
35	SPILLS	QUEENS BLV & JACKSON AVE 8912010/CLOSED 11/19/1992	QUEENS BLV & JACKSON AVE LONG ISLAND CI NY 11101	0.25 NE	N/A
71	SPILLS	QUEENSBORO PLAZA & 9611914/CLOSED 01/10/1997	27TH ST & QUEENSBORO PLAZ QUEENS NY 11101	0.25 NE	N/A
	SPILLS	0400339/CLOSED	CORNER 94/47TH AVE QUEENS NY	NON GC	N/A
	SPILLS	COMMERCIAL AREA 0402592/CLOSED	3536 NORTHERN BLVD. ACCRO QUEENS NY	NON GC	N/A
	SPILLS	0402307/CLOSED	27TH ST QUEENS NY	NON GC	N/A
	SPILLS	9802623/CLOSED 05/29/1998	44TH DRIVE QUEENS NY	NON GC	N/A

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	SPILLS	29TH ST & 120TH AVE 9109149/CLOSED 11/27/1991	29TH ST & 120TH AVE QUEENS NY	NON GC	N/A
	SPILLS	ALLEY POND CREEK/QUEENS 9002291/CLOSED 03/31/1995	NORTHERN BLV/ALLEY POND QUEENS NY	NON GC	N/A
	SPILLS	DUTCH KILL/SCRAP YARD 9204680/CLOSED 07/23/1992	DUTCH KILL QUEENS NY	NON GC	N/A
	SPILLS	OFFRAMP FROM QUEENSBOROUG 9603974/CLOSED 07/03/1996	BETWEEN 43RD AVE/QUEENS P QUEENS NY 11101	NON GC	N/A
	SPILLS	CITGO GAS 9506296/ACTIVE	50-35 NORTHERN BLVD QUEENS NY	NON GC	N/A
	SPILLS	45TH AVE & 48TH STREET 9311240/CLOSED 12/17/1993	45TH AVE & 48TH STREET QUEENS NY	NON GC	N/A
	SPILLS	VAULT 6276 9911870/CLOSED 03/05/2002	47TH AVE / GILMORE ST QUEENS NY	NON GC	N/A
	SPILLS	STREET SPILL 0503136/CLOSED	NORTHERN BLVD / 177TH ST QUEENS NY	NON GC	N/A
	SPILLS	29TH ST & GREENPOINT AVE 0003107/ACTIVE	29TH ST & GREENPOINT AVE QUEENS NY 11101	NON GC	N/A
	SPILLS	POLE 47307 0104832/CLOSED 10/12/2001	WESTSIDE OF 123RD ST QUEENS NY	NON GC	N/A
	SPILLS	OVERHEAD CABLE 0407043/CLOSED	23RD ST/25TH AVE QUEENS NY	NON GC	N/A
	SPILLS	127 ST COLLEGE POINT RD 9411067/CLOSED 11/18/1994	127TH ST & COLLEGE POINT QUEENS NY	NON GC	N/A
	SPILLS	12TH ST/47TH AVE 8403999/ACTIVE	12TH ST/47TH AVE QUEENS NY	NON GC	N/A
	SPILLS	47TH AVENUE 9303948/CLOSED 06/28/1993	47TH AVENUE QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 7064 0305471/CLOSED	78TH AVE & 29TH ST QUEENS NY	NON GC	N/A
	SPILLS	NORTHERN BLVD 9211387/CLOSED 02/28/1995	NORTHERN BLVD QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE#1831 0401466/CLOSED	53RD PL/NORTHERN BLVD QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 8418 0003123/CLOSED 05/29/2003	NORTHERN BLVD QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE # 9669 0404394/CLOSED	SOUTHSIDE NORTHERN BLVD 1 QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 2137 0000914/CLOSED 04/24/2000	CAUSTELL PL & 27 TH ST QUEENS NY	NON GC	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

TOTAL: 193 **GEOCODED:** 155 **NON GEOCODED:** 38 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
	SPILLS	MANHOLE 15352 0505594/CLOSED	S SIDE NORTHERN BV QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 13249 0500230/CLOSED	N/S 45TH AVE QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 14361 0508973/ACTIVE	NORTHERN BLVD NEAR HARPER S QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 14413 0403163/CLOSED	QUEENS PLAZA NORTH QUEENS NY	NON GC	N/A
75	SPILLS80	JACKSON AVE & QUEEN ST 8904552/CLOSED	JACKSON AVE & QUEEN ST Long Island Ci NY 11101	0.11 NE	N/A
82	SPILLS80	43-40 COURT SQUARE / QUEE 8702187/CLOSED	43-40 COURT SQUARE LONG ISLAND CI NY 11101	0.11 SW	N/A
83	SPILLS80	MIDTOWN OPERATING CROP 8806043/ACTIVE	42050 24 ST QUEENS NY 11101	0.25 NW	N/A
	SPILLS80	SOUTH SIDE OF NORTHERN BO 8703825/CLOSED	S. SIDE OF NORTHERN BLVD. QUEENS NY	NON GC	N/A
	SPILLS80	SUBWAY-NORTHERN BLVD. 7901404/CLOSED	SUBWAY-NORTHERN BLVD. QUEENS NY 11101	NON GC	N/A
41	*STATE*	*AMTRAK SUNNYSIDE YARD* *241006*	*39 29 HONEYWELL STREET* *LONG ISLAND CI NY 11101*	*0.60 NE*	*16*
43	*STATE*	*NATIONAL RUBBER ADHESIVES, INC.* *241028*	*38 31 9TH STREET* *LONG ISLAND CI NY 11101*	*0.77 NW*	*18*
45	*STATE*	*STANDARD MOTOR PRODUCTS, INC.* *241016*	*37 18 NORTHERN BOULEVARD* *LONG ISLAND CI NY 11101*	*0.90 NE*	*20*
44	*STATE*	*ROEHR CHEMICALS, INC.* *241014*	*52 20 37TH STREET* *LONG ISLAND CI NY 11101*	*0.90 SE*	*22*
42	*STATE*	*MANHATTAN ADHESIVES* *HS2035/INDUSTRIAL*	*425-459 GREEN POINT AVENUE* *BROOKLYN NY 11222*	*0.96 SW*	*24*
42	*STATE*	*FORMER MANHATTAN ADHESIVES PLANT* *224009*	*425-459 GREENPOINT AVE.* *BROOKLYN NY 11222*	*0.96 SW*	*25*
5	*STATE*	*QUANTA RESOURCES* *241005*	*37 80 REVIEW AVENUE* *MASPETH NY 11101*	*1.00 SE*	*27*
84	*SWL*	*HAMPTON MATERIALS AND HANDLING; IN* *2-41W89/INACTIVE*	*21-16 JACKSON AVENUE* *QUEENS NY 11101*	*0.35 SW*	*29*
	SWL	*C&H SAND AND STONE; CORP.* *2-41W87/INACTIVE*	*21-16 JACKSON AVENUE* *LONG ISLAND CI NY 11101*	*NON GC*	*30*
38	UST	S & M AUTOMATIC PRECISION CO. CBS2-000087/INACTIVE	44-43 PURVES ST LONG ISLAND CI NY 11101	0.02 SE	N/A
90	UST	CITICORP AT COURT SQUARE PBS2-455040/ACTIVE PBS FACILITY	25-01 JACKSON AVENUE LONG ISLAND CI NY 11101	0.07 SW	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

TOTAL: 193 **GEOCODED:** 155 **NON GEOCODED:** 38 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
22	UST	INCOME STAR CORPORATION PBS2-283118/ACTIVE PBS FACILITY	27-35 JACKSON AVE LONG ISLAND CI NY 11101	0.09 NE	N/A
22	UST	CAB MANAGEMENT CORP PBS2-017647/ACTIVE PBS FACILITY	27-34 JACKSON AVE LONG ISLAND CI NY 11101	0.09 NE	N/A
22	UST	LONG ISLAND CITY PETROLEUM PBS2-090565/ACTIVE PBS FACILITY	27-01 JACKSON AVENUE LONG ISLAND CI NY 11101	0.09 NE	N/A
95	UST	L I CITY COURT BUILDING PBS2-217042/ACTIVE PBS FACILITY	25-10 COURTHOUSE SQUARE LONG ISLAND CI NY 11101	0.10 SW	N/A
89	UST	5 COURT SQUARE PBS2-603367/ACTIVE PBS FACILITY	5 COURT SQUARE LONG ISLAND CI NY 11101	0.10 SW	N/A
88	UST	43-00 CRESCENT ST. PBS2-480606/UNREGULATED BY PBS	43-00 CRESCENT ST LONG ISLAND CI NY 11101	0.12 NW	N/A
88	UST	2415 44TH ROAD LLC PBS2-600777/ACTIVE PBS FACILITY	43-32 CRESCENT STREET LONG ISLAND CI NY 11101	0.12 NW	N/A
87	UST	2415 44 ROAD LLC PBS2-600776/ACTIVE PBS FACILITY	24-15 44TH ROAD LONG ISLAND CI NY 11101	0.13 NW	N/A
13	UST	EAGLE ELECTRIC MFG CO. INC. CBS2-000041/INACTIVE	45-31 COURT SQUARE LONG ISLAND CI NY 11101	0.14 SW	N/A
13	UST	EAGLE ELECTRIC MFG CO INC PBS2-017418/ACTIVE PBS FACILITY	45-31 COURT SQ LONG ISLAND CI NY 11104	0.14 SW	N/A
13	UST	45-30 COURT SQUARE PBS2-092673/ACTIVE PBS FACILITY	45-30 COURT SQUARE LONG ISLAND CI NY 11101	0.14 SW	N/A
96	UST	MORBECK CORP PBS2-309052/ACTIVE PBS FACILITY	24-15 43 AVE LONG ISLAND CI NY 11101	0.15 NW	N/A
91	UST	EAGLE ELECTRIC MFG CO INC PBS2-017388/ACTIVE PBS FACILITY	43-35 24TH STREET LONG ISLAND CI NY 11101	0.16 NW	N/A
97	UST	RML CO. PBS2-602342/ACTIVE PBS FACILITY	24-20 JACKSON AVENUE LONG ISLAND CI NY 11101	0.16 SW	N/A
51	UST	42-15 CRESENT ST PBS2-155969/ACTIVE PBS FACILITY	42-15 CRESCENT ST LONG ISLAND CI NY 11101	0.17 NE	N/A
51	UST	KRK EXPEDITING CO INC PBS2-303690/UNREGULATED BY PBS	42-21 CRESCENT ST LONG ISLAND CI NY 11101	0.17 NE	N/A
94	UST	FRANCO-AMERICAN NOVELTY CO INC PBS2-064319/ACTIVE PBS FACILITY	23-14 44TH ROAD LONG ISLAND CI NY 11101	0.18 NW	N/A
86	UST	23-10 43TH AVE PBS2-158623/ACTIVE PBS FACILITY	23-10 43TH AVE LONG ISLAND CI NY 11101	0.19 NW	N/A
80	UST	MARKETING INDUSTRIES GROUP LTD. PBS2-081566/ACTIVE PBS FACILITY	45-55 PEARSON STREET LONG ISLAND CI NY 11101	0.19 SW	N/A
80	UST	GAP REALTY CO PBS2-600746/UNREGULATED BY PBS	45-56 PEARSON ST LONG ISLAND CI NY 11101	0.19 SW	N/A

Environmental FirstSearch
Sites Summary Report

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QUEENS NY 11101

JOB: 06-284

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
80	UST	45-17 PEARSON ST 45-18 CRT SQ PBS2-207098/UNREGULATED BY PBS	45-17 PEARSON ST (45-18 CRT LONG ISLAND CI NY 11101	0.19 SW	N/A
36	UST	OUTLET CITY INC PBS2-237981/UNREGULATED BY PBS	42-16 WEST ST LONG ISLAND CI NY 11101	0.21 NE	N/A
19	UST	KASSABIAN REALTY LLC PBS2-283339/ACTIVE PBS FACILITY	43-10 23RD ST LONG ISLAND NY 11101	0.21 NW	N/A
54	UST	BRANCO LEATHER INC PBS2-081345/ACTIVE PBS FACILITY	44-02 23RD ST LONG ISLAND CI NY 11101	0.21 NW	N/A
50	UST	SATT REALTY CORP. PBS2-349429/ACTIVE PBS FACILITY	26-32 SKILLMAN AVENUE LONG ISLAND CI NY 11101	0.21 SE	N/A
55	UST	LIC AUTO GROUP INC. PBS2-606925/SUBPART 360-14 ONLY	46-20 27TH STREET LONG ISLAND CI NY 11101	0.21 SE	N/A
92	UST	EAGLE ELECTRIC MFG CO INC PBS2-017353/ACTIVE PBS FACILITY	23-01 42RD ROAD LONG ISLAND CI NY 11101	0.23 NW	N/A
85	UST	22-15 43RD AVENUE BLDG PBS2-341894/UNREGULATED BY PBS	22-15 43RD AVENUE LONG ISLAND CI NY 11101	0.24 NW	N/A
93	UST	PLAZA QUEENS ASSOC PBS2-247618/ACTIVE PBS FACILITY	24-16 BRIDGE PLAZA SOUTH LONG ISLAND CI NY 11101	0.25 NE	N/A
93	UST	EAGLE ELECTRIS MFG CO INC PBS2-406643/ACTIVE PBS FACILITY	24-02 BRIDGE PLAZA SOUTH LONG ISLAND CI NY 11101	0.25 NE	N/A
14	UST	VIRGINIA S. PETERSON, AGENT PBS2-480363/ADMINISTRATIVELY CLO	21-21 44TH DRIVE LONG ISLAND CI NY 11101	0.25 NW	N/A
83	UST	MIDTOWN OPERATING CORP PBS2-269336/ACTIVE PBS FACILITY	42-50 24TH STREET LONG ISLAND CI NY 11101	0.25 NW	N/A

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 121 **DIST/DIR:** 0.21 SE **MAP ID:** 50

NAME:	26-32 SKILLMAN AVE	**REV:**	10/15/05
ADDRESS:	26-32 SKILLMAN AVE	**ID1:**	0209560
	LONG ISLAND CITY NY 11101	**ID2:**	
	NEW YORK	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	12/17/2002
DATE REPORTED:	12/17/2002
SPILL TIME:	11:30 AM
TIME REPORTED:	12:20 PM
SPILLED MATERIAL:	#6 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	PRIVATE DWELLING
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 146 **DIST/DIR:** 0.25 NW **MAP ID:** 83

NAME: MIDTOWN OPERATING CROP
ADDRESS: 42050 24 ST
NYC NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8806043
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 10/17/88
SPILL TIME: 15:00

DATE REPORTED: 10/17/88
TIME REPORTED: 08:39

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1
AMOUNT RECOVERED: 0

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
4K TK FAILED PETRO-TITE, L R = UNREADABLE. EXC & INVEST.

REGION: 2

UST TRUST? T

SPILL INVESTIGATOR: TOMASELLO
SPILL CONTACT:

TELEPHONE:

SPILLER: UNK
ADDRESS:

SPILLER CONTACT:

TELEPHONE:

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 135 **DIST/DIR:** 0.26 NW **MAP ID:** 17

NAME:	CONDEA SUPPLY CORP	**REV:**	10/15/05
ADDRESS:	21-21 44TH RD	**ID1:**	0306979
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	10/02/2003
DATE REPORTED:	10/02/2003
SPILL TIME:	10:30 AM
TIME REPORTED:	12:41 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 131 **DIST/DIR:** 0.27 NE **MAP ID:** 12

NAME:	BUSINESS	**REV:**	3/1/06
ADDRESS:	28-11 QUEENS PLAZA NORTH	**ID1:**	0512409
	LONG ISLAND NY	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	01/26/2006
DATE REPORTED:	01/26/2006
SPILL TIME:	09:10 AM
TIME REPORTED:	09:10 AM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	INSTITUTIONAL, EDUCATIONAL, GOV., OTHER
RESOURCE AFFECTED:	GROUNDWATER
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 136 **DIST/DIR:** 0.27 NE **MAP ID:** 15

NAME:	FALIDAS ASSOCIATES	**REV:**	10/15/05
ADDRESS:	25-15 QUEENS PLAZA NORTH	**ID1:**	0305348
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	08/01/2003
DATE REPORTED:	08/20/2003
SPILL TIME:	08:00 AM
TIME REPORTED:	08:43 AM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK FAILURE
SPILL SOURCE:	COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED:	GROUNDWATER
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 145 **DIST/DIR:** 0.37 NE **MAP ID:** 10

NAME: MAMM REALTY
ADDRESS: 25-11 41ST AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 9803835
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 06/25/98
SPILL TIME: 14:00

DATE REPORTED: 06/25/98
TIME REPORTED: 16:05

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: OTHER
CALLER REMARKS:
DISCOVERED CONTAMINATED SOIL DURING TANK REMOVAL CONTAMINATED SOIL WAS EXCAVATED AND STOCK PILED CALLER IS CONTRACTER FOR NEW OWNER

REGION: 2 **UST TRUST?** TRUE

SPILL INVESTIGATOR: SIGONA
SPILL CONTACT: MICHAEL LEVINE **TELEPHONE:** (718) 392-3013

SPILLER: MAMM REALTY, INC.
ADDRESS: 22-09 QUEENS PLAZA NORTH
LONG ISLAND CITY , NY 11101-
SPILLER CONTACT: MICHAEL LEVINE **TELEPHONE:** (718) 392-3013

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 06/29/98
DOES CLEAN UP MEET STANDARDS? FALSE
CLOSE DATE: / /
PENALTY RECOMMENDED? FALSE
DEC REMARKS:
DEC SIGONA CALLED MICHAEL ALLETTO AT YELLOWSTONE ON 6/26/98. YELLOWSTONE INDICATED THAT THEY REMOVED ALL THE CONTAMINATED SOILS AND COLLECTED ENDPOINT SAMPLES WHICH ARE BEING TESTED. THE RESULTS WILL BE SUBMITTED TO DEC (SIGONA) WHEN THEY BECOME AVAILABLE.

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 142 **DIST/DIR:** 0.38 NW **MAP ID:** 63

NAME: INTERNATIONAL MASONRY INS
ADDRESS: 12-07 44TH AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0103153
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 06/21/01
SPILL TIME: 13:30

DATE REPORTED: 06/21/01
TIME REPORTED: 14:44

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: NON-COMMERCIAL/INSTITUTIONAL
REPORTED BY: TANK TESTER
CALLER REMARKS:

REGION: 2

UST TRUST? F

SPILL INVESTIGATOR: DEMEO
SPILL CONTACT: DENNIS HOLLOWAY **TELEPHONE:** (718) 706-9139

SPILLER: INTERNATIONAL MASONRY INS
ADDRESS: 12-07 44TH AV
LONG ISLAND CITY ,
SPILLER CONTACT: DENNIS HOLLOWAY **TELEPHONE:** (718) 706-9139

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 06/21/01
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 120 **DIST/DIR:** 0.40 NW **MAP ID:** 48

NAME: 12-12 43RD AVE
ADDRESS: 12-12 23RD AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 7/12/05
ID1: 9814023
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 07/07/98
SPILL TIME: 12:00

DATE REPORTED: 02/19/99
TIME REPORTED: 14:32

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: RESPONSIBLE PARTY
CALLER REMARKS:
TESTED TANK. TANK FAILED.

REGION: 2 **UST TRUST?** T

SPILL INVESTIGATOR: TOMASELLO
SPILL CONTACT: **TELEPHONE:**

SPILLER: 1212 43RD AVE
ADDRESS: 1212 23RD AVE
LONG ISLAND CITY , NY
SPILLER CONTACT: **TELEPHONE:**

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 02/24/99
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 138 **DIST/DIR:** 0.40 SE **MAP ID:** 16

NAME: GETTY
ADDRESS: 31-05 QUEENS BLVD
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0009849
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 11/30/00
SPILL TIME: 07:45

DATE REPORTED: 11/30/00
TIME REPORTED: 08:19

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: GASOLINE STATION
REPORTED BY: OTHER
CALLER REMARKS:
CALLER REPORTING A SPILL OF PETROLEUM FOUND TO BE INPACTED SOIL LIKELY FROM A TANK FAILURE. NO CLEAN UP AS OF YET AND NO CALLBACK NECESSARY

REGION: 2

UST TRUST? T

SPILL INVESTIGATOR: SACCACIO/ROMMEL
SPILL CONTACT: ERIC EWALD

TELEPHONE:

SPILLER: GETTY GAS STATION
ADDRESS: 3105 QUEENS BLVD
LONG ISLAND CITY , NY -
SPILLER CONTACT:

TELEPHONE: ( ) -

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 01/12/01
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 151 **DIST/DIR:** 0.44 NW **MAP ID:** 56

NAME: X
ADDRESS: 11-20 43RD RD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0210116
ID2:
STATUS: ACTIVE
PHONE:

SITE INFORMATION:

SPILL DATE:	01/07/2003
DATE REPORTED:	01/07/2003
SPILL TIME:	01:30 PM
TIME REPORTED:	01:35 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 119 **DIST/DIR:** 0.46 SW **MAP ID:** 78

NAME: 11-15 47TH AVE./QUEENS/H
ADDRESS: 11015 47TH AVE.
NEW YORK CITY NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8707005
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 11/17/87
SPILL TIME: 11:30

DATE REPORTED: 11/17/87
TIME REPORTED: 11:43

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1
AMOUNT RECOVERED: 0

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
3K TANK COULDN T MAINTAIN OIL IN STANDPIPE, WILL EXCAVATE, ISOLATE AND RETEST. CONTACT: BILL GOLDSTEIN (718) 392-3900.

REGION: 2

UST TRUST? F

SPILL INVESTIGATOR: BATTISTA
SPILL CONTACT:

TELEPHONE:

SPILLER: H & R ASSOCIATES
ADDRESS: 11-15 47TH AVE.
LONG ISLAND CITY , NY
SPILLER CONTACT:

TELEPHONE: (718) 392-3900

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 141 **DIST/DIR:** 0.47 NE **MAP ID:** 64

NAME: INTERN L MRTG. SPECIALIST
ADDRESS: 29024 40TH AVENUE
LIC NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8709369
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 02/03/88
SPILL TIME: 15:00

DATE REPORTED: 02/03/88
TIME REPORTED: 15:30

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1 G
AMOUNT RECOVERED: -1 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
CONTACT: CLIFFORD WENGLIM AT KAL REALTY. 3K TANK SYSTEM FAILED PETROTITE/ LEAK RATE = -.673GPH

REGION: 2 **UST TRUST?** FALSE

SPILL INVESTIGATOR: BATTISTA
SPILL CONTACT: **TELEPHONE:**

SPILLER: KAL REALTY (OWNER)
ADDRESS:

SPILLER CONTACT: **TELEPHONE:** (718) 784-2842

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? FALSE
DEC REMARKS:
/ / : COASTAL COMBUSTION (PHONE: 212-475-4263), MIKE JUNIOR, HIRED GND SERVICE FOR KAL REALTY.

CLOSE DATE: / /
PENALTY RECOMMENDED? FALSE

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 124 **DIST/DIR:** 0.48 NW **MAP ID:** 20

NAME: 42-30 11TH ST
ADDRESS: 42-30 11TH ST
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 9509473
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 10/31/95
SPILL TIME: 12:00

DATE REPORTED: 10/31/95
TIME REPORTED: 16:07

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: OTHER
CALLER REMARKS:
CALLER WAS HIRED TO REMOVE TANKS AT THE ABOVE LOCATION AND FOUND CONTAIMANATED SOIL BEEPER NUMBER FOR CALLER IS(917)451-4313

REGION: 2 **UST TRUST?** F

SPILL INVESTIGATOR: O DOWD
SPILL CONTACT: **TELEPHONE:**

SPILLER: JAMES DIVITO
ADDRESS: 42-30 11TH ST
LONG ISLAND CITY , NY 11101-
SPILLER CONTACT: **TELEPHONE:**

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 11/01/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 137 **DIST/DIR:** 0.48 SW **MAP ID:** 62

NAME:	GENERAL INSULATION CORP	**REV:**	3/1/06
ADDRESS:	46-09 11TH STREET	**ID1:**	0510695
	LONG ISLAND NY	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	12/13/2005
DATE REPORTED:	12/13/2005
SPILL TIME:	12:00 PM
TIME REPORTED:	12:00 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	15.0000 GAL.
SPILL CAUSE:	TANK FAILURE
SPILL SOURCE:	INSTITUTIONAL, EDUCATIONAL, GOV., OTHER
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 193 **DIST/DIR:** NON GC **MAP ID:**

NAME: CARLOS CORTEZ
ADDRESS: 39017 40TH AVENUE
NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8709682
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 02/16/88
SPILL TIME: 13:00

DATE REPORTED: 02/16/88
TIME REPORTED: 22:32

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: GASOLINE STATION
REPORTED BY: TANK TESTER
CALLER REMARKS:

REGION: 2 **UST TRUST?** T

SPILL INVESTIGATOR: SULLIVAN
SPILL CONTACT: **TELEPHONE:**

SPILLER: ALBERT GARAGE
ADDRESS:

SPILLER CONTACT: **TELEPHONE:** (718) 786-0640

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 29 **DIST/DIR:** 0.60 NE **MAP ID:** 41

NAME: AMTRAK SUNNYSIDE YARD
ADDRESS: 39 29 HONEYWELL STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241006
ID2:
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 100
REGION: 2

SITE TYPE:
OPEN DUMP: X
LAGOON:
POND:
STRUCTURE:
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: NATIONAL RAIL PASSENGER CORPORATION
CURRENT OWNER(S) ADDRESS: 400 NORTH CAPITOL STREET NW
WASHINGTON NY 20001

OPERATOR(S) DURING DISPOSAL: AMTRAK - SUNNYSIDE YARD
OPERATOR(S) ADDRESS: 39-29 HONEYWELL STREET
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: 1910 TO unknown

SITE DESCRIPTION:
The site is an active maintenance and storage yard for train locomotives and passenger cars. Several investigations conducted prior to 1986 had found that PCBs were present in soils and a PCBs laden separate phase plume was also present near the former Engine Shop. A remedial investigation was later conducted in multiple phases under NYSDEC oversight pursuant to a consent order. Seventeen specific areas of concern (AOC) have been identified. PCBs, petroleum hydrocarbons, and lead are the main site related contaminants of concern. Onsite soils, groundwater, and sewer sediments are contaminated with one or more of these contaminants. Chlorinated solvents are also present in on site groundwater, but are believed to have originated off site. The sources of the PCBs are believed to be leaks from stationary transformers and locomotive mounted transformers. The main sources of petroleum hydrocarbons are believed to be the diesel USTs and the various leaks and disposals over the years of the Yard activities. The consent order was modified in 1988 to divide the Yard into six operable units (OUs). The operable units (OUs) 1 and 2, the unsaturated soil under and around the High Speed Line building areas have been investigated and remediated. A RI for OU 3, the unsaturated soils and the free product plume (AOC 1) is underway. Portions of OU 4 (remainder of the site) have been completed. The on site sewer system (OU 5) and the groundwater/saturated soils (OU 6) were also investigated during the Phase II, but more work remains to be done. Interim Remedial Measures (IRMs) installed since 1990 have contained and recovered petroleum. These measures were discontinued in 1996. A new IRM consisting of a single collection trench was installed in late 1998 to recover the free petroleum. This IRM continues to operate on and off as permitted by ongoing Yard construction. The Long Island Railroad (LIRR) is planning to construct tunnels through the Yard as part of its East Side Access (ESA) project. Impacts from the proposed construction remain to be assessed.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	QUANTITY:
PCB contaminated oil; polychlorinated biphenyls (pcb)	unknown
Lead	unknown
Xylene	unknown
1,2,4-Trichlorobenzene	unknown
Benzene	unknown
Pyrene	unknown
Fluoranthene	unknown
Anthracene	unknown
Benzo(B)Fluoranthene	unknown

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 29 **DIST/DIR:** 0.60 NE **MAP ID:** 41

NAME: AMTRAK SUNNYSIDE YARD
ADDRESS: 39 29 HONEYWELL STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241006
ID2:
STATUS:
PHONE:

Benzo(A)Pyrene unknown

ANALYTICAL DATA AVAILABLE FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE:	FILL.
DEPTH TO GROUNDWATER:	RANGE: 1 TO 5 FEET.

LEGAL ACTION

TYPE:	CONSENT ORDER RI/FS
STATUS:	OS

REMEDIATION

PROPOSED:		**DESIGN**	
ACTIVE:	X	**COMPLETE**	

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Soil and groundwater contamination by PCBs has been confirmed. A PCBs laced petroleum plume is also present in one portion of the site. The site has secured access.Exceedances of standards, criteria, and guidance include PCBs, metals (primarily lead), and SVOCs for soil; and metals and SVOCs for groundwater.

ASSESSMENT OF HEALTH PROBLEMS:
Groundwater in the area of the site is not used as a source of potable water. Access to the site is controlled, preventing trespassers from coming in contact with contaminated soils.

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 32 **DIST/DIR:** 0.77 NW **MAP ID:** 43

NAME: NATIONAL RUBBER ADHESIVES, INC.
ADDRESS: 38 31 9TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241028
ID2: NYD990690190
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 1
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: NATIONAL RUBBER ADHESIVES, INC.
CURRENT OWNER(S) ADDRESS: 25 KNICKERBOCKER AVENUE
BROOKLYN NY 11208

OPERATOR(S) DURING DISPOSAL: NATIONAL RUBBER ADHESIVES, INC.
OPERATOR(S) ADDRESS: 38-31 9TH STREET
LONG ISLAND CITY NY 11385

HAZARDOUS WASTE DISPOSAL PERIOD: unknown TO unknown

SITE DESCRIPTION:
The property is located within an urban industrialized seThe property is located within an urban industrialized section of Long Island City. The site extends 335 feet from the north to the south and 117 feet from the west to the east. The entire site is occupied by a 30,000 square feet, one story building. There is a small courtyard in the central portion of the building, on it s western side. The site is approximately 15 to 20 feet above mean sea level. The nearest surface water body is the East River, approximately one quarter mile west of the site. The property is registered with the USEPA as a small quantity generator of hazardous waste, and is also listed as a registered Petroleum Bulk Storage Facility (PBS) and a Chemical Bulk Storage Facility (CBS). Five underground storage tanks (USTs) were closed in-place, including one toluene, two gasoline, one methyl ethyl ketone (MEK) and one heptane UST. Two USTs with a storage capacity of 1500 gallons are currently in service at the site storing heptane. Site ownership changed in 2002. The new owners originally entered the Volunteer Cleanup Program to address hazardous waste contamination but switched to the Brownfield Cleanup Program (BCP). A BCP application was approved in 2004.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	QUANTITY:
Toluene	unknown
Xylene	unknown
Benzene	unknown
Toluene U-220 (F005 Waste)	unknown

ANALYTICAL DATA AVAILABLE FOR
GROUNDWATER: X
AIR:
SOIL: X
SURFACE WATER:
SEDIMENT:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 32 **DIST/DIR:** 0.77 NW **MAP ID:** 43

NAME: NATIONAL RUBBER ADHESIVES, INC.
ADDRESS: 38 31 9TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241028
ID2: NYD990690190
STATUS:
PHONE:

APPLICABLE STANDARDS EXCEEDED FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
DRINKING WATER:

GEOTECHNICAL INFORMATION
SOIL/ROCK TYPE: GLACIAL TILL OVER CRYSTALLINE BEDROCK.
DEPTH TO GROUNDWATER: RANGE: 5 TO 10 FEET.

LEGAL ACTION
TYPE:
STATUS:

REMEDIATION
PROPOSED:
ACTIVE:
DESIGN
COMPLETE

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Previous investigations indicate the site contains a consequential amount of hazardous waste(xylene and toluene). Site impacts to the East River can not be assessed at this time. The site is situated over a sole-source aquifer.

ASSESSMENT OF HEALTH PROBLEMS:
Elevated levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals have been identified in soil and groundwater at this site. The area is paved and served by pubic water so exposures to contaminated soils and groundwater are unlikely. Due to the high levels of VOCs in on-site groundwater, there is the potential for exposures related to soil vapor intrusion in surrounding buildings. A soil vapor investigation is planned as part of the ongoing remedial investigation.

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 35 **DIST/DIR:** 0.90 NE **MAP ID:** 45

NAME: STANDARD MOTOR PRODUCTS, INC.
ADDRESS: 37 18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241016
ID2: NYD001315266
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 1.1
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: STANDARD MOTOR PRODUCTS/MTA
CURRENT OWNER(S) ADDRESS: 37-18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101

OPERATOR(S) DURING DISPOSAL: STANDARD MOTOR PRODUCTS/MTA
OPERATOR(S) ADDRESS: 37-18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: unknown TO unknown

SITE DESCRIPTION:
Standard Motor Products (SMP) is located in an urban area, on the southern side of Northern Boulevard, between 37th and 39th streets. SMP is in the business of producing automobile parts and components. Current manufacturing operations include metal fabrication and machining, plastic injection molding, and assembly. The building on site has been occupied by SMP since the mid 1900s. An investigation in 1990 was initiated after an oily sheen was observed in a puddled area on the southeast side of the property. Soil samples from this area revealed elevated levels of petroleum hydrocarbons and volatile organic compounds (VOCs), primarily 1,1,1-trichloroethane. Approximately 2,700 sq.ft. of soil was excavated to a depth of 18 inches and stockpiled on-site. Further investigation determined that soils in the area of the rear loading platform contained elevated levels of petroleum hydrocarbons and VOCs. Contaminated soils extended beyond the area excavated. Subsequent groundwater samples taken indicated contamination with 1,1,1-trichloroethane and lead. An investigation was performed by the owner and a Delisting Petition was submitted to the NYSDEC in 1994. This petition was denied. A Consent Order has been signed to develop and implement a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS work plan was approved in October 2002. The first phase of the RI fieldwork began in November 2002 and the second phase was conducted in July 2003. A work plan for a supplemental investigation of soil gas and groundwater monitoring is currently being developed.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Tetrachloroethylene (PCE)	unknown
1,1,1 TCA	unknown
1,1-Dichloroethane	unknown
Methyl-Tert-Butyl Ether (MTBE)	unknown
Trichloroethene (TCE)	unknown

ANALYTICAL DATA AVAILABLE FOR

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 35 **DIST/DIR:** 0.90 NE **MAP ID:** 45

NAME: STANDARD MOTOR PRODUCTS, INC.
ADDRESS: 37 18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241016
ID2: NYD001315266
STATUS:
PHONE:

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE: COARSE SAND AND GRAVEL.
DEPTH TO GROUNDWATER: RANGE: 1 TO 5 FEET.

LEGAL ACTION

TYPE: CONSENT ORDER RI/FS
STATUS: OS

REMEDIATION

PROPOSED: **DESIGN**
ACTIVE: **COMPLETE**

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Significant levels of 1,1,1-trichloroethane, lead, and petroleum hydrocarbons have been found in groundwater and soil samples. The highest levels of groundwater contamination are adjacent to the loading dock at the back of the building. Groundwater flow is to the adjacent Amtrack property. A gas station upgradient of SMP (on the corner of Northern Blvd and 39th Street) is the source of the petroleum contamination in the groundwater.

ASSESSMENT OF HEALTH PROBLEMS:
The site is situated in an urban and industrial area. On-site workers may contact contaminated surface soils that were not removed as part of a previous soil removal effort. Surface and subsurface soil samples were collected during the remedial ivestigation to delineate the nature and extent of soil contamination. Access to the site is restricted by fences and security personnel. Personnel gain access to the area of concern through a locked gate; thus limiting public exposure. Groundwater near the site is not used for potable water.

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 34 **DIST/DIR:** 0.90 SE **MAP ID:** 44

NAME: ROEHR CHEMICALS, INC.
ADDRESS: 52 20 37TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241014
ID2: NYD000764936
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 0.5
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: ACETO CORPORATION
CURRENT OWNER(S) ADDRESS: ONE HOLLOW LANE
LAKE SUCCESS NY 11042

OPERATOR(S) DURING DISPOSAL: ROEHR CHEMICALS, INC.
OPERATOR(S) ADDRESS: 50-20 37TH STREET
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: 1991 TO unknown

SITE DESCRIPTION:
Roehr Chemicals used to be located on 52-20 37th Street, in Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street and Newtown Creek is located approximately 1,750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five lots - lots 1,8,23, and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemical was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene, a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil with xylene. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found contaminated with xylene and acetone. The RI showed a long narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. Soil vapor extraction and air sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/ AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues under the OM&M program.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	QUANTITY:
Acetone	unknown
Xylene (Mixed)	unknown
Ethylbenzene	unknown

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 34 **DIST/DIR:** 0.90 SE **MAP ID:** 44

NAME:	ROEHR CHEMICALS, INC.	**REV:**	02/09/06
ADDRESS:	52 20 37TH STREET	**ID1:**	241014
	LONG ISLAND CITY NY 11101	**ID2:**	NYD000764936
	QUEENS	**STATUS:**	
CONTACT:		**PHONE:**	

ANALYTICAL DATA AVAILABLE FOR

GROUNDWATER:	X	**SURFACE WATER:**	X
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE:	MEDIUM TO COURSE SAND WITH FINE GRAVEL.
DEPTH TO GROUNDWATER:	RANGE: 25 TO 30 FEET.

LEGAL ACTION

TYPE:	
STATUS:	

REMEDIATION

PROPOSED:		**DESIGN**	
ACTIVE:	X	**COMPLETE**	

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
The remedial actions taken todate have adequately addressed significant threat posed by the contamination, and the site reclassification is under consideration. The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The installed system is being operated in an on and off pulsing sequence to assess if the reductions in groundwater contaminant levels are permanent or not.

ASSESSMENT OF HEALTH PROBLEMS:
On site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Air within the main building will be tested prior to occupation by a new tenant. Soil and groundwater contamination continue to diminish as the interim remedial measure progresses.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 31 **DIST/DIR:** 0.96 SW **MAP ID:** 42

NAME: MANHATTAN ADHESIVES
ADDRESS: 425-459 GREEN POINT AVENUE
BROOKLYN NY 11222
KINGS
CONTACT:

REV:
ID1: HS2035
ID2:
STATUS: INDUSTRIAL
PHONE:

REGION: 2

LTBI DATE:
CONFIRM DATE:
DELETED DATE:
REMED DATE:
WAIVER DATE:

NPL:
PUB INV:
INIT ACTION:
RESP ACTION:
PRIORITY: ENVIRON/PUBLIC HEALTH

CURRENT STATUS: NOT ACTIVE
PET/HAZ:
REMEDIATION: PHASE 1

CONTENT: AROCLOR 1221, AROCLOR 1221B, AROCLOR 5460, PCB/PCT MIXTURE
LOCATION:
RESULTS:

GROUND WATER:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 30 **DIST/DIR:** 0.96 SW **MAP ID:** 42

NAME: FORMER MANHATTAN ADHESIVES PLANT
ADDRESS: 425-459 GREENPOINT AVE.
BROOKLYN NY
KINGS
CONTACT:

REV: 05/20/99
ID1: 224009
ID2: NYD980780811
STATUS:
PHONE:

CLASS CODE: D1 **REGION:** 2 **ESTIMATED SIZE:** ACRES

SITE TYPE:
OPEN DUMP: **STRUCTURE:** X
LAGOON: **LANDFILL:**
POND:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: Frank Castiglione
CURRENT OWNER(S) ADDRESS: 32-02 College Point Blvd.
Flushing NY 11354

OPERATOR(S) DURING DISPOSAL:
OPERATOR(S) ADDRESS:
NY

HAZARDOUS WASTE DISPOSAL PERIOD: TO:

SITE DESCRIPTION:
Manhattan Adhesives is currently an empty factory building that is located at the foot of the Greenpoint Ave., Bridge in Brooklyn. Besides the Manhattan Adhesives factory, about 10 feet from the northeast wall is a manhole (not a sewer or drain) into which liquid waste was allegedly discharged. This waste came from a condemned oil storage site located at the intersection of Rt. 280, and the NJ Turnpike in NJ. The manhole is suspected of being the opening to an underground tank; however, the quantity of the waste allegedly dumped exceeds the capacity of most tanks. This information was obtained from the State Senate Committee on Crime and the Brooklyn District Attorney s office. Phase I State Superfund has been completed. A partial phase II investigation was completed during 1985 and recommended no further action. The Responsible Party has agreed to undertake an investigation in 1986. An investigation has not found hazardous waste on-site.

CONFIRMED HAZARDOUS WASTE DISPOSAL:
Waste oil alleged to contain PCB s

QUANTITY:
Over 400,000 gal.

ANALYTICAL DATA AVAILABLE FOR:
GROUNDWATER: **SURFACE WATER:**
AIR: **SEDIMENT:**
SOIL:

APPLICABLE STANDARDS EXCEEDED FOR:
GROUNDWATER: **SURFACE WATER:**
AIR: **DRINKING WATER:**

- Continued on next page -

GEOTECHNICAL INFORMATION:

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 30 **DIST/DIR:** 0.96 SW **MAP ID:** 42

NAME: FORMER MANHATTAN ADHESIVES PLANT
ADDRESS: 425-459 GREENPOINT AVE.
BROOKLYN NY
KINGS
CONTACT:

REV: 05/20/99
ID1: 224009
ID2: NYD980780811
STATUS:
PHONE:

SOIL/ROCK TYPE:
DEPTH TO GROUNDWATER:

LEGAL ACTION:
TYPE:
STATUS:

REMEDIATION:
PROPOSED: **DESIGN:**
ACTIVE: **COMPLETE:**

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

ASSESSMENT OF HEALTH PROBLEMS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 33 **DIST/DIR:** 1.00 SE **MAP ID:** 5

NAME: QUANTA RESOURCES
ADDRESS: 37 80 REVIEW AVENUE
MASPETH NY 11378
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241005
ID2: NYD980534499
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 2
REGION: 2

SITE TYPE:
OPEN DUMP: X
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: QUANTA RESOURCES
CURRENT OWNER(S) ADDRESS: 299 SOUTH STATE STREET
DOVER NY 19901

OPERATOR(S) DURING DISPOSAL: QUANTA RESOURCES
OPERATOR(S) ADDRESS: 299 SOUTH STATE STREET
DOVER NY 19901

HAZARDOUS WASTE DISPOSAL PERIOD: 1960 TO 1981

SITE DESCRIPTION:
Quanta Resources operated a waste oil storage and processing facility at 37-80 Review Ave. from 1960 to 1981. The site is located in an industrial/commercial area of Long Island City. The Newtown Creek is about 500 ft. south of the site. After filing for bankruptcy in 1981, the owners abandoned the site. The site has tanks and several buildings on site, and is still abandoned. The surrounding parcels are currently used for a combination of commercial and industrial. A New York City emergency remedial action removed approximately 640,000 gallons of waste oil from the property. Some of the waste oil contained tetrachloroethene, methyl chloride, 1,1,1-trichloroethane and trichloroethene. Sludge, waste oil, and diesel fuel, all contaminated with PCBs from badly deteriorated leaking tanks and drums, were also removed. As part of NYSDEC s Phase II Investigation, three on-site groundwater monitoring wells were installed. During installation it was discovered that there was a four foot layer of oil lying above the groundwater table, which would imply that there are about 500,000 gallons of oil underground. A consent order was signed with numerous PRPs in May 2002 for the undertaking of investigation and remediation activities. Phase I of the Remedial Investigation has been completed. Phase II of the Remedial Investigation is planned for early 2005.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Toluene	unknown
1,1,1 TCA	unknown
Benzene	unknown
Toluene 2,4-Disocyanate	unknown
Hydrocarbons Heavy Metal	unkown
1,1,1 trichloroethane	unknown
trichloroethene	unknown
Tetrachloroethene	unknown
Methyl chloride	unknown

ANALYTICAL DATA AVAILABLE FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
SEDIMENT:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

STATE SITE

SEARCH ID: 33 **DIST/DIR:** 1.00 SE **MAP ID:** 5

NAME: QUANTA RESOURCES
ADDRESS: 37 80 REVIEW AVENUE
MASPETH NY 11378
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241005
ID2: NYD980534499
STATUS:
PHONE:

SOIL: X

APPLICABLE STANDARDS EXCEEDED FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
DRINKING WATER:

GEOTECHNICAL INFORMATION
SOIL/ROCK TYPE: FILL OVER SAND.
DEPTH TO GROUNDWATER: RANGE: 1 TO 5 FEET.

LEGAL ACTION
TYPE: CONSENT ORDER RI/FS
STATUS: NE

REMEDIATION
PROPOSED:
ACTIVE:
DESIGN
COMPLETE

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Soil and groundwater contamination has been confirmed. The primary contaminants of concern include petroleum hydrocarbons, chlorinated solvents, PCBs, heavy metals and PAHs. Measurable LNAPL was found in 24 of 29 onsite and offsite monitoring wells. The site presents a significant threat due to the soil and groundwater contamination, free product plume and close proximity to Newtown Creek.

ASSESSMENT OF HEALTH PROBLEMS:
Waste oil previously stored on-site has caused widespread contamination of groundwater and soils. Approximately 500,000 gallons of contaminated waste oil remains at the site, floating on the water table. The aquifer of concern is not used as a source for drinking water. Groundwater wells in this area of Queens are used only for commercial and industrial purposes. A fence surrounds the site restricting access and minimizing the potential for direct contact exposures to on-site contaminates. The potential exists for the floating oil plume to migrate into the nearby Newtown Creek which empties into the East River. Further investigation is required.

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

SOLID WASTE LANDFILL SITE

SEARCH ID: 82 **DIST/DIR:** 0.35 SW **MAP ID:** 84

NAME:	HAMPTON MATERIALS AND HANDLING; INC.	**REV:**	01/05/06
ADDRESS:	21-16 JACKSON AVENUE	**ID1:**	2-41W89
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	INACTIVE
CONTACT:	JOHN CLAUSE	**PHONE:**	

SITE INFORMATION

OWNER INFORMATION

NAME:
TYPE:
ADDRESS: ,
EMAIL:
PHONE:

CONTACT INFORMATION

NAME: JOHN CLAUSE
ADDRESS: ,
EMAIL:
PHONE:

ACTIVITY DESC: C&D PROCESSING - REGISTERED
REG STATUS:
WASTE TYPE:
AUTH NUMBER: NONE
AUTH ISSUE DATE:
EXPIRATION DATE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

SOLID WASTE LANDFILL SITE

SEARCH ID: 192 **DIST/DIR:** NON GC **MAP ID:**

NAME:	C&H SAND AND STONE; CORP.	**REV:**	01/05/06
ADDRESS:	21-16 JACKSON AVENUE	**ID1:**	2-41W87
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	INACTIVE
CONTACT:	HUGH FLAHERTY	**PHONE:**	7189372979

SITE INFORMATION

OWNER INFORMATION

NAME:
TYPE:
ADDRESS:
EMAIL:
PHONE:

CONTACT INFORMATION

NAME:	HUGH FLAHERTY
ADDRESS:	21-16 JACKSON AVENUE LONG ISLAND CITY , NY 11101
EMAIL:	
PHONE:	7189372979
ACTIVITY DESC:	C&D PROCESSING - REGISTERED
REG STATUS:	
WASTE TYPE:	
AUTH NUMBER:	NONE
AUTH ISSUE DATE:	
EXPIRATION DATE:	

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: 4430 PURVES ST
QUEENS NY 11101

JOB: 06-284

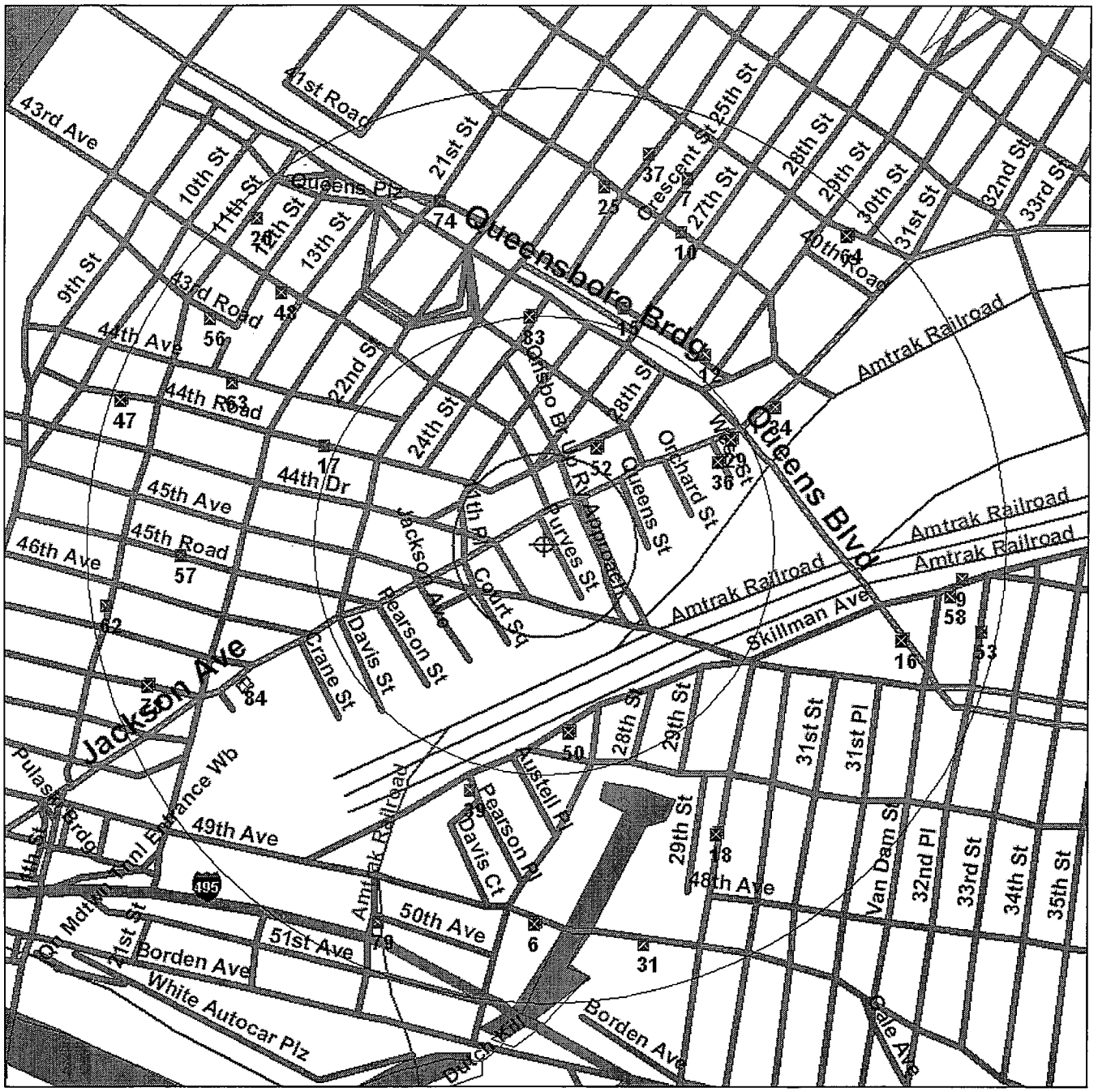
Street Name	Dist/Dir	Street Name	Dist/Dir
11th Pl	0.08 NW		
23rd St	0.19 NW		
24th St	0.15 NW		
25th St	0.08 NW		
27th St	0.08 NW		
28th St	0.16 NE		
29th St	0.22 SE		
42nd Rd	0.14 NE		
43rd Ave	0.04 NE		
44th Ave	0.20 NW		
44th Dr	0.04 SW		
44th Rd	0.08 NW		
45th Ave	0.13 SW		
45th Rd	0.19 SW		
47th Ave	0.22 SW		
Austell Pl	0.23 SW		
Court Sq	0.09 SW		
Davis St	0.23 SW		
Dutch Kills St	0.05 NE		
Hunter St	0.08 NW		
Jackson Ave	0.03 NW		
Northern Blvd	0.25 NE		
Orchard St	0.16 NE		
Pearson St	0.19 SW		
Purves St	0.01 NE		
Qnsbo Br Up Ry Appro	0.06 NE		
Queens Plz SOUTH	0.23 NE		
Queens St	0.11 NE		
Queensboro Brg	0.25 NE		
Skillman Ave	0.19 SE		
Thomson Ave	0.06 SW		
West St	0.22 NE		

Environmental FirstSearch

.5 Mile Radius

ASTM Map: CERCLIS, RCRATSD, LUST, SWL

4430 PURVES ST, QUEENS NY 11101



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.746624 Longitude: -73.94112) .....

...ntified Site, Multiple Sites, Receptor .....

..., Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

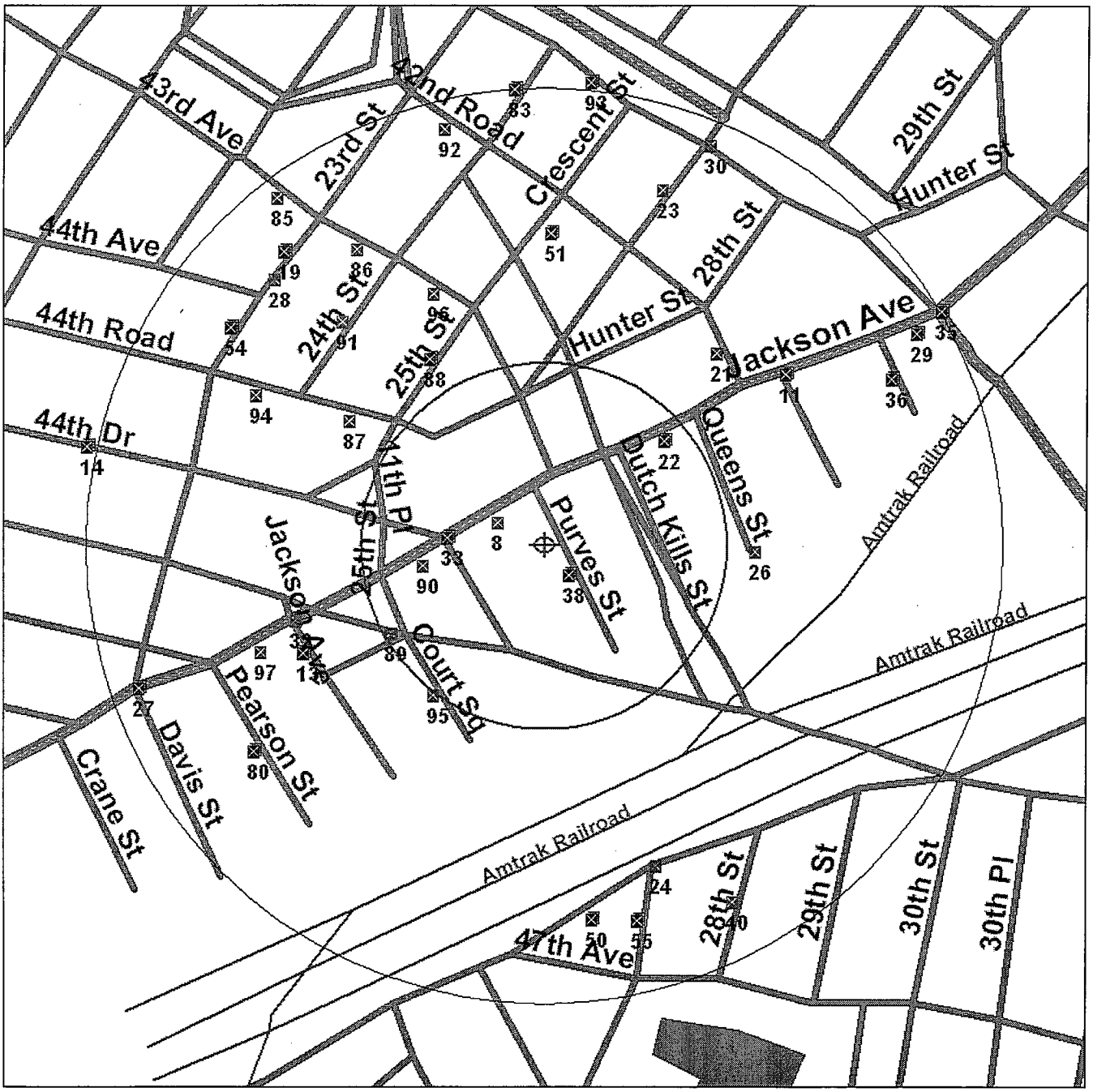
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM Map: RCRAGEN, ERNS, UST

4430 PURVES ST, QUEENS NY 11101



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.746624 Longitude: -73.94112) .....

...ntified Site, Multiple Sites, Receptor .....

..., Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

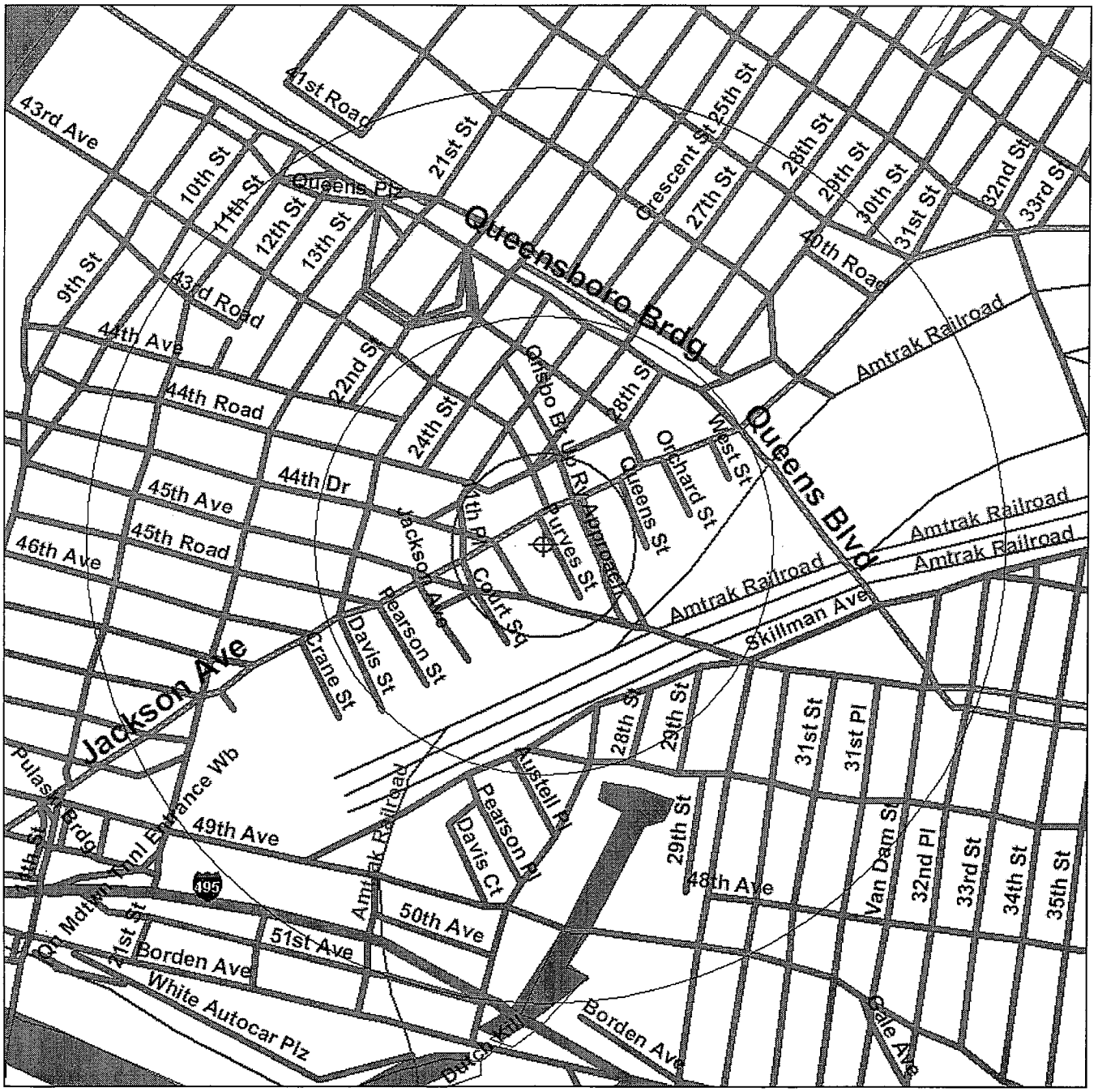
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Brownfield

4430 PURVES ST, QUEENS NY 11101



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.746624 Longitude: -73.94112) .....

Brownfield.....

Roads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Federal Land Use Sites

4430 PURVES ST, QUEENS NY 11101

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.746624 Longitude: -73.94112) .....

Land Use: Wilderness Areas, Wildlife Preserves .....

Land Use: Amer. Indian Sacred Sites, End. Species' Habitats...

Railroads .....

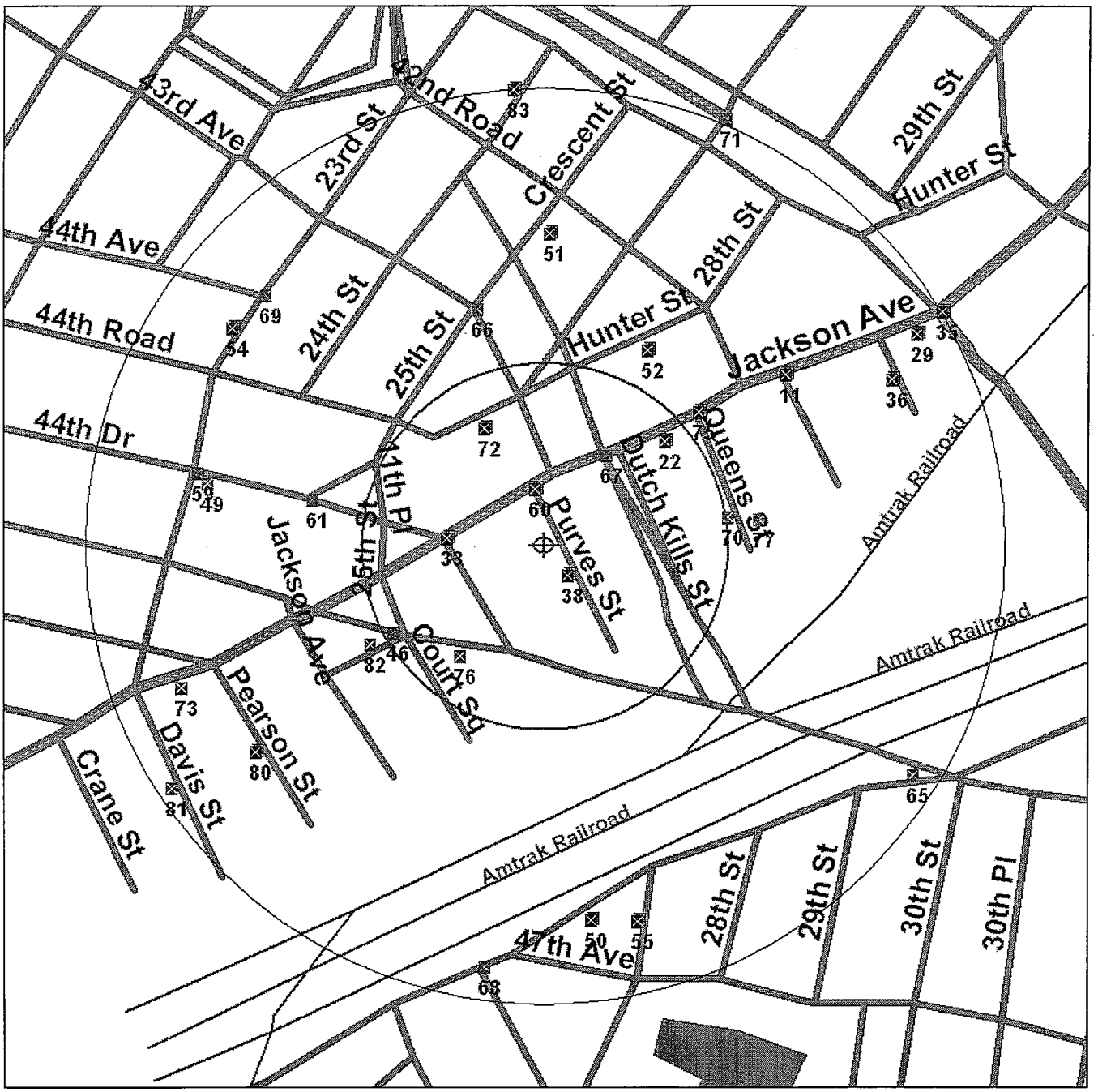
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

Non-ASTM Map: Spills 90, Spills 80

4430 PURVES ST, QUEENS NY 11101



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.746624 Longitude: -73.94112) .....

Identified Site, Multiple Sites, Receptor .....

Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

National Historic Sites and Landmark Sites .....

Railroads .....

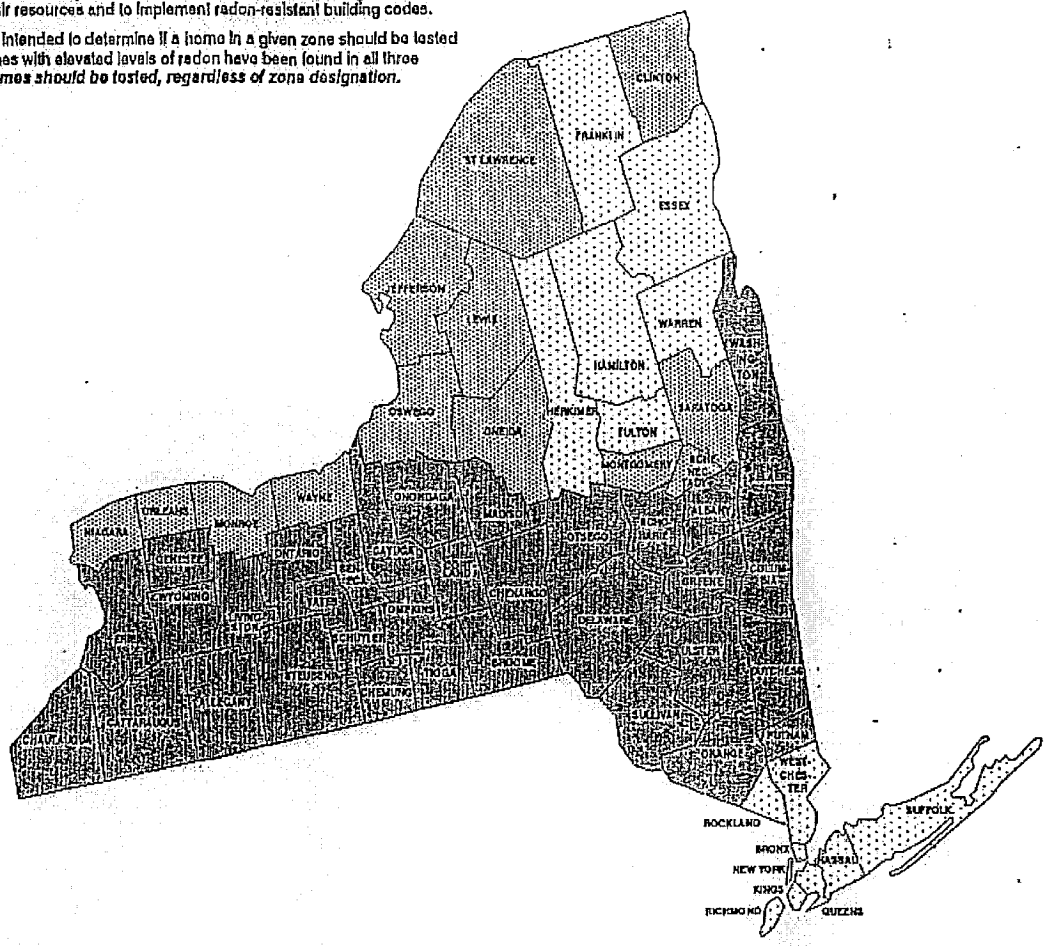
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

USEPA MAP OF RADON ZONES

NEW YORK - EPA Map of Radon Zones

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

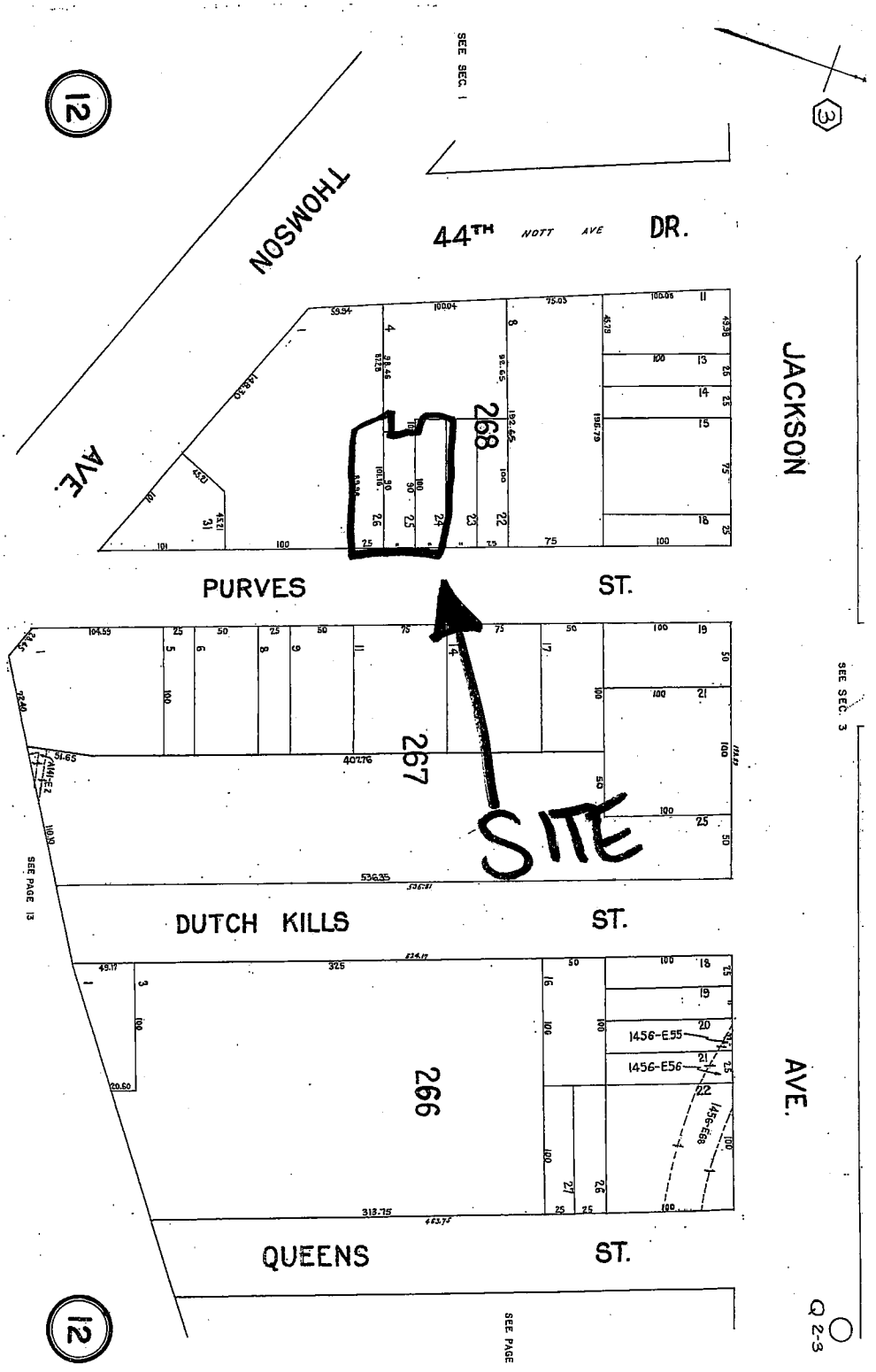
This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. ***All homes should be tested, regardless of zone designation.***



Zone 1 Zone 2 Zone 3

IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of New York" before using this map. This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

NEW YORK CITY DEPARTMENT OF ASSESSMENT INFORMATION


12
SEE SEC. 1
3
THOMSON
AVE.
44TH DR.
NOTT AVE
JACKSON
268
PURVES ST.
267
SITE
SEE SEC. 3
SEE PAGE 13
DUTCH KILLS ST.
266
1456-E55
1456-E56
1456-E58
AVE.
QUEENS ST.
12
SEE PAGE 11
Q 2-3

PROPERTY INFORMATION

2)	Property:	**PURVIS ST, LONG ISLAND CITY NY 11101**			
APN:	**00268-00024**			Use:	**VACANT LAND (NEC)**
/Old APN:	**002680024**	Tax Class/Area:	**4**	Total Value:	**$29,124**
Card #:		Prop Tax:	**$3,191.38**	Land Value:	**$29,124**
County:	**QUEENS, NY**	Tax Yr: **2005**	Delinq:	Imprv Value:	
Census:	**19.00**	Tax Apprsl Dist:		Market Value:	**$76,800**
Map Pg:	**02-03-12**	School Dist:		Mkt Land Val:	**$76,800**
Municipality:	**HUNTER'S POINT**	Exemptions:		Assd Yr:	**2005**
Township:		Exempt Land:		% Improve:	
		Exempt Total:		Neighbr Code:	
Owner:	**CONSTRUTION**			Owner Vest:	/ /
				Phone:	
Mail:	**44 30A PURVIS ST; LONG ISLAND CITY NY**				

Owner Transfer = Rec Dt: **12/31/1986** Price: Doc#: **2265-859** Type: **DEED (REG)**
Sale Dt: **12/18/1986**

SALE & FINANCE INFORMATION

	LAST SALE			PRIOR SALE		
Recording/Sale Date:	**12/31/1986**	**12/18/1986**		**01/16/1986**	**09/04/1985**	
Sale Price/Type:	**$75,000**			**$13,000**		
Document #/Stamp $:	**1265-859**		**$300.00**	**2008-409**		**$52.00**
ed Type:	**DEED (REG)**			**DEED (REG)**		
1st Mtg Loan $/Type:	**$50,000**	**CONV**				
1st Mtg Rate/Type/Term:	/	/				
1st Mtg Lender:	**PURCHASE MONEY MTG**					
2nd Mtg Loan $/Type:						
2nd Mtg Rate/Type/Term:	/	/				
Tranfer B&P:						
Title Company:						
Seller:	**COLEMAN JAMES W**					
New Construction:						

Other Last Sale Info = # Parcels: Type 2: **MULTIPLE** Pend:

SITE INFORMATION

Zoning:	**M1-5/R9**	Sewer Type:		Acres:	**0.06**
County Use:	**V1**	Water Type:		Lot Area:	**2,500**
State Use:		Electric:		Lot Width:	**25.00**
Bldg Class:				Lot Depth:	**100.00**
				Lot Shape:	
Garage Cap#:		Site Influence:		Bldg Width:	
Garage2 Sqft:				Bldg Depth:	
rking Sqft:					
Parking Type:					

IMPROVEMENT INFORMATION

County: **QUEENS, NY**
APN: **00268-00024**

Gross Bldg Area:	Total Rooms:	Construction:
Ig/Living Area:	Bedrms:	Foundation:
Ground Flr Area:	Baths (Full/Half):	Ext Wall:
Above Grade:	Ttl Baths/Fixt:	Int Wall:
Upper Area:	Yr Built/Eff:	Roof Type:
2nd Flr Area:	# Stories:	Roof Matl:
Rec Rm Area:	Fireplace/#:	Roof Shape:
Basement Area:	Basement Type:	Heat Fuel:
Basement Fin:	Pool:	Heat Type:
$/SF:	Porch Type:	Parcel Fuel:
Perimeter Area:	Patio Type:	Floor Type:
	Attic Type:	Floor Cover:
# Bldgs:	Style:	Air Cond:
# Res. Units:		
# Comm Units:		
Inspect Entry:		
Permit Amt:		
Bldg Type:		
Bldg Comments:		
Parcel Comments:		

LEGAL INFORMATION

Legal Blk/Bldg: **268**
Legal Lot/Unit: **24**

Legal Desc:

PROPERTY INFORMATION

3)	Property: **PURVIS ST, LONG ISLAND CITY NY 11101**				
APN:	**00268-00025**			Use:	**VACANT LAND (NEC)**
Old APN:	**002680025**	Tax Class/Area:	**4**	Total Value:	**$26,208**
Card #:		Prop Tax:	**$2,872.02**	Land Value:	**$26,208**
County:	**QUEENS, NY**	Tax Yr: **2005**	Delinq:	Imprv Value:	
Census:	**19.00**	Tax Apprsl Dist:		Market Value:	**$69,100**
Map Pg:	**02-03-12**	School Dist:		Mkt Land Val:	**$69,100**
Municipality:	**HUNTER'S POINT**	Exemptions:		Assd Yr:	**2005**
Township:		Exempt Land:		% Improve:	
		Exempt Total:		Neighbr Code:	
Owner:	**PERNO JOHN**			Owner Vest:	/ /
				Phone:	

Mail: **4430 PURVES ST; LONG ISLAND CITY NY 11101-2908 C008**

Owner Transfer = Rec Dt: **12/31/1986** Price: Doc#: **2265-859** Type: **DEED (REG)**
Sale Dt: **12/18/1986**

SALE & FINANCE INFORMATION

	LAST SALE		PRIOR SALE	
Recording/Sale Date:	**12/31/1986**	**12/18/1986**	**01/16/1986**	**09/04/1985**
Sale Price/Type:	**$75,000**		**$13,000**	
Document #/Stamp $:	**1265-859**	**$300.00**	**2008-411**	**$52.00**
ed Type:	**DEED (REG)**		**DEED (REG)**	
1st Mtg Loan $/Type:	**$50,000**	**CONV**		
1st Mtg Rate/Type/Term:	/	/		
1st Mtg Lender:	**PURCHASE MONEY MTG**			
2nd Mtg Loan $/Type:				
2nd Mtg Rate/Type/Term:	/	/		
Tranfer B&P:				
Title Company:				
Seller:	**COLEMAN JAMES W**			
New Construction:				

Other Last Sale Info = # Parcels: Type 2: **MULTIPLE** Pend:

SITE INFORMATION

Zoning:	**M1-5/R9**	Sewer Type:		Acres:	**0.05**
County Use:	**V1**	Water Type:		Lot Area:	**2,250**
State Use:		Electric:		Lot Width:	**25.00**
Bldg Class:				Lot Depth:	**90.00**
				Lot Shape:	**IRREGULAR**
Garage Cap#:		Site Influence:		Bldg Width:	
Garage2 Sqft:				Bldg Depth:	
king Sqft:					
Parking Type:					

IMPROVEMENT INFORMATION

County: **QUEENS, NY**
APN: **00268-00025**

Gross Bldg Area:	Total Rooms:	Construction:
Ig/Living Area:	Bedrms:	Foundation:
Ground Flr Area:	Baths (Full/Half):	Ext Wall:
Above Grade:	Ttl Baths/Fixt:	Int Wall:
Upper Area:	Yr Built/Eff:	Roof Type:
2nd Flr Area:	# Stories:	Roof Matl:
Rec Rm Area:	Fireplace/#:	Roof Shape:
Basement Area:	Basement Type:	Heat Fuel:
Basement Fin:	Pool:	Heat Type:
$/SF:	Porch Type:	Parcel Fuel:
Perimeter Area:	Patio Type:	Floor Type:
	Attic Type:	Floor Cover:
# Bldgs:	Style:	Air Cond:
# Res. Units:		
# Comm Units:		
Inspect Entry:		
Permit Amt:		
Bldg Type:		
Bldg Comments:		
Parcel Comments:		

LEGAL INFORMATION

Legal Blk/Bldg: **268**
Legal Lot/Unit: **25**

Legal Desc:

PROPERTY INFORMATION

4) Property: **PURVIS ST, LONG ISLAND CITY NY 11101**

APN:	**00268-00026**			Use:	**VACANT LAND (NEC)**
Old APN:	**002680026**	Tax Class/Area:	**4**	Total Value:	**$27,675**
Card #:		Prop Tax:	**$3,032.22**	Land Value:	**$27,675**
County:	**QUEENS, NY**	Tax Yr: **2005**	Delinq:	Imprv Value:	
Census:	**19.00**	Tax Apprsl Dist:		Market Value:	**$73,000**
Map Pg:	**02-03-12**	School Dist:		Mkt Land Val:	**$73,000**
Municipality:	**HUNTER'S POINT**	Exemptions:		Assd Yr:	**2005**
Township:		Exempt Land:		% Improve:	
		Exempt Total:		Neighbr Code:	
Owner:	**PERNO JOHN**			Owner Vest:	/ /
				Phone:	

Mail: **4430 PURVES ST; LONG ISLAND CITY NY 11101-2908 C008**

Owner Transfer = Rec Dt: Price: Doc#: Type:
Sale Dt:

SALE & FINANCE INFORMATION

	LAST SALE		PRIOR SALE	
Recording/Sale Date:	**04/13/1992**	**03/26/1992**	**04/13/1992**	**03/26/1992**
Sale Price/Type:	**$52,000**			
Document #/Stamp $:	**3299-1683**	**$208.00**	**3299-1682**	
ed Type:	**DEED (REG)**		**DEED (REG)**	
1st Mtg Loan $/Type:				
1st Mtg Rate/Type/Term:	/	/		
1st Mtg Lender:				
2nd Mtg Loan $/Type:				
2nd Mtg Rate/Type/Term:	/	/		
Tranfer B&P:				
Title Company:				
Seller:	**COLEMAN JAMES W**			
New Construction:				

Other Last Sale Info = # Parcels: Type 2: Pend:

SITE INFORMATION

Zoning:	**M1-5/R9**	Sewer Type:		Acres:	**0.06**
County Use:	**V1**	Water Type:		Lot Area:	**2,527**
State Use:		Electric:		Lot Width:	**25.00**
Bldg Class:				Lot Depth:	**101.08**
				Lot Shape:	**IRREGULAR**
Garage Cap#:		Site Influence:		Bldg Width:	
Garage2 Sqft:				Bldg Depth:	
king Sqft:					
Parking Type:					

IMPROVEMENT INFORMATION

County: **QUEENS, NY**
APN: **00268-00026**

Gross Bldg Area:	Total Rooms:	Construction:
Bldg/Living Area:	Bedrms:	Foundation:
Ground Flr Area:	Baths (Full/Half):	Ext Wall:
Above Grade:	Ttl Baths/Fixt:	Int Wall:
Upper Area:	Yr Built/Eff:	Roof Type:
2nd Flr Area:	# Stories:	Roof Matl:
Rec Rm Area:	Fireplace/#:	Roof Shape:
Basement Area:	Basement Type:	Heat Fuel:
Basement Fin:	Pool:	Heat Type:
$/SF:	Porch Type:	Parcel Fuel:
Perimeter Area:	Patio Type:	Floor Type:
	Attic Type:	Floor Cover:
# Bldgs:	Style:	Air Cond:
# Res. Units:		
# Comm Units:		
Inspect Entry:		
Permit Amt:		
Bldg Type:		
Bldg Comments:		
Parcel Comments:		

LEGAL INFORMATION

Legal Blk/Bldg: **268**
Legal Lot/Unit: **26**

Legal Desc:

NEW YORK CITY FIRE DEPARTMENT STORAGE TANK INFORMATION

FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Tanks Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2441 or 2442

Tank Request Form

OFFICE USE ONLY
Cashier / Search No.:

SECTION A **CUSTOMER INFORMATION**

Please print your address and contact telephone number.

Middleton Environmental
Name

50 Park Avenue
Address

Babylon, NY 11702
State Zip Code

(631) 321-4300
Telephone Number

Processing may take time, please choose one option below:
I will wait for it ☐ I will it pick- up ☐ Mail it to my address ☑

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order (made payable to the NYC Fire Department) and a self-addressed envelope (with postal stamp). Mail checks or money orders directly to the address and unit listed above. DO NOT MAIL CASH. Cash payments can only be made in person and accepted by our Cashiers Office (9am – 3pm).

SECTION B **PLEASE PRINT THE ADDRESS TO BE SEARCHED.**

4426-4430 Purves Street — Queens
House Number Street Name — Borough

CUSTOMER – PLEASE READ THE INFORMATION BELOW.

CERTIFIED REPORT WILL BE MAILED TO THE ADDRESS YOU HAVE PROVIDED WITHIN TEN (10) BUSINESS DAYS AFTER DATE SUBMITTED. COMPUTER PRINTOUTS WILL BE PROVIDED ONLY UPON REQUEST.

After you have received the certified report, you may request a certified computer printouts and/or a copy of any related record for an additional fee of $0.25 (cents) / per page. The fee for individual copies can only be determined after this search has been completed and you have received the related report. All payments are non-refundable.

Note: All listed tank information come from records, which exist in the FDNY District Office Folders and computer files. Also, please be advised that this search will not include records manually kept by Fire or Engine Companies, unless a summons for "Failure to Comply" was issued.

SECTION C **FUEL (HEATING) OIL TANKS - FEE $10.00 / PER REPORT**

If you would like to obtain a certified report, please complete this section by checking one or more boxes from the selection below.

☒ ITEM 1 – THE TOTAL AMOUNT AND SIZE OF EXISTING FUEL OIL / HEATING TANKS (includes installation date)

☒ ITEM 2 – THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED FUEL OIL / HEATING TANKS

☐ ITEM 3 – OTHER: No actives / voided C of O #14-07020175 exp. 4/21/98 2-275 gallon

For 4430 Purves Bldg next door

For Office Use Only – Do not write in this section.

Searched By: _____ Date: ___/___/___

(PLEASE SEE OTHER SIDE OF FORM)

SECTION D **BURIED MOTOR VEHICLE TANKS - FEE $10.00 / PER REPORT**

If you would like to obtain a certified report, please complete this section by checking one or more boxes from the selection below.

- [x] ITEM 1 – THE TOTAL AMOUNT AND SIZE OF EXISTING BURIED MOTOR VEHICLE TANKS
- [x] ITEM 2 – THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED BURIED MOTOR VEHICLE TANKS
- [ ] ITEM 3 – MOST RECENT TANK / PIPING TEST RESULTS (includes type of test performed)
- [ ] ITEM 4 – HISTORY OF BURIED MOTOR VEHICLE TANKS LEAKS
- [ ] ITEM 5 – OTHER: _____

For Office Use Only - Do not write in this section.

Searched By: _____ Date: ___/___/___

SECTION E **PLEASE READ STATEMENT AND SIGN BELOW.**

I have read all of the instructions and clearly understand all of the information listed in each completed section.

Customer / Signature: Karen R Farrell Date: ___/___/___

For Office Use Only - Do not write in this section.

Total Amount

Accepted by / Initials: _____ Date: ___/___/___

Certification Stamp

Electronic Stamp Below – Date / Time Received

NEW YORK CITY BUILDING DEPARTMENT PROPERTY PROFILE OVERVIEW

NYC BUILDINGS

NYC.gov always open

NYC Department of Buildings

Property Profile Overview

44-30 PURVIS STREET QUEENS 11101 BIN# 4849278

Health Area	:	Tax Block	: 268
Census Tract	:	Tax Lot	: 26
Community Board	:	Condo	:
Buildings on Lot	:	Vacant	:

View All Addresses... Browse Block Browse Lot View Certificates of Occupancy

DOB Special Place Name:	S/B LOT 1 NOT 26		
DOB Building Remarks:			
Landmark Status:		**Special Status:**	N/A
Loft Law:	NO	**Local Law:**	NO
SRO Restricted:	NO	**TA Restricted:**	NO
UB Restricted:	NO	**Special District:**	N/A
Little 'E' Restricted:	N/A	**Grandfathered Sign:**	NO
Legal Adult Use:	NO	**City Owned:**	NO
Historic Block:	268	**Historic Lots:**	1
Other BINs:	NONE		
Department of Finance Occupancy Code:	V1-VACANT LAND		

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of ructure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open
Complaints	0	0
Violations-DOB	4	0
Violations-ECB	0	0
Jobs/Filings	0	
PRA / ARA Jobs	0	
Total Jobs	0	
Total Actions	0	

Elevator Records
Electrical Applications
Permits In-Process / Issued
Illuminated Signs Annual Permits
Plumbing Inspections
Open Plumbing Jobs / Work Types
Facades
Marquee Annual Permits
Boiler Compliance
DEP Boiler Information

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

NEW YORK TELEPHONE ADDRESS DIRECTORY INFORMATION

- - -358-3945
- - -961-8135
- - -762-7147
- - -358-6805
- - -445-8684
- - -353-3214
- - -539-4804
- - -353-9229
C - -961-4100
- - -762-7489
- - -961-1085
nc -358-1414
- - -358-0625
hew 353-1242
Corp 762-9163

33—44

rs - -353-2525
- - -445-6812
- - -445-9698
- - -461-2049
- - -961-1270
- - -939-7017
- - -463-5127
- - -463-8757
- - -939-7719
- - -762-6734
- - -445-5483
- - -886-3576
- - -762-7776
- - -762-7776

The
y To Animals—
- - -445-1011
- - -445-1011

s 1

- - -353-2429
- - -359-0388
- - -886-1579
- - -359-7885
Co Inc 539-0900
- - -961-2513
- - -961-4823
- - -359-3482
- - -359-3482
- - -886-3683
- - -539-2969
- - -886-4665
s Inc - 886-4665
Retriever
886-4665
- - -539-9652

6—01

- - -358-2146
ter - -886-3165
- - -539-3431
c - - -463-9781
stdy - 353-6236
Svces Inc—
nter -961-4550
& Heating
- - -353-6500
p 762-8370
- - -445-8046

8—31

Corp -358-9599
- - -463-7978
- - -959-0230

107-17 Nelson & A Miss - - - -526-6960
107-18 Davis Rosa Bell Mrs - - - -658-3985
107-18 Whitfield L Mrs - - - -526-2643
107-19 Carter Julia M Mrs - - - -297-0050
107-20 Clark L - - - - - - - -526-6610
107-20 Robinson-Bey Chas Mrs - -291-9630

SHORE AV 107—25

107-31 Matthews J - - - - - - -291-1316
107-31 Scott Sterling - - - - - -657-8863
107-32 Badger Chas Jr - - - - -526-1069
107-35 Coleman C L - - - - - -291-9131
107-36 Lamothe Jacques - - - -657-1658
107-39 Baldwin Emma Mrs - - - -739-8359
107-42 Sapp B - - - - - - - -526-2237

107—43 107—44 LAKEWOOD AV

PROSPECT AV

(SEE 235TH DOUGLASTON)
(SEE 239TH DOUGLASTON)
(SEE 240TH DOUGLASTON)

134 Quigley B - - - - - - - -631-9047
134 Quigley Burchell Assocs - - -428-3434

PURITAN AV

119 Nakagawa Motohiro - - - - -793-0148
144 Hof Robert & Susanna - - - -263-0760

PURITAN AV

FOREST HILLS

(SEE 75TH RD)

ZIP CODE 11375

1980

PURVIS ST

LONG ISLAND CITY

ZIP CODE 11101

JACKSON AV 44—01

44-11 North Eastern Interior Demolition Corp - - - - - - - - -786-9671
44-16 Isravers al Inc - - - - - - -784-9440
44-18 J & A Plating Equip Inc platers equip - 361-8979
44-18 Viewrite Manufacturing Inc 786-0098
44-19 European Gates Co - - - -361-7349
44-27 Apexton Records Manufacturing Inc - - - - - - - - -937-4038
44-30 L C Constr - - - - - - - -786-2793
44-30 Welsh Bros Contrctng Co trucking - 729-7330
44-39 Liberty Hardware Mfg Corp -784-2700
44-39 Loeb Morris - - - - - - b -784-1515

44—48 44—53 THOMSON AV

PUTNAM AV

RIDGEWOOD

(FOR NUMBERS LOWER THAN 1601 SEE BKLYN)

ZIP CODE 11385

60-07 Inrom Frank Jr - - - - - -
60-08 Gletz Edwin O - - - - - -456-4564
60-09 Henry John F - - - - - -821-0157
60-09 Schmidt Erich F - - - - -456-5616
60-10 Merlino Joseph J - - - -386-1041
60-12 Cheng T S - - - - - - -386-1967
60-12 Coffey M - - - - - - - -456-0749
60-13 Batewell Robt J - - - - -821-0470
60-14 Adamo Nicholas - - - - -821-6350
60-15 Lanzer Jack - - - - - -497-5460
60-15 Ruperto Francisco - - - -381-1430
60-16 Delmage Bertram F - - - -381-0479
60-16 Tobia Liborio - - - - - -381-8228
60-17 Mucha Robt - - - - - - -366-1294
60-18 Novick Edward - - - - -497-5296
60-19 Adams M - - - - - - - -381-1272
60-19 Wiederwohl Jos - - - - -456-4071
60-20 Calola Giacamo - - - - -497-1754
60-20 Voges Edw H - - - - - -386-4424
60-21 Kropf Edw F - - - - - -381-8026
60-24 Behrman John - - - - - -386-0173
60-24 Majozic Salo - - - - - -381-4155
60-24 Smith John S - - - - - -497-5784

60TH PL 60—25

60-27 Abramski Julia Mrs - - - -366-6385
60-27 Kessler Emil - - - - - -456-5214
60-28 Guadalupe A - - - - - -497-3523
60-28 Sabella Jas J - - - - - -386-2548
60-30 Asaro Frank - - - - - -366-9767
60-30 Liguori Helen - - - - - -386-7395
60-31 Pilarsky Helen - - - - -366-6914
60-34 Frizzi Oscar - - - - - -386-3479
60-34 Kauzlar Jure - - - - - -366-2087
60-34 Lucian Florea - - - - - -366-5727
60-34 Masone Cosimo - - - - - -366-2962
60-35 Stanga Irem J - - - - - -366-0510
60-35 Stanga Robert - - - - - -386-7023
60-38 Bloes Richard - - - - - -366-7411
60-38 Prinz John Mrs - - - - -366-4386
60-38 Schaefer Wm J - - - - -386-9094
60-38 Skorb Helen R - - - - - -381-3865
60-39 Santoro Lynn Mrs - - - - -381-9807
60-40 Klein I - - - - - - - - -456-6321
60-40 Koenig Gottlieb - - - - -497-2406
60-40 Pole Frank - - - - - - -497-6978
60-41 O'Connor John F - - - - -381-5342
60-42 Di Maggio Louis F - - - -497-4178
60-42 Rose V - - - - - - - - -366-7579
60-43 Brand George W - - - - -386-8638
60-43 Cassetta Amedeo - - - -386-4961
60-45 Beck A - - - - - - - - -386-4521
60-45 Mohr Frank - - - - - - -821-8127
60-46 French I - - - - - - - -381-4862
60-46 Killen William - - - - -497-5334
60-47 Palcic Edith A - - - - -366-5918
60-47 Stephan John J - - - - -456-8839
60-50 Erker Alois - - - - - -497-4687
60-50 Watzel Bella - - - - - -821-2785

60TH LN 60—51

60-51 Moos Frank - - - - - - -821-7305
60-52 Mader Mary T Mrs - - - -497-8607
60-53 Jaranowski Julia Mrs - - -366-8273
60-53 Leone Pat - - - - - - -381-8799
60-55 Kinkopf Albin - - - - - -497-2053
60-56 Koenig M S - - - - - - -366-2075
60-59 Bahret Gladys Mrs - - - -456-2923
60-59 Morello Enzo - - - - - -366-0520
60-60 Blass L - - - - - - - -366-4603
60-60 Curione S E - - - - - -497-1181
60-61 Ella Jennie - - - - - -456-5058
60-61 Sciortino Vincent - - - -381-4797

1605 Koesta
1605 Lilken
1605 Lopez
1605 Nieves
1605 Osovni
1605 Potoke
1605 Ruiz E
1605 Sieroc
1605 Sydran
1605 Wallbr
1612 Miro L
1612 Roldar
1614 Ramir
1614 Roldar
1615 Alvare
1615 Attlan
1615 Cavaz
1615 Crnko
1615 Del Va
1615 Flecke
1615 Gadon
1615 Gonza
1615 Gorell
1615 Greent
1615 Hader
1615 Leffer
1615 Lopez
1615 Matyc
1615 Poma
1615 Rabus
1615 Rosen
1615 Sande
1615 Sherr
1615 Stahl
1615 Touw
1615 Zamb
1616 Creva
1618 Herna
1618 Nieve
1620 Mars
1620 Mont
1622 Enda
1622 Enda
1624 Char
1624 DeSa
1625 Ambr
1625 Baez
1625 Beck
1625 Billi
1625 Blaz
1625 Brow
1625 Figu
1625 Ford
1625 Forn
1625 Gard
1625 Haar
1625 John
1625 Mor
1625 Rod
1625 Schr
1625 Selb
1625 Shal
1625 Sher
1625 Shu
1625 Stal
1625 Upp
1625 Veg
1625 Wal
1625 Wie
1626 Aug
1626 Gua
1630 Fle
1630 Val
1632 San

107-06 Walker Frank ----------291-3840
107-11 Badger Chas L ----------AXte 7-4898
107-12 Carter Susan A Mrs --------REpb 9-7892
107-12 Wooling Katherine----------526-1467
107-14 English Rachel Mrs ----------739-0765
107-17 Nelson E A Miss ----------JA 6-6960
107-18 Campbell Mae ---------RN-REpb 9-4068
107-18 Campbell Neville J ---------REpb 9-4068
107-18 Davis Rosa Bell Mrs-------OLmp 8-3985
107-19 Calhoun Maglean Mrs ----------526-3589
107-19 Carter Julia M Mrs ----------AX 7-0050
107-20 Collins Alphonso ----------526-2973
107-20 Robinson-Bey Chas Mrs -----AXte 1-9630

SHORE AV 10725

107-26 Burns Albert ----------523-6956
107-31 Burrell Heather ----------657-4818
107-31 Porch Rose Mrs----------OL 7-3197
107-32 Badger Chas Jr----------JA 6-1069
107-33 Dorniak Louis R----------523-1629
107-35 Williams Bertha Mrs ----------JA 6-3321
107-35 Williams Norman H----------RE 9-2815
107-36 Boschen Geo ----------RE 9-0020
107-36 James Bertram ----------291-1751
107-37 Apple Wilbur ----------739-8673
107-39 Baldwin Emma ----------RE 9-8359
107-40 Williams Julia M Mrs------REpb 9-7408
107-42 Lewis Gladys M ----------739-9094
107-42 Rowe Harold ----------657-1561

10743 10744 LAKEWOOD AV

PROSPECT AV

(SEE 235TH ST DOUGLASTON)
(SEE 239TH ST DOUGLASTON)
(See 240TH ST DOUGLASTON)

1970

PURITAN AV FOREST HILLS

(SEE 75TH RD)

PURVES ST LONG ISLAND CITY

JACKSON AV 4401

44-11 Hownor Assoc Inc ----------ST 4-2121
44-15 Concrete Breaking Co ----------ST 4-4939
44-17 Consolidated Concrete Cuting Corp-786-5551
44-17 Expert Concrete Breakers Inc --STII 4-4410
44-17 Expert Concrete Pumping Co -----ST 4-4410
44-18 Olympic Plating Equip Co
pltrs equip-361-8979
44-18 Pyramid Enterprises Inc --------ST 6-0098
44-27 DePaul Chemcl CoInc ----------784-8511
44-30 Berdell Indstries Inc----------STII 6-6886
44-30 Welsh Bros Contractg Co-trukng-STII 4-6325
44-39 Liberty Hrdwr Mfg Corp -------784-5020
44-39 Loeb Morris b ----------ST 4-1515
44-43 Exhibit Graphics Inc ----------361-8069

4446 4453 THOMSON AV

PUTNAM AV RIDGEWOOD

178 Wittreich H M----------382-4657

(FOR NUMBERS LOWER THAN 1601 SEE BKLYN)

1136 Monaghan Thomas ----------366-6173
1540 Hoffler G ----------497-3396

1615 Lomnitzer Herber
1615 Maier Emmy --
1615 Maier Fred ----
1615 Manzi Mildred -
1615 Moore Grace -
1615 Moran A -----
1615 Morgan John C
1615 Otto Edw H ---
1615 Perlman Henry -
1615 Rabuse John --
1615 Sanders M B ---
1615 Seibert Marion J
1615 Stahlkopf Walter
1615 Stasiw Wasyl --
1615 Surge L D -----
1615 Tzortzinis Kosta
1616 Clement Jos ---
1616 Deegan Lawrence
1618 Weitzel Kathleen T
1620 Marsala Michael
1620 Montalbano Rose
1622 Ferrari Reno ---
1624 Segreti Mario --
1625 Ambrecht Karl
1625 Anderson Josephi
1625 Baumann Henry J
1625 Billik Pola ----
1625 Blum Robt G --
1625 Connolly Warren
1625 Connolly Warren
1625 Farley Eileen ---
1625 Ford Chas -----
1625 Fralle Ralph ---
1625 Gardner Saul ---
1625 Hetzer Jos W--
1625 Huryn Andrew --
1625 Imhoff Robt A
1625 Kamine Anna Mr
1625 Kessler E -----
1625 Kleberhoff Helm
1625 Mannino A ---
1625 Martschenko Iva
1625 Reid Wm W --
1625 Ryan Vivian A -
1625 Saltanis Ann -
1625 Schade Alice --
1625 Schmidt Wm T -
1625 Sheremeta Wm
1625 Shubert Hyman
1625 Shugarr Jos A
1625 Sirois Philip --
1625 Skiffington Maur
1625 Smith Wm Chas
1625 Turner Alexndr
1625 Veittinger Ernst
1625 Wagner Edw G
1625 Waldinger S ---
1625 Weber E -----
1625 Wiedmann Mayb
1625 Wiedmann R C
1626 Augello Sal --
1626 Guarino Salvato
1630 Milone Chas V
1630 Schultheis Edw
1630 Schultheis Edw
1632 Renn Michael -
1634 Beretvas M ---
1634 Gasparitch Lore
1635 Adler B ------
1635 Blank Geo ---
1635 Boychuk Michl
1635 Collins Edw -

...ael FLsh 3-2429
...k FLsh 8-6173
...rank J FLsh 9-7885
... INde 1-9327
...s F INde 1-4225
... INde 1-0256
... Motor Shop FLsh 3-7345
... electrcl contr FLsh 3-7345
...red INde 1-5280

3601

...nk FLsh 8-2146
... study FLsh 3-6236
FLsh 9-6860
... INde 1-9144
...e Eugene FLsh 9-6994
... Plumbing&Heating Co Inc FLsh 3-6500
...wer Llge 4-0523
... INde 1-6248
...nstruction Co Inc FLsh 9-1152
...el Inc
... paintg&decoratg FLsh 3-1123
...ion Prods Inc INde 3-2500
... Hlkr 5-7200
... Hlkr 5-7200
... Hlkr 5-7200

3631

...o Plating Corp FLsh 8-9599
...o Plating Corp FLsh 8-9599
... IN 3-7978
... FLsh 3-3740

3701

...s C grocr Hlkr 5-1494
... D6 FLsh 8-0733
...d Corp parts&svce INde 3-2400

3801

...gela M INde 3-1986
...to Repr FLsh 3-0259

3901

... LI 3-2700

ELT AV 4001

... Master Barbrs Assn IN 1-4197
... FLsh 9-9530

ETON ST JAM

10401

... OLmp 8-0042
...Venturo contr JAma 6-5471
...Anita Mrs OLmp 7-1843

10501

... AX 7-5416
... OLmp 3-6049

107-31 Porch Rose Mrs OLmp 7-3197
107-32 Badger Chas Jr JAma 6-1069
107-33 Dorniak Louis F JAma 3-1629
107-34 Edwards Leyola Mrs ...
107-35 Fredricks Hattie ... AX 1-5481
107-35 Williams Norman H REpb 9-2815
107-36 Boschen Geo Sr REpb 9-0020
107-37 Archer Lloyd Mrs JAma 3-2640
107-38 Jackson Robt C ...
107-38 Sadler Jos REpb 9-6914
107-40 Williams Julia M Mrs REpb 9-7408
107-41 Wyse Robt E ...

PROSPECT AV
(SEE 60TH PL RIDGEWOOD)
(SEE 235TH ST DOUGLASTON)
(SEE 239TH ST DOUGLASTON)
(See 240TH ST DOUGLASTON)

PRSPCT INWD

... Bar-Ass Chemcl Co Inc GRnt 1-8000

PROSPECT ST
(SEE 43RD ST WOODSIDE)

PURITAN AV FOREST HILLS
(SEE 75TH RD)

PURVES ST LONG ISLAND CITY

44-17 Expert Concrete Breakers Inc STil 4-4410
Nights Sun&Holidays NEwt 9-3448
44-18 Rozilda Cakes Inc STil 6-6895
44-19 Howmor Assocs Inc STil 4-2121
44-23 Concrete Breaking Co STil 4-4939
44-26 Gandy Air Freight Inc STil 6-4740
44-27 De Paul Chemcl Co Inc STil 4-0547
44-27 Syn-Cote Chemcl Corp STil 4-5297
44-28 Berdell Indstries Inc STil 6-6886
44-30 Copes Roscoe T STil 6-8311
44-30 Green Gertrude STil 6-8311
44-30 Tru-Synthetics Inc STil 6-2540
44-30 Welsh Bros Contractg Co truking STil 4-6325
44-39 Liberty Hrdwr Mfg Corp STil 4-5940
44-39 Loeb Morris b ST 4-1515

PUTNAM AV RIDGEWOOD
(FOR NUMBERS LOWER THAN 1601 SEE BKLYN)

WYCKOFF AV 1601

1605 Alter Alfred A VAnd 1-6897
1605 Bender Geo VAnd 1-7224
1605 Callarota Jos A GLnm 6-6066
1605 Fleshman Robt VAnd 1-8191
1605 Graumann Heinz K GLnm 6-1273
1605 Gunning Jos VAnd 1-2539
1605 Hollander Martin J7 EVrg 2-4769
1605 Hollander Wm L EVrg 6-0878
1605 Juergenleit Geo EVrg 1-5568
1605 Jurgeleit Brunhilde VAnd 1-5900
1605 Kinzler Jos A GLnm 6-7882
1605 Lechleiter R C EV 2-2611
1605 Leggio Jos A EVrg 2-4163

1960

FLsh 8-6422
L us 9-6898
FLsh 9-6898
L us 9-6898

8LVD)

A S
LAur 8-3627
LAur 5-6341
LAur 8-1016
LAur 7-0742
LAur 7-1777
LAur 5-7414
LAur 5-6804
LAur 8-4713

L

8Oul 3-4531
yrs
8Oul 8-3702

C)

VILLAGE

LVD

FLsh 3-4854
FL us 3-1143
FLsh 9-2067
FL us 9-5476

FL us 3-5651
FL us 9-2909

3-1320
9-4668
HAN
E 7TH AV)

IRST
02
HA ve 6-8973
HAvm 9-0746
9 ILno 8-8072

7 ILno 7-5790
0 HIck 6-8852
HAvm 4-5323
Spec
HAvm 4-8072
HA ve 4-3056
HA ve 4-3056
NEwt 9-9513
0 HIck 6-7321

001
7 ILno 8-7328
HAvm 6-5522
5 ILno 8-4757
0 HIck 6-5485

OCKWAY
9 FArR 7-2249
FArR 7-3994
FA rR 7-4150
6 FArR 7-4150
FArR 7-5633
FArR 7-2255
7 FArR 7-2460
FArR 7-2460
FArR 7-2323

33-26 Astuto Philip J ---------J7 FLsh 3-2324
33-28 Gledhill Wm H ---------J7 FLsh 9-3663
33-30 Kirwan Robt H ----------D8 INde 3-1058
33-30 Manzo John A ----------D8 FLsh 3-2720
33-30 McCormick E ----------D8 INde 3-1898
33-31 Washington Maxwell ------J7 FLsh 8-6805
33-31 Wright E Mrs ..... D1 FL us 3-3964
33-33 Bellomo Thos ------grocr A0 FLsh 9-9077
33-33 Di Bunno J ... grocr S4 FL us 9-9077
33-33 Di Buonn Theo ---------D6 FLsh 8-1780
33-37 Zensen Jos ----------D6 FLsh 9-5880
33-38 Alhanese Rocco ----------J9 FLsh 8-5987
33-38 Cassano Anthony genl contr D9 FLsh 3-8428
33-38 Thunquist Frank signs J1 FL us 9-8072
33-41 Ritter Raymond E --------J9 INde 3-3465
33-43 Duchesne Mildred Mrs-----D4 FLsh 3-1012
33-44 Meyer Sally J ----------J9 FLsh 9-0798
33-44 Moore Edw F ----------D9 FLsh 9-0607
33-44 Towne Howard C ---------D6 FLsh 8-2894
33-45 Ciecirski Ernest F -------D9 FLsh 3-1911
33-45 Ming Harold J ----------D9 INde 3-5409
33-47 Linke Harry ----------D6 FLsh 8-1933
33-49 Piatta Helen T ---------D9 FLsh 8-8605
33-51 Beaver Theo ----------D8 FLsh 3-2677
33-51 Engel Felix ----------J8 FLsh 8-3919
33-51 Nelson Ivar ----------J8 FLsh 3-7317
33-51 Regan John V ----------J8 FLsh 9-8215
33-51 Sokoloff Murray ---------D9 FLsh 8-8607
33-52 Parrella Alfred ----------D7 FLsh 8-6309
33-53 Manzo Mario J ----------J9 INde 3-4289
33-56 Wheeler Mae E ----------D6 FLsh 8-2727
33-58 Gagne Leona ----------D8 FLsh 3-3563
33-58 Kulka S M ---------- FLsh 3-3563
33-60 Fried Celia Mrs ..... D0 FL us 9-0533
33-60 Resnick Leah F Mrs....D0 FL us 9-0533
33-70 NY City of—
Police Dept—
Detective Squads—109th D8 INde 3-2073
33-70 Police Dept 109 Prec--------FLus 9-6500

96th AV 1501

35-04 Wright Nell E .....J1 FL us 9-7267
35-07 Terone Frank ----------D8 FLsh 8-6173
35-11 Winkler Chris A Inc-----autos FLus 9-2410
35-12 Jordan Thos S Jr .....J0 FL us 3-3068
35-14 Campbell Jas E----------J7 FLsh 8-4239
35-14 Lewis Harlan ----------D8 FLsh 8-5891
35-15 Leuci T ---------- FLus 9-3482
35-22 Leuci T A ----------D8 INde 3-2861
35-22 Natl Elec Co ----------D8 FLsh 3-7345
35-22 Sossi John --electrcl contr-D8 FLsh 3-7345
35-23 Natl Hotel Supply Co----meats FLus 9-5555
35-34 (58) Rosenthal Sam J pntr FL us 9-4164
35-34 (58) Royal Press The----prntrs-FLus 9-4164

96th AV 3601

36-07 Amer Silver C--precs metls-D8 FLus 3-8012
36-07 Sherman&Co --precs metls-D8 FLsh 3-8012
36-08 Ebenezer Bapt Church ----J9 FLsh 3-6236
36-08 Glanton V W Rev --study J9 FLsh 3-6236
36-14 D ---------- Spec
36-17 Dandy Jesse W ----------J9 INde 3-2194
36-17 La Dainty Beauty Salon ----J8 FLsh 9-3762
36-18 Young Andrew Laurence --D6 FLsh 8-1682
36-20 McCoy Minnie Eugene -----J8 FLsh 9-6994
36-29 Leek Geo W----------D7 FLsh 8-6340

98th RD 3631

36-32 Starkin Mary E Mrs -----D5 FLsh 9-6592
36-35 Martorano Ann C---------- FLus 3-0230
36-37 Sease Emhra J ----------J9 INde 3-2596
36-37 Sease Marie ----------D9 FLsh 3-3740
36-39 Ferruso Otto ----------J8 FLsh 9-4730
36-39 Pero Angelo ---------- FLus 9-4730

97th AV 3701

37-09 Ho Frances ----------J9 INde 3-4028
37-10 Malaves Jos ----------D6 FLsh 8-0733
37-15 H ---------- Spec
37-20 N ---------- NP
37-20 NY City of
Transportation Bd of
Transit Systm
Queens Bus Div
Prince St Garage -----J9 INde 3-4080

98th AV 3801

38-02 Puckett Dorothy C ------A0 INde 3-1986

99th AV 3901

39-05 Forster Bros
auto body repr D9 INde 3-9875
39-15 Forster Brothers
auto paintng body wks FLsh 9-9576

106-47 Waddey Kathleen ------D9 JAma 3-1865
106-50 Kolakowski Stanislaw ----J7 JAma 6-3549
106-50 Kupcewicz Julius F-------J6 REpb 9-8490

107th AV 10701

107-01 Jackson Harry L----------REpb 9-0538
107-03 Wright Nathan A ------J48 JAma 3-1638
107-06 Graham Chas Mrs--------J6 JAma 3-5816
107-11 Amann John ----------REpb 9-8517
107-12 Carter Susan A Mrs.....W9 RE pu 9-7892
107-14 Saunders Geo E --------D6 JAma 3-4736
107-15 Mudzinski Thos S ------J9 OLmp 8-5832
107-17 Nelson Amy ----------J9 OLmp 8-0446
107-18 Nightingale Beryl ------J7 REpb 9-5508
107-19 Gorycki Mary .....D1 JA ma 6-8667
107-20 Morley Patk A .... D1 RE pu 9-8652

SHORE AV 10726

107-26 Burns Albert ----------J6 JAma 3-6956
107-26 James John Henry -----D7 JAma 3-0198
107-31 McEachin Lena M Mrs----J8 JAma 3-1387
107-31 Roane Carita V Mrs -----J9 REpb 9-8094
107-32 Badger Chas Jr --------D8 JAma 6-1069
107-33 Dornlak Chas V ---------J8 JAma 3-1629
107-34 Best Doretha ---------D9 OLmp 8-2612
107-34 McKinley Ruth S -------D7 JAma 3-0284
107-35 Williams Norman P ----D3 RE po 9-2815
107-36 Boschen Geo Sr--------J3 RE pb 9-0020
107-37 Archer Myrtle --------D8 JAma 3-9015
107-38 Sadler Jos .....J1 RE pu 9-6914
107-39 Baldwin Benjamine E--------REpu 9-8359
107-42 Burton Bettis ----------A0 JAma 3-5068
107-42 Shaw Frances M Mrs----A0 JAma 3-5068

PROSPECT AV
(SEE 60TH PL RIDGEWOOD)
(SEE 235TH ST DOUGLASTON)
(SEE 239TH ST DOUGLASTON)
(See 240TH ST DOUGLASTON)

PROSPECT PL
SEE 55TH RD LAUREL HILL)
(SEE 228TH ST ROSEDALE)

PROSPECT ST
(SEE 43RD ST WOODSIDE)

PULASKI ST
(SEE 68TH AV GLENDALE)
(SEE 68TH AV MID VIL)

PUNTINE ST JAMAICA
(SEE 165TH ST)

PURITAN AV FOREST HILLS
(SEE 75TH RD)

PURVES ST LONG ISLAND CITY

44-17 Expert Concrete Breakers Inc
W7 ST II 4-4410
Nights Sun & holidays . . NE wt 9-3448
44-19 Baltic Mach & Tool Co .....W5 ST II 4-2122
44-19 Gelomer Equip Co .....W5 ST II 4-2122
44-23 Concrete Breaking Co -----D9 STII 4-4939
44-26 Ortho Chemcl Corp .....D5 STII 4-8473
44-27 De Paul Chemcl Co Inc..D0 ST II 4-0547
44-27 Gruenwald & Niemitz
engnrs D0 ST II 4-8676
44-30 Central Auto Radiator Svce--D7 STII 4-6325
44-30 Tru-Synthetics Inc --------D8 STII 6-2540
44-30 Welsh Bros Contractg Co-trstng STII 4-6325
44-33 Bonded Papr Prods Co Inc--D8 STII 4-8320
44-35 Thompson O Inc.elec mfr S9 ST II 4-0760
44-37 Kimmel Mary ----------J9 STII 6-8317
44-37 Marrero Jose ----------D9 STII 6-7382
44-39 Genl Detroit Corp The
extngshrs J9 STII 6-5050
44-39 Genl Fire Truck Corp-----J9 STII 6-5050
44-43 Hughes Gladys ----------J8 STII 6-3080
44-43 Williams Benj ----------J9 STII 6-7040

1615 Becht John ----------J4 HEgm 3-6
1615 Berg Edw .....D2 HE ge 3-8
1615 Berg Louise ----------J7 EVrg 2-5
1615 Blutman Morris ----------J8 EVrg 2-6
1615 Chajutin Wladislaw L -----A0 HEgm 3-8
1615 Chassen Gertrude --------J7 EVrg 2-4
1615 Clements Estelle Mrs.....J3 HE nm 3-6
1615 Craper Michl G ----------J9 EVrg 6-1
1615 Doliner Solomon .....D2 HE ge 3-7
1615 Evans Glenn O ----------D8 EVrg 6-1
1615 F ---------- S
1615 Fiorello Nickolas ----------J7 EVrg 2-6
1615 Fruim Isidore ----------D8 EVrg 6-1
1615 Glassman David ------MD-J9 HEgm 3-9
1615 Goldberg Melvin A--------D8 EVrg 2-6
1615 Greenblatt Henry L -------J7 EVrg 2-7
1615 Harvey Richd ----------D9 EVrg 6-1
1615 Heins Ernst F ----------J4 HFom 3-2
1615 Homan John W ----------J9 EVrg 6-0
1615 I ---------- S
1615 Jasen Michl A ----------D9 HYcn 7-2
1615 Kassan Ruth ----------D9 HYcn 7-2
1615 Laschinger Julius --------D5 HEom 3-7
1615 Leffert Wm ----------D8 EVrg 6-1
1615 Librach Michl ----------J9 EVrg 6-0
1615 Miller Betty Mrs .....W3 HE ge 3-2
1615 Noble Rudolph --------J3 HE gm 3-9
1615 Redden Wm R.... .MD W9 HE ge 3-8
1615 Solil Mary ----------J7 EVrg 2-5
1615 Sontag Morris K ---------J7 EVrg 2-4
1618 Arcuri Virginia ----------J8 EVrg 6-1
1620 Henny Geo J ----------A0 HYcn 7-3
1620 Peterson F W .....W9 HE ge 3-2
1622 Roecklein Conrad --------D3-HE gm 3-8
1622 Stelper Henry ----------HEgm 3-8
1624 Frank Dorothy .....D2 HE ge 3-0
1625 A ---------- S
1625 B ---------- S
1625 Bender Arthur ----------J7-EVrg 2-5
1625 Bovers Chas W ----------J7 EVrg 2-6
1625 Brennan Jos T ----------J9-EVrg 6-3
1625 C ---------- S
1625 Chassen Nathan ---------J4-HEgm 3-5
1625 Decker Wm A ----------D8 EVrg 6-1
1625 Fraile Ralph ----------J7 EVrg 2-5
1625 Gardner Saul ----------J7 EVrg 2-4
1625 Grauman Fred Mrs --------A0 HYcn 7-2
1625 Gurka Emil ----------J9-EVrg 2-5
1625 Haberman Eugene T ------D5 EVrg 2-8
1625 Hofacker Harold C --------D8 EVrg 6-1
1625 Jurkowich John .....J2 HF ge 3-2
1625 Liebman Geo ----------D8 EVrg 6-2
1625 Lucia Carl A ----------D8 EVrg 6-1
1625 M ----------
1625 Miller B .....S7 HE ge 3-1
1625 O ----------
1625 Palmer Joan E ----------D8 EVrg 6-1
1625 Rosenstock Oslos --------D9-HEgm 3-2
1625 S ----------
1625 S ----------
1625 S ----------
1625 Schade Alice ----------J7-EVrg 2-7
1625 Schneider Morris .....D1 HE ge 3-1
1625 Sharfman Benj Rabbi -----D6-HEgm 3-9
1625 Sirois Philip .....D0 HE ge 3-0
1625 Smith Wm Chas --------D5 EVrg 2-8
1625 T ----------
1625 Wagner Edw G ----------D8 EVrg 6-
1625 Wiedmann Maybelle R Mrs-----HEgm 3-
1628 Krach John V ....S0 HE ge 3-0
1630 Eller Wm E ----------J9-EVrg 6-
1632 Eckert M Mrs .....S9 HE ge 3-
1635 Adelman Phillip .....W9 HE ge 3-
1635 Adler Betty Mrs ---------J7-EVrg 2-
1635 Basso Margaret M --------D8-EVrg 6-
1635 Blank Minnie .....DDS.S7 HE ge 3-
1635 Cartwright Louis W-------D6 HEgm 3-
1635 Caulfield Robt E ---------J7-EVrg 2-
1635 Crowe Margaret ----------J7-EVrg 2-
1635 Cypress Metal Weatherstrip Co
D4 HEgm 3-
1635 Dietz Wm E ----------J9-EVrg 6-
1635 Dotzler Frank J ---------D8-EVrg 6-
1635 Feldman Max ---------W0 HF ge 3-
1635 Fertel Alex ----------D9 HEgm 3-
1635 Fincken Jos W .....J2 HF ge 3-
1635 Fischer Madeline M ------A0 EVrg 6-
1635 Goldstein Ida ----------A0 HYcn 7-
1635 Gundlach Arnold ---------A0 HYcn 7-
1635 K ----------
1635 Lo Grasso Vincent S ------J9-EVrg 6-
1635 McCutcheon Henry M-------J7-EVrg 2-
1635 Mintz Ruth ----------J8 EVrg 2-
1635 Moore Florence M --------D8-EVrg 6-
1635 O'Brien Mae Mrs---------J9 EVrg 6-
1635 Palletto Dani G ---------D8 EVrg 6-
1635 Panse Fritz R ----------J6-HEgm 3-
1635 Sack Lena Mrs ----------D9-EVrg 2-

1950

1940

VE BLVD
A
....W8 FL us 9-8298
W8 FL us 9-8298
BETWEEN 14401
01 SEE 2ND AV)
HIGHER THAN
149 SEE 7TH AV)

JAMAICA
N BLVD)

ELMHST
curement Divn NPub
curement Divn.. NPub
y Gas & Elec
yard S4 NE wt 9-3123

R AV
V JAM SO)

)ZONE PK
D AV)

ST ALBANS
TH ST)

SO OZONE PK
TH ST)

V ROSEDALE
TH ST)

L MASPETH
TH DR)

ST
(T ST
KWY)
3T QNS VIL)

FAR ROCKWAY
.....W8 FA rR 7-7920
.....S6 FA rR 7-3994
.....FA rR 7-4150
.....FA rR 7-5633
.....FA rR 7-2255
.....W5 FA rR 7-2460
.....FA rR 7-2323
.....W3 FA rR 7-1947
.....W3 FA rR 7-1947
.....W8 FA rR 7-4656

/ ROSEDALE
TH AV)

WOODSIDE
TH ST)

/ BAYSIDE
TH AV)

FLUSHING
01
.....W5 FL us 9-1438-M
.....W6 IN de 3-4939
.....S4 IN de 3-5964
..grocr S4 FL us 9-9077

rsehoer S5 IN de 3-0702
Fence Wks
W9 IN de 3-6081
S8 IN de 3-6081
uto repr S8 IN de 3-0702
on wks W8 IN de 3-6081
S1 FL us 9-0798
.....W2 FL us 9-7613-J
W6 FL us 9-0535
luvenile Aid Bur
l Ho 9 JO IN de 3-5466
.....FL us 9-6500

..S6 FL us 9-8859-J
Inc
autos S5 FL us 9-2410
JO FL us 3-3068
..W2 FL us 9-7260-J
Co
meats W3 FL us 9-5555
autos W8 IN de 3-6032
m J. prntr FL us 9-4164
The prntrs FL us 9-4164
LVD 3641
01

PRINCE ST FLUSHING
39-15 Forster Bros
auto painig body wks W7 FL us 9-9576
ROOSEVELT AV 4001
40-11 De Finn Carlo butchr W7 IN de 3-7830
40-11 Prince Meat Mkt .....W7 IN de 3-7830
40th RD 4031

PRINCETON RD DOUGLASTON
(SEE 244TH ST)

PRINCETON ST JAMAICA
104th AV 10401
104-12 NYC Fire Dept ..... NPub
105th AV 10501
106th AV 10601
106-12 Daniels Wm H ..... W9 JA ma 6-5976
106-12 Hardy Florence ..... W9 JA ma 6-5976
SOUTH RD 10631
106-45 Laws Leon S .....S9 RE pu 9-4059
106-46 Lasky Sophie Miss ..S1 RE pu 9-8462
106-47 Rouzeau Christina Mrs W9 JA ma 6-2428
106-49 Lisi Leo .....W9 RE pu 9-9008
107th AV 10701
107-01 Jackson Harry L .....S2 RE pu 9-0538
107-11 Amann John .....S2 RE pu 9-8517
107-12 Carter Susan A Mrs ...W9 RE pu 9-7892
107-18 Adams A W .....S9 JA ma 6-8763
SHORE AV 10725
107-36 Botchen Geo .....S9 RE pu 9-6981
107-38 Johnson C S .....S4 RE pu 9-0271
107-39 Baldwin Benjamine E...W3 RE pu 9-8359
LAKEWOOD AV

PRISCILLA AV
(SEE 135TH AV AQUEDUCT)
(SEE 150TH AV JAM SO)

PROCTOR ST
(SEE 73RD PL GLENDALE)
(SEE 119TH RD JAMAICA)

PROMETCHA ST CORONA
(SEE 35TH AV)

PROSPECT AV
(SEE BAY PARK PL FR RCKWY)
(SEE PLUNKETT AV FAR RCKWY)
(SEE READS LA FAR RCKWY)
(SEE 41ST RD FLUSHING)
(SEE 60TH PL RIDGEWOOD)
(SEE 83RD ST WINFIELD)
(SEE 90TH AV HOLLIS)
(SEE 148TH DR ROSEDALE)
(SEE 235TH ST DOUGLASTON)
(SEE 240TH ST DOUGLASTON)

PROSPECT CT LAURELTON
(SEE EDGEWOOD AV)

PROSPECT PL
(SEE 40TH AV LITTLE NK)
(SEE 54TH AV MASPETH)
(SEE 55TH RD LAUREL HILL)
(SEE 228TH ST ROSEDALE)

PROSPECT ST
(SEE BAY PK PL FAR RCKWY)
(SEE 27TH ST L I C)
(SEE 38TH AV FLUSHING)
(SEE 43RD AV ELMHURST)
(SEE 43RD ST WOODSIDE)
(SEE 53RD AV NEWTOWN)
(SEE 104TH ST RICH HILL)
(SEE 159TH ST JAMAICA)
(SEE 239TH ST DOUGLASTON)

PROVOST ST CORONA
(SEE 50TH AV)

PUEBLO AV HOLLIS
(SEE 85TH RD)

PULASKI ST
(SEE 68TH AV GLENDALE)
(SEE 68TH AV MID VIL)

PULLIS AV BAYSIDE
(SEE 215TH PL)

PULLIS ST OR AV MIDDLE VIL
(SEE 79TH PL)

PUNTINE ST JAMAICA
(SEE 165TH ST)

PURDY PL RIDGEWOOD
(SEE SENECA AV)

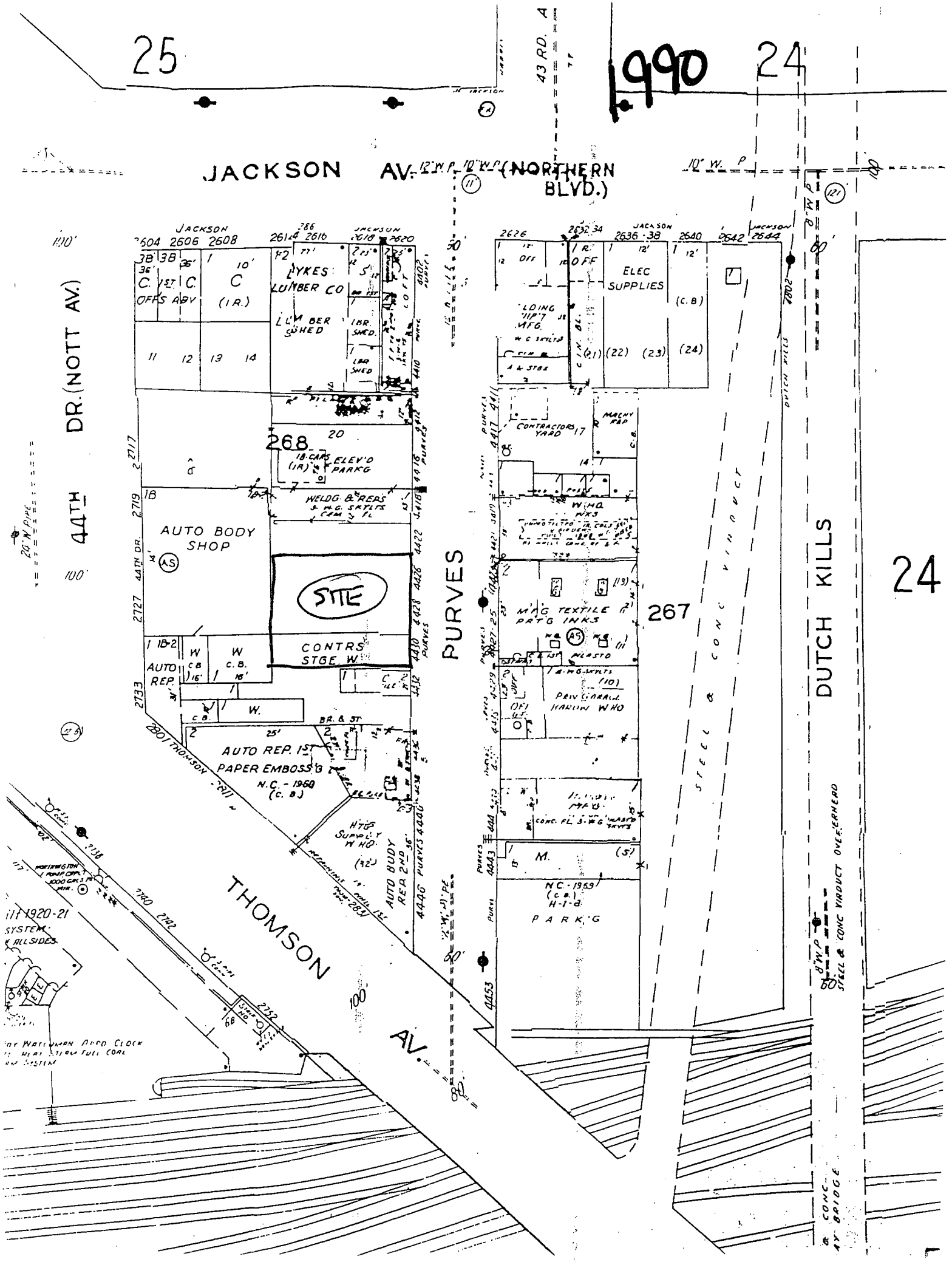
PURDY ST
(SEE 43RD ST L I C)
(SEE 102ND AV HOLLIS)

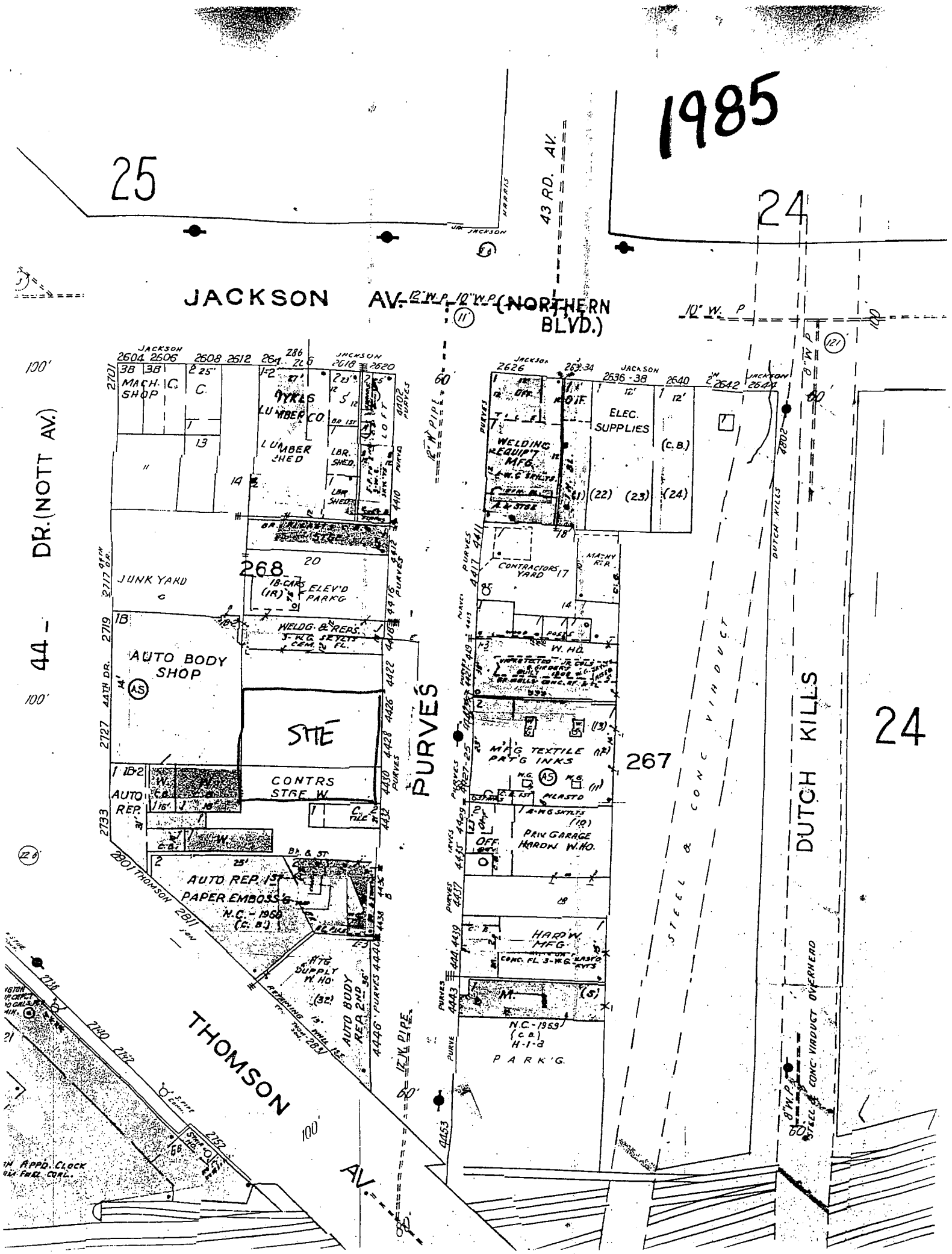
PURITAN AV FOREST HILLS
(SEE 75TH RD)

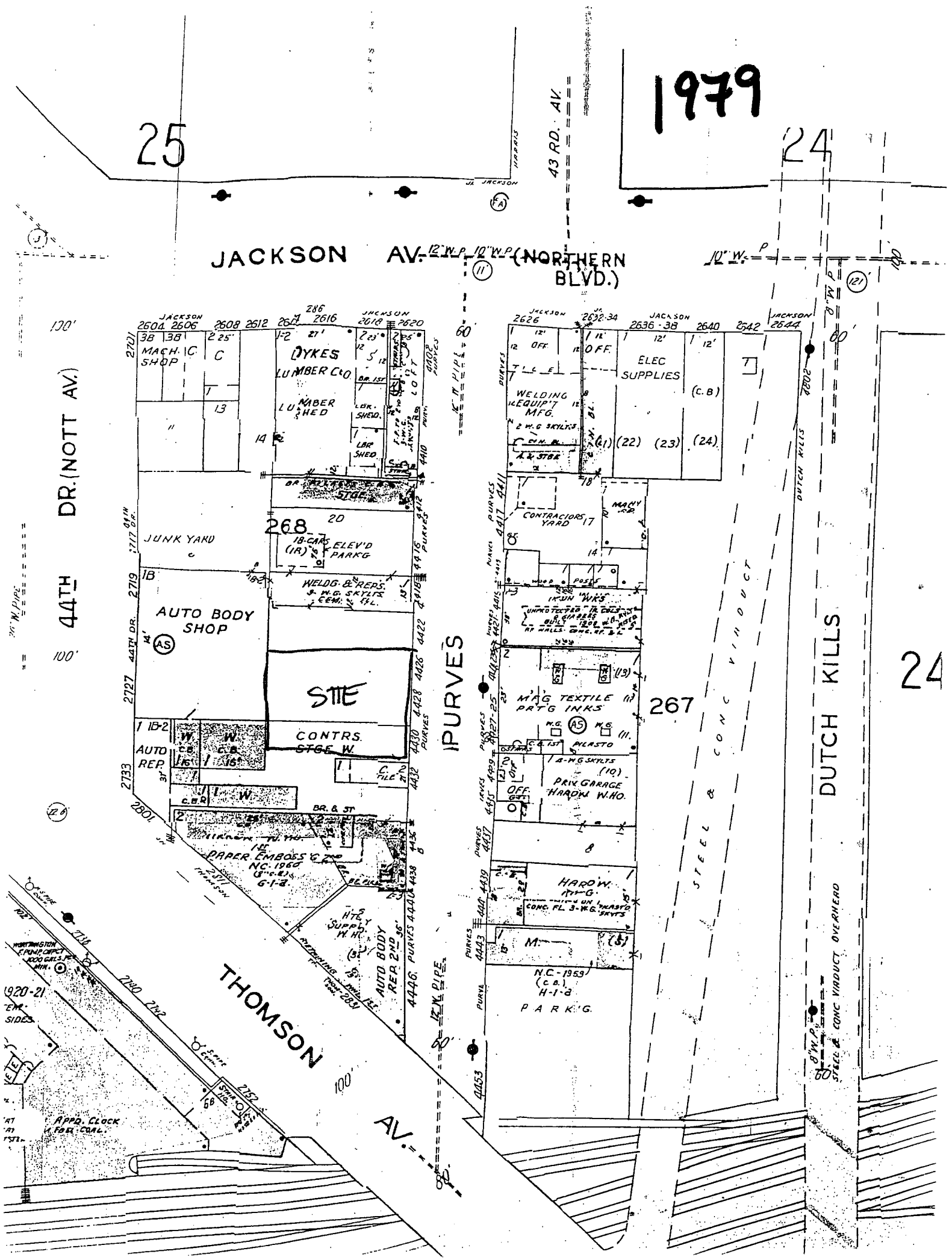
PURVES ST LONG ISLAND CITY
44-17 Expert Concrete Breakers Inc
W7 ST II 4-4410
44-19 Baltic Mach & Tool Co W5 ST II 4-2122
44-19 Getomer Equip Co W5 ST II 4-2122
44-21 Concrete Breaking Co W9 ST II 4-4939
44-27 A M & J News Co Inc S9 IN en 6-9358
44-30 Welsh Bros Contractg Co
truking S8 ST II 4-6325
44-35 Thompson O Inc elec mfr S9 ST II 4-0760
44-40 Russell Gerald S insecticids S6 ST II 4-8933

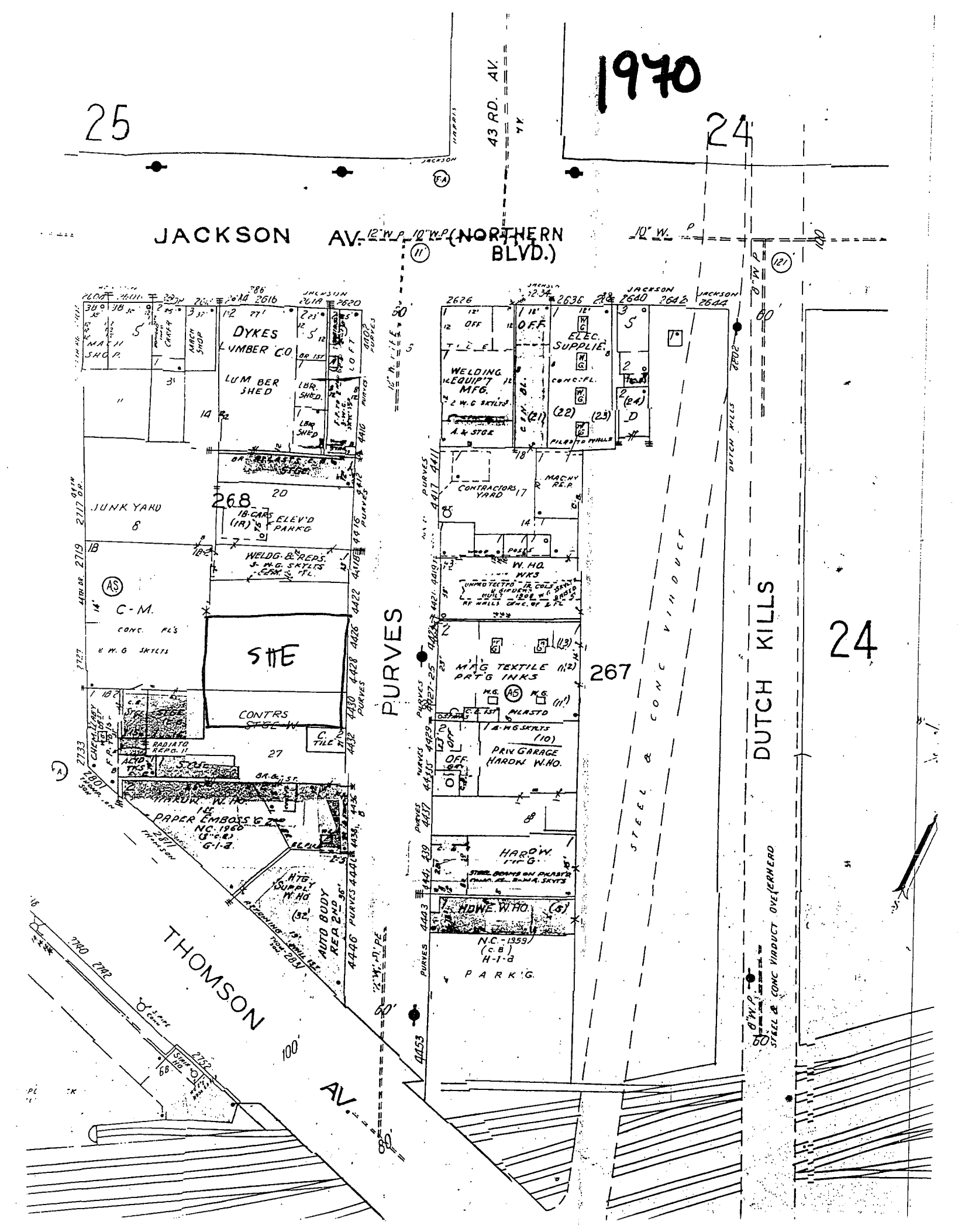
PUTNAM AV RIDGEWOOD
(FOR NUMBERS LOWER THAN 1601 SEE PUTNAM AV BKLYN)
WYCKOFF AV 1601
1605 Altura Otto .....W9 HE ge 3-1787
1605 Blomquist Victor L .....W9 HE ge 3-4316
1605 Busku Paul .....W2 HE ge 3-5017
1605 Brewer Willie Mae .....W9 HE ge 3-5219
1605 Chassen Nathan .....W9 HE ge 3-5543
1605 Chernoff Rose Mrs .....W9 HE ge 3-4947
1605 Lyons Nina ... nrse S8 HE ge 3-5108
1605 Muefflemann Wm .....W9 HE ge 3-2665
1605 Ritter Frank .....W4 HE ge 3-2883
1605 Schmitt Lori Miss RN W7 HE ge 3-8511
1605 Squire Jos Jr JO HE ge 3-1325
1605 Wultson Era .....W9 HE ge 3-5543
1605 Zwanger E Mrs .....S3 HE ge 3-4946
1614 Hanson Jchn E .....W6 HE ge 3-5893
1615 Margolis Harry .....S9 HE ge 3-9661
1615 Miller Betty Mrs .....W3 HE ge 3-2028
1613 Redden Wm R .....MO W9 HE ge 3-8642
1615 Silverman Sadie S6 HE ge 3-3258
1615 Theyken Emily W9 HE ge 3-2239
1616 Davis Arthur W .....S8 HE ge 3-5256
1618 Bartol S F .....S9 HE ge 3-5147
1620 Peterson F W W9 HE ge 3-2351
1622 Selzer C W9 HE ge 3-5957
1622 Steiger Henry ..... S0 HE ge 3-8888
1625 Aller Alfred A .....W7 HE ge 3-6897
1625 Brand Bertha Miss ..... HE ge 3-4387
1625 Elling Olga E Mrs .....W4 HE ge 3-0457
1625 Jost Erich .....J8 HE ge 3-0542
1625 Levine Murray J JO HE ge 3-2018
1625 Link Ruth Mrs .....W9 HE ge 3-4266
1625 Miller H S7 HE ge 3-1523
1625 Scheinfeld Hyman E Rabbi W2 HE ge 3-6025
1625 Steiner Carl NPub
1625 Tiedeman Geo .....W9 HE ge 3-5015
1625 Vrondis Gus JO HE ge 3-4576
1625 Wiesmann Maybelle R Mrs
W6 HE ge 3-3912
1628 Kroch John V .....S0 HE ge 3-0557
1632 Eckert M Mrs .....S9 HE ge 3-5190
1635 Adelman Philip .....W9 HE ge 3-1493
1635 Blank Minnie ... OOS S7 HE ge 3-1570
1635 Blum Jos D ..... S7 HE ge 3-8012
1635 Bussing Harry P W9 HE ge 3-5228
1635 Farber Jack .....S9 HE ge 3-0159
1635 Feldman Max .....W9 HE ge 3-6726
1635 Fertel Alex .....W2 HE ge 3-2136
1635 Heifond Ogeld M MD ofc S6 HE ge 3-2224
1635 Schulz John JO HE ge 3-3976
1636 Heiner Chas W .....S0 HE ge 3-2233
1638 Lynch Path .....S6 HE ge 3-6752
1642 Broderick Marion E .....W5 HE ge 3-3076
1644 Montellone John .....S5 HE ge 3-0713
1645 Ashler Philip J ..... HE ge 3-4951
1645 Wenzlee Rudolf .....W4 HE ge 3-5222
1646 Grosskortenhaus Fred .... S9 HE ge 3-3567
1646 Hauberl Wm .....W7 HE ge 3-9412
1647 Benh Saml .....W3 HE ge 3-5782
1651 Osborne Chas S .....S8 HE ge 3-4426
1652 Lamberson Loy M .....W9 HE ge 3-0383
1655 Baosa Frances Mrs .....W6 HE ge 3-1176
1655 Uredal Christel E W9 HE ge 3-9634
1660 Schmitz Martha Miss ....S0 HE ge 3-6443
1666 Clemens Loretta V JO HE ge 3-2759
1668 Wiebe Martha Mrs ....S8 HE ge 3-3089
1670 Butcher Wm J ...MD W9 HE ge 3-5262
If no answer call .....EV er 2-9394
1674 Stahl Pastry Shop .....JO EV er 2-9483

SANBORN FIRE INSURANCE MAPS (FOR PAST PROPERTY USAGE)


1990
25
24
JACKSON AV.
(NORTHERN BLVD.)
44TH DR. (NOTT AV.)
43 RD. A
PURVES
DUTCH KILLS
THOMSON AV.
STEEL & CONC VIADUCT
STEEL & CONC VIADUCT OVER KERNERD
LYKES LUMBER CO
LUMBER SHED
1 BR. SHED
LBR SHED
ELEC SUPPLIES
CONTRACTORS YARD
AUTO BODY SHOP
STGE
CONTRS STGE W.
AUTO REP.
AUTO REP. 1ST PAPER EMBOSS'G CO
N.C. - 1958 (C. B.)
AUTO BUDY REP 2ND
M'F'G TEXTILE PRTG INKS
267
268
PRIV GARAGE
PARK'G
N.C. - 1959 (C. B.) H-1-D
2801 THOMSON
2727
2733
2719
2717
4422
4426
4428
4430
4432
4436
4438
4440
4446
4443
4453
2626
2632-34
2636-38
2640
2642
2644
2604 2606 2608
2614
2616
2618
2620
2738
2740
2742
2732
1110'
100'
60'


1985
25
24
JACKSON AV.
(NORTHERN BLVD.)
43 RD. AV.
44 - DR. (NOTT AV.)
PURVES
DUTCH KILLS
THOMSON AV.
268
267
24
STEEL & CONC VIADUCT
STEEL & CONC. VIADUCT OVERHEAD
JUNK YARD
AUTO BODY SHOP
STGE
CONTRS STGE W.
AUTO REP.
AUTO REP. 1ST
PAPER EMBOSS'G
N.C. - 1968
(C.B.)
AUTO BODY REP. 2ND
HARD'W MFG
N.C. - 1959
(C.B.)
H-1-3
PARK'G.
ELEC. SUPPLIES
WELDING EQUIP'T MFG.
CONTRACTORS YARD
M'F'G TEXTILE PRT'G INKS
PRIN GARAGE
HARDW'E MFG
LUMBER SHED
MACH. SHOP
WELDG. & REPRS.
18-CARS ELEV'D PARK'G
12" W. P. PIPE
8" W. P.
10" W. P.
12" W. P.


1979
25
24
JACKSON AV.
(NORTHERN BLVD.)
43 RD. AV.
44TH DR. (NOTT AV.)
JACKSON
2604 2606 2608 2612 2616 2618 2620
MACH. SHOP
DYKES LUMBER CO
LUMBER SHED
LBR. SHED
LBR SHED
STGE.
268
JUNK YARD
18 CARS ELEV'D PARKG
WELDG. & REPRS.
AUTO BODY SHOP
STGE
CONTRS. STGE W.
AUTO REP.
PAPER EMBOSS & TRIM
NC. 1960
G-1-2
AUTO BODY REP 2ND
PURVES
2626 2632-34 2636-38 2640 2642 2644
WELDING EQUIP'T MFG.
ELEC SUPPLIES
CONTRACTORS YARD
IRON WKS
M'F'G TEXTILE PRT'G INKS
267
PRIV GARAGE
HARDW. W.HO.
HARDW. MFG.
M.
N.C.-1959
H-1-8
PARKG.
DUTCH KILLS
STEEL & CONC VIADUCT
STEEL & CONC VIADUCT OVERHEAD
THOMSON AV.
2710 2740 2742 2752
APPD. CLOCK FOR COAL
12" W.P.
10" W.P.
8" W.P.
6" W.P.
60'
100'


1970
25
24
43 RD. AV.
JACKSON AV.
(NORTHERN BLVD.)
JACKSON
10" W. P.
12" W. P.
DYKES LUMBER CO.
LUMBER SHED
MACH SHOP
LOFT
JUNK YARD
268
18 CARS (IR) ELEV'D PARK'G
WELDG. & REPRS.
C-M.
CONC. FL'S
& W. G. SKYLTS
SITE
CONTRS STGE. W.
CHEMICALS
ACID TKS.
RADIATO REPG. 11
PAPER EMBOSS'G & PRINTG
NC. 1960
G-1-a
HTG'G SUPPLY W. HO
AUTO BODY REPR. 2ND
PURVES
THOMSON
AV.
100'
CONTRACTORS YARD
MACHY REP.
WELDING EQUIP'T MFG.
ELEC. SUPPLIES
CONC. FL.
2 W. G. SKYLTS
A. & STGE
PILASTO MILLS
W. HO.
WKS
M'F'G TEXTILE PRT'G INKS
PRIV GARAGE HARDW. W. HO.
HARDW'E W. HO.
N.C. - 1959
(c.8)
H-1-a
P A R K'G.
267
DUTCH KILLS
STEEL & CONC VIADUCT
STEEL & CONC VIADUCT OVEJERHEAD
2626
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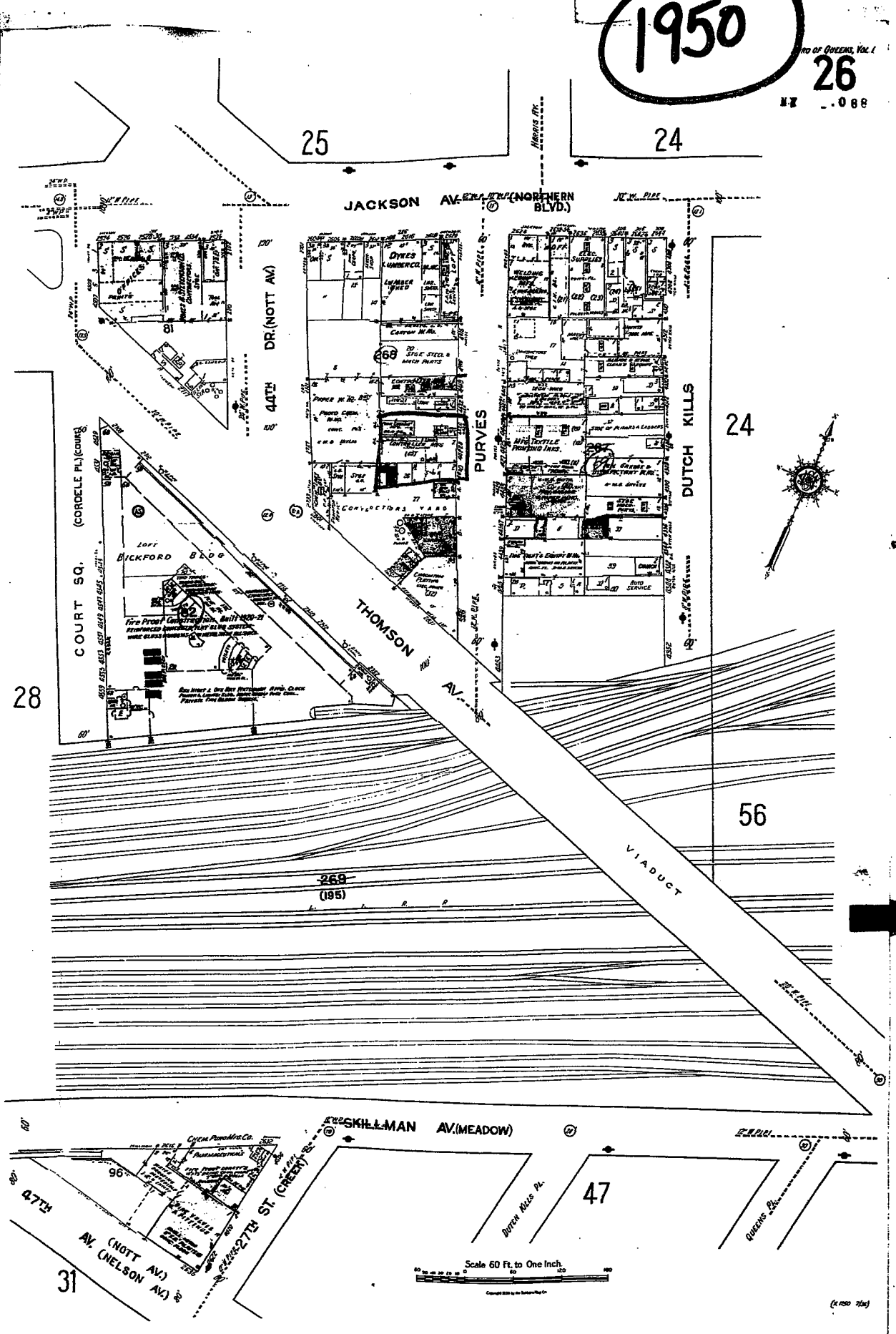
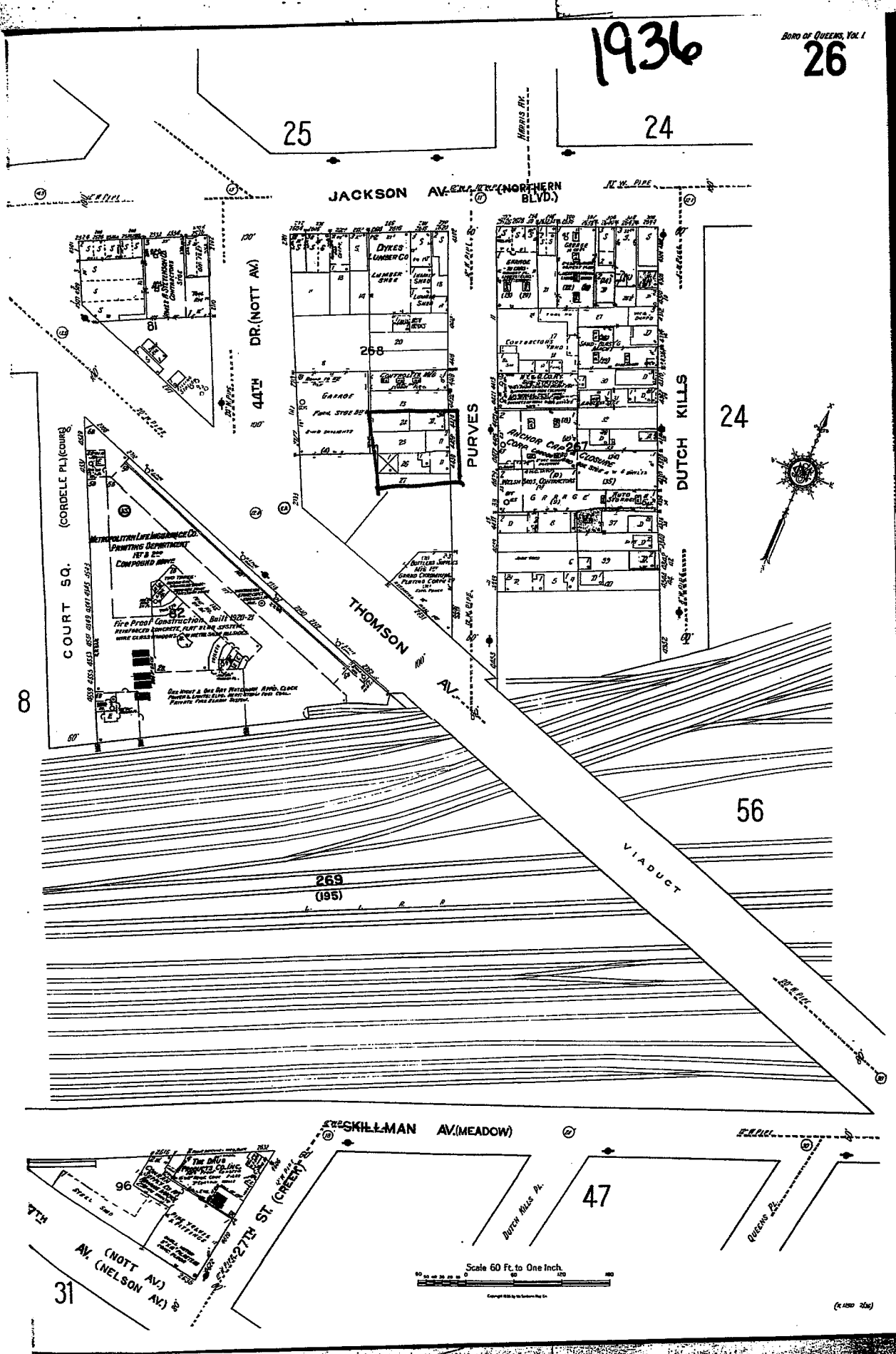
1950


25
24
JACKSON AV. (NORTHERN BLVD.)
DR. (NOTT AV.)
44TH
PURVES
DUTCH KILLS
24
COURT SQ. (CORDELE PL.) (COURT)
28
THOMSON AV.
VIADUCT
56
269
(195)
SKILLMAN AV. (MEADOW)
47TH
AV. (NOTT AV.) (NELSON AV.)
31
47TH ST. (CREEK)
DUTCH KILLS PL.
47
QUEENS PL.
Scale 60 Ft. to One Inch.

1936

BORO OF QUEENS, VOL. 1

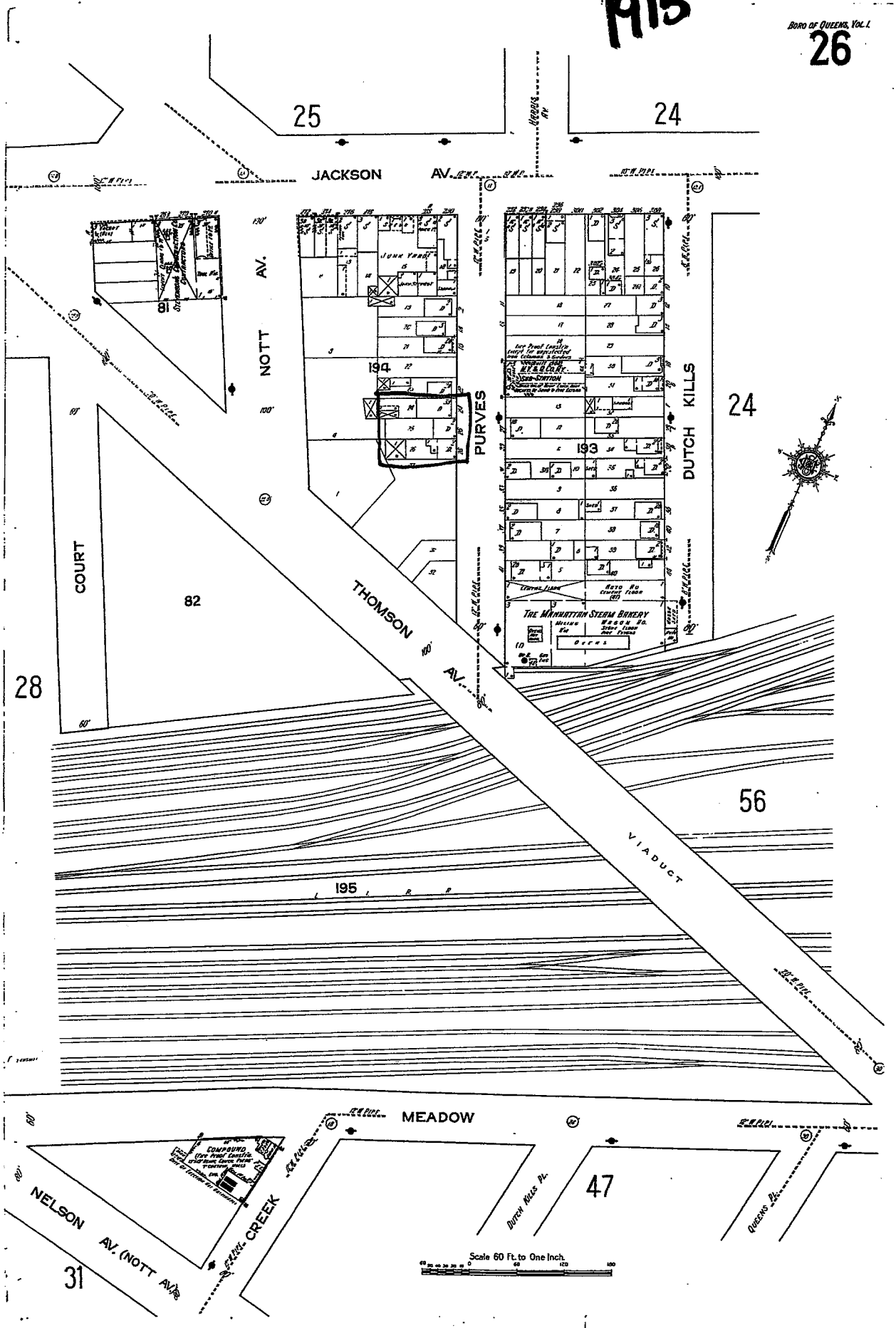
26

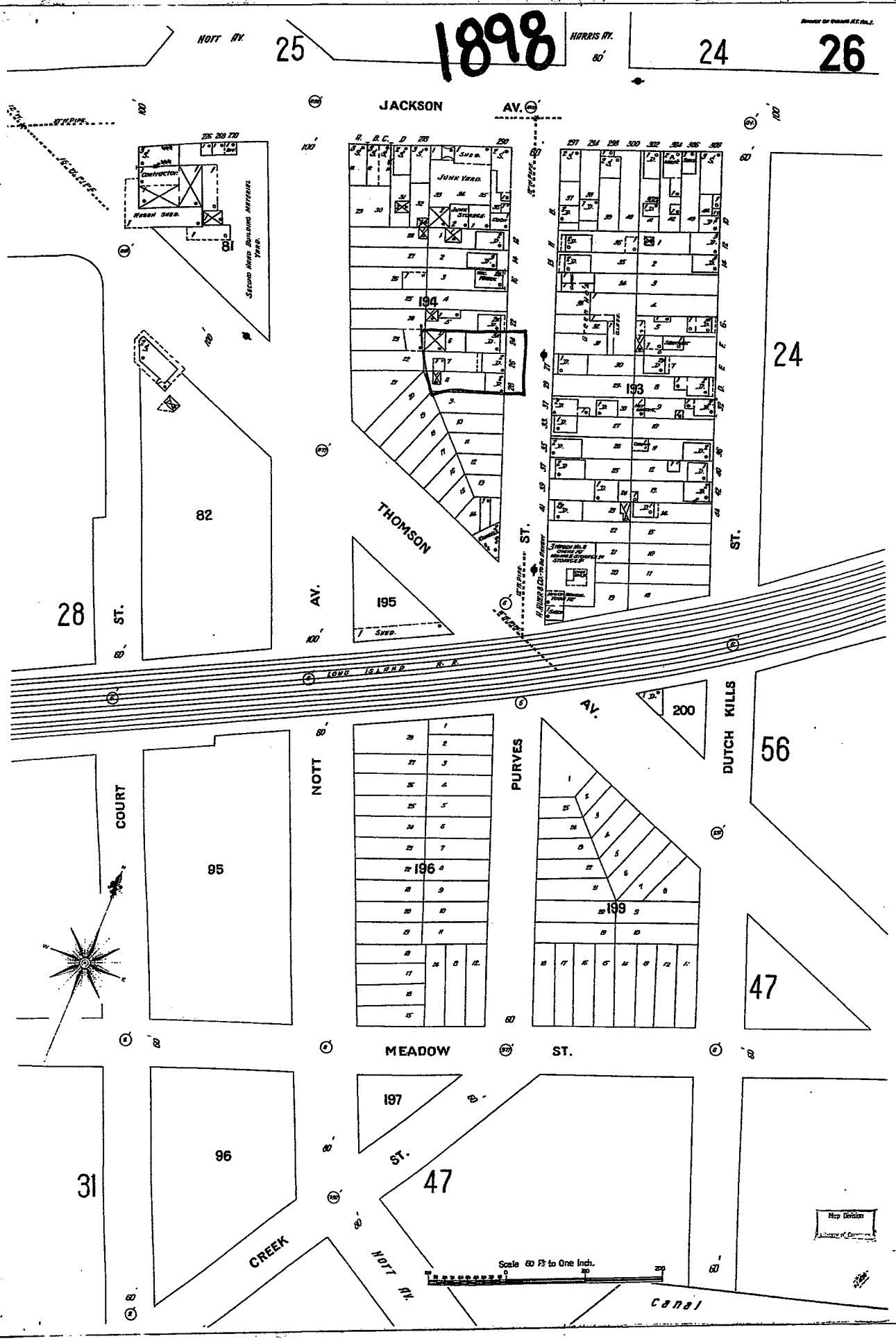


1915

BORO OF QUEENS, VOL. I

26




1898
HOTT AV.
25
HARRIS AV.
60'
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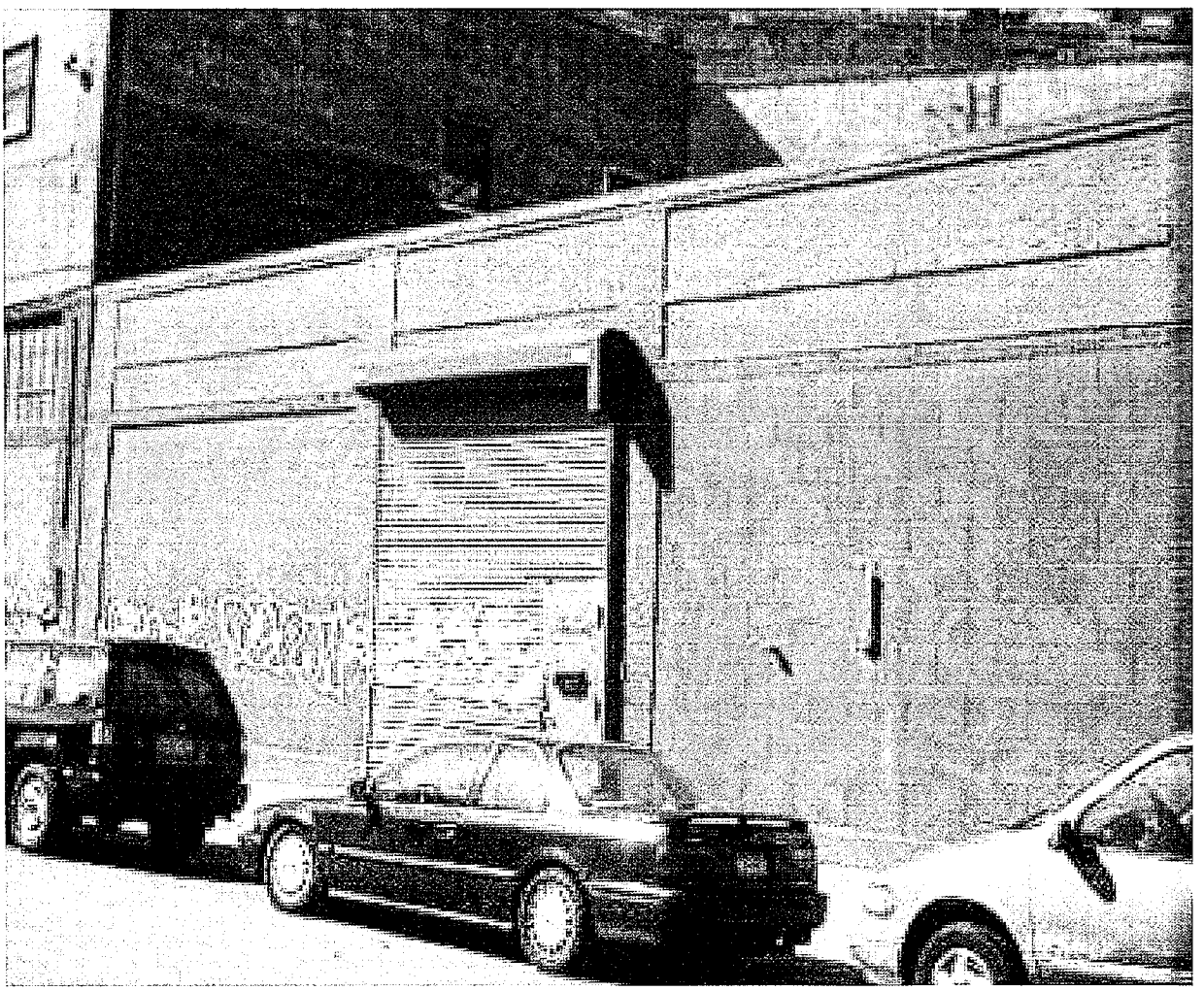
JACKSON
AV.
JUNK YARD.
JUNK STORAGE
194
193
24
82
81
THOMSON
ST.
AV.
195
28
ST.
LONG ISLAND R. R.
AV.
200
DUTCH KILLS
56
COURT
95
NOTT
PURVES
196
199
47
MEADOW
ST.
197
96
31
ST.
47
CREEK
HOTT AV.
Scale 60 Ft to One Inch.
Canal

MIDDLETON ENVIRONMENTAL, INC.
Environmental Consultants and Engineers

UPDATE TO PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Property located at 44-32/38 Purves Street

In Long Island City, New York



Prepared for Weiss and Company

April 27, 2006

50 PARK AVENUE, BABYLON, NY 11702
631 321-4300 • FAX: 631 321-4349 • middletonenvironmental.com

MIDDLETON ENVIRONMENTAL, INC.
Environmental Consultants and Engineers

April 27, 2006

Mr. Dani Weiss
Weiss and Company
22 West 38th Street - 12th Floor
New York, NY 10018

RE: Property located 44-32/38 Purves Street in Long Island City, New York.

Dear Mr. Weiss,

Pursuant to our recent telephone conversation, we have prepared an update to the September 30, 2003 Phase I Environmental Site Assessment by Middleton Environmental Incorporated (MEI), prepared on the above referenced property. An update of this report was conducted in order to determine if there are any recognized environmental conditions with regard to the subject site since the preparation of the original report. The site is approximately 0.43 acres in size and there are two (2) commercial buildings on the site. The main building is approximately 17,860 square feet in size and has two floors and no basement (the main floor of the building is on Thomson Avenue while the lower level is on Purves Street. The building is presently vacant and was formerly utilized as an automobile body repair facility and a carpet storage facility. The rear building is a small two story (plus basement), building that was formerly utilized as a realty office (the carpet storage area, main floor automobile repair area and rear two story former realty office were not accessible during the site inspection).

The building was re-inspected on April 17, 2006. The office area on the main floor (on Thomson Avenue), had carpeted floors, sheetrock walls and 2 by 2 foot ceiling tiles (with concrete ceilings atop the ceiling tiles). The repair areas on the lower level had concrete floors, concrete walls and concrete ceiling. There were four (4) floor drains located on the lower level of the building that did not show any signs of chemical staining. The property owner indicated that these drains are connected to the municipal sewer system and do no discharge to the subsurface (there were no private sanitary systems observed on the subject site). There were two (2) 275 gallon above ground heating oil storage tanks and a 275 gallon above ground waste oil storage tank noticed inside the building (there is also a fill port and vent pipe for a 275 gallon heating oil tank in the former carpet storage area). The observed tanks did not show any signs of staining or leakage. The heating oil tanks are properly registered with the New York City Fire Department (NYCFD). However, the waste oil tank is not presently registered with the NYCFD or the NYSDEC. It is recommended that this tank be properly registered if to be utilized in the future (or be removed if not to be utilized). None of the overhead heating units or any of the overhead pipes inside the building were insulated by friable Presumed Asbestos Containing Material (PACM). There were no signs of friable PACM fireproofing noticed inside the main building. There was one (1) paint spray booth noticed on the lower level of the main building that was properly vented outside the building.

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The last area examined was the outside grounds. There were no oil fill ports or fuel vents for any underground storage tanks noticed on the site. A review of the New York City Fire Department Storage Tank Files and New York State Department of Environmental Conservation (NYSDEC), Petroleum Bulk Storage Database did not indicate the presence of any registered underground storage tanks on the site. A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two (2) buried gasoline storage tanks behind the carpet storage area portion of the building on Purves Street. The site inspection did not indicate the presence of any oil fill ports or vents in the vicinity of this area and it is highly likely that the tanks were removed when the rear portion of the building was constructed (it should be noted that later Sanborn Maps did not indicate the presence of any buried tanks on the site). There were no outside above ground storage tanks, outside 55 gallon drum storage areas or any outside above ground electrical transformers noticed on the site. There were no signs of stressed vegetation or soil contamination noticed on the site.

There were no USEPA National Priority List Sites (Federal Superfund), within a mile radius of the subject site. There were no USEPA CERCLIS Sites or any USEPA RCRA Transportation, Disposal or Storage (TSD), facilities within a half mile radius of the subject site. The subject site was not identified as a RCRA Hazardous Waste Generator. There were six (6) New York State Department of Environmental Conservation Inactive Hazardous Waste Sites within a mile radius of the subject site. None of these sites would have an apparent adverse impact on the subject site based upon the distance to the subject site. A review of the NYSDEC Leaking Underground Storage Tank Database indicated the presence of forty (40) Leaking Underground Storage Tank (LUST), sites within a half mile radius of the site. The subject site was not identified on the LUST site list and none of the reported LUST sites would have an apparent adverse impact on the site.

A review of the New York City Building Department property profile overview and the New York City Department of Assessment files indicated that the portion of the building along Purves Street (where the carpet company is located), and the small portion of the building on the corner of Thompson Street and 44th Drive (that houses the offices for the automobile repair company), were reportedly constructed in 1939, while the larger portion of the building that houses the automobile body repair facility (and connected the two original buildings), was constructed in 1960. A review of available Sanborn Fire Insurance Maps and New York Telephone Address Directories indicated that the original building on Purves Street was utilized as a private garage while the original building on the corner of Thompson Avenue and 44th Drive was originally utilized as a chemical laboratory and automobile radiator repair facility (while the remainder of the property was utilized as a contractors storage yard). The larger portion of the building that was constructed in 1960 was utilized in the past by a heat exchanger company, a filter cleaner company, a hardware warehouse, a paper embossing company and a taxi repair facility. The small two story office building has been utilized as a realty office and by a contracting company and was constructed between 1936 and 1940.

It is the opinion of Middleton Environmental Incorporated that no further testing (subsurface or otherwise), is required on the subject site. Please feel free to contact my office should you have any questions regarding this Physical Site Inspection or if you need any additional information regarding this Transaction Screen Process Report.

Sincerely,

Donald J. Middleton Jr.
President

APPENDIX

ENVIRONMENTAL DATABASE INFORMATION (FROM FIRSTSEARCH TECHNOLOGY)

NEW YORK CITY DEPARTMENT OF ASSESSMENT INFORMATION

NEW YORK CITY FIRE DEPARTMENT STORAGE TANK INFORMATION

NEW YORK CITY BUILDING DEPARTMENT INFORMATION

NEW YORK TELEPHONE ADDRESS DIRECTORY INFORMATION (FOR PAST SITE USAGE)

SANBORN FIRE INSURANCE MAPS (FOR PAST SITE USAGE)

SITE PHOTOS

ENVIRONMENTAL DATABASE INFORMATION (FROM FIRSTSEARCH TECHNOLOGY)

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

TARGET PROPERTY:

4432 PURVES ST

QUEENS NY 11101

Job Number: 06-283

PREPARED FOR:

MEI

50 Park Avenue

Babylon, NY 11702

04-05-06

Tel: (201) 848-4789 *Fax: (201) 848-4789*

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Environmental FirstSearch
Search Summary Report

Target Site: 4432 PURVES ST
QUEENS NY 11101

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	01-13-06	1.00	0	0	0	0	0	0	0
CERCLIS	Y	01-13-06	0.50	0	0	0	0	-	0	0
RCRA TSD	Y	02-16-06	0.50	0	0	0	0	-	0	0
RCRA COR	Y	02-16-06	1.00	0	0	0	0	5	0	5
RCRA GEN	Y	02-16-06	0.25	0	5	15	-	-	1	21
ERNS	Y	12-31-05	0.15	0	1	0	-	-	2	3
State Sites	Y	02-09-06	1.00	0	0	0	0	7	0	7
Spills-1990	Y	10-15-05	0.25	0	11	35	-	-	18	64
Spills-1980	Y	10-18-00	0.25	0	1	2	-	-	0	3
SWL	Y	01-05-06	0.50	0	0	0	1	-	1	2
REG UST/AST	Y	01-01-02	0.25	0	7	23	-	-	0	30
Leaking UST	Y	10-15-05	0.50	0	0	6	33	-	1	40
- TOTALS -				0	25	81	34	12	23	175

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although FirstSearch Technology Corp. uses its best efforts to research the actual location of each site, FirstSearch Technology Corp. does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of FirstSearch Technology Corp.'s services proceeding are signifying an understanding of FirstSearch Technology Corp.'s searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Site Information Report

Request Date:	04-05-06	**Search Type:**	COORD
Requestor Name:	Karen	**Job Number:**	06-283
Standard:	AMY		**Filtered Report**

TARGET ADDRESS: 4432 PURVES ST
QUEENS NY 11101

Demographics

Sites: 175 **Non-Geocoded:** 23 **Population:** NA

Radon: OF THE 2 HOMES TESTED, THE AVG. PCI/L LEVEL WAS .7

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-73.940841	-73:56:27	**Easting:**	589421.344
Latitude:	40.74584	40:44:45	**Northing:**	4510871.57
			Zone:	18

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
35	ERNS	MARISOL 571363/CONSUMER	44-43 PURVES STREET LONG ISLAND NY 11101	0.04 NW	N/A
	ERNS	NYC DEP 402345/FIXED FACILITY	127TH STREET AND COLLEGE PK QUEENS NY	NON GC	N/A
	ERNS	581256/UNKNOWN	44TH DRIVE QUEENS NY	NON GC	N/A
46	*LUST*	*26-32 SKILLMAN AVE* *0209560/ACTIVE*	*26-32 SKILLMAN AVE* *LONG ISLAND CI NY 11101*	*0.15 SE*	*1*
46	LUST	0303917/CLOSED	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.15 SE	N/A
49	LUST	42-64 HUNTER STREET 9310213/CLOSED 11/22/1993	42-64 HUNTER STREET LONG ISLAND CI NY 11101	0.17 NE	N/A
33	LUST	OUTLET CITY 9600688/CLOSED 05/27/2003	42-16 WEST STREET LONG ISLAND CI NY 11101	0.23 NE	N/A
36	LUST	47-22 PEARSON PLACE 9206718/CLOSED 07/29/1993	47-22 PEARSON PLACE LONG ISLAND CI NY 11101	0.23 SW	N/A
28	LUST	ON THE STREET 0312740/CLOSED	2821 JACKSON AVE LONG ISLAND CI NY 11101	0.25 NE	N/A
79	*LUST*	*MIDTOWN OPERATING CROP* *8806043/ACTIVE*	*42050 24 ST* *QUEENS NY 11101*	*0.30 NW*	*2*
18	*LUST*	*CONDEA SUPPLY CORP* *0306979/ACTIVE*	*21-21 44TH RD* *LONG ISLAND CI NY 11101*	*0.30 NW*	*3*
14	*LUST*	*BUSINESS* *0512409/ACTIVE*	*28-11 QUEENS PLAZA NORTH* *QUEENS NY 11101*	*0.31 NE*	*4*
32	LUST	NYC TRANSIT AUTHORITY 9100729/CLOSED 11/30/2000	29-50 NORTHERN BLVD QUEENS NY 11101	0.31 NE	N/A
19	LUST	JOMEIRA REALITY 0110569/CLOSED	47-20 30TH ST LONG ISLAND CI NY 11101	0.31 SE	N/A
19	LUST	47-20 30TH ST 8708435/CLOSED	47-20 30TH ST LONG ISLAND CI NY 11101	0.31 SE	N/A
16	*LUST*	*FALIDAS ASSOCIATES* *0305348/ACTIVE*	*25-15 QUEENS PLAZA NORTH* *LONG ISLAND CI NY 11101*	*0.32 NE*	*5*
6	LUST	27-11 49TH AVE 8800938/CLOSED	27-11 49TH AVE QUEENS NY 11101	0.36 SW	N/A
6	LUST	BLACK BEAR COMPANY 0501474/CLOSED	2710 HUNTER POINT AV QUEENS NY 11101	0.36 SW	N/A
17	LUST	GETTY #344 9909630/CLOSED 12/02/2004	31-05 QUEENS BLVD LONG ISLAND CI NY 11101	0.38 SE	N/A
17	*LUST*	*GETTY* *0009849/ACTIVE*	*31-05 QUEENS BLVD* *LONG ISLAND CI NY 11101*	*0.38 SE*	*6*
29	LUST	NY ENVELOPE 0102148/CLOSED 06/17/2005	2910 HUNTERS POINT AV LONG ISLAND CI NY 11101	0.39 SE	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
54	LUST	ANDREA ELECTRONICS 9709895/CLOSED 12/17/2002	11-40 45TH DRIVE LONG ISLAND CI NY 11101	0.41 NW	N/A
77	LUST	0208486/CLOSED	23-30 50TH AVE LONG ISLAND CI NY 11101	0.41 SW	N/A
10	*LUST*	*MAMM REALTY* *9803835/ACTIVE*	*25-11 41ST AVE* *LONG ISLAND NY 11101*	*0.42 NE*	*7*
60	*LUST*	*INTERNATIONAL MASONRY INS* *0103153/ACTIVE*	*12-07 44TH AVE* *LONG ISLAND CI NY 11101*	*0.42 NW*	*8*
55	LUST	CLOSED-LACKOF RECENT INFO 9207976/CLOSED 03/06/2003	32-00 SKILLMAN AVE. LONG ISLAND CI NY 11101	0.43 SE	N/A
9	LUST	32-00 SKILLMAN AVE 0302379/CLOSED	32-00 SKILLMAN AVE QUEENS NY 11101	0.44 NE	N/A
25	LUST	GULF STATION 0308076/CLOSED	23-01 41ST AVE LONG ISLAND CI NY 11101	0.45 NE	N/A
70	LUST	0100062/CLOSED 06/16/2003	QUEENS PLAZA N/21ST ST QUEENS NY 11101	0.45 NW	N/A
44	*LUST*	*12-12 43RD AVE* *9814023/ACTIVE*	*12-12 23RD AVE* *LONG ISLAND CI NY 11101*	*0.45 NW*	*9*
50	LUST	43-41 32ND PLACE 9303078/CLOSED 06/25/1993	43-41 32ND PLACE LONG ISLAND CI NY 11101	0.46 SE	N/A
74	*LUST*	*11-15 47TH AVE./QUEENS/H* *8707005/ACTIVE*	*11015 47TH AVE.* *QUEENS NY 11101*	*0.46 SW*	*10*
74	LUST	11-15 47 AVE/LIC 8707344/CLOSED	11-15 47 AVE. LONG ISLAND CI NY 11101	0.46 SW	N/A
12	LUST	47-04 VAN DAM ST/QUEENS 8809581/CLOSED	47-04 VAN DAM STREET QUEENS NY 11101	0.47 SE	N/A
7	LUST	CLOSED-LACKOF RECENT INFO 9105613/CLOSED 03/14/2003	40-40 CRESCENT ST LONG ISLAND CI NY 11101	0.48 NE	N/A
53	*LUST*	*X* *0210116/ACTIVE*	*11-20 43RD RD* *LONG ISLAND CI NY 11101*	*0.48 NW*	*11*
47	LUST	32-32 QUEENS BLVD 9309167/CLOSED 07/27/1994	32-32 QUEENS BLVD LONG ISLAND CI NY 11101	0.48 SE	N/A
47	*LUST*	*32-32 QUEENS BLVD/SUNOCO* *8905358/ACTIVE*	*32032 QUEENS BLVD* *QUEENS NY 11101*	*0.48 SE*	*12*
34	LUST	COMMERCIAL BUILDING 0506977/CLOSED	40-23 24TH ST LONG ISLAND CI NY 11101	0.49 NE	N/A
59	*LUST*	*GENERAL INSULATION CORP* *0510695/ACTIVE*	*46-09 11TH STREET* *QUEENS NY 11101*	*0.49 SW*	*13*
61	*LUST*	*INTERN L MRTG. SPECIALIST* *8709369/ACTIVE*	*29024 40TH AVENUE* *LONG ISLAND CI NY 11101*	*0.50 NE*	*14*

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
61	LUST	KAL REALTY 9806658/CLOSED 06/15/2005	29-24 40TH AV LONG ISLAND CI NY 11101	0.50 NE	N/A
	LUST	*CARLOS CORTEZ* *8709682/ACTIVE*	*39017 40TH AVENUE* *QUEENS NY*	*NON GC*	*15*
2	RCRACOR	ACTIVE STEEL DRUM CO INC NYD003933355/CA	52-30 34TH ST LONG ISLAND CI NY 11101	0.70 SE	N/A
1	RCRACOR	ACCURATE ASSOCIATES NYD001264191/CA	5-36 46TH RD LONG ISLAND CI NY 11101	0.72 NW	N/A
4	RCRACOR	KOSAN INDUSTRIAL CORP NYD061949228/CA	5-49 49TH AVE LONG ISLAND CI NY 11101	0.79 SW	N/A
3	RCRACOR	CON EDISON - RAVENSWOOD SITE NYD003917960/CA	38-54 VERNON BOULEVARD LONG ISLAND CI NY 11101	0.86 NW	N/A
5	RCRACOR	QUANTA RESOURCES CORP NYD980592562/CA	37-80 REVIEW AVE LONG ISLAND CI NY 11101	0.95 SE	N/A
35	RCRAGN	S N B INC NYR000003061/TRANSPORTER	44-16 PURVES ST LONG ISLAND CI NY 11101	0.04 NW	N/A
8	RCRAGN	A A A STAMP & SEAL NYR000055889/SGN	26-20 JACKSON AVE QUEENS NY 11101	0.08 NW	N/A
31	RCRAGN	NYCTA NYR000001032/VGN	44TH DR & JACKSON AVE LONG ISLAND CI NY 11101	0.09 NW	N/A
26	RCRAGN	MTA EXISTING RAIL YARD NYR000113605/LGN	QUEENS ST - DEAD END LONG ISLAND CI NY 11101	0.11 NE	N/A
21	RCRAGN	KENT BRAGALINE INC NYR000075630/SGN	27-45 JACKSON AVE LONG ISLAND CI NY 11101	0.12 NE	N/A
23	RCRAGN	LIRR - HUNTERS POINT YARD NYR000132985/SGN	SKILLMAN AVE & 27TH ST LONG ISLAND CI NY 11101	0.13 SE	N/A
30	RCRAGN	NYCT - COURT SQUARE STA G LINE NYR000045062/SGN	JACKSON ST & COURT SQ QUEENS NY 11101	0.15 NW	N/A
15	RCRAGN	COOPER WIRING DEVICES (EAGLE ELECT NYD001287986/LGN	45-01 COURT SQ LONG ISLAND CI NY 11101	0.15 SW	N/A
37	RCRAGN	SUBACCHI FURNITURE NYD045440997/SGN	46-24 28TH ST LONG ISLAND CI NY 11101	0.17 SE	N/A
20	RCRAGN	J BROTHERS AUTO BODY INC NYR000039644/VGN	28-20 42ND RD LONG ISLAND CI NY 11101	0.18 NE	N/A
13	RCRAGN	CON EDISION - TRF 6360 NYP004089918/LGN	ORCHARD ST E 107 S JACKSON LONG ISLAND CI NY 11101	0.19 NE	N/A
24	RCRAGN	MICHELANGELO SCULPTURE NYR000090498/SGN	27-01 47TH AVE LONG ISLAND CI NY 11101	0.20 SE	N/A
33	RCRAGN	OUTLET CITY INC NYD053174041/SGN	42-16 WEST ST LONG ISLAND CI NY 11101	0.23 NE	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
11	RCRAGN	CLIPPER DIAMOND TOOL CO INC NY0001037944/VGN	47-16 AUSTELL PL - 3RD FLOO LONG ISLAND CI NY 11101	0.23 SW	N/A
36	RCRAGN	SHOWMAN FABRICATORS INC NYD980781322/VGN	47-22 PEARSON PLACE LONG ISLAND CI NY 11101	0.23 SW	N/A
11	RCRAGN	CONFORT & CO NY0000990861/LGN	AUSTEL PL LONG ISLAND CI NY 11101	0.23 SW	N/A
27	RCRAGN	NYCT - FLUSHING AVENUE LINE (#7 LI NYR000103416/LGN	DAVIS & 23RD ST LONG ISLAND CI NY 11101	0.24 SW	N/A
27	RCRAGN	MTA NYCT - COURT HOUSE SQ STA 45TH NYR000099846/SGN	JACKSON AVE & 23RD ST LONG ISLAND CI NY 11101	0.24 SW	N/A
22	RCRAGN	KOREA NEWS NYD987005857/SGN	42-22 27TH ST LONG ISLAND CI NY 11101	0.25 NE	N/A
28	RCRAGN	MTA NYCT - JACKSON & WEST SUBSTA S NYR000078238/LGN	28-20 JACKSON AVE LONG ISLAND CI NY 11101	0.25 NE	N/A
	RCRAGN	NYCDOT BRIDGES BIN 2247260 NY0000263517/VGN	JACKSON AVE BRIDGE OVER QUEENS NY 11101	NON GC	N/A
35	SPILLS	44-43 PURVES ST 9713189/CLOSED 05/14/1998	44-43 PURVES ST LONG ISLAND CI NY 11101	0.04 NW	N/A
72	SPILLS	VAULT#3073 0506520/ACTIVE	2740 THOMASON AVE QUEENS NY 11101	0.06 SW	N/A
31	SPILLS	0208224/CLOSED	JACKSON AV & 44TH DR QUEENS NY 11101	0.09 NW	N/A
57	SPILLS	CONED MANHOLE#515 0405105/ACTIVE	PURVES STREET/JACKSON QUEENS NY 11101	0.09 NW	N/A
57	SPILLS	COMMERCIAL AREA 0405305/CLOSED	PERVES ST/ OF JACKSON AV QUEENS NY 11101	0.09 NW	N/A
43	SPILLS	1 COURT SQUARE 9110791/CLOSED 01/17/1992	1 COURT SQUARE LONG ISLAND CI NY 11101	0.10 NW	N/A
67	SPILLS	MANHOLE 4440 9901252/CLOSED 01/07/2000	4327 QUEENS ST QUEENS NY 11101	0.11 NE	N/A
64	SPILLS	MANHOLE # 2353 0409173/CLOSED	JACKSON VAE/DUTCHKILL STR QUEENS NY 11101	0.11 NE	N/A
21	SPILLS	MINI MICRO 0108045/CLOSED 11/14/2001	27-35 JACKSON AVE JACKSON HEIGHT NY 11101	0.12 NE	N/A
21	SPILLS	GASGO 9913082/CLOSED 09/07/2005	27-01 JACKSON AV LONG ISLAND CI NY 11101	0.12 NE	N/A
73	SPILLS	VS# 2196 9914143/CLOSED 03/26/2002	43-22 QUEENS ST QUEENS NY 11101	0.12 NE	N/A
68	SPILLS	RESIDENTS 9809062/CLOSED 10/21/1998	43-09 HUNTERS STREET LONG ISLAND CI NY 11101	0.13 NW	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
68	SPILLS	0105318/CLOSED 06/30/2003	43-09 HUNTER ST LONG ISLAND CI NY 11101	0.13 NW	N/A
71	SPILLS	VS #2196 9912434/CLOSED 03/19/2002	QUEENS ST/JACKSON AVE QUEENS NY 11101	0.14 NE	N/A
71	SPILLS	VAULT 2196 0109680/CLOSED	QUEENS ST AND JACKSON AV QUEENS NY 11101	0.14 NE	N/A
46	SPILLS	0303917/CLOSED	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.15 SE	N/A
46	SPILLS	26-32 SKILLMAN AVE 0209560/ACTIVE	26-32 SKILLMAN AVE LONG ISLAND CI NY 11101	0.15 SE	N/A
58	SPILLS	CONED MANHOLE # 2760 0405237/CLOSED	44 DRIVE/HUNTER QUEENS NY 11101	0.16 NW	N/A
52	SPILLS	46-07 27TH ST 9002825/CLOSED 05/06/1991	46-07 27TH ST QUEENS NY 11101	0.16 SE	N/A
49	SPILLS	42-64 HUNTER STREET 9310213/CLOSED 11/22/1993	42-64 HUNTER STREET LONG ISLAND CI NY 11101	0.17 NE	N/A
76	SPILLS	0304876/CLOSED	4555 PEARSON STREET LONG ISLAND CI NY 11101	0.18 SW	N/A
65	SPILLS	MANHOLE # 6390 0409172/CLOSED	SKILHAM AVE/AUSTELL PLACE QUEENS NY 11101	0.18 SW	N/A
13	SPILLS	MANHOLE 876 9902595/CLOSED 09/07/1999	JACKSON AVENUE ORCHID ST LONG ISLAND CI NY 11101	0.19 NE	N/A
13	SPILLS	TM 6360 0110006/CLOSED	ORCHARD ST/JACKSON AV QUEENS NY 11101	0.19 NE	N/A
63	SPILLS	MAN HOLE #4010 0405432/CLOSED	CRESCENT STREET/43RD AVE QUEENS NY 11101	0.19 NW	N/A
62	SPILLS	LAGUARDIA COLLEGE 0412340/CLOSED	2910 THOMPSON AVE QUEENS NY 11101	0.20 SE	N/A
69	SPILLS	ROADWAY 0103014/CLOSED 06/20/2001	23-10 JACKSON AVE QUEENS NY 11101	0.21 SW	N/A
56	SPILLS	COED MANHOLE # 456 0405238/CLOSED	44 DRIVE/23RD STREET QUEENS NY 11101	0.22 NW	N/A
45	SPILLS	2301 44TH DRIVE 9401439/CLOSED 04/29/1994	2301 44TH DRIVE LONG ISLAND CI NY 11101	0.22 NW	N/A
33	SPILLS	OUTLET CITY 9813882/ACTIVE	42-16 WEST ST LONG ISLAND CI NY 11101	0.23 NE	N/A
33	SPILLS	OUTLET CITY 9600688/CLOSED 05/27/2003	42-16 WEST STREET L.I. C. NY 11101	0.23 NE	N/A
33	SPILLS	OUTLET CITY 0301857/CLOSED	42-16 WEST STREET LONG ISLAND CI NY 11101	0.23 NE	N/A

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 4432 PURVES ST
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JOB: 06-283

TOTAL: 175 **GEOCODED:** 152 **NON GEOCODED:** 23 **SELECTED:** 24

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
48	SPILLS	42-21 CRESENT ST/QUEENS 9006388/CLOSED 09/11/1990	42-21 CRESENT STREET QUEENS NY 11101	0.23 NW	N/A
48	SPILLS	VAULT VS3241 0000423/CLOSED 01/17/2002	42-15 CRESCENT ST ASTORIA NY 11101	0.23 NW	N/A
48	SPILLS	4207 25TH AVENUE 9312123/CLOSED 06/13/1995	4207 25TH STREET LONG ISLAND CI NY 11101	0.23 NW	N/A
11	SPILLS	VAULT VS794 0313782/CLOSED	46-16 AUSTELL PLACE QUEENS NY 11101	0.23 SW	N/A
36	SPILLS	47-22 PEARSON PLACE 9206718/CLOSED 07/29/1993	47-22 PEARSON PLACE LONG ISLAND CI NY 11101	0.23 SW	N/A
36	SPILLS	J MANHEIMER INC 0008410/CLOSED 02/11/2003	47-22 PIERSON PL LONG ISLAND CI NY 11101	0.23 SW	N/A
36	SPILLS	ON SIDEWALK 0110585/CLOSED	47-15 PEARSON PL LONG ISLAND CI NY 11101	0.23 SW	N/A
11	SPILLS	COMFORT AND COMPANY 9414137/CLOSED 01/25/1995	47-47 AUSTELL PLACE LONG ISLAND NY 11101	0.23 SW	N/A
75	SPILLS	0111462/CLOSED	45-52 DAVIS ST LONG ISLAND CI NY 11101	0.23 SW	N/A
28	SPILLS	311 CENTER 0211974/CLOSED	28-21 JACKSON AVENUE QUEENS NY 11101	0.25 NE	N/A
28	SPILLS	ON THE STREET 0312740/CLOSED	2821 JACKSON AVE LONG ISLAND CI NY 11101	0.25 NE	N/A
66	SPILLS	MANHOLE #2531 9810540/CLOSED 10/31/2002	44TH AVE / 23RD ST LONG ISLAND CI NY 11101	0.25 NW	N/A
51	SPILLS	44-67 23RD ST/CITIBANK 8910247/CLOSED 01/26/1990	44-67 23RD STREET QUEENS NY 11101	0.25 NW	N/A
51	SPILLS	NOVATT BUILDING 0000121/CLOSED 05/18/2000	44-78 23RD ST QUEENS NY 11101	0.25 NW	N/A
	SPILLS	12TH ST/47TH AVE 8403999/ACTIVE	12TH ST/47TH AVE QUEENS NY	NON GC	N/A
	SPILLS	9802623/CLOSED 05/29/1998	44TH DRIVE QUEENS NY	NON GC	N/A
	SPILLS	POLE 47307 0104832/CLOSED 10/12/2001	WESTSIDE OF 123RD ST QUEENS NY	NON GC	N/A
	SPILLS	OVERHEAD CABLE 0407043/CLOSED	23RD ST/25TH AVE QUEENS NY	NON GC	N/A
	SPILLS	OFFRAMP FROM QUEENSBOROUG 9603974/CLOSED 07/03/1996	BETWEEN 43RD AVE/QUEENS P QUEENS NY 11101	NON GC	N/A
	SPILLS	MANHOLE 7064 0305471/CLOSED	78TH AVE & 29TH ST QUEENS NY	NON GC	N/A

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Sites Summary Report

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JOB: 06-283

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
	SPILLS	MANHOLE 2137 0000914/CLOSED 04/24/2000	CAUSTELL PL & 27 TH ST QUEENS NY	NON GC	N/A
	SPILLS	MANHOLE 13249 0500230/CLOSED	N/S 45TH AVE QUEENS NY	NON GC	N/A
	SPILLS	LI EXPRESSWAY SERVICE RD 0404415/CLOSED	WB SERVICE RD /130TH ST QUEENS NY	NON GC	N/A
	SPILLS	45TH AVE & 48TH STREET 9311240/CLOSED 12/17/1993	45TH AVE & 48TH STREET QUEENS NY	NON GC	N/A
	SPILLS	127 ST COLLEGE POINT RD 9411067/CLOSED 11/18/1994	127TH ST & COLLEGE POINT QUEENS NY	NON GC	N/A
	SPILLS	DUTCH KILL/SCRAP YARD 9204680/CLOSED 07/23/1992	DUTCH KILL QUEENS NY	NON GC	N/A
	SPILLS	29TH ST & 120TH AVE 9109149/CLOSED 11/27/1991	29TH ST & 120TH AVE QUEENS NY	NON GC	N/A
	SPILLS	29TH ST & GREENPOINT AVE 0003107/ACTIVE	29TH ST & GREENPOINT AVE QUEENS NY 11101	NON GC	N/A
	SPILLS	 0400339/CLOSED	CORNER 94/47TH AVE QUEENS NY	NON GC	N/A
	SPILLS	47TH AVENUE 9303948/CLOSED 06/28/1993	47TH AVENUE QUEENS NY	NON GC	N/A
	SPILLS	VAULT 6276 9911870/CLOSED 03/05/2002	47TH AVE / GILMORE ST QUEENS NY	NON GC	N/A
	SPILLS	 0402307/CLOSED	27TH ST QUEENS NY	NON GC	N/A
78	SPILLS80	43-40 COURT SQUARE / QUEE 8702187/CLOSED	43-40 COURT SQUARE LONG ISLAND CI NY 11101	0.11 NW	N/A
71	SPILLS80	JACKSON AVE & QUEEN ST 8904552/CLOSED	JACKSON AVE & QUEEN ST Long Island Ci NY 11101	0.14 NE	N/A
36	SPILLS80	47-22 PEARSON PL/QUEENS 8900343/CLOSED	47-22 PEARSON PLACE QUEENS NY 11101	0.23 SW	N/A
38	*STATE*	*AMTRAK SUNNYSIDE YARD* *241006*	*39 29 HONEYWELL STREET* *LONG ISLAND CI NY 11101*	*0.62 NE*	*16*
40	*STATE*	*NATIONAL RUBBER ADHESIVES, INC.* *241028*	*38 31 9TH STREET* *LONG ISLAND CI NY 11101*	*0.83 NW*	*18*
41	*STATE*	*ROEHR CHEMICALS, INC.* *241014*	*52 20 37TH STREET* *LONG ISLAND CI NY 11101*	*0.85 SE*	*20*
42	*STATE*	*STANDARD MOTOR PRODUCTS, INC.* *241016*	*37 18 NORTHERN BOULEVARD* *LONG ISLAND CI NY 11101*	*0.91 NE*	*22*
39	*STATE*	*FORMER MANHATTAN ADHESIVES PLANT* *224009*	*425-459 GREENPOINT AVE.* *BROOKLYN NY 11222*	*0.91 SW*	*24*

Environmental FirstSearch
Sites Summary Report

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39	*STATE*	*MANHATTAN ADHESIVES* *HS2035/INDUSTRIAL*	*425-459 GREEN POINT AVENUE* *BROOKLYN NY 11222*	*0.91 SW*	*26*
5	*STATE*	*QUANTA RESOURCES* *241005*	*37 80 REVIEW AVENUE* *MASPETH NY 11101*	*0.95 SE*	*27*
80	*SWL*	*HAMPTON MATERIALS AND HANDLING; IN* *2-41W89/INACTIVE*	*21-16 JACKSON AVENUE* *QUEENS NY 11101*	*0.35 SW*	*29*
	SWL	*C&H SAND AND STONE; CORP.* *2-41W87/INACTIVE*	*21-16 JACKSON AVENUE* *LONG ISLAND CI NY 11101*	*NON GC*	*30*
35	UST	S & M AUTOMATIC PRECISION CO. CBS2-000087/INACTIVE	44-43 PURVES ST LONG ISLAND CI NY 11101	0.04 NW	N/A
88	UST	L I CITY COURT BUILDING PBS2-217042/ACTIVE PBS FACILITY	25-10 COURTHOUSE SQUARE LONG ISLAND CI NY 11101	0.08 SW	N/A
85	UST	CITICORP AT COURT SQUARE PBS2-455040/ACTIVE PBS FACILITY	25-01 JACKSON AVENUE LONG ISLAND CI NY 11101	0.09 NW	N/A
84	UST	5 COURT SQUARE PBS2-603367/ACTIVE PBS FACILITY	5 COURT SQUARE LONG ISLAND CI NY 11101	0.10 NW	N/A
21	UST	INCOME STAR CORPORATION PBS2-283118/ACTIVE PBS FACILITY	27-35 JACKSON AVE. LONG ISLAND CI NY 11101	0.12 NE	N/A
21	UST	LONG ISLAND CITY PETROLEUM PBS2-090565/ACTIVE PBS FACILITY	27-01 JACKSON AVENUE LONG ISLAND CI NY 11101	0.12 NE	N/A
21	UST	CAB MANAGEMENT CORP PBS2-017647/ACTIVE PBS FACILITY	27-34 JACKSON AVE LONG ISLAND CI NY 11101	0.12 NE	N/A
46	UST	SATT REALTY CORP. PBS2-349429/ACTIVE PBS FACILITY	26-32 SKILLMAN AVENUE LONG ISLAND CI NY 11101	0.15 SE	N/A
15	UST	EAGLE ELECTRIC MFG CO INC PBS2-017418/ACTIVE PBS FACILITY	45-31 COURT SQ LONG ISLAND CI NY 11104	0.15 SW	N/A
15	UST	EAGLE ELECTRIC MFG CO. INC. CBS2-000041/INACTIVE	45-31 COURT SQUARE LONG ISLAND CI NY 11101	0.15 SW	N/A
15	UST	45-30 COURT SQUARE PBS2-092673/ACTIVE PBS FACILITY	45-30 COURT SQUARE LONG ISLAND CI NY 11101	0.15 SW	N/A
52	UST	LIC AUTO GROUP INC. PBS2-606925/SUBPART 360-14 ONLY	46-20 27TH STREET LONG ISLAND CI NY 11101	0.16 SE	N/A
83	UST	43-00 CRESCENT ST. PBS2-480606/UNREGULATED BY PBS	43-00 CRESCENT ST LONG ISLAND CI NY 11101	0.17 NW	N/A
83	UST	2415 44TH ROAD LLC PBS2-600777/ACTIVE PBS FACILITY	43-32 CRESCENT STREET LONG ISLAND CI NY 11101	0.17 NW	N/A
82	UST	2415 44 ROAD LLC PBS2-600776/ACTIVE PBS FACILITY	24-15 44TH ROAD LONG ISLAND CI NY 11101	0.17 NW	N/A
90	UST	RML CO. PBS2-602342/ACTIVE PBS FACILITY	24-20 JACKSON AVENUE LONG ISLAND CI NY 11101	0.17 SW	N/A

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Sites Summary Report

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
76	UST	GAP REALTY CO PBS2-600746/UNREGULATED BY PBS	45-56 PEARSON ST LONG ISLAND CI NY 11101	0.18 SW	N/A
76	UST	45-17 PEARSON ST 45-18 CRT SQ PBS2-207098/UNREGULATED BY PBS	45-17 PEARSON ST (45-18 CRT LONG ISLAND CI NY 11101	0.18 SW	N/A
76	UST	MARKETING INDUSTRIES GROUP LTD. PBS2-081566/ACTIVE PBS FACILITY	45-55 PEARSON STREET LONG ISLAND CI NY 11101	0.18 SW	N/A
89	UST	MORBECK CORP PBS2-309052/ACTIVE PBS FACILITY	24-15 43 AVE LONG ISLAND CI NY 11101	0.21 NW	N/A
87	UST	FRANCO-AMERICAN NOVELTY CO INC PBS2-064319/ACTIVE PBS FACILITY	23-14 44TH ROAD LONG ISLAND CI NY 11101	0.22 NW	N/A
86	UST	EAGLE ELECTRIC MFG CO INC PBS2-017388/ACTIVE PBS FACILITY	43-35 24TH STREET LONG ISLAND CI NY 11101	0.22 NW	N/A
33	UST	OUTLET CITY INC PBS2-237981/UNREGULATED BY PBS	42-16 WEST ST LONG ISLAND CI NY 11101	0.23 NE	N/A
48	UST	42-15 CRESENT ST PBS2-155969/ACTIVE PBS FACILITY	42-15 CRESCENT ST LONG ISLAND CI NY 11101	0.23 NW	N/A
48	UST	KRK EXPEDITING CO INC PBS2-303690/UNREGULATED BY PBS	42-21 CRESCENT ST LONG ISLAND CI NY 11101	0.23 NW	N/A
36	UST	PROPERTY CLERK WAREHOUSE PBS2-343420/ACTIVE PBS FACILITY	47-15 PEARSON PLACE LONG ISLAND CI NY 11101	0.23 SW	N/A
11	UST	CONFORT & CO INC PBS2-327085/ACTIVE PBS FACILITY	47-47 AUSTELL PL LONG ISLAND CI NY 11101	0.23 SW	N/A
36	UST	J MANHEIMER INC PBS2-369810/UNREGULATED BY PBS	47-22 PEARSON PL LONG ISLAND CI NY 11101	0.23 SW	N/A
81	UST	23-10 43TH AVE PBS2-158623/ACTIVE PBS FACILITY	23-10 43TH AVE LONG ISLAND CI NY 11101	0.24 NW	N/A
51	UST	BRANCO LEATHER INC PBS2-081345/ACTIVE PBS FACILITY	44-02 23RD ST LONG ISLAND CI NY 11101	0.25 NW	N/A

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 117 **DIST/DIR:** 0.15 SE **MAP ID:** 46

NAME:	26-32 SKILLMAN AVE	**REV:**	10/15/05
ADDRESS:	26-32 SKILLMAN AVE	**ID1:**	0209560
	LONG ISLAND CITY NY 11101	**ID2:**	
	NEW YORK	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	12/17/2002
DATE REPORTED:	12/17/2002
SPILL TIME:	11:30 AM
TIME REPORTED:	12:20 PM
SPILLED MATERIAL:	#6 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	PRIVATE DWELLING
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 144 **DIST/DIR:** 0.30 NW **MAP ID:** 79

NAME: MIDTOWN OPERATING CROP
ADDRESS: 42050 24 ST
NYC NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8806043
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 10/17/88
SPILL TIME: 15:00

DATE REPORTED: 10/17/88
TIME REPORTED: 08:39

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1
AMOUNT RECOVERED: 0

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
4K TK FAILED PETRO-TITE, L R = UNREADABLE. EXC & INVEST.

REGION: 2

UST TRUST? T

SPILL INVESTIGATOR: TOMASELLO
SPILL CONTACT:

TELEPHONE:

SPILLER: UNK
ADDRESS:

SPILLER CONTACT:

TELEPHONE:

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 133 **DIST/DIR:** 0.30 NW **MAP ID:** 18

NAME:	CONDEA SUPPLY CORP	**REV:**	10/15/05
ADDRESS:	21-21 44TH RD	**ID1:**	0306979
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	10/02/2003
DATE REPORTED:	10/02/2003
SPILL TIME:	10:30 AM
TIME REPORTED:	12:41 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 129 **DIST/DIR:** 0.31 NE **MAP ID:** 14

NAME:	BUSINESS	**REV:**	3/1/06
ADDRESS:	28-11 QUEENS PLAZA NORTH	**ID1:**	0512409
	LONG ISLAND NY	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	01/26/2006
DATE REPORTED:	01/26/2006
SPILL TIME:	09:10 AM
TIME REPORTED:	09:10 AM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	INSTITUTIONAL, EDUCATIONAL, GOV., OTHER
RESOURCE AFFECTED:	GROUNDWATER
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 134 **DIST/DIR:** 0.32 NE **MAP ID:** 16

NAME: FALIDAS ASSOCIATES
ADDRESS: 25-15 QUEENS PLAZA NORTH
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0305348
ID2:
STATUS: ACTIVE
PHONE:

SITE INFORMATION:

SPILL DATE: 08/01/2003
DATE REPORTED: 08/20/2003
SPILL TIME: 08:00 AM
TIME REPORTED: 08:43 AM
SPILLED MATERIAL: #2 FUEL OIL

SPILLED AMOUNT: 0.0000 GAL.
SPILL CAUSE: TANK FAILURE
SPILL SOURCE: COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED: GROUNDWATER
WATERBODY:

REGION CLOSED DATE: NOT CLOSED

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 136 **DIST/DIR:** 0.38 SE **MAP ID:** 17

NAME: GETTY
ADDRESS: 31-05 QUEENS BLVD
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0009849
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 11/30/00
SPILL TIME: 07:45

DATE REPORTED: 11/30/00
TIME REPORTED: 08:19

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: GASOLINE STATION
REPORTED BY: OTHER
CALLER REMARKS:
CALLER REPORTING A SPILL OF PETROLEUM FOUND TO BE INPACTED SOIL LIKELY FROM A TANK FAILURE. NO CLEAN UP AS OF YET AND NO CALLBACK NECESSARY

REGION: 2 **UST TRUST?** T

SPILL INVESTIGATOR: SACCACIO/ROMMEL
SPILL CONTACT: ERIC EWALD **TELEPHONE:**

SPILLER: GETTY GAS STATION
ADDRESS: 3105 QUEENS BLVD
LONG ISLAND CITY , NY -
SPILLER CONTACT: **TELEPHONE:** ( ) -

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 01/12/01
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 143 **DIST/DIR:** 0.42 NE **MAP ID:** 10

NAME: MAMM REALTY
ADDRESS: 25-11 41ST AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 9803835
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 06/25/98
SPILL TIME: 14:00

DATE REPORTED: 06/25/98
TIME REPORTED: 16:05

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: OTHER
CALLER REMARKS:
DISCOVERED CONTAMINATED SOIL DURING TANK REMOVAL CONTAMINATED SOIL WAS EXCAVATED AND STOCK PILED CALLER IS CONTRACTER FOR NEW OWNER

REGION: 2 **UST TRUST?** TRUE

SPILL INVESTIGATOR: SIGONA
SPILL CONTACT: MICHAEL LEVINE **TELEPHONE:** (718) 392-3013

SPILLER: MAMM REALTY, INC.
ADDRESS: 22-09 QUEENS PLAZA NORTH
LONG ISLAND CITY , NY 11101-
SPILLER CONTACT: MICHAEL LEVINE **TELEPHONE:** (718) 392-3013

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 06/29/98
DOES CLEAN UP MEET STANDARDS? FALSE
CLOSE DATE: / /
PENALTY RECOMMENDED? FALSE
DEC REMARKS:
DEC SIGONA CALLED MICHAEL ALLETTO AT YELLOWSTONE ON 6/26/98. YELLOWSTONE INDICATED THAT THEY REMOVED ALL THE CONTAMINATED SOILS AND COLLECTED ENDPOINT SAMPLES WHICH ARE BEING TESTED. THE RESULTS WILL BE SUBMITTED TO DEC (SIGONA) WHEN THEY BECOME AVAILABLE.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 140 **DIST/DIR:** 0.42 NW **MAP ID:** 60

NAME: INTERNATIONAL MASONRY INS
ADDRESS: 12-07 44TH AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0103153
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 06/21/01
SPILL TIME: 13:30

DATE REPORTED: 06/21/01
TIME REPORTED: 14:44

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: NON-COMMERCIAL/INSTITUTIONAL
REPORTED BY: TANK TESTER
CALLER REMARKS:

REGION: 2

UST TRUST? F

SPILL INVESTIGATOR: DEMEO
SPILL CONTACT: DENNIS HOLLOWAY
TELEPHONE: (718) 706-9139

SPILLER: INTERNATIONAL MASONRY INS
ADDRESS: 12-07 44TH AV
LONG ISLAND CITY ,
SPILLER CONTACT: DENNIS HOLLOWAY
TELEPHONE: (718) 706-9139

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 06/21/01
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 116 **DIST/DIR:** 0.45 NW **MAP ID:** 44

NAME: 12-12 43RD AVE
ADDRESS: 12-12 23RD AVE
LONG ISLAND CITY NY
QUEENS
CONTACT:

REV: 7/12/05
ID1: 9814023
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 07/07/98
SPILL TIME: 12:00

DATE REPORTED: 02/19/99
TIME REPORTED: 14:32

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 0 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: RESPONSIBLE PARTY
CALLER REMARKS:
TESTED TANK. TANK FAILED.

REGION: 2 **UST TRUST?** T

SPILL INVESTIGATOR: TOMASELLO
SPILL CONTACT: **TELEPHONE:**

SPILLER: 1212 43RD AVE
ADDRESS: 1212 23RD AVE
LONG ISLAND CITY , NY
SPILLER CONTACT: **TELEPHONE:**

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 02/24/99
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 115 **DIST/DIR:** 0.46 SW **MAP ID:** 74

NAME: 11-15 47TH AVE./QUEENS/H
ADDRESS: 11015 47TH AVE.
NEW YORK CITY NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8707005
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 11/17/87
SPILL TIME: 11:30

DATE REPORTED: 11/17/87
TIME REPORTED: 11:43

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1
AMOUNT RECOVERED: 0

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
3K TANK COULDN T MAINTAIN OIL IN STANDPIPE, WILL EXCAVATE, ISOLATE AND RETEST. CONTACT: BILL GOLDSTEIN (718) 392-3900.

REGION: 2 **UST TRUST?** F

SPILL INVESTIGATOR: BATTISTA
SPILL CONTACT: **TELEPHONE:**

SPILLER: H & R ASSOCIATES
ADDRESS: 11-15 47TH AVE.
LONG ISLAND CITY , NY
SPILLER CONTACT: **TELEPHONE:** (718) 392-3900

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 149 **DIST/DIR:** 0.48 NW **MAP ID:** 53

NAME: X
ADDRESS: 11-20 43RD RD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 10/15/05
ID1: 0210116
ID2:
STATUS: ACTIVE
PHONE:

SITE INFORMATION:

SPILL DATE:	01/07/2003
DATE REPORTED:	01/07/2003
SPILL TIME:	01:30 PM
TIME REPORTED:	01:35 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	0.0000 GAL.
SPILL CAUSE:	TANK TEST FAILURE
SPILL SOURCE:	COMMERCIAL/INDUSTRIAL
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 121 **DIST/DIR:** 0.48 SE **MAP ID:** 47

NAME: 32-32 QUEENS BLVD/SUNOCO
ADDRESS: 32032 QUEENS BLVD
NEW YORK CITY NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8905358
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 08/30/89
SPILL TIME: 15:15

DATE REPORTED: 08/30/89
TIME REPORTED: 16:28

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1
AMOUNT RECOVERED: 0

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: GASOLINE STATION
REPORTED BY: TANK TESTER
CALLER REMARKS:
(5) 550 GALLON TANKS FAILED PETRO TITE WITH A LEAK RATE OF 0.737GPH, WILL EXCAVATE & TEST (5) MORE TANKS ON 8/31/89.

REGION: 2

UST TRUST? T

SPILL INVESTIGATOR: SULLIVAN
SPILL CONTACT:

TELEPHONE:

SPILLER: SUNOCO AA
ADDRESS:

SPILLER CONTACT:

TELEPHONE:

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 135 **DIST/DIR:** 0.49 SW **MAP ID:** 59

NAME:	GENERAL INSULATION CORP	**REV:**	3/1/06
ADDRESS:	46-09 11TH STREET	**ID1:**	0510695
	LONG ISLAND NY	**ID2:**	
	QUEENS	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	

SITE INFORMATION:

SPILL DATE:	12/13/2005
DATE REPORTED:	12/13/2005
SPILL TIME:	12:00 PM
TIME REPORTED:	12:00 PM
SPILLED MATERIAL:	#2 FUEL OIL
SPILLED AMOUNT:	15.0000 GAL.
SPILL CAUSE:	TANK FAILURE
SPILL SOURCE:	INSTITUTIONAL, EDUCATIONAL, GOV., OTHER
RESOURCE AFFECTED:	SOIL
WATERBODY:	
REGION CLOSED DATE:	NOT CLOSED

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 139 **DIST/DIR:** 0.50 NE **MAP ID:** 61

NAME: INTERN L MRTG. SPECIALIST
ADDRESS: 29024 40TH AVENUE
LIC NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8709369
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 02/03/88
SPILL TIME: 15:00

DATE REPORTED: 02/03/88
TIME REPORTED: 15:30

MATERIAL SPILLED: #2 FUEL OIL
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1 G
AMOUNT RECOVERED: -1 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL/INDUSTRIAL
REPORTED BY: TANK TESTER
CALLER REMARKS:
CONTACT: CLIFFORD WENGLIM AT KAL REALTY. 3K TANK SYSTEM FAILED PETROTITE/ LEAK RATE = -.673GPH

REGION: 2 **UST TRUST?** FALSE

SPILL INVESTIGATOR: BATTISTA
SPILL CONTACT:
TELEPHONE:

SPILLER: KAL REALTY (OWNER)
ADDRESS:

SPILLER CONTACT:
TELEPHONE: (718) 784-2842

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? FALSE
DEC REMARKS:
/ / : COASTAL COMBUSTION (PHONE: 212-475-4263), MIKE JUNIOR, HIRED GND SERVICE FOR KAL REALTY.

CLOSE DATE: / /
PENALTY RECOMMENDED? FALSE

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 175 **DIST/DIR:** NON GC **MAP ID:**

NAME: CARLOS CORTEZ
ADDRESS: 39017 40TH AVENUE
NY
QUEENS
CONTACT:

REV: 1/1/02
ID1: 8709682
ID2:
STATUS: ACTIVE
PHONE:

SPILL DATE: 02/16/88
SPILL TIME: 13:00

DATE REPORTED: 02/16/88
TIME REPORTED: 22:32

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: -1 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TANK TEST FAILURE
RESOURCE AFFECTED: GROUNDWATER
WATERBODY AFFECTED:
SOURCE OF SPILL: GASOLINE STATION
REPORTED BY: TANK TESTER
CALLER REMARKS:

REGION: 2 **UST TRUST?** T

SPILL INVESTIGATOR: SULLIVAN
SPILL CONTACT: **TELEPHONE:**

SPILLER: ALBERT GARAGE
ADDRESS:

SPILLER CONTACT: **TELEPHONE:** (718) 786-0640

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 07/03/95
DOES CLEAN UP MEET STANDARDS? F
DEC REMARKS:

CLOSE DATE: / /
PENALTY RECOMMENDED? F

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 27 **DIST/DIR:** 0.62 NE **MAP ID:** 38

NAME: AMTRAK SUNNYSIDE YARD
ADDRESS: 39 29 HONEYWELL STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241006
ID2:
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 100
REGION: 2

SITE TYPE:
OPEN DUMP: X
LAGOON:
POND:
STRUCTURE:
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: NATIONAL RAIL PASSENGER CORPORATION
CURRENT OWNER(S) ADDRESS: 400 NORTH CAPITOL STREET NW
WASHINGTON NY 20001

OPERATOR(S) DURING DISPOSAL: AMTRAK - SUNNYSIDE YARD
OPERATOR(S) ADDRESS: 39-29 HONEYWELL STREET
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: 1910 TO unknown

SITE DESCRIPTION:
The site is an active maintenance and storage yard for train locomotives and passenger cars. Several investigations conducted prior to 1986 had found that PCBs were present in soils and a PCBs laden separate phase plume was also present near the former Engine Shop. A remedial investigation was later conducted in multiple phases under NYSDEC oversight pursuant to a consent order. Seventeen specific areas of concern (AOC) have been identified. PCBs, petroleum hydrocarbons, and lead are the main site related contaminants of concern. Onsite soils, groundwater, and sewer sediments are contaminated with one or more of these contaminants. Chlorinated solvents are also present in on site groundwater, but are believed to have originated off site. The sources of the PCBs are believed to be leaks from stationary transformers and locomotive mounted transformers. The main sources of petroleum hydrocarbons are believed to be the diesel USTs and the various leaks and disposals over the years of the Yard activities. The consent order was modified in 1988 to divide the Yard into six operable units (OUs). The operable units (OUs) 1 and 2, the unsaturated soil under and around the High Speed Line building areas have been investigated and remediated. A RI for OU 3, the unsaturated soils and the free product plume (AOC 1) is underway. Portions of OU 4 (remainder of the site) have been completed. The on site sewer system (OU 5) and the groundwater/saturated soils (OU 6) were also investigated during the Phase II, but more work remains to be done. Interim Remedial Measures (IRMs) installed since 1990 have contained and recovered petroleum. These measures were discontinued in 1996. A new IRM consisting of a single collection trench was installed in late 1998 to recover the free petroleum. This IRM continues to operate on and off as permitted by ongoing Yard construction. The Long Island Railroad (LIRR) is planning to construct tunnels through the Yard as part of its East Side Access (ESA) project. Impacts from the proposed construction remain to be assessed.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
PCB contaminated oil; polychlorinated biphenyls (pcb)	unknown
Lead	unknown
Xylene	unknown
1,2,4-Trichlorobenzene	unknown
Benzene	unknown
Pyrene	unknown
Fluoranthene	unknown
Anthracene	unknown
Benzo(B)Fluoranthene	unknown

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 27 **DIST/DIR:** 0.62 NE **MAP ID:** 38

NAME: AMTRAK SUNNYSIDE YARD
ADDRESS: 39 29 HONEYWELL STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241006
ID2:
STATUS:
PHONE:

Benzo(A)Pyrene unknown

ANALYTICAL DATA AVAILABLE FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE:	FILL.
DEPTH TO GROUNDWATER:	RANGE: 1 TO 5 FEET.

LEGAL ACTION

TYPE:	CONSENT ORDER RI/FS
STATUS:	OS

REMEDIATION

PROPOSED:		**DESIGN**	
ACTIVE:	X	**COMPLETE**	

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Soil and groundwater contamination by PCBs has been confirmed. A PCBs laced petroleum plume is also present in one portion of the site. The site has secured access.Exceedances of standards, criteria, and guidance include PCBs, metals (primarily lead), and SVOCs for soil; and metals and SVOCs for groundwater.

ASSESSMENT OF HEALTH PROBLEMS:
Groundwater in the area of the site is not used as a source of potable water. Access to the site is controlled, preventing trespassers from coming in contact with contaminated soils.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 30 **DIST/DIR:** 0.83 NW **MAP ID:** 40

NAME: NATIONAL RUBBER ADHESIVES, INC.
ADDRESS: 38 31 9TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241028
ID2: NYD990690190
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 1
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: NATIONAL RUBBER ADHESIVES, INC.
CURRENT OWNER(S) ADDRESS: 25 KNICKERBOCKER AVENUE
BROOKLYN NY 11208

OPERATOR(S) DURING DISPOSAL: NATIONAL RUBBER ADHESIVES, INC.
OPERATOR(S) ADDRESS: 38-31 9TH STREET
LONG ISLAND CITY NY 11385

HAZARDOUS WASTE DISPOSAL PERIOD: unknown TO unknown

SITE DESCRIPTION:
The property is located within an urban industrialized seThe property is located within an urban industrialized section of Long Island City. The site extends 335 feet from the north to the south and 117 feet from the west to the east. The entire site is occupied by a 30,000 square feet, one story building. There is a small courtyard in the central portion of the building, on it s western side. The site is approximately 15 to 20 feet above mean sea level. The nearest surface water body is the East River, approximately one quarter mile west of the site. The property is registered with the USEPA as a small quantity generator of hazardous waste, and is also listed as a registered Petroleum Bulk Storage Facility (PBS) and a Chemical Bulk Storage Facility (CBS). Five underground storage tanks (USTs) were closed in-place, including one toluene, two gasoline, one methyl ethyl ketone (MEK) and one heptane UST. Two USTs with a storage capacity of 1500 gallons are currently in service at the site storing heptane. Site ownership changed in 2002. The new owners originally entered the Volunteer Cleanup Program to address hazardous waste contamination but switched to the Brownfield Cleanup Program (BCP). A BCP application was approved in 2004.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Toluene	unknown
Xylene	unknown
Benzene	unknown
Toluene U-220 (F005 Waste)	unknown

ANALYTICAL DATA AVAILABLE FOR
GROUNDWATER: X
AIR:
SOIL: X
SURFACE WATER:
SEDIMENT:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 30 **DIST/DIR:** 0.83 NW **MAP ID:** 40

NAME: NATIONAL RUBBER ADHESIVES, INC.
ADDRESS: 38 31 9TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241028
ID2: NYD990690190
STATUS:
PHONE:

APPLICABLE STANDARDS EXCEEDED FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
DRINKING WATER:

GEOTECHNICAL INFORMATION
SOIL/ROCK TYPE: GLACIAL TILL OVER CRYSTALLINE BEDROCK.
DEPTH TO GROUNDWATER: RANGE: 5 TO 10 FEET.

LEGAL ACTION
TYPE:
STATUS:

REMEDIATION
PROPOSED:
ACTIVE:
DESIGN
COMPLETE

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Previous investigations indicate the site contains a consequential amount of hazardous waste(xylene and toluene). Site impacts to the East River can not be assessed at this time. The site is situated over a sole-source aquifer.

ASSESSMENT OF HEALTH PROBLEMS:
Elevated levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals have been identified in soil and groundwater at this site. The area is paved and served by pubic water so exposures to contaminated soils and groundwater are unlikely. Due to the high levels of VOCs in on-site groundwater, there is the potential for exposures related to soil vapor intrusion in surrounding buildings. A soil vapor investigation is planned as part of the ongoing remedial investigation.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 32 **DIST/DIR:** 0.85 SE **MAP ID:** 41

NAME: ROEHR CHEMICALS, INC.
ADDRESS: 52 20 37TH STREET
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241014
ID2: NYD000764936
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 0.5
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: ACETO CORPORATION
CURRENT OWNER(S) ADDRESS: ONE HOLLOW LANE
LAKE SUCCESS NY 11042

OPERATOR(S) DURING DISPOSAL: ROEHR CHEMICALS, INC.
OPERATOR(S) ADDRESS: 50-20 37TH STREET
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: 1991 TO unknown

SITE DESCRIPTION:
Roehr Chemicals used to be located on 52-20 37th Street, in Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street and Newtown Creek is located approximately 1,750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five lots - lots 1,8,23, and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemical was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene, a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil with xylene. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found contaminated with xylene and acetone. The RI showed a long narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. Soil vapor extraction and air sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/ AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues under the OM&M program.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Acetone	unknown
Xylene (Mixed)	unknown
Ethylbenzene	unknown

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 32 **DIST/DIR:** 0.85 SE **MAP ID:** 41

NAME:	ROEHR CHEMICALS, INC.	**REV:**	02/09/06
ADDRESS:	52 20 37TH STREET	**ID1:**	241014
	LONG ISLAND CITY NY 11101	**ID2:**	NYD000764936
	QUEENS	**STATUS:**	
CONTACT:		**PHONE:**	

ANALYTICAL DATA AVAILABLE FOR

GROUNDWATER:	X	**SURFACE WATER:**	X
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE:	MEDIUM TO COURSE SAND WITH FINE GRAVEL.
DEPTH TO GROUNDWATER:	RANGE: 25 TO 30 FEET.

LEGAL ACTION

TYPE:
STATUS:

REMEDIATION

PROPOSED:		**DESIGN**	
ACTIVE:	X	**COMPLETE**	

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
The remedial actions taken todate have adequately addressed significant threat posed by the contamination, and the site reclassification is under consideration. The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The installed system is being operated in an on and off pulsing sequence to assess if the reductions in groundwater contaminant levels are permanent or not.

ASSESSMENT OF HEALTH PROBLEMS:
On site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Air within the main building will be tested prior to occupation by a new tenant. Soil and groundwater contamination continue to diminish as the interim remedial measure progresses.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 33 **DIST/DIR:** 0.91 NE **MAP ID:** 42

NAME: STANDARD MOTOR PRODUCTS, INC.
ADDRESS: 37 18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241016
ID2: NYD001315266
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 1.1
REGION: 2

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: STANDARD MOTOR PRODUCTS/MTA
CURRENT OWNER(S) ADDRESS: 37-18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101

OPERATOR(S) DURING DISPOSAL: STANDARD MOTOR PRODUCTS/MTA
OPERATOR(S) ADDRESS: 37-18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101

HAZARDOUS WASTE DISPOSAL PERIOD: unknown TO unknown

SITE DESCRIPTION:
Standard Motor Products (SMP) is located in an urban area, on the southern side of Northern Boulevard, between 37th and 39th streets. SMP is in the business of producing automobile parts and components. Current manufacturing operations include metal fabrication and machining, plastic injection molding, and assembly. The building on site has been occupied by SMP since the mid 1900s. An investigation in 1990 was initiated after an oily sheen was observed in a puddled area on the southeast side of the property. Soil samples from this area revealed elevated levels of petroleum hydrocarbons and volatile organic compounds (VOCs), primarily 1,1,1-trichloroethane. Approximately 2,700 sq.ft. of soil was excavated to a depth of 18 inches and stockpiled on-site. Further investigation determined that soils in the area of the rear loading platform contained elevated levels of petroleum hydrocarbons and VOCs. Contaminated soils extended beyond the area excavated. Subsequent groundwater samples taken indicated contamination with 1,1,1-trichloroethane and lead. An investigation was performed by the owner and a Delisting Petition was submitted to the NYSDEC in 1994. This petition was denied. A Consent Order has been signed to develop and implement a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS work plan was approved in October 2002. The first phase of the RI fieldwork began in November 2002 and the second phase was conducted in July 2003. A work plan for a supplemental investigation of soil gas and groundwater monitoring is currently being developed.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Tetrachloroethylene (PCE)	unknown
1,1,1 TCA	unknown
1,1-Dichloroethane	unknown
Methyl-Tert-Butyl Ether (MTBE)	unknown
Trichloroethene (TCE)	unknown

ANALYTICAL DATA AVAILABLE FOR

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 33 **DIST/DIR:** 0.91 NE **MAP ID:** 42

NAME: STANDARD MOTOR PRODUCTS, INC.
ADDRESS: 37 18 NORTHERN BOULEVARD
LONG ISLAND CITY NY 11101
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241016
ID2: NYD001315266
STATUS:
PHONE:

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**SEDIMENT:**	
SOIL:	X		

APPLICABLE STANDARDS EXCEEDED FOR

GROUNDWATER:	X	**SURFACE WATER:**	
AIR:		**DRINKING WATER:**	

GEOTECHNICAL INFORMATION

SOIL/ROCK TYPE:	COARSE SAND AND GRAVEL.
DEPTH TO GROUNDWATER:	RANGE: 1 TO 5 FEET.

LEGAL ACTION

TYPE:	CONSENT ORDER RI/FS
STATUS:	OS

REMEDIATION

PROPOSED:	**DESIGN**
ACTIVE:	**COMPLETE**

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Significant levels of 1,1,1-trichloroethane, lead, and petroleum hydrocarbons have been found in groundwater and soil samples. The highest levels of groundwater contamination are adjacent to the loading dock at the back of the building. Groundwater flow is to the adjacent Amtrack property. A gas station upgradient of SMP (on the corner of Northern Blvd and 39th Street) is the source of the petroleum contamination in the groundwater.

ASSESSMENT OF HEALTH PROBLEMS:
The site is situated in an urban and industrial area. On-site workers may contact contaminated surface soils that were not removed as part of a previous soil removal effort. Surface and subsurface soil samples were collected during the remedial ivestigation to delineate the nature and extent of soil contamination. Access to the site is restricted by fences and security personnel. Personnel gain access to the area of concern through a locked gate; thus limiting public exposure. Groundwater near the site is not used for potable water.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 28 **DIST/DIR:** 0.91 SW **MAP ID:** 39

NAME: FORMER MANHATTAN ADHESIVES PLANT
ADDRESS: 425-459 GREENPOINT AVE.
BROOKLYN NY
KINGS
CONTACT:

REV: 05/20/99
ID1: 224009
ID2: NYD980780811
STATUS:
PHONE:

CLASS CODE: D1 **REGION:** 2 **ESTIMATED SIZE:** ACRES

SITE TYPE:
OPEN DUMP:
LAGOON:
POND:

STRUCTURE: X
LANDFILL:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: Frank Castiglione
CURRENT OWNER(S) ADDRESS: 32-02 College Point Blvd.
Flushing NY 11354

OPERATOR(S) DURING DISPOSAL:
OPERATOR(S) ADDRESS:
NY

HAZARDOUS WASTE DISPOSAL PERIOD: TO:

SITE DESCRIPTION:
Manhattan Adhesives is currently an empty factory building that is located at the foot of the Greenpoint Ave., Bridge in Brooklyn. Besides the Manhattan Adhesives factory, about 10 feet from the northeast wall is a manhole (not a sewer or drain) into which liquid waste was allegedly discharged. This waste came from a condemned oil storage site located at the intersection of Rt. 280, and the NJ Turnpike in NJ. The manhole is suspected of being the opening to an underground tank; however, the quantity of the waste allegedly dumped exceeds the capacity of most tanks. This information was obtained from the State Senate Committee on Crime and the Brooklyn District Attorney s office. Phase 1 State Superfund has been completed. A partial phase II investigation was completed during 1985 and recommended no further action. The Responsible Party has agreed to undertake an investigation in 1986. An investigation has not found hazardous waste on-site.

CONFIRMED HAZARDOUS WASTE DISPOSAL:
Waste oil alleged to contain PCB s

QUANTITY:
Over 400,000 gal.

ANALYTICAL DATA AVAILABLE FOR:
GROUNDWATER:
AIR:
SOIL:

SURFACE WATER:
SEDIMENT:

APPLICABLE STANDARDS EXCEEDED FOR:
GROUNDWATER:
AIR:

SURFACE WATER:
DRINKING WATER:

GEOTECHNICAL INFORMATION:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 28 **DIST/DIR:** 0.91 SW **MAP ID:** 39

NAME: FORMER MANHATTAN ADHESIVES PLANT
ADDRESS: 425-459 GREENPOINT AVE.
BROOKLYN NY
KINGS
CONTACT:

REV: 05/20/99
ID1: 224009
ID2: NYD980780811
STATUS:
PHONE:

SOIL/ROCK TYPE:
DEPTH TO GROUNDWATER:

LEGAL ACTION:
TYPE:
STATUS:

REMEDIATION:
PROPOSED: **DESIGN:**
ACTIVE: **COMPLETE:**

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

ASSESSMENT OF HEALTH PROBLEMS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 29 **DIST/DIR:** 0.91 SW **MAP ID:** 39

NAME: MANHATTAN ADHESIVES
ADDRESS: 425-459 GREEN POINT AVENUE
BROOKLYN NY 11222
KINGS
CONTACT:

REV:
ID1: HS2035
ID2:
STATUS: INDUSTRIAL
PHONE:

REGION: 2

LTBI DATE:
CONFIRM DATE:
DELETED DATE:
REMED DATE:
WAIVER DATE:

NPL:
PUB INV:
INIT ACTION:
RESP ACTION:
PRIORITY: ENVIRON/PUBLIC HEALTH

CURRENT STATUS: NOT ACTIVE
PET/HAZ:
REMEDIATION: PHASE 1

CONTENT: AROCLOR 1221, AROCLOR 1221B, AROCLOR 5460, PCB/PCT MIXTURE
LOCATION:
RESULTS:

GROUND WATER:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 31 **DIST/DIR:** 0.95 SE **MAP ID:** 5

NAME: QUANTA RESOURCES
ADDRESS: 37 80 REVIEW AVENUE
MASPETH NY 11378
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241005
ID2: NYD980534499
STATUS:
PHONE:

SITE INFORMATION

CLASS CODE: 2
SIZE (ACRES): 2
REGION: 2

SITE TYPE:
OPEN DUMP: X
LAGOON:
POND:
STRUCTURE: X
LANDFILL:
NPL STATUS:

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER(S) NAME: QUANTA RESOURCES
CURRENT OWNER(S) ADDRESS: 299 SOUTH STATE STREET
DOVER NY 19901

OPERATOR(S) DURING DISPOSAL: QUANTA RESOURCES
OPERATOR(S) ADDRESS: 299 SOUTH STATE STREET
DOVER NY 19901

HAZARDOUS WASTE DISPOSAL PERIOD: 1960 TO 1981

SITE DESCRIPTION:
Quanta Resources operated a waste oil storage and processing facility at 37-80 Review Ave. from 1960 to 1981. The site is located in an industrial/commercial area of Long Island City. The Newtown Creek is about 500 ft. south of the site. After filing for bankruptcy in 1981, the owners abandoned the site. The site has tanks and several buildings on site, and is still abandoned. The surrounding parcels are currently used for a combination of commercial and industrial. A New York City emergency remedial action removed approximately 640,000 gallons of waste oil from the property. Some of the waste oil contained tetrachloroethene, methyl chloride, 1,1,1-trichloroethane and trichlorcethene. Sludge, waste oil, and diesel fuel, all contaminated with PCBs from badly deteriorated leaking tanks and drums, were also removed. As part of NYSDEC s Phase II Investigation, three on-site groundwater monitoring wells were installed. During installation it was discovered that there was a four foot layer of oil lying above the groundwater table, which would imply that there are about 500,000 gallons of oil underground. A consent order was signed with numerous PRPs in May 2002 for the undertaking of investigation and remediation activities. Phase I of the Remedial Investigation has been completed. Phase II of the Remedial Investigation is planned for early 2005.

CONFIRMED HAZARDOUS WASTE DISPOSAL:	**QUANTITY:**
Toluene	unknown
1,1,1 TCA	unknown
Benzene	unknown
Toluene 2,4-Disocyanate	unknown
Hydrocarbons Heavy Metal	unkown
1,1,1 trichloroethane	unknown
trichloroethene	unknown
Tetrachloroethene	unknown
Methyl chloride	unknown

ANALYTICAL DATA AVAILABLE FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
SEDIMENT:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

STATE SITE

SEARCH ID: 31 **DIST/DIR:** 0.95 SE **MAP ID:** 5

NAME: QUANTA RESOURCES
ADDRESS: 37 80 REVIEW AVENUE
MASPETH NY 11378
QUEENS
CONTACT:

REV: 02/09/06
ID1: 241005
ID2: NYD980534499
STATUS:
PHONE:

SOIL: X

APPLICABLE STANDARDS EXCEEDED FOR
GROUNDWATER: X
AIR:
SURFACE WATER:
DRINKING WATER:

GEOTECHNICAL INFORMATION
SOIL/ROCK TYPE: FILL OVER SAND.
DEPTH TO GROUNDWATER: RANGE: 1 TO 5 FEET.

LEGAL ACTION
TYPE: CONSENT ORDER RI/FS
STATUS: NE

REMEDIATION
PROPOSED:
ACTIVE:
DESIGN
COMPLETE

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
Soil and groundwater contamination has been confirmed. The primary contaminants of concern include petroleum hydrocarbons, chlorinated solvents, PCBs, heavy metals and PAHs. Measurable LNAPL was found in 24 of 29 onsite and offsite monitoring wells. The site presents a significant threat due to the soil and groundwater contamination, free product plume and close proximity to Newtown Creek.

ASSESSMENT OF HEALTH PROBLEMS:
Waste oil previously stored on-site has caused widespread contamination of groundwater and soils. Approximately 500,000 gallons of contaminated waste oil remains at the site, floating on the water table. The aquifer of concern is not used as a source for drinking water. Groundwater wells in this area of Queens are used only for commercial and industrial purposes. A fence surrounds the site restricting access and minimizing the potential for direct contact exposures to on-site contaminates. The potential exists for the floating oil plume to migrate into the nearby Newtown Creek which empties into the East River. Further investigation is required.

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

SOLID WASTE LANDFILL SITE

SEARCH ID: 83 **DIST/DIR:** 0.35 SW **MAP ID:** 80

NAME:	HAMPTON MATERIALS AND HANDLING; INC.	**REV:**	01/05/06
ADDRESS:	21-16 JACKSON AVENUE	**ID1:**	2-41W89
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	INACTIVE
CONTACT:	JOHN CLAUSE	**PHONE:**	

SITE INFORMATION

OWNER INFORMATION

NAME:
TYPE:
ADDRESS:
EMAIL:
PHONE:

CONTACT INFORMATION

NAME: JOHN CLAUSE
ADDRESS:
EMAIL:
PHONE:

ACTIVITY DESC: C&D PROCESSING - REGISTERED
REG STATUS:
WASTE TYPE:
AUTH NUMBER: NONE
AUTH ISSUE DATE:
EXPIRATION DATE:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

SOLID WASTE LANDFILL SITE

SEARCH ID: 174 **DIST/DIR:** NON GC **MAP ID:**

NAME:	C&H SAND AND STONE; CORP.	**REV:**	01/05/06
ADDRESS:	21-16 JACKSON AVENUE	**ID1:**	2-41W87
	LONG ISLAND CITY NY 11101	**ID2:**	
	QUEENS	**STATUS:**	INACTIVE
CONTACT:	HUGH FLAHERTY	**PHONE:**	7189372979

SITE INFORMATION

OWNER INFORMATION

NAME:
TYPE:
ADDRESS:
EMAIL:
PHONE:

CONTACT INFORMATION

NAME:	HUGH FLAHERTY
ADDRESS:	21-16 JACKSON AVENUE LONG ISLAND CITY , NY 11101
EMAIL:	
PHONE:	7189372979
ACTIVITY DESC:	C&D PROCESSING - REGISTERED
REG STATUS:	
WASTE TYPE:	
AUTH NUMBER:	NONE
AUTH ISSUE DATE:	
EXPIRATION DATE:	

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: 4432 PURVES ST
QUEENS NY 11101

JOB: 06-283

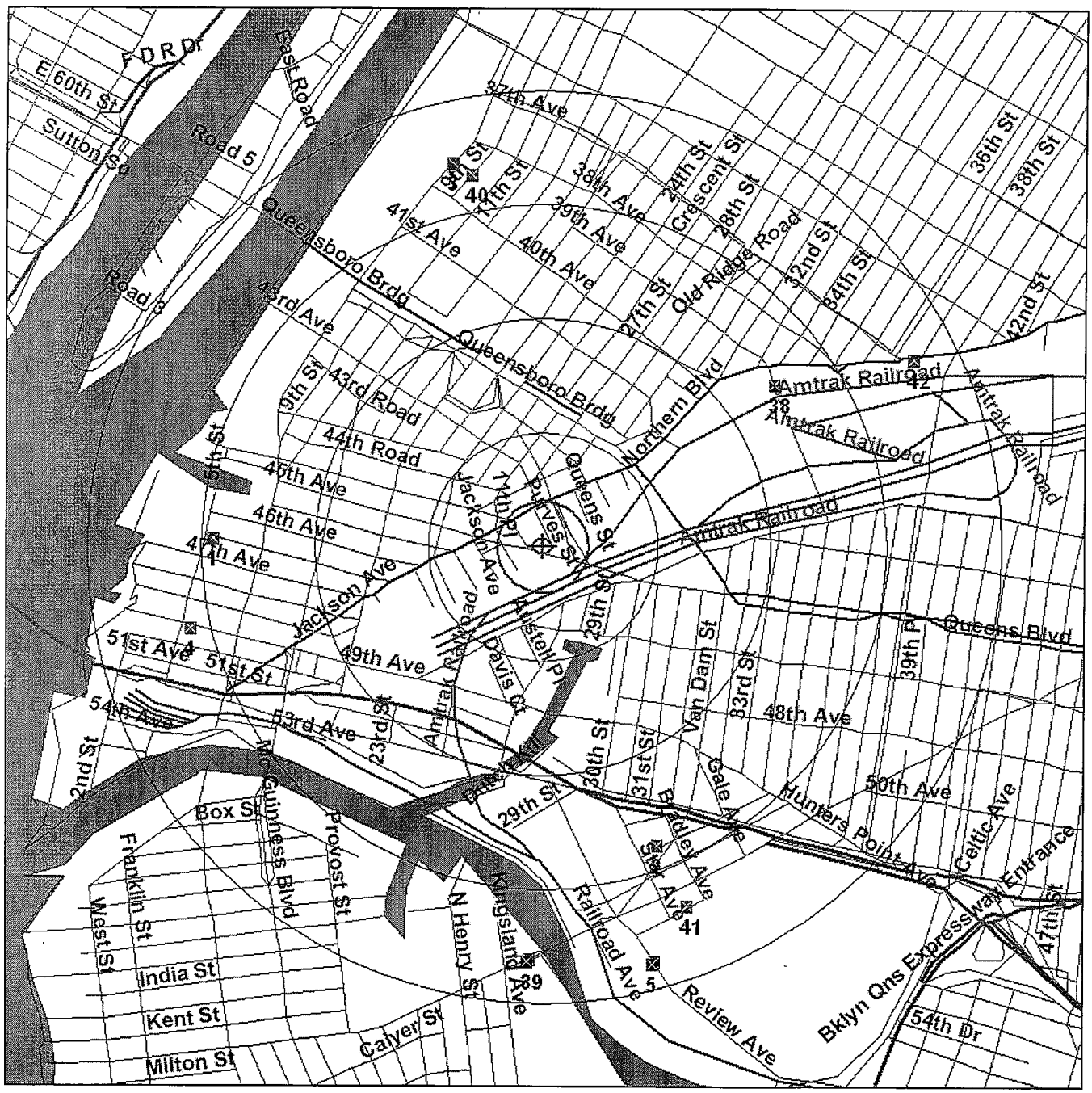
Street Name	Dist/Dir	Street Name	Dist/Dir
11th Pl	0.12 NW		
23rd St	0.22 NW		
24th St	0.20 NW		
25th St	0.11 NW		
27th St	0.13 SE		
28th St	0.15 SE		
29th St	0.18 SE		
30th St	0.23 SE		
42nd Rd	0.17 NE		
43rd Ave	0.09 NW		
44th Ave	0.25 NW		
44th Dr	0.03 SW		
44th Rd	0.14 NW		
45th Ave	0.14 NW		
45th Rd	0.19 SW		
47th Ave	0.17 SW		
Austell Pl	0.18 SW		
Court Sq	0.07 SW		
Davis Ct	0.24 SW		
Davis St	0.22 SW		
Dutch Kills St	0.07 NE		
Hunter St	0.13 NW		
Jackson Ave	0.08 NW		
Orchard St	0.17 NE		
Pearson Pl	0.22 SW		
Pearson St	0.17 SW		
Purves St	0.02 NE		
Qnsbo Br Up Ry Appro	0.11 NE		
Queens St	0.11 NE		
Skillman Ave	0.13 SE		
Thomson Ave	0.01 SW		
West St	0.23 NE		

Environmental FirstSearch

1 Mile Radius

ASTM Map: NPL, RCRACOR, STATE Sites

4432 PURVES ST, QUEENS NY 11101



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.74584 Longitude: -73.940841) .....

Unidentified Site, Multiple Sites, Receptor .....

Landfill, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Brownfield

4432 PURVES ST, QUEENS NY 11101

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.74584 Longitude: -73.940841) .....

wnfield.....

.oads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM AAI Map: Federal Land Use Sites

4432 PURVES ST, QUEENS NY 11101

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.74584 Longitude: -73.940841) .....

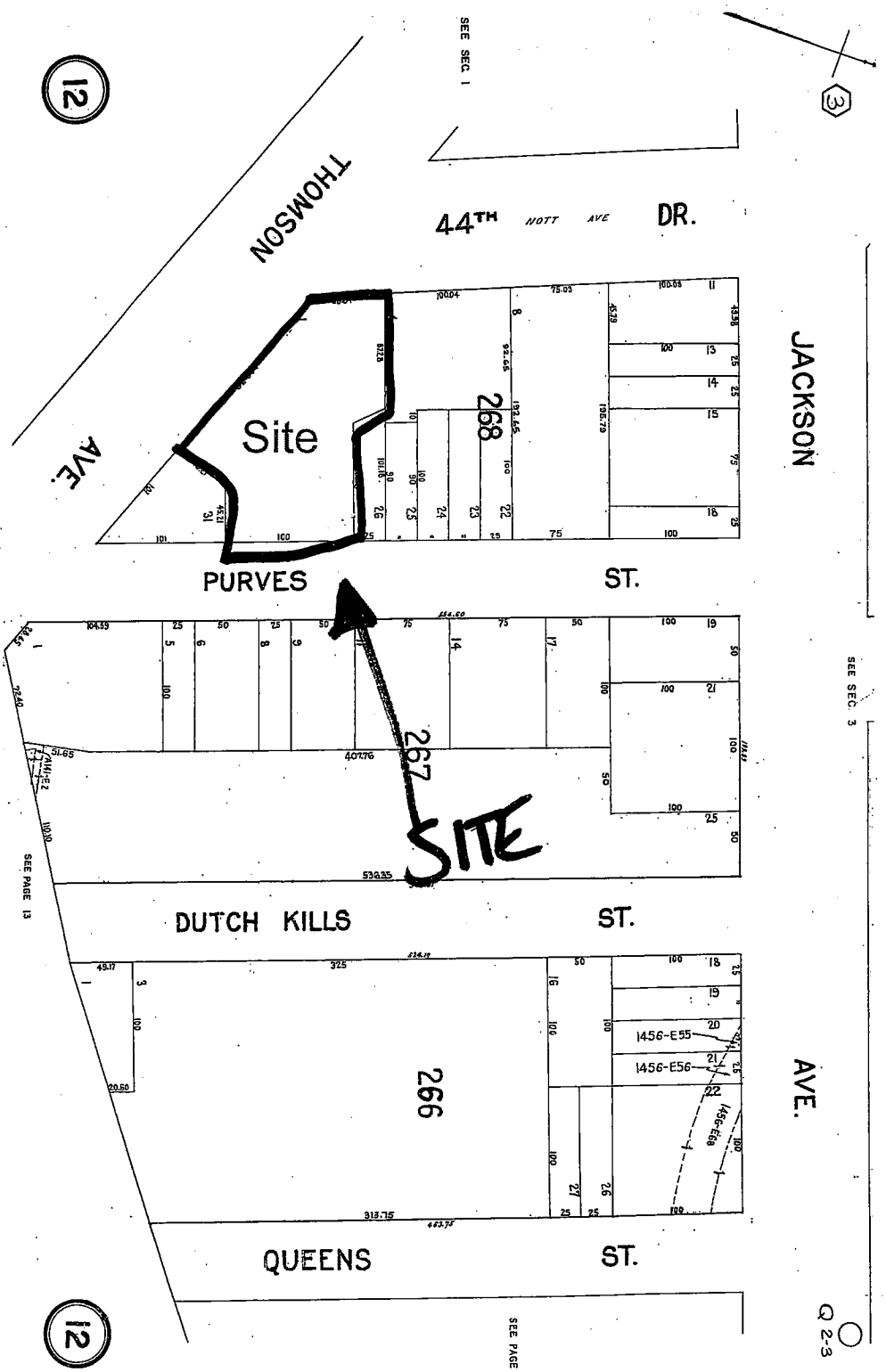
[1] Land Use: Wilderness Areas, Wildlife Preserves .....

[.] Land Use: Amer. Indian Sacred Sites, End. Species' Habitats...

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

NEW YORK CITY DEPARTMENT OF ASSESSMENT INFORMATION


12
SEE SEC. 1
3
THOMSON
AVE.
44TH NOTT AVE DR.
Site
268
JACKSON
PURVES ST.
267
SITE
SEE SEC. 3
SEE PAGE 13
DUTCH KILLS ST.
266
1456-E55
1456-E56
AVE.
QUEENS ST.
12
SEE PAGE 11
Q 2-3

PROPERTY INFORMATION

1)	Property: **4430 PURVES ST, LONG ISLAND CITY NY 11101-2908 C008**				
APN:	**00268-00001**			Use:	**GARAGE**
Alt/Old APN:	**002680001**	Tax Class/Area:	**4**	Total Value:	**$329,490**
Card #:		Prop Tax:	**$36,740.54**	Land Value:	**$206,550**
County:	**QUEENS, NY**	Tax Yr: **2005**	Delinq:	Imprv Value:	**$122,940**
Census:	**19.00**	Tax Apprsl Dist:		Market Value:	**$799,000**
Map Pg:	**02-03-12**	School Dist:		Mkt Land Val:	**$515,000**
Municipality:	**HUNTER'S POINT**	Exemptions:		Assd Yr:	**2005**
Township:		Exempt Land:		% Improve:	**037%**
		Exempt Total:		Neighbr Code:	
Owner:	**PURVES STREET REALTY**			Owner Vest:	/ **/ CO**
				Phone:	
Mail:	**4430 PURVES ST; LONG ISLAND CITY NY 11101-2908 C008**				

Owner Transfer = Rec Dt: Price: Doc#: Type:
Sale Dt:

SALE & FINANCE INFORMATION

	LAST SALE		PRIOR SALE	
Recording/Sale Date:	**04/10/2003**	**12/05/2002**	**10/11/1989**	**09/07/1989**
Sale Price/Type:	**$2,200,000**			
Document #/Stamp $:	**86245**	**$8,800.00**	**2886-387**	
Deed Type:	**DEED (REG)**		**DEED (REG)**	
1st Mtg Loan $/Type:	**$1,760,000**	**PRIVATE PARTY**		
1st Mtg Rate/Type/Term:	**/ FIXED**	/		
1st Mtg Lender:				
2nd Mtg Loan $/Type:				
2nd Mtg Rate/Type/Term:	/	/		
Tranfer B&P:				
Title Company:				
Seller:	**COLEMAN JAMES W**			
New Construction:				

Other Last Sale Info = # Parcels: Type 2: Pend:

SITE INFORMATION

Zoning:	**M1-5/R9**	Sewer Type:		Acres:	**0.10**
County Use:	**G9**	Water Type:		Lot Area:	**4,521**
State Use:		Electric:		Lot Width:	**100.00**
Bldg Class:				Lot Depth:	**45.21**
				Lot Shape:	**IRREGULAR**
Garage Cap#:		Site Influence:	**CORNER**	Bldg Width:	**59**
Garage2 Sqft:				Bldg Depth:	**27**
Parking Sqft:					
Parking Type:					

IMPROVEMENT INFORMATION

County: **QUEENS, NY**
APN: **00268-00001**

Gross Bldg Area:	**17,860**	Total Rooms:			Construction:
dg/Living Area:	**17,860**	Bedrms:			Foundation:
Ground Flr Area:		Baths (Full/Half):			Ext Wall:
Above Grade:	**1,613**	Ttl Baths/Fixt:			Int Wall:
Upper Area:		Yr Built/Eff:	**1939**		Roof Type:
2nd Flr Area:		# Stories:	**1.00**		Roof Matl:
Rec Rm Area:		Fireplace/#:			Roof Shape:
Basement Area:		Basement Type:			Heat Fuel:
Basement Fin:		Pool:			Heat Type:
$/SF:		Porch Type:			Parcel Fuel:
Perimeter Area:		Patio Type:			Floor Type:
		Attic Type:			Floor Cover:
# Bldgs:	**1**	Style:			Air Cond:
# Res. Units:	**3**				
# Comm Units:	**3**				
Inspect Entry:					
Permit Amt:					
Bldg Type:					
Bldg Comments:					
Parcel Comments:					

LEGAL INFORMATION

Legal Blk/Bldg: **268**
Legal Lot/Unit: **1**

Legal Desc:

NEW YORK CITY FIRE DEPARTMENT STORAGE TANK INFORMATION

FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Tanks Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2441 or 2442

Tank Request Form

OFFICE USE ONLY
Cashier / Search No.:

SECTION A **CUSTOMER INFORMATION**

Please print your address and contact telephone number.

Middleton Environmental
Name

50 Park Avenue
Address

Babylon, NY 11702
State Zip Code

(631) 321-4300
Telephone Number

Processing may take time, please choose one option below:
I will wait for it ☐ I will it pick- up ☐ Mail it to my address ☑

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order (made payable to the NYC Fire Department) and a self-addressed envelope (with postal stamp). Mail checks or money orders directly to the address and unit listed above. DO NOT MAIL CASH. Cash payments can only be made in person and accepted by our Cashiers Office (9am – 3pm).

SECTION B **PLEASE PRINT THE ADDRESS TO BE SEARCHED.**

2729-2733 44th Drive / 4432-4438 Purves St / 2801-2819 Thomson Avenue Queens
House Number Street Name Borough

CUSTOMER – PLEASE READ THE INFORMATION BELOW.

CERTIFIED REPORT WILL BE MAILED TO THE ADDRESS YOU HAVE PROVIDED WITHIN TEN (10) BUSINESS DAYS AFTER DATE SUBMITTED. COMPUTER PRINTOUTS WILL BE PROVIDED ONLY UPON REQUEST.

After you have received the certified report, you may request a certified computer printouts and/or a copy of any related record for an additional fee of $0.25 (cents) / per page. The fee for individual copies can only be determined after this search has been completed and you have received the related report. All payments are non-refundable.

Note: All listed tank information come from records, which exist in the FDNY District Office Folders and computer files. Also, please be advised that this search will not include records manually kept by Fire or Engine Companies, unless a summons for "Failure to Comply" was issued.

SECTION C **FUEL (HEATING) OIL TANKS - FEE $10.00 / PER REPORT**

If you would like to obtain a certified report, please complete this section by checking one or more boxes from the selection below.

☒ ITEM 1 – THE TOTAL AMOUNT AND SIZE OF EXISTING FUEL OIL / HEATING TANKS (includes installation date)

☒ ITEM 2 – THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED FUEL OIL / HEATING TANKS

☐ ITEM 3 – OTHER: 1-550 gallon -06949028 -4438 Purves -exp. 8/31/84
1-275 gallon -04321634 - 2801 Thomson

For Office Use Only – Do not write in this section.

F-86041258 exp 4/14/98 @ #2801 - no tank info

voided c for 44-30 (or 32) Purves
(2) 275 gallon tanks exp 4/21/98

Searched By: _____ Date: ___/___/___

(PLEASE SEE OTHER SIDE OF FORM)

SECTION D **BURIED MOTOR VEHICLE TANKS - FEE $10.00 / PER REPORT**

If you would like to obtain a certified report, please complete this section by checking one or more boxes from the selection below.

- [x] ITEM 1 – THE TOTAL AMOUNT AND SIZE OF EXISTING BURIED MOTOR VEHICLE TANKS
- [x] ITEM 2 – THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED BURIED MOTOR VEHICLE TANKS
- [ ] ITEM 3 – MOST RECENT TANK / PIPING TEST RESULTS (includes type of test performed)
- [ ] ITEM 4 – HISTORY OF BURIED MOTOR VEHICLE TANKS LEAKS
- [ ] ITEM 5 – OTHER: _____

For Office Use Only – Do not write in this section.

Searched By: _____ Date: ___/___/___

SECTION E **PLEASE READ STATEMENT AND SIGN BELOW.**

I have read all of the instructions and clearly understand all of the information listed in each completed section.

Customer / Signature: Karen A Farrell Date: ___/___/___

For Office Use Only – Do not write in this section.

Total Amount

Accepted by / Initials: _____ Date: ___/___/___

Certification Stamp

Electronic Stamp Below – Date / Time Received

A-95A (599)

FIRE DEPARTMENT ·CITY OF NEW YORK
BUREAU OF REVENUE MANAGEMENT
9 MetroTech East
Brooklyn, N.Y. 11201-3857

RECORD SEARCH REQUEST
FUEL (HEATING) OIL

MAIL TO:

Middleton Environmental Inc.
181 West Main Street-Suite B
Babylon, New York 11702

Search No._____

The undersigned requests the following information re: Premises
2801-2819 Thomson Avenue AKA2729-2733 44th Drive AKA4432-4438 Purvis Street
Long Island City

ADDRESS BOROUGH

For Fuel (Heating) Oil Tanks Only

1. No. and Size of tanks .....FEE: $10.00
2. No. and Size of sealed and/or removed tanks.....FEE: $10.00
   Searched by _____ Date _____
3. Pending Headquarters violations order.....FEE: $10.00
4. Other_____ .....FEE: $10.00

Note: The N.Y.C. Fire Department Does Not Conduct Tests on Fuel (Heating) Oil Tanks.
State Applicants interest in or relation to premises: _____FEE: $10.00

Signed: _____ Date: _____

DO NOT WRITE BELOW THIS LINE

Gentlemen:

In reply to your request concerning the premises mentioned above, please be advised that as of 9 A.M., our records show the following:

D.O. 14 Ac # 0432 1684 Pmt Cap 4/04 one 275 gal
Bldg 28-01 Thomson ave
44-38 Purves D.O. 14. Ac # 0694 7028 pmt Cap 4/04
one 550 Gal.

Searched by: _____

Violations recorded above are only those which are a matter of record in headquarters of the bureau of fire prevention, and may not include violations issued by local units, unless a summons for "failure to comply" was issued. All reported tank information comes from records, which exist in the fire department district office folders, or on computer files.

MAXIMUM RESPONSE TIME 20 BUSINESS DAYS

NEW YORK CITY BUILDING DEPARTMENT INFORMATION

NYC BUILDINGS

NYC.gov always open

NYC Department of Buildings

Property Profile Overview

28-01 THOMSON AVENUE QUEENS 11101 BIN# 4003504

Health Area	: 720	Tax Block	: 268
Census Tract	: 19	Tax Lot	: 1
Community Board	: 402	Condo	: NO
Buildings on Lot	: 2	Vacant	: NO

View All Addresses... Browse Block Browse Lot View Certificates of Occupancy

DOB Special Place Name:			
DOB Building Remarks:			
Landmark Status:		**Special Status:**	N/A
Loft Law:	NO	**Local Law:**	NO
SRO Restricted:	NO	**TA Restricted:**	NO
UB Restricted:	NO	**Special District:**	N/A
Little 'E' Restricted:	N/A	**Grandfathered Sign:**	NO
Legal Adult Use:	NO	**City Owned:**	NO
Historic Block:	268	**Historic Lots:**	1
Other BINs:	NONE		
Department of Finance Occupancy Code:		G9-GARAGE/GAS STAT'N	

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of tructure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open
Complaints	0	0
Violations-DOB	3	3
Violations-ECB	0	0
Jobs/Filings	1	
PRA / ARA Jobs	0	
Total Jobs	1	
Actions	23	

OR Enter Action Type:

OR Select from List:

Select...

AND Show Actions

Elevator Records
Electrical Applications
Permits In-Process / Issued
Illuminated Signs Annual Permits
Plumbing Inspections
Open Plumbing Jobs / Work Types
Facades
Marquee Annual Permits
Boiler Compliance
DEP Boiler Information

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

NYC BUILDINGS

NYC.gov always open

NYC Department of Buildings

Expanded Block / Lot Information

Premises: 28-01 THOMSON AVENUE QUEENS **BIN: 4003504 Block: 268 Lot: 1**

LOW NUMBER	HIGH NUMBER	STREET NAME	STCDE	BIN
28-01	28-19	THOMSON AVENUE	65120	4003504
27-29	27-33	44 DRIVE	09990	4003504
44-32	44-38	PURVIS STREET	59790	4003504

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NYC BUILDINGS

NYC.gov always open

NYC Department of Buildings

Actions

Premises: 28-01 THOMSON AVENUE QUEENS **BIN: 4003504 Block: 268 Lot: 1**

NUMBER		TYPE	FILE DATE
ALT 2696-28		ALTERATION	00/00/1928
ALT 6933-35		ALTERATION	00/00/1935
ALT 757-59		ALTERATION	00/00/1959
ALT 860-76		ALTERATION	00/00/1976
BN 353-64		BUILDING NOTICE	00/00/1964
COQ 50005	(PDF)	CERTIFICATE OF OCCUPANCY - QUEENS	00/00/1945
COQ 138566	(PDF)	CERTIFICATE OF OCCUPANCY - QUEENS	00/00/1961
COQ 190965	(PDF)	CERTIFICATE OF OCCUPANCY - QUEENS	00/00/1976
FO 90-86		OIL BURNER APPLICATION	02/19/1986
MIS 2001-44		MISCELLANEOUS	00/00/1944

Next

Enter Action Type: Or Select from List: Select... Refresh

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

NYC BUILDINGS

NYC.gov always open

NYC Department of Buildings

Actions

Premises: 28-01 THOMSON AVENUE QUEENS **BIN: 4003504 Block: 268 Lot: 1**

NUMBER	TYPE	FILE DATE
MIS 1707-48ES	MISCELLANEOUS	00/00/1948
MISC 2002-44	MISCELLANEOUS	00/00/1944
MISC 11184-47CC	MISCELLANEOUS	00/00/1947
MISC 2827-47BN	MISCELLANEOUS	00/00/1947
MISC 3357-47FO	MISCELLANEOUS	00/00/1947
MISC 787-47	MISCELLANEOUS	00/00/1947
MISC 846-60	MISCELLANEOUS	00/00/1960
N -E-		00/00/0000
N -E-C44DRIVE		00/00/0000
NB 2390-07	NEW BUILDING	00/00/1907

Previous Next

Enter Action Type: Or Select from List: Select... Refresh

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

NYC Department of Buildings

Actions

Premises: 28-01 THOMSON AVENUE QUEENS **BIN: 4003504 Block: 268 Lot: 1**

NUMBER	TYPE	FILE DATE
NB 2163-45	NEW BUILDING	00/00/1945
PRS 3894-69	PLUMBING REPAIR SLIP	00/00/1969
SEE 28-01THOMSONAVE		00/00/1901
V 12960-85 BOILER	DOB VIOLATION - ACTIVE	08/08/1985
V 062893LL629114023	DOB VIOLATION - ACTIVE	06/28/1993
V 060794LL629105151	DOB VIOLATION - ACTIVE	06/07/1994

Previous

Enter Action Type: Or Select from List: Select... Refresh

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

DEPARTMENT OF BUILDINGS

BOROUGH OF QUEENS , THE CITY OF NEW YORK

No. Q 122566

Date 1/13/61

CERTIFICATE OF OCCUPANCY

dard form adopted by the Board of Standards and Appeals and issued pursuant to Section 646 of the York Charter, and Sections C26-181.0 to C26-187.0 inclusive Administrative Code 2.1.3.1. to 2.1.3.7. ng Code.)

This certificate supersedes C. O. No.

owner or owners of the building or premises:

THIS CERTIFIES that the new—altered—existing—building—premises located at

44-38 Purvis St., WS. 101' N/O Thomson Ave. Block 268 Lot 1

, conforms substantially to the approved plans and specifications, and to the requirements building code and all other laws and ordinances, and of the rules and regulations of the Board of Standnd Appeals applicable to a building of its class and kind at the time the permit was issued; and CERTIFIES FURTHER that, any provisions of Section 646P of the New York Charter have been ed with as certified by a report of the Fire Commissioner to the Borough Superintendent.

For Alt. No. Alt. 757/59 Construction classification— Non-fire

ancy classification — Comm. . Height 2 stories, 34 feet.

of completion 1/12/61 . Located in Unrestricted Use District.

A Area 1 . Height Zone at time of issuance of permit

This certificate is issued subject to the limitations hereinafter specified and to the following reso-ns of the Board of Standards and Appeals: (Calendar numbers to be inserted here)

PERMISSIBLE USE AND OCCUPANCY

STORY	LIVE LOADS (Lbs per Sq Ft)	PERSONS ACCOMMODATED			USE
		MALE	FEMALE	TOTAL	
1	On gr.	30		30	Factory & Loading & Unloading of Trucks
2	50 & 120	30		30	Factory, Office, Loading & Unloading of Trucks

Borough Superintendent

TIFICATE WILL BE NULL AND VOID IF ALTERED IN ANY MANNER OR ADDITIONS ARE MADE THERETO.

Form 14 P (Rev. 10/74)

THE CITY OF NEW YORK

HOUSING AND DEVELOPMENT ADMINISTRATION

DEPARTMENT OF BUILDINGS

CERTIFICATE OF OCCUPANCY

BOROUGH QUEENS DATE: 11/5/76 NO. 190965

This certificate supersedes C.O. No. ZONING DISTRICT M3-1

THIS CERTIFIES that the ~~new~~ altered ~~building~~ building—premises located at
28-01 Thomson Avenue Block 268 Lot 1

CONFORMS SUBSTANTIALLY TO THE APPROVED PLANS AND SPECIFICATIONS AND TO THE REQUIREMENTS OF ALL APPLICABLE LAWS, RULES, AND REGULATIONS FOR THE USES AND OCCUPANCIES SPECIFIED HEREIN

ALT 860/76

PERMISSIBLE USE AND OCCUPANCY

STORY	LIVE LOAD LBS. PER SQ. FT.	MAXIMUM NO. OF PERSONS PERMITTED	ZONING DWELLING OR ROOMING UNITS	BUILDING CODE HABITABLE ROOMS	ZONING USE GROUP	BUILDING CODE OCCUPANCY GROUP	DESCRIPTION OF USE
1st	b/g	3			17 16		Biological Analysis Laboratory and used car sales, & Acc. Auto Repair
2nd	120	13			17		Repair Shop & used car sales & acc. Auto Repair.

THIS CERTIFICATE OF OCCUPANCY MUST BE POSTED WITHIN THE BUILDING IN ACCORDANCE WITH THE RULES OF THE DEPARTMENT PROMULGATED MARCH 31ST, 1938

OPEN SPACE USES

(SPECIFY - PARKING SPACES, LOADING BERTHS, OTHER USES, NONE)

NO CHANGES OF USE OR OCCUPANCY SHALL BE MADE UNLESS A NEW AMENDED CERTIFICATE OF OCCUPANCY IS OBTAINED

THIS CERTIFICATE OF OCCUPANCY IS ISSUED SUBJECT TO FURTHER LIMITATIONS, CONDITIONS AND SPECIFICATIONS NOTED ON THE REVERSE SIDE.

H. E. Sherman
BOROUGH SUPERINTENDENT

JEREMIAH T. WALSH
COMMISSIONER

☐ ORIGINAL ☑ OFFICE COPY—DEPARTMENT OF BUILDINGS ☐ COPY

THAT THE ZONING LOT ON WHICH THE PREMISES IS LOCATED IS BOUNDED AS FOLLOWS:

BEGINNING at a point on the ~~XXX~~ Northeast Corner ~~XXXXX~~ distant Thomson Ave feet from the corner formed by the intersection of and 47th St.

running thence N. 59.24',E.87.28' feet; thence S. 27.33',E.89.98' feet;
thence S. 10',W.45.21' feet; thence S. 45.21',W.148.28' feet;
thence ..... feet; thence ..... feet;
thence ..... feet; thence ..... feet;
to the point or place of beginning.

AIF 860/76

~~XXX~~ N.B. or ALT. No. DATE OF COMPLETION 10/26/76 CONSTRUCTION CLASSIFICATION Non-fire Proof

BUILDING OCCUPANCY GROUP CLASSIFICATION Commercial HEIGHT 2 STORIES, 20' FEET

THE FOLLOWING FIRE DETECTION AND EXTINGUISHING SYSTEMS ARE REQUIRED AND WERE INSTALLED IN COMPLIANCE WITH APPLICABLE LAWS.

	YES	NO
STANDPIPE SYSTEM		
YARD HYDRANT SYSTEM		
STANDPIPE FIRE TELEPHONE AND SIGNALLING SYSTEM		
SMOKE DETECTOR		
FIRE ALARM AND SIGNAL SYSTEM		

	YES	NO
AUTOMATIC SPRINKLER SYSTEM		

STORM DRAINAGE DISCHARGES INTO:

A) SANITARY SEWER ☐ B) COMBINED SEWER ☐ C) PRIVATE SEWAGE DISPOSAL SYSTEM ☐

SANITARY DRAINAGE DISCHARGES INTO:

A) SANITARY SEWER ☐ B) COMBINED SEWER ☐ C) PRIVATE SEWAGE DISPOSAL SYSTEM ☐

LIMITATIONS OR RESTRICTIONS:

BOARD OF STANDARDS AND APPEALS CAL. NO. _____

CITY PLANNING COMMISSION CAL. NO. _____

OTHERS:

NEW YORK TELEPHONE ADDRESS DIRECTORY INFORMATION (FOR PAST SITE USAGE)

LBOT ST (PL)

KEW GARDENS

ZIP CODE 11415

- -846-8824
- imothy -441-3360
- David -847-8525
- iakis Agamemnon -846-0793
- i C -441-6825
- s Jack -849-3532
- baum Ari & Zahava -441-8785
- baum Zahaun & Ari -441-8785
- Barbara -846-1306
- er Morris -847-5646
- WELL TOWERS APT -
- Irma Mrs -846-6579
- ison Joan T -846-6527
- son Walter -849-3147
- y A -849-7578
- n Hertha I -847-4870
- tein Jolana -846-0615
- Kathe -847-4044
- olz Cecile -847-3928
- in Jack -847-4975
- er Edw -849-1769
- chmann Fred -846-6472
- r Peter -441-9267
- n Robt R -846-3963
- iUs Richd P -847-6257
- Robt B -846-5558
- n Leopold -847-6867
- au E -441-9370
- enstein Herbert -849-4398
- rhoff Doris K Mrs -849-1836
- lefsky Morris -847-7647
- olland Howard -846-7162
- i C -441-3340
- < Ignatz -441-5927
- uer Ernest -849-1207
- ieldler Curt A -MD-847-7852
- n Joseph -847-3784
- lman Abraham -849-6552
- g Bruno -847-2506
- r V -847-7058
- erman -846-0587
- L -846-6552

84TH AV 84—01

- B -441-2041
- r Klara -849-0376
- noff Nicholas -847-0620
- iarach Max -849-3892
- h Lazarus -847-1650
- me I -847-5315
- i Herbert H -849-6334
- on Alex -847-2613
- owski Edward -441-9578
- rswick Rudolph Kohn -849-7432
- ihelm Wm A -846-2251
- ton V -441-4126
- ndrea Kenneth -847-2674
- bro I R -849-4058
- itner Max -847-7120
- zenko Boris -847-5573
- her Pete -441-0269
- uer Royetta -846-5172
- lettl David R -847-5986
- n Florence Mrs -847-8164
- zalez H M -847-8557
- don Leonard -849-9328
- enwald Chas -847-0288
- ser L G -849-0272
- ss Charles S -441-0565
- er L -849-6450
- ner Stephen H -849-8366
- dwerger Harold P -441-5923
- is Sami -846-3488
- skovic Solomon -847-8795
- ca Hary -846-5042
- ca John -846-1138
- ng H -849-8244
- be Alfred -847-9871
- z N -847-9174
- ecky Richard W -849-8462
- Michael -441-1474
- is Ruvim -849-1491
- edt Theo -847-4249
- Robert -849-2476
- is Karl -847-6274
- ltin Leonard -846-6554
- y Kurt -849-5317
- ris Frank F -849-1076
- iata Edward -849-9027
- sel Emelew -847-7748
- nderer Milton -849-7090
- ss S F -846-6160

TENNIS PL

FOREST HILLS

(SEE 70TH RD)

ZIP CODE 11375

- 1 Ron Delsener -b-544-7348
- 2 Forest Hills Gardens Corp -268-2420
- 6 Green-Ways Realty -544-1952
- 8 Spilka Seymour -b-793-0361
- 10 Enoch Realty Inc -793-0424
- 12 Fitzsimons John F -atty-263-4800
- 14 Leinberger Clifford -atty-793-6153
- 14 Mastrodomenico Emil F -lwyr-268-4619
- 30 Guelman Zulma -793-6607
- 36 Malcmacher S -261-3961
- 44 Rosenberg Moritz I -544-5623
- 52 Klein Jerahmiel -261-4192
- 66 Oprisiu Cornelius A -MD-268-2784
- 99 Gluck Eugen -261-5890
- Call -261-9862

TERRACE AV

(SEE FOOTHILL AV HOLLIS)

THEBES AV

LITTLE NECK

ZIP CODE 11362

- 248-12 Amatenstein Bernard -225-[illegible]269
- 248-12 Amatenstein Bernard -428-0720
- 248-16 Valenti Bertram -428-4945
- 248-20 McKenna M -225-[illegible]262
- 248-20 McKenna Owen M -225-[illegible]765

248—24 [illegible]ION

- 248-24 O'Dea John -229-6833
- 248-30 Schachter Leo -224-1632
- 248-33 Fales Kevin G -224-4225
- 248-33 Piccola John P -224-5277
- 248-34 Cohen Lawrence H -224-8256
- 248-37 Murphy B -428-6491
- 248-40 Dowd Denis F -225-9045
- 248-41 Ritter Wm G -224-5882
- 248-41 Ritter William G -428-0133
- 248-44 Struhl E R -225-3343
- 248-44 Struhl Herman -224-1803
- 248-45 Gonzalez Ralph M -423-8783
- 248-50 Ambrosio John J -428-5629

MARATHON PKWY 249—01

- 249-07 Bucek Louis -428-6955
- 249-08 Concannon Jas F -428-8996
- 249-11 Murphy Robert E -631-5757
- 249-14 Alessi Frank -224-4176
- 249-15 Jekowsky Mildred -423-5937
- 249-15 Jekowsky Sidney -225-6172
- 249-18 Gangloff Frank M -229-3337
- 249-19 Genna Salvatore C -224-3696
- 249-20 Lytje Jorgen -224-2869
- 249-20 Lytje Jorgen -BA 4-2869
- 249-23 McCann John M -631-7947
- 249-24 Maroti J X -423-3150
- 249-27 Brand Harold -225-4617
- 249-28 Kubelka Frank & Mima -229-6848
- 249-31 David Steve -224-0224
- 249-32 Braun Robt A -224-4685
- 249-36 Selbel Russell -423-4703
- 249-39 Rosenbaum Walter -224-0783
- 249-40 Ulzheimer Al -225-6331
- 249-43 Kratchman Robt F Jr -224-8153
- 249-44 Murphy Jas P -224-9070
- 249-52 Otero Michl -224-2208
- 249-55 Belcher M F -229-8129
- 249-59 Brennan M J -423-4932
- 249-60 Detiberiis Nick -428-8527
- 249-66 D'Urso Alfred -428-7295
- 249-66 Durso Stephen -225-1342
- 249-70 Peracchino Walter -631-3571

DEEPDALE AV 251—01

- 251-06 Mocko Paul -224-8463
- 251-11 Hollis Louis -224-1634
- 251-11 Hollis S -229-2220
- 251-20 Altpeter Laurence -224-1372
- 251-23 Poneros George J -225-0273
- 251-28 Cervoni Paul -428-1855
- 251-28 Malboro Constr Corp -428-8555
- 257-20 Curley M -423-2054

THOMPSON PL

FLUSHING

ZIP CODE 11367

- 31-27 Roadway Dining Corp -784-9534
- 61-10 Cucopulos John -961-5089
- 61-10 Golia Jos G -atty-939-6047
- 61-10 Weitz Michael -762-8232
- 61-19 Curley Thomas J -358-7637

THOMSON AV

LONG ISLAND CITY

ZIP CODE 11101

JACKSON AV-COURT SQ 27—01

- 27-19 Manny Auto Electric Co -786-3393
- 27-42 Crusader Press Inc -pubrs-786-2000

44TH DR 28—01

- 28-01 Jema Coach Auto Body -784-1516
- 28-11 Ale Taxi Brokers Inc -392-3434
- 28-11 Taxi City -784-8502
- 28-31 A-One Auto Collision Inc -784-9730
- 28-31 A-One Auto Collision Inc -786-0024
- 28-31 Vinny's Towing -274-7615

28—40 PURVES

29—10 SKILLMAN AV

- 29-10 Adams Labs Inc -392-4800
- 29-10 All Brand Ofc Equipt Corp -729-2733
- 29-10 Correctional Education Consortium Inc -786-4798
- 29-10 Executone Inc—
  - Distribtr Svce Div -392-4800
  - Exec Offices -392-4800
  - Exprt Div -392-5115
  - Factory -392-4800
- 29-10 Goldberg Dave Inc beachwear-786-7477
- 29-10 Klein A & Co Inc -boxes-937-4010
- 29-10 LaGuardia Community College—
  - Registrar -626-8521
- 29-10 Morris Belt & Suspender Co Inc 392-4295
- 29-10 Oxford Novelty Co Inc -392-4295
- 29-10 Sea Fair Swimwear showroom-786-7477
- 29-10 Seafair Swimwear Inc -786-7477
- 29-10 Splendor Form Brassiere Inc 392-6600
- 29-10 Splentex Inc -392-6600
- 29-10 Tama Sportswear Inc -786-7477
- 29-10 Vision Color Cards -937-3131
- 29-10 Westminster Belt Co Inc -392-4295
- 29-10 Widder J & Co Inc -937-3131

30—02 30TH

- 30-20 BUCILLA BLDG -
- 30-20 Armour Handcrafts Inc -784-6333
- 30-20 Bucilla Co -784-6333
- 30-20 Bucilla Co -genl ofcs-784-6333

30—28 30TH PL

- 30-30 Warner-Lambert Co american chicle div-784-8900
- 30-35 Alling & Cory-Canfield Papers Inc 784-6200

31—02 31ST

- 31-10 Automatique Inc -786-1168
- 31-10 Consumer Assistance Bureau Of La Guardia Community College 786-7856
- 31-10 LaGuardia College Bookstore 786-7132
- 31-10 LaGuardia Community College—
  - Genl Information -626-2700
  - Admissions -626-5588
  - Adult Education -626-5055
  - Bookstore -626-5579
  - Bursar -626-8523
  - Continuing Education -626-5055
  - Cooperative Education -626-8526
  - Extended Day-Evening Program 626-5055
  - Financial Aid -626-5515
  - Library -626-5518
  - Personnel -626-2720
  - Public Information -626-5054
  - Purchasing -626-2742
  - Student Services -626-8568

249-20 Plested Leslie W ---------J9 BAys 4-2869
249-23 McCann John M ----------321-2045
249-24 Frost Reuben W ---------J6 BAys 9-4177
249-27 Brand Harold ----------CAys 5-4617
249-28 Lisowski Kazmers ---------BAys 9-6848
249-31 David Steve ----------BAys 4-0224
249-32 Braun Robt A ----------224-4685
249-36 Chambers Jas M ----------FAcl 1-0705
249-39 Rosenbaum Walter ----------BA 4-0783
249-40 Ulzheimer Al ----------BAys 5-6331
249-43 Kratchman Robt F Jr --------BAys 4-8153
249-44 Murphy Jas P ----------BAys 4-9070
249-47 Scarola Chas ----------BAys 5-5792
249-48 O'Donnell Patk E --------BAys 4-4322
249-51 Kananowicz Alexndr ---------HA 8-4867
249-52 Otero Michl ----------224-2208
249-59 Brennan M J ----------FA 1-0038
249-60 Detiberiis Nick ----------428-8527
249-63 Sullivan Gerard F --------BAys 4-6955
249-66 D'Urso Alfred ----------428-7295
249-70 Peracchino Walter ----------631-3571

DEEPDALE AV 25101

251-06 Mocko Paul ----------BA 4-8463
251-11 Linker Jack W ----------HA 8-3389
251-14 Monahan Matthew J ---------631-0250
251-17 Jarvis Carol ----------428-1535
251-20 Altpeter Laurence ---------BAys 4-1372
251-28 Cervoni Paul ----------428-8555
251-29 Curley M ----------FA 1-0193
251-66 Reid S ----------BAys 9-2213

25165 25166 VAN ZANDT AV-ANNANDALE LA

THERESA COURT
FAR ROCKAWAY

15 Delaney Evelyn ----------945-0612

THETFORD LA ROCKWY PT
REID AV 1

1 Spina Carmelo ----------NE 4-9128
1 Spina Chas ----------945-4033
2 Allocca Mildred A ----------NE 4-9158
3 Coby Jeanne ----------945-2398
4 McGrath Patricia ----------GR 4-7351
5 Simpson Jas ----------634-8979
7 Gavin John M ----------474-6203
8 Poynten Eleanor M ----------GR 4-7251
8 Poynten Eleanor M ----------NEpt 4-4692
11 McGreevy Nora ----------NEpt 4-5995
12 Talkina John ----------634-8720
14 MacIntosh Jos ----------WH 5-1665
16 Ehler John ----------945-6712
17 Clark M A ----------945-5888
18 Mertis Elmer F ----------NEpt 4-2535
20 O'Donnell Thos ----------NEpt 4-6655
22 DeFiori Henrietta ----------474-8205
23 Gentle Ruth M ----------474-5502
24 Girard Joseph A ----------634-4875
25 McElroy Fenton F X ----------NEpt 4-4690
27 Miller Robt J ----------NE 4-8871
28 McDonald K A ----------634-6103
30 Danaher Kevin ----------945-5682

39 40 BEDFORD AV

THOMSON AV L I C
JACKSON AV—COURT SQ 2701

27-19 Soltan&Son ----------392-9522
27-42 Crusader Press Inc --------pubrs-786-2000

2801 44th DR

28-01 Berdell Indstries Inc
---------heat exchngrs-EM 1-7660
28-01 Central Auto Radiator Colnc--RAvn 9-1167
28-01 Filter Cleaner Co ----------RAvn 9-1167
28-01 Hydro-Cote Corp of Amer --------EM 1-7660
28-11 Natl Announcements Inc --------EM 1-9580
28-11 Rosner Card&Papr Co ----------ST 6-1432
28-31 A-One Auto Collision Inc ---------392-9520
28-31 A-One Auto Collision Inc ---------786-0024

2840 PURVES
SKILLMAN AV 2910

29-10 A Klein&Co Inc ----------boxes 937-4010
29-10 Frank CA&Co Inc ----------rl est 786-3566
29-10 HRH Constr Corp ----------361-0157
29-10 Printogs Ltd ----------392-8855
29-10 Screen Fashions Inc ---------392-8855
29-10 Sherwood Fashions Inc ---------786-8343
29-10 Sunshine Biscuits Inc ---------784-8829
29-10 Triple R Trucking Co ---------392-2051
29-10 Triple R Trucking Co ---------392-2160

30th 3002

30-20 BUCILLA BLDG

Defense Contract Audit Agcy Fld
Instrmnt Co Resident
Audit Office ----------784-9000
31-11 Local 425 IUEAFL-CIO ---------392-1270
31-27 Roadway Restrnt&Lounge --------392-9859

3128 31st PL

31-31 Aamco Automatic Transmissions—
Call ----------784-1200
61-19 Curley Thomas J ----------358-7637

3145 3146 VAN DAM—QUEENS BLVD

THORNHILL AV DOUGLASTON
(FOR NUMBERS BETWEEN 23901 & 24115 SEE 53rd AV)
DOUGLASTON PKWY 24202

242-15 O'Donohue Paul M Jr ---------FA 1-4576
242-15 Sherry J Jos ----------229-8303
242-18 Owyer John A ----------BAys 9-1692
242-26 Lappin John I ----------BA 4-3925

24301 REDFIELD

243-03 Breen Thos D ----------224-5704
243-06 Pallan Arthur W ----------BA 5-5493
243-10 Savary Jean P ----------229-9167
243-11 Quock Francis M ------business 229-9255
243-15 Murphy Francis J ----------BA 9-5312
243-16 Fanghella Vincent ----------428-2273

244th 24401

244-11 Peters Madeline ----------BA 9-8496
244-12 Super Nathan ----------BAys 5-0617
244-16 Horak Bernard ----------BAys 9-9285
244-20 McKeon Ambrose ---------- 428-2833
244-20 Smith Ronald ----------BAys 4-0762
244-24 Gray Robt A ----------FAcl 1-3688
244-69 Donohue Margaret Mrs -----RN HA 8-5474

24501 245th

245-02 Bley Hy ----------224-7456
245-06 Gorman K ----------428-9790
245-12 Andersen Lauritz E ---------631-9106

OVERBROOK 24609

246-09 Redan Ben ----------FAcl 1-0063
246-09 Redan Les ----------BA 5-8946
246-10 Striar Louis ----------FA 1-0083
246-10 Striar Susan ----------BA 9-6854
246-15 Romano Alphonso ---------631-9611
246-16 Gili Ronald P ----------HA 8-9872
246-19 Bizzaro Michl ----------FA 1-1449
246-23 Bernstein Geo ----------BAys 9-6559
246-26 Tymchyshyn M ----------225-7385
246-27 Cina Jack ----------631-7013
246-33 Dunne Robt J ---------BAys 5-4198
246-34 Bahrami Dora Mrs ---------631-8982
246-37 Conroy Edwin F Jr ---------225-9706

248th 24801

248-08 Carley Valentine F ---------224-8728
248-09 Newton Fredk C ----------BAys 4-7780
248-14 Balke Henry A ----------321-2436
248-14 Smith F ----------321-2436
248-15 King Edw W ----------BAys 5-0843
248-18 Pasqua Anthony -----water supl 428-8037
248-21 Strutis Alfred J ----------BAys 4-9553
248-24 Friedrich Sidney ----------BA 9-0445
248-27 Lodato Jos ----------BAys 9-3583
248-28 Orgera Anthony M ---------428-0625
248-31 Schell Herman J ----------224-0202
248-32 Bolger Henry J ----------BAys 4-7992
248-37 Wessen Manls Pro --------BAys 9-2938
248-37 Wessen Sylvia Tib ---------428-2527
248-38 Sonenberg Nell ----------428-8116
248-43 Pfeffer T ----------225-7125
248-46 Trolola Raymond A ----------631-8979
248-46 Trolola Raymond S ----------BA 9-9035
248-51 Della Michael V ----------428-0554
248-56 Mahan Raymond J --------BAys 5-3137
248-56 Winkler Fredk ----------BAys 5-7243
248-59 Berritto Salvatore ----------224-7974
248-59 Berritto Salvatore ----------229-0850
248-65 Calzaretta Louis A -------A1 BAys 4-3303

54th AV-MARATHON PKWY 24905

249-05 Poulos Anastasia ----------321-1042
249-06 Just Erwin ----------HA 8-7050
249-11 O'Brien Eliz H Mrs ---------229-8011
249-20 Richmond Raymond ----------BA 4-5134
249-20 Richmond Raymond ---------FAcl 1-2049
If No Answer ----------FA 1-0813
249-21 Kenigsberg Saml ----------MD BA 5-1121
250-05 Racaniello Frank ----------321-1953

25006 250th

250-11 Toye C ----------BA 5-5574
250-15 Rudin Jack ----------BAys 4-6795
250-20 Lissner Will ----------BAys 4-1321

25202 252nd

252-09 Lauterbach Irving S
252-15 Messenger Bernard L
252-15 Messenger Margie
252-20 Wolfenson Morton
252-20 Wolfenson Wendy
252-21 Sedrish Murray L

25302 253rd

253-03 Flerson Morris
253-12 Basacchi Rocco
253-12 Donato Jos A

25303 25312 254t

THORNTON PL F
BURNS - 64th RD

66-10 Alexander Barbara E
66-10 Atha Christien
66-10 Axelberd David
66-10 Barkoe Arthur
66-10 Barr James
66-10 Benetez S
66-10 Biegel Peter
66-10 Bornstein Murray
66-10 Boylan Patk
66-10 Bryan Diana
66-10 Caricards
66-10 Cohan F L
66-10 Cohen Wm
66-10 Cortes Hugo Amadeo
66-10 Douglas David C
66-10 Emrich Paula Mrs
66-10 Feld Juda
66-10 Fortuney J C
66-10 Gabriel Sharon
66-10 Gawlik Peter
66-10 Gelb Bernard M
66-10 Goldstein Gil
66-10 Goldstein Harry
66-10 Golub Isidore
66-10 Greenberg Louis H
66-10 Greenspan Rochelle
66-10 Hunt R
66-10 Huss Ellington J
66-10 Javitz Al
66-10 Kalvert Nancy
66-10 Katz Harriet
66-10 Klein Leslie
66-10 Koblentz Myra
66-10 Krautman Frank
66-10 Laufer Abraham
66-10 Laufer Abraham
66-10 Lavee Moshe
66-10 Lewis Anna
66-10 Lifson Sheldon V
66-10 Lincke Eberhard
66-10 Lynn Robt K
66-10 Melendez C
66-10 Meverson Wm
66-10 Millsap Michael E
66-10 Mizushima Takeo
66-10 Mutzman Dave
66-10 Niedra Zenta
66-10 Nowoslolski Alberto
66-10 Olmeta Angel E
66-10 O'Malley Thomas V
66-10 Parsons Michl J
66-10 Preffer Saml
66-10 Preffer Saml
66-10 Reti J
66-10 Rosario Robert
66-10 Rozman Irving
66-10 Rubin Neil
66-10 Safer E
66-10 Sager E A
66-10 Salto A
66-10 Saturn Lionel R
66-10 Schechner Shelby
66-10 Senersky A
66-10 Sheridan Richd J
66-10 Smith S J
66-10 Stahl Carl
66-10 Stanyek Emery
66-10 Stewart Wm
66-10 Strum Irwin
66-10 Suss Bernard
66-10 Todd E
66-10 Trelser Irwin
66-10 Turk Robert L
66-10 Tuzel Erdim
66-10 Victor Herbert
66-10 Weinrobe Lawrence
66-10 Wetheimer Gary
66-10 Wilson Joseph
66-10 Worden Boris R
66-10 Zwebner Asher Z

E.W. GARDENS

...rie A ... VI 9-0198
Sidney ... VIrg 6-3598
...attle Mrs ... VIrg 7-0912
...lorence Mrs ... VIrg 7-8164
...k R ... VI 9-5626
...ain Emil ... VI 6-1917
Chas S4 VIrg 7-0288
...se G Mrs A1 VIrg 9-0272
... VI 7-9056
...ancis B ... VIrg 6-1791
...ger Harold P ... HI 1-5923
...to Masashi ... VI 6-8979
...aml ... VIrg 6-3488
...arry W ... VIrg 9-4394
...ilde Mrs ... VIrg 9-8244
Myra ... VIrg 7-0677
Alfred ... VIrg 7-9871
...r Emile Miss ... VIrg 7-4888
Clara ... VIrg 9-8244
...y Jos J ... VIrg 7-8988
Mella ... VIrg 9-3890
...hmid Leo ... VI 6-8576
...ll Eleanor ... VIrg 7-9084
...tedt Theo 05 VIrg 7-4249
...n Karl ... VIrg 7-6274
Henry ... VIrg 9-5056
Martin ... VI 9-8526
Thos ... VI 6-3958
Kurt ... VIrg 9-5317
Frank F ... VIrg 9-1076
Isidor ... VIrg 9-5501
...rs Mildred S ... VIrg 6-3289
...Friedrich ... VIrg 9-6663
...ger Milton ... VIrg 9-7090
...n Howard H ... VIrg 7-0756
S F ... VIrg 6-6160
Lawrence J ... VIrg 7-7101
...y Geo R ... VIrg 6-6267
...y Eliz F ... Hlkr 1-6017
...aum Herta N ... VIrg 9-5317
...aum Julius ... VIrg 7-3243
Chateau Apts ... VIrg 6-9771
...ll Louis ... VI 9-2649
...on I M ... VIrg 7-8188
...helmer Leo ... VIrg 7-6424
...r Mary J ... VIrg 6-5505
Ignatz ... VIrg 9-0734
Hugo ... VIrg 9-3914
... Fredk H ... VIrg 9-1455
...ba Chas T ... HI 1-1323
...ab Goldie ... VIrg 7-1791
...r Kamillo ... Hlkr 1-3260
...man Elliott ... VI 6-3803
...n Walter ... VI 9-6576
...berger Hugo ... VIrg 9-6762
...ko Mae Mrs ... VIrg 7-9285
...h Thos ... VIrg 7-4059
Carl ... VIrg 6-2024
...r Robt ... Hlkr 1-3621
...Henry ... VIrg 9-5104
...Robt ... Hlkr 1-3936
...r Chas H ... VIrg 9-9743
...llan Arshag M ... VIrg 9-7678
...dway Henry ... VIrg 9-9199
...blatt Ira ... Hlkr 1-5737
...s D W ... VIrg 9-8590
...er Anne Mrs ... VIrg 7-7511
Dora ... VIrg 6-9084
...en Harold A W8 VIrg 7-7406
...tead Gerald ... VIrg 9-6069
Abra... ... VI... 9-2857

...MAN'S ISL COLLEGE PT

...rk Dept O...
Disposal P...
...n's Isl STV... FLsh 3-2124

FALMADGE PL
(SEE 146TH ST)

TAMPA PL
(SEE 42ND RD)

...ERINE ST JAMAICA

...NIS PL FOREST HILLS

Joe R ... Llge 4-0142
Maynard J ... BO 8-7707
...um Henry ... MD BO 3-2617
(SEE 70TH RD)

...
248-40 Pappas Stephen ... BAys 4-0309
248-41 Ritter Wm G ... BAys 4-5882
248-44 Strubl Herman ... BAys 4-1803
248-44 Steubl Herman ... BAys 9-4088
248-45 Gonzalez Ralph M ... FA 1-1989
248-50 Page Frank ... BAys 9-4765
248-54 Wasklewicz Paul A ... BAys 9-7433

MARATHON PKWAY 24901

249-07 Heinkele E Jas ... BAys 5-4485
249-08 Concannon Jas F ... FAcl 1-1044
249-11 Kopca Anna L Mrs ... BAys 9-1050
249-14 Alessi Frank ... BAys 4-4136
249-15 Jekowsky Sidney ... BAys 5-6172
249-18 Gangloff Frank M ... BAys 9-3337
249-19 Genna Salvatore ... BAys 4-3696
249-20 Plested Leslie W J9 BAys 4-2869
249-23 McCann Eileen T Mrs ... FAcl 1-1241
249-24 Frost Reuben W J6 BAys 9-4177
249-27 Brand Harold ... BAys 5-4617
249-28 Lisowski Kazimers ... BAys 9-6848
249-31 David Steve ... BAys 4-0224
249-32 Braun Robt A ... BAys 4-4685
249-36 Chambers Jay M ... FAcl 1-0705
249-39 Davis Richd ... FAcl 1-4146
249-40 Ulzheimer Al ... BAys 5-6331
249-40 Ulzheimer Arthur J ... BAys 9-4445
249-40 Ulzheimer Philip J ... BAys 9-4445
249-43 Kratchmar Robt ... BAys 4-8853
249-44 Murphy Jas P ... BAys 4-...
249-52 Scarola Chas ... BAys 5-5...
249-48 O'Donnell Patk E ... BAys 4-4322
249-51 Kanarowicz Alexnda ... FAcl 1-4867
249-52 Lohle David V ... BA 6-8848
249-55 Cook Alex ... BAys 4-6432
249-59 Brennan Edw ... FAcl 1-0638
249-60 Fulton J H Col ... BAys 9-4824
249-63 Sullivan Gerard J ... BAys 4-6955
249-66 Wilowski Edmund J ... BAys 5-4426
249-70 Torpe Geo ... BAys 5-8137

DEEPDALE AV 25101

251-14 McTiernan Jos ... BA 9-3620
251-20 Altpeter Laurence ... BAys 4-1372
251-20 Altpeter Laurence ... BAys 9-3750
251-23 Goetschlus Geo W ... BAys 9-7681
251-29 Curley M ... FA 1-0195
251-66 Reid S ... BAys 9-2214

THEDFORD AV HOWARD BCH
(SEE 98TH ST)

THERESA CT ROCKWY BCH

THETFORD LA ROCKWY PT

4 McGrath Patricia ... GR 4-7351
8 Poynton Eleanor M ... NEpt 4-4692
11 McGreevy Nora ... NEpt 4-5097
13 Werner Elwood ... NEpt 4-0229
17 Laine Anna C Mrs ... GRst 4-8126
18 Mertis Elmer F ... NEpt 4-2535
20 O'Donnell Thos ... NEpt 4-6655
22 Brown Richd E ... NEpt 4-7318
24 Beardell R J ... NE 4-1825
25 McElroy Fenton J X ... NEpt 4-4690
28 Greer Geo F ... rl est NEpt 4-5494
28 Greer Geo F ... NEpt 4-7044
30 Wagensell Evelyn ... NE 1-2420

THOMPSON PL FLUSHING

61-19 Curley Thos J ... FLsh 8-7637

THOMSON AV L I C

COURT SQ 2510

JACKSON AV 2701

27-19 Sweeney's Esso Srce Sta ... EXet 2-9522
27-42 Crusader Press Inc pubrs JB STil 6-2000

44th DR 2801

28-01 Berdell Indstries Inc
... sheet stockers ST 6-6896
28-01 Central Auto Radiator Colnc RAyn 9-1167
28-01 Filter Cleaner Co ... RAyn 9-1167
28-11 Natl Announcements Inc ... EM 1-9580
28-31 Burns Heating Supl Co Inc ... STil 6-2020
28-31 Burns Supl Co
... heating & insulatn STil 6-2020
28-31 Jackson&Church Co
... heating units STil 6-2020

29th 2901

29-10 Sunshine Biscuits Inc
... main ofc&bkry STil 4-8500

30th 3001

BOT ST (PL)
W GARDENS

Jack ----------J5 Vlrg 7-3243
Chas ----------S4 Vlrg 7-0288
----------Spec
M ----------D3 Vlrg 7-9832
old ----------J9 Vlrg 7-6274-R
----DDS-J9-Vlrg 7-3488-W
W C ----------J7 Vlrg 9-3965
L ----------S9 Vlrg 7-9389
V ----------Vlrg 9-4988
----------D0 Vlrg 9-6762
yra ----------J7 Vlrg 7-0677-J
fred ----------D3 Vlrg 7-9871
mile Miss----------Vlrg 7-4888
Vest Rev ----------J0 Vlrg 9-6281
los J ----------D6 Vlrg 7-8988-W
Theo ----------D5 Vlrg 7-4249
----------D2 Vlrg 9-1223
arl ----------D6 Vlrg 7-6274-W
fried ----------D3 Vlrg 9-4482
rman H ----------A0 Vlrg 7-6442-M
E ----------J6 Vlrg 9-3470
ldor ----------J7 Vlrg 9-5501
Anne F ----------J7 Vlrg 7-0677-W
Mildred S ----------J6 Vlrg 7-4107-W
fedrich ----------D5 Vlrg 9-6663
Abraham ----------J9 Vlrg 9-0790
era ----------D9 Vlrg 9-0693
M ----------J8 Vlrg 9-7090
ila ----------J9 Vlrg 7-7911-M
----------J8 Vlrg 7-10366
Ernest N ----------Vlrg 9-5217
ceao Apts ----------D4 Vlrg 9-9186
August ----------J9 Vlrg 7-3488-J
y E ----------Vlrg 9-1370
Elias ----------J1 Vlrg 7-8092
ner Leo ----------W8 Vlrg 7-6424
Ignatz ----------D0 Vlrg 9-0734
ld Hugo ----------D0 Vlrg 9-3914
mcl Co ----------J4 Vlrg 9-7432
----------Spec
Martin L ----------D1 Vlrg 7-4698
Fredk H ----------J2 Vlrg 9-1455
Danl ----------D3 Vlrg 7-1634
----------J4 Vlrg 7-0903
----------J6 Vlrg 7-4059-J
----------J6 Vlrg 9-5104
----------Vlrg 9-9743
nas H ----------Vlrg 9-7678
Chag M ----------Vlrg 0893-J
----------Vlrg 8590
Jos C ----------D1 Vlrg 7511
Harold A ----------W8 Vlrg 7406
I Gerald ----------Vlrg 7-1200-W
Karl ----------D7 Vlrg 9-4108
Arnold ----------D8 Vlrg 7-1538
Helen ----------D0 Vlrg 7-1538

AN'S ISL COLLEGE PT

ist Corp ----------A0 INde 3-1510
s Dept of—
posal Plants—
Isl S T W----------J6 FLsh 3-5124

TALMADGE PL
SEE 146TH ST)

TAMPA PL
(SEE 42ND RD)

GERINE ST JAMAICA

TARRYTOWN ST
(SEE 204TH ST)

ESSEE ST AQUEDUCT
EE 117TH ST)

S PL FOREST HILLS
EE 70TH RD)

TERRACE AV
OOTHILL AV HOLLIS)
86TH AV JAMAICA)

THEBES AV LITTLE NECK

249-24 Frost Reuben W ----------J6 BAys 9-4177
249-24 Plested Evelyn V ----------J5 BAys 9-4177
249-27 Varda Lucien A ----------J9 BAys 4-4617
249-28 Lisowski Kazmers ----------D9 BAys 9-6848
249-31 David Steve ----------J9 BAys 4-0224
249-32 Braun Robt A ----------J9 BAys 4-4685
249-35 Salfer Anthony H ----------J9 BAys 4-4325
249-36 Kenny John J -Watr Supt D8 BAys 9-6963
249-40 Ulzheimer Al ----------D3 BAys 9-2772
249-44 Vernier Marcel ----------J9 BAys 4-4374
249-48 O'Donnell Patk E ----------J9 BAys 4-4322
249-52 Montreuil X ----------J9 BAys 4-0971

DEEPDALE AV 25101

251-20 Altpeter Laurence ----------J9 BAys 4-1372
251-29 Stikeman Chas ----------BAys 9-4139
251-66 Reid S ----------BAys 9-2213

THEDFORD AV HOWARD BCH
(SEE 98TH ST)

THERESA CT RCKWY BCH

THERESA PL
(SEE 68TH RD)

THETFORD LA ROCKWY PT

8 Poynten Eleanor M----------A0 BEIH 5-4452-R
16 Bradley Henrietta Miss 52 BE II 5 2436
18 Mertis Elmer F ----------J3 BE IH 5-0160
21 Coby Jos A ----------D7 BEIH 5-5186-J
24 B ----------Spec
28 Greer Geo F----------D6 BEIH 5-5494
30 W ----------Spec

THOMPSON PL FLUSHING

61-11 Rhoades Vincent B----------09 INde 3-1882
61-19 Scully John A ----------first D8 FLsh 3-5939

THOMSON AV L I C

COURT SQ 2510

25-10 N ----------NP
25-10 N Y City of—
Courts—
Special Sessions-Part 3------STII 4-4930
District Attorney ---------STII 4-7590
25-10 T ----------NP

JACKSON AV 2701

27-X Dillon J C Co Inc ---------D7 STII 4-0422
27-08 Bickford's Inc -----employ D8 STII 4-3857
27-19 Kesbec Inc ---------gas sta STII 4-9522
27-42 Crusader Press Inc - pubrs J8 STII 6-2000
27-42 Zeese-Wilkinson-Dillon Co Inc
lithgphr J6 STII 4-8620

24th DR 2801

28-01 Central Auto Radiatr Co---J8 IRon 6-1167
Grand Chromium Plating Co-D3 ST II 4-2492

29th SKILLMAN AV 2901

29-10 Sunshine Biscuits Inc
main ofc & bkry-J6-STII 4-8500

30th (ORTON) 3001

30-X(132) Sackett & Wilhelms Lithographing
Corpn IRon 6-3800
30-X (132) Volz Wm J b ----D9 IRon 6-3800
30-15 Soumakis Sam ----cafeteria-J5 STII 4-9884
30-20 NATIONAL CARBON CO BLDG
30-20 Bakelite Corp er dept DO ST II 4-9020
30-20 Bear Brand Yarns Co Inc—
Genl office ----------J8-STII 6-2500
30-20 Bernhard Ulmann Co Inc—
Genl office ----------J8 STII 6-2500
30-20 Bucilla Prods Inc—
Genl office ----------J8-STII 6-2500
30-20 Carbide & Carbon Chemcls Corp STII 4-9020
30-20 DMC Corp ----------J8 STII 6-2519
30-20 Fleisher Yarns Inc—
Genl office ----------J8-STII 6-2500
30-20 Glossilla Prods Inc—
Genl office ----------J8 STII 6-2500
30-20 H ----------Spec
30-20 Halsway Corp er dept DO ST II 4-9020
30-20 Knickerbocker Catering Inc D8 IRon 6-0722
30-20 Linde Air Products Co---------STII 4-9020
30-20 Natl Carbon Co----------STII 4-9020
30-20 Prest-O-Lite Co ----------STII 4-9020
30-20 Ulmann Bernhard Co Inc—
Genl office ----------J8 STII 6-2500
30-29 King's Restrnt ----------J4 STII 4-9571
30-30 Amer Chicle Co ----------STII 4-8900
30-30 Society of Chemcl Industry J7 STII 4-8900

THOMSON AV L I C

31-31 Schlegelmilch Bros
clincl thermtrs-IRon 6-7087
31-31 Whiteman Mfg Co ---------J9-STII 6-1800

SEE ALSO QUEENS BLVD

THORNHILL AV DOUGLASTON

(FOR NUMBERS BETWEEN 23901 & 24111 SEE 63rd AV)

DOUGLASTON PKWY 24201

242-15 Sherry Anne ----------D1 BAys 9-8309
242-18 Neale R H----------J3 BAys 9-7010
242-26 Farrell Wm M ----------BAys 9-2699

REDFIELD 24301

243-03 Koch Karl ----------W8 BAys 9-5594
243-06 Pinkham C A ----------J2 BAys 9-0649
243-10 Burroughs W C ----------BAys 9-2975
243-11 Z ----------Spec
243-15 Toomey Thomas J ----------J9 BAys 4-3394

244th 24401

244-09 McElroy Edw J ----------D2 BAys 9-5670
244-11 Sweet Jas S ----------J9-BAys 9-4233
244-12 Slawson Herbert G ----------D2 BAys 9-0984
244-16 Kniskern Harold L ----------D0 BAys 9-1208
244-16 Oppa Lillian ----------D0 BAys 9-1208
244-20 Quinlan Thos F ----------J9 BAys 4-5893
244-24 Gray Robt A ----------J9-BAys 4-4552

245th 24501

245-02 Ayres Percy S ----------BAys 9-1812

MARATHON PKWY 24901

249-11 O'Brien Ella H Mrs....J1 BAys 9-8011
249-19 Cavanagh John A ------J3-BAys 9-6274
249-20 F ----------Spec
249-21 Haas Richd ----------J9 BAys 4-0099
249-21 Kaufmann Jennie K Mrs --J9 BAys 4-0099

250th 25001

250-X B ----------Spec
250-05 Mueller Max ----------J9 BAys 4-2150
250-06 Meyer Gerald ----------J9-BAys 4-5784
250-20 Lissner Will ----------J9 BAys 4-1321
250-21 Denenfeld Jack ---------J9 BAys 4-5740
250-21 Denny Harold ----------J9 BAys 4-5740
250-38 Beuerman Walter E ------J9 BAys 4-1165
250-48 Sprung Bernard K ------J9 BAys 4-2196

251st PL 25101

251-06 Rottweiler Antoo ....J1 BAys 9-4092

252nd ST 252-00

252-09 Licht Louis M ----------A0 BAys 9-7683
252-15 Jurick Jack ----------A0 BAys 9-7400
252-15 Jurick Jack ----------D9 BAys 9-5474
252-21 Sedrish David ----------J9 BAys 4-3498

THORNTON PL FOREST HILLS

66th AV

66-20 Ideal Spot Beer Garden Inc The
J6 BOul 8-9771
66-20 Ideal Spot Beer Garden Inc The
J8-BOul 8-5484

67th AV 6701

67-04 Sawch Stephen T ----D1 BO ul 8-8877
67-06 Grunberger Eugene ------J8 ILno 9-0299
67-08 Baran Jos ----------J5 BOul 8-1253
67-10 Liotta Thos ----------D5 BOul 8-6197
67-11 Freedman Tillie Mrs ------J8 BOul 3-4540
67-12 Reiss Sol S ----------D1 BO ul 8-3992
67-14 Fierson Irving ----------J2 BO ul 3-1152
67-16 Schlanger B ----------D8 ILno 9-3926
67-18 Popper Hyman ----------D2 BO ul 3-2641
67-19 Fritz Morris ----------D9 BOul 8-3926
67-24 Yunker M A ----------D5 BOul 8-5895
67-25 Kunreuther Richd ------D0 BO ul 3-0046
67-28 Davis Eugene ----------D9 LIge 4-1017
67-30 Ismail A S ----------J2 BO ul 8-4888
67-32 Schram Augusta ---------D3-BO ul 8-4985

THORP AV
(SEE 259TH ST)

THURSBY AV RCKWY BCH

BCH 62nd 6201

62-01 NYC Sanitation dept
dist ofc No 67 89 BE II 5-4247

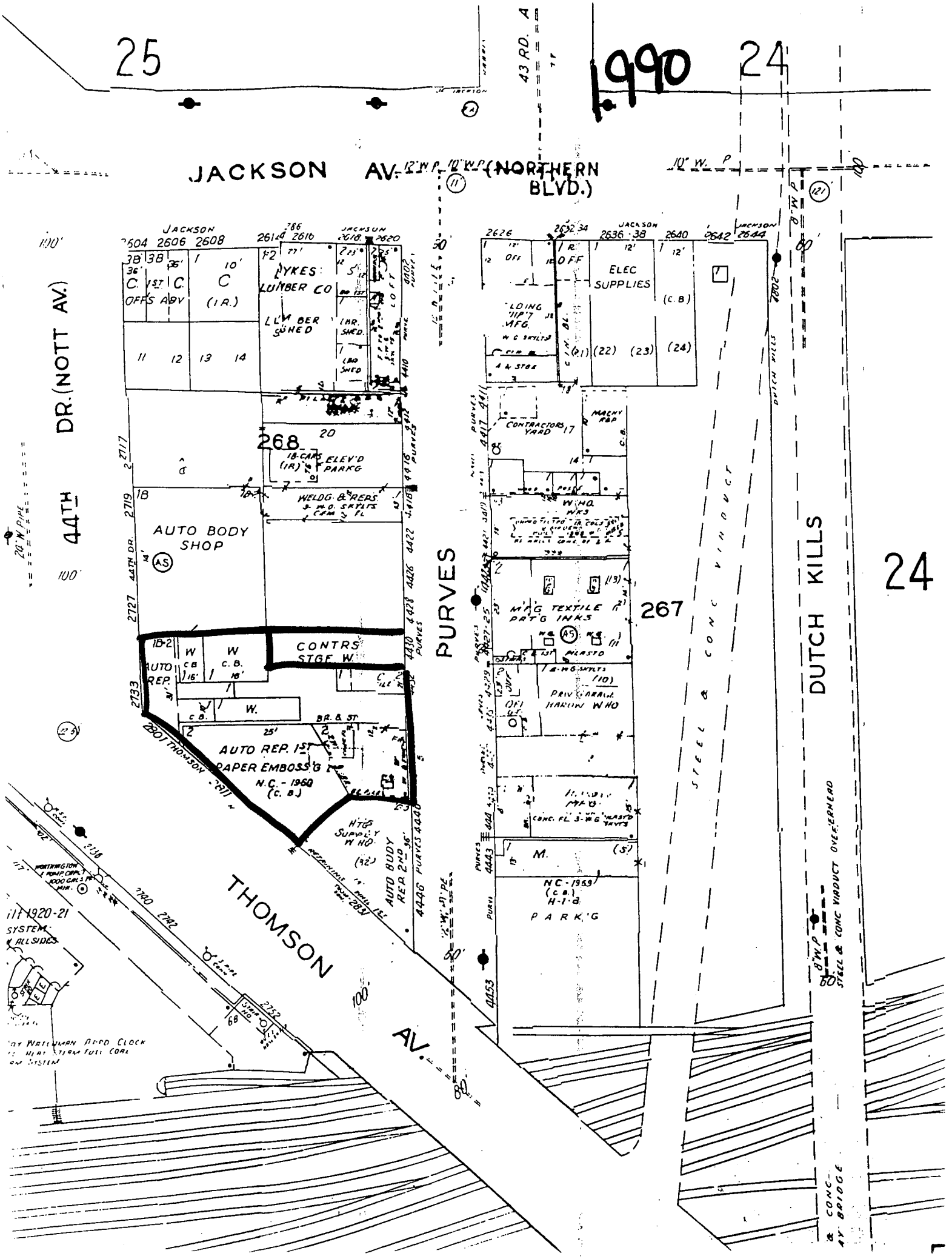
BCH 66th 6601

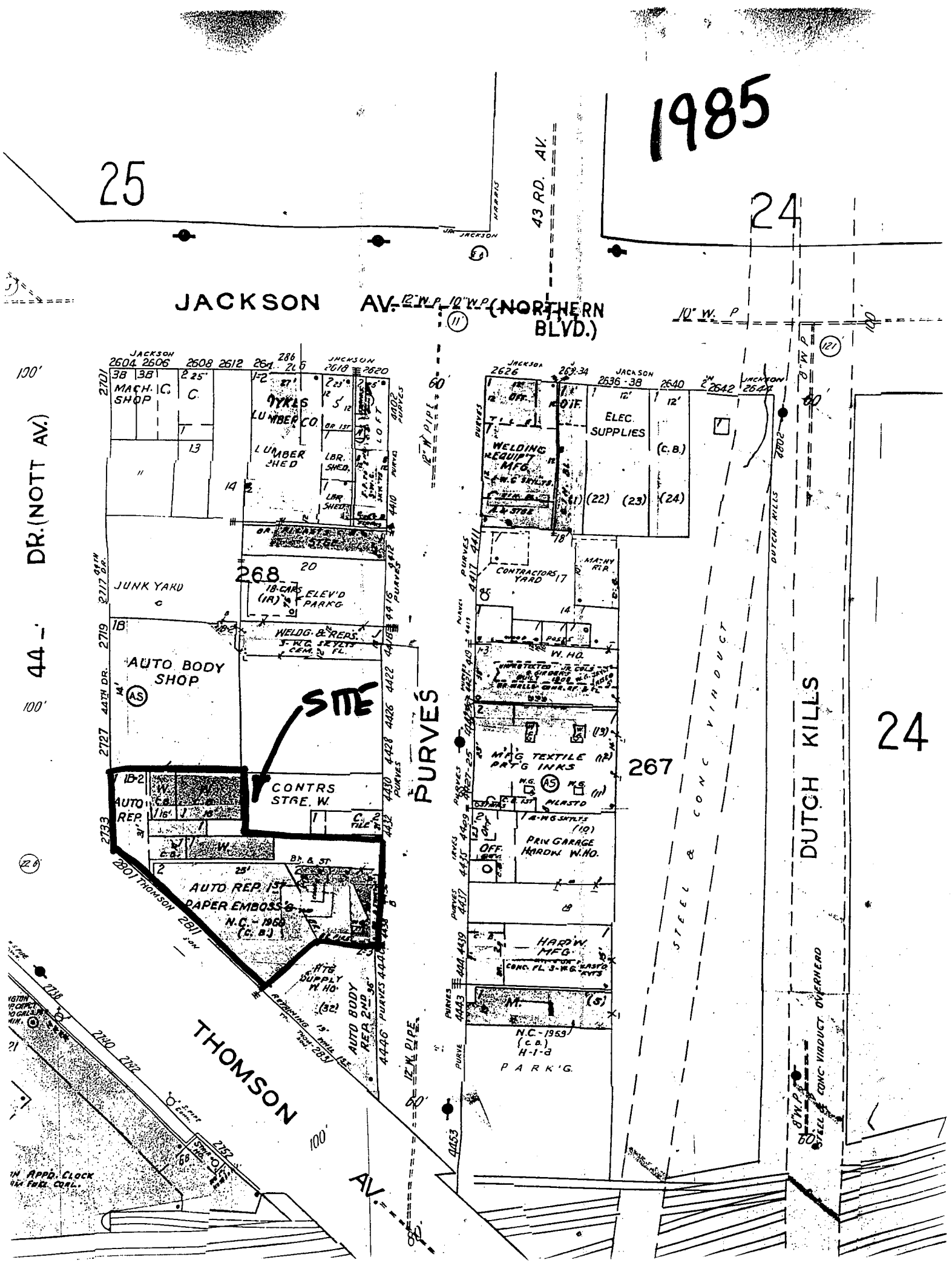
66-08 Taiz Herman ----------D3 BEIH 5-0316
66-10 Kimmerling Geo J ----------W6 BE II 5-5681

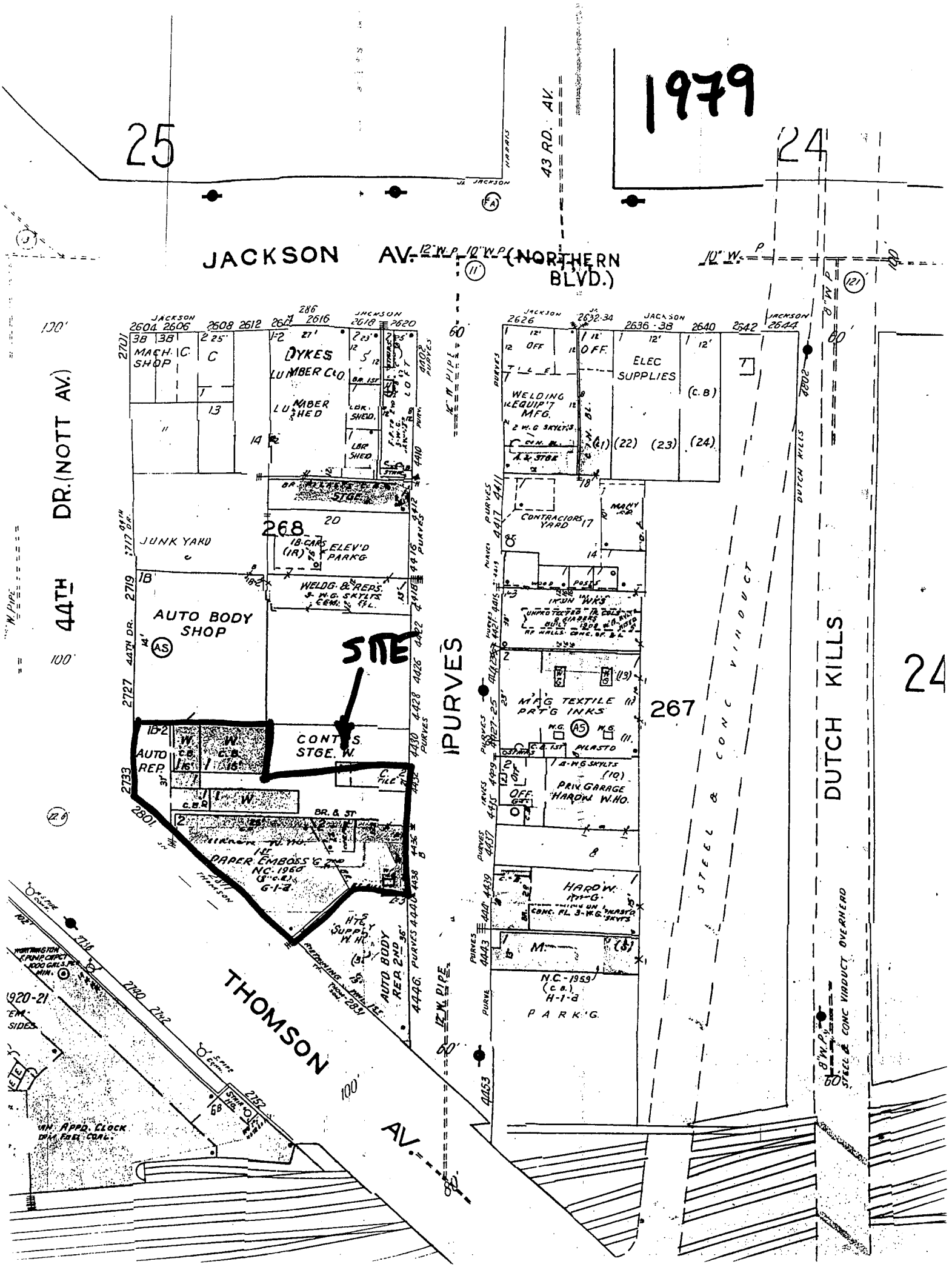
BCH 69th 6901

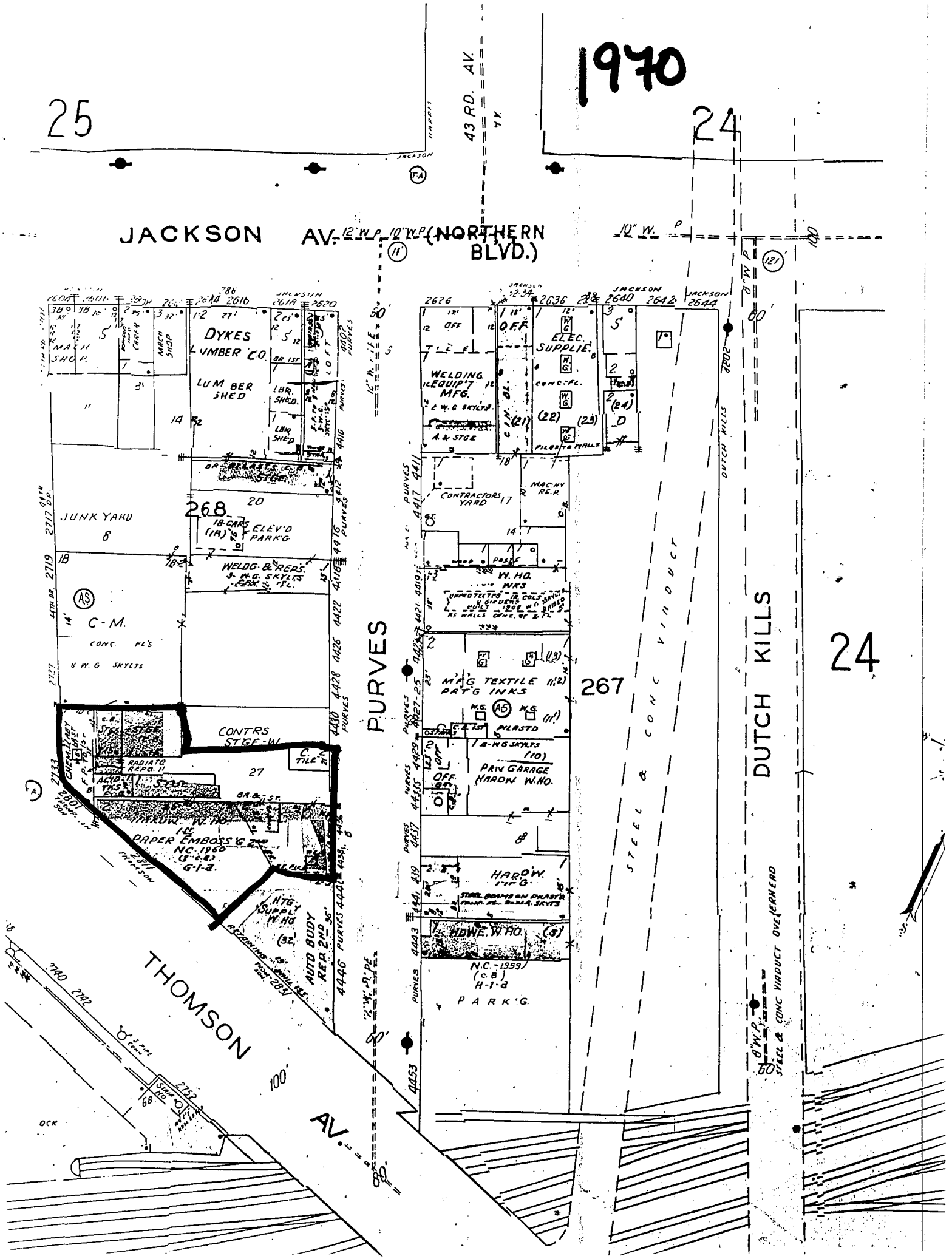
69-14 D'Anna Lee R ----------A0-BEIH 5-3161-R

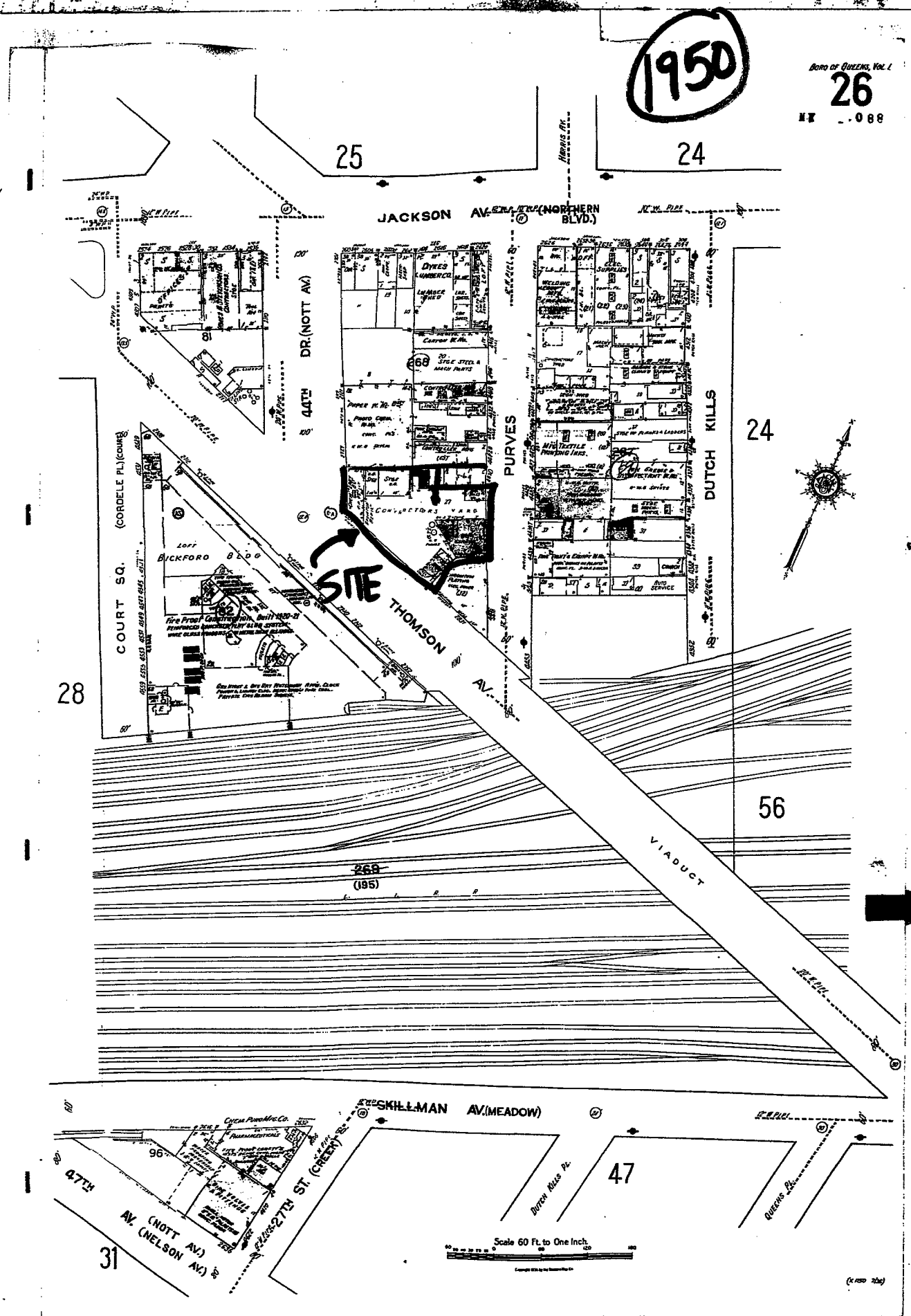
SANBORN FIRE INSURANCE MAPS (FOR PAST SITE USAGE)


25
24
1990
JACKSON AV. (NORTHERN BLVD.)
43 RD. A
DR. (NOTT AV.)
44TH
PURVES
DUTCH KILLS
THOMSON AV.
STEEL & CONC VIADUCT
LYKES LUMBER CO
LUMBER SHED
AUTO BODY SHOP
AUTO REP. 1ST
PAPER EMBOSS'G
N.C. - 1960
(C. B.)
CONTRS STGE. W
268
267
ELEC SUPPLIES
CONTRACTORS YARD
MFG. TEXTILE PRT'G INKS
PARK'G
2604 2606 2608
2610
2618
2620
2626
2632 34
2636 38
2640
2642
2644
2727
2733
2719
2717
2807 THOMSON
2780 2782
2752
4430
4446
4453


1985
25
24
JACKSON AV.
(NORTHERN BLVD.)
43 RD. AV.
DR. (NOTT AV.)
44 -
THOMSON AV.
PURVES
DUTCH KILLS
STEEL & CONC VIADUCT
STEEL & CONC. VIADUCT OVERHEAD
268
267
24
SITE
MACH. SHOP
TYKLE LUMBER CO.
LUMBER SHED
LBR. SHED
JUNK YARD
18-CARS ELEV'D (IR) PARK'G
WELDG. & REPRS.
AUTO BODY SHOP
CONTRS STGE. W.
AUTO REP.
AUTO REP. 1ST
PAPER EMBOSS'G
N.C.-1968
(C.B.)
AUTO BODY REP. 2ND
ELEC. SUPPLIES
WELDING EQUIPT MFG.
CONTRACTORS YARD
W. HO.
MFG. TEXTILE PRT'G INKS
PRIN GARAGE HARDW. W. HO.
HARD'W MFG.
N.C.-1959
(C.B.)
H-1-a
PARK'G.
2801 THOMSON
2727 44TH DR.
2717 44TH DR.
2701
2719
2733
2738
2740
2742
2752
2802
4410
4412
4416
4422
4426
4428
4430
4432
4438
4440
4442
4443
4444
4446
4453
4411
4417
4435
4437
4439
12" W. P.
10" W. P.
8" W. P.
6" W. P.
12" W. PIPE
2604 2606 2608 2612 2614 2616 2618 2620
2626 2630-34 2636-38 2640 2642 2644


1979
25
24
JACKSON AV. (NORTHERN BLVD.)
43 RD. AV.
44TH DR. (NOTT AV.)
JACKSON
2604 2606 2608 2612 2614 2616 2618 2620
2626 2632-34 2636-38 2640 2642 2644
DYKES LUMBER CO
LUMBER SHED
LBR. SHED
STGE.
268
JUNK YARD
18 CARS ELEV'D (1A) PARKG
WELDG. & REPS.
AUTO BODY SHOP
SITE
CONTS. STGE. W.
AUTO REP.
BR. & ST.
PAPER EMBOSS & PRTG
AUTO BODY RER 2ND
PREFINISHING
THOMSON AV.
WELDING EQUIP'T MFG.
ELEC SUPPLIES
CONTRACTORS YARD
IRON WKS
MFG TEXTILE PRTG INKS
PRIV GARAGE
HARO W.
CONC. FL.
N.C.-1959
H-1-a
PARK'G
267
PURVES
DUTCH KILLS
STEEL & CONC VIADUCT
STEEL & CONC VIADUCT OVERHEAD
12" W. P.
10" W. P.
8" W. P.
6" W. P.
4" GAS PIPE
12" W. P.
2701
2719
2727
2733
2801
2802
4410
4412
4416
4418
4422
4426
4428
4430
4432
4436
4438
4440
4446
4411
4417
4423
4427
4429
4435
4437
4439
4441
4443
4453
100'
60'

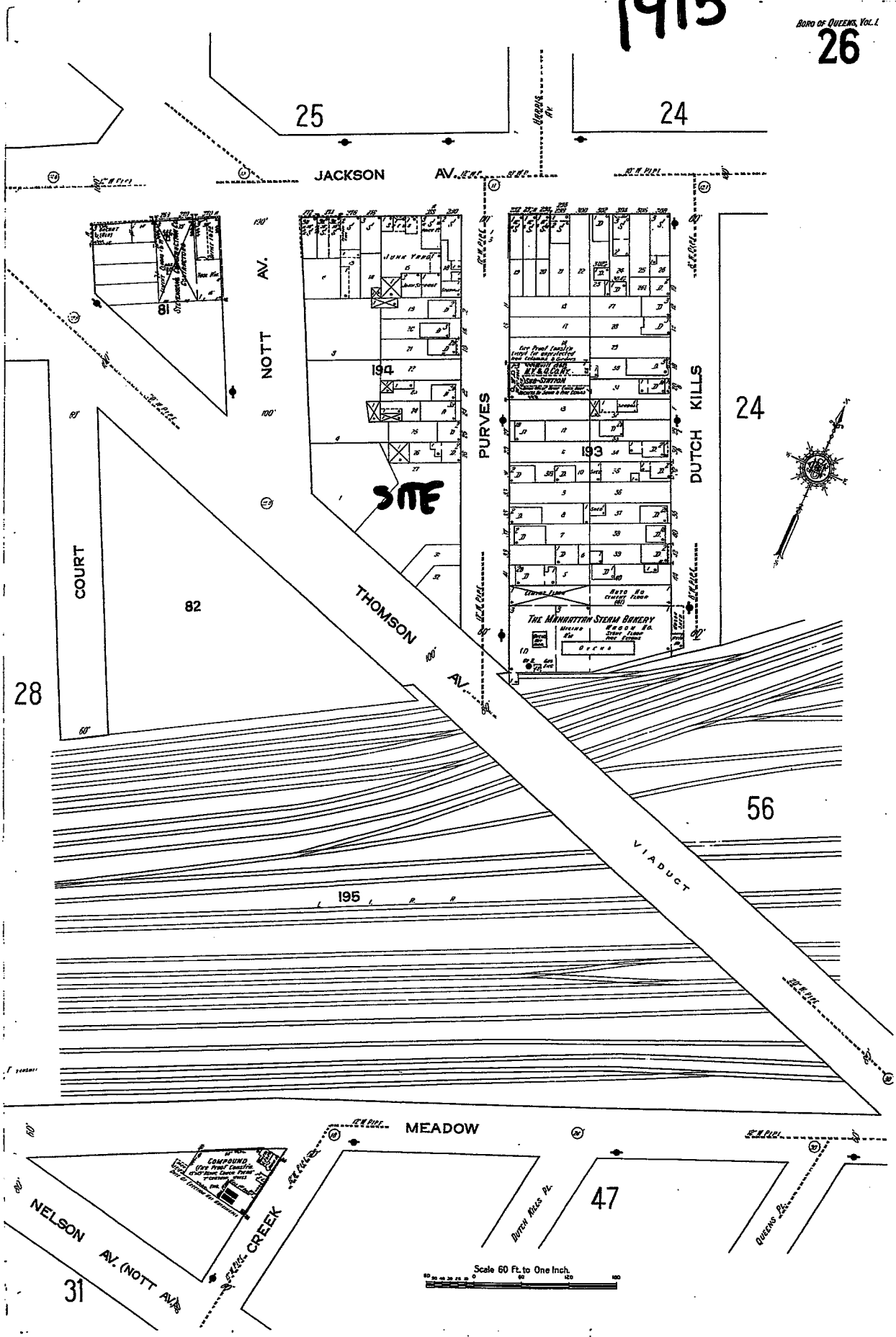

1970
25
24
43 RD. AV.
JACKSON AV.
(NORTHERN BLVD.)
JACKSON
12" W.P.
10" W.P.
DYKES LUMBER CO.
LUMBER SHED
MACH SHOP
LBR. SHED
JUNK YARD
268
18-CARS ELEV'D (1A) PARK'G
WELDG. & REPS.
C-M.
CONTRS STGE-W
PAPER EMBOSS'G
NC. 1960
G-1-a
AUTO BODY REP. 2ND
H'TG SUPPLY W. HO.
THOMSON
PURVES
2626
2636
2640
2642
2644
2628
WELDING EQUIP'T MFG.
ELEC. SUPPLIE
CONTRACTORS YARD
MACHY REP.
W. HO.
MAG TEXTILE PRT'G INKS
PRIV GARAGE HARDW. W. HO.
HARDW.
HOWE. W. HO.
N.C. - 1959
(C.B.)
H-1-a
PARK'G
267
DUTCH KILLS
STEEL & CONC VIADUCT
STEEL & CONC VIADUCT OVERHEAD
AV.
100'
60'
80'

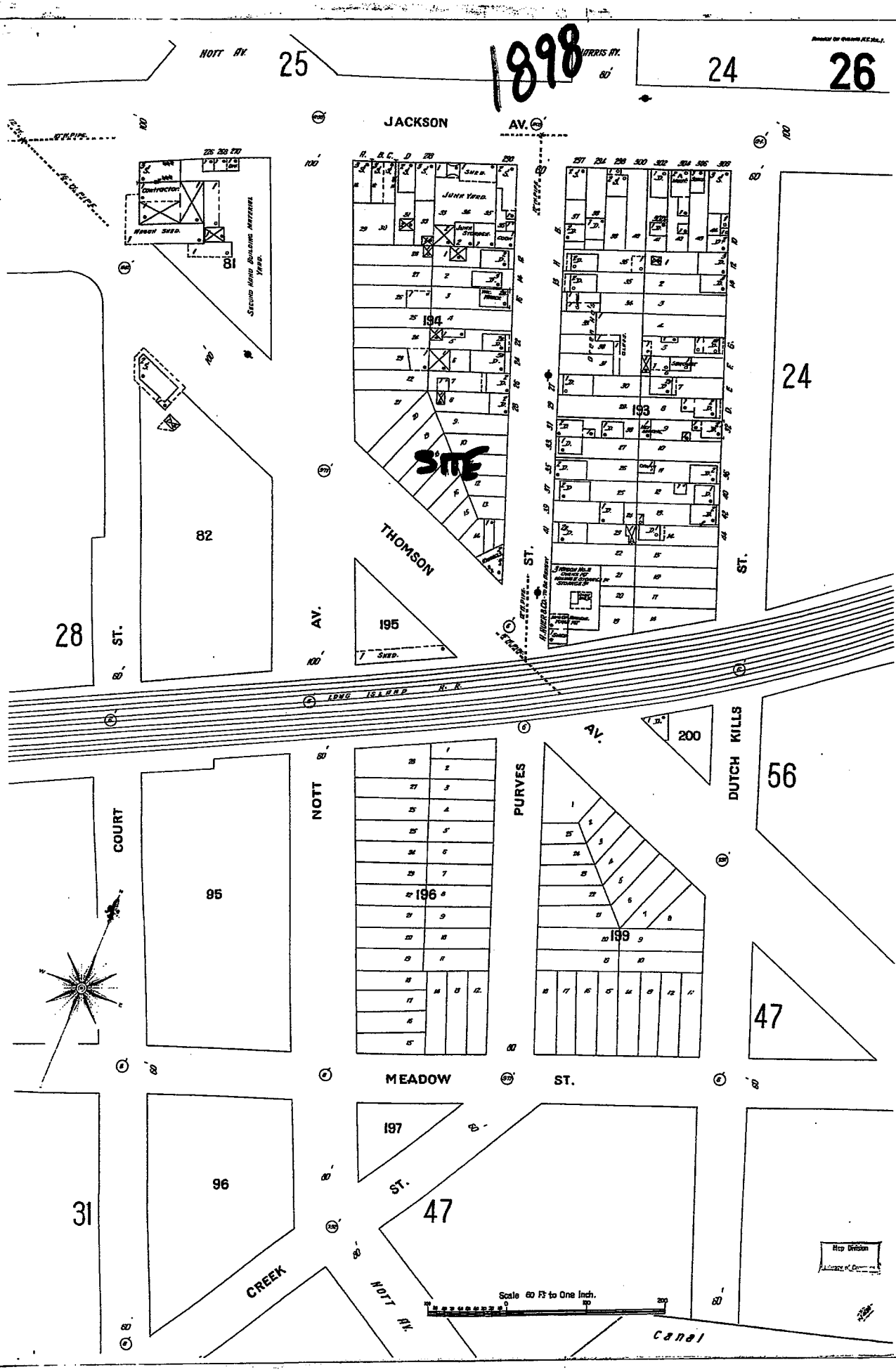

1950
BORO OF QUEENS, VOL. 1
26
25
24
JACKSON AV.
(NORTHERN BLVD.)
44TH DR. (NOTT AV.)
PURVES
DUTCH KILLS
COURT SQ. (CORDELE PL.) (COURT)
BUCKFORD BLDG
SITE
THOMSON AV.
28
56
VIADUCT
268
(195)
SKILLMAN AV. (MEADOW)
47TH AV. (NOTT AV.) (NELSON AV.)
27TH ST. (CREEK)
DUTCH KILLS PL.
QUEENS PL.
47
31
Scale 60 Ft. to One Inch.

1915

BORO OF QUEENS, VOL. I

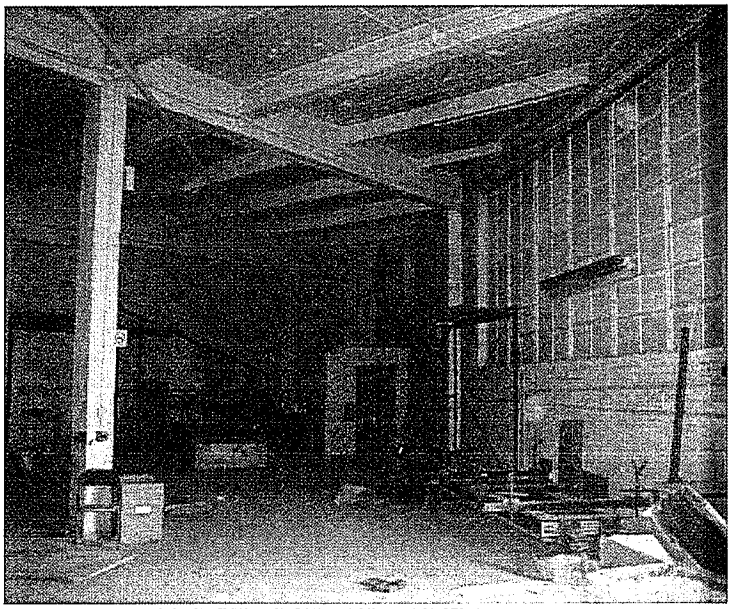
26



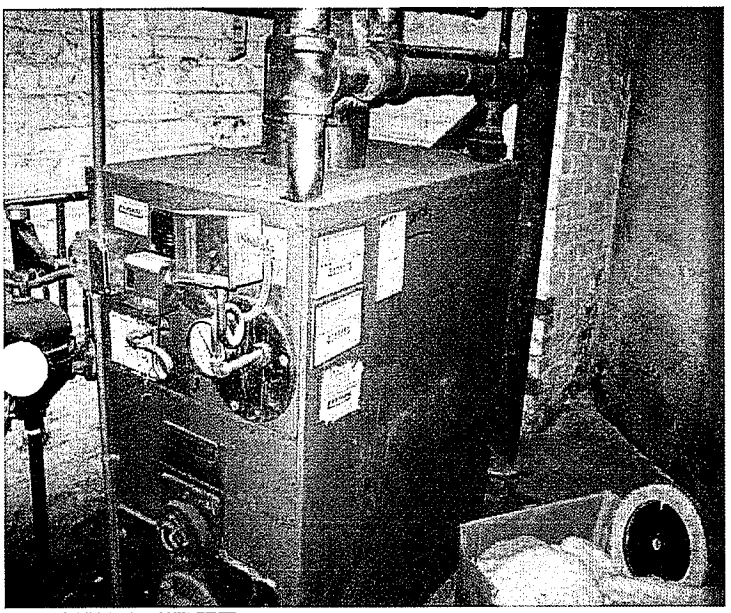

1898
HOTT AV.
25
HARRIS AV.
60'
24
26
JACKSON AV.
100'
Contractor
Wagon Shed
81
Second Hand Building Materials Yard
Junk Yard
194
193
SITE
24
82
THOMSON
ST.
28
ST.
AV.
195
100'
60'
L. I. R. R.
200
DUTCH KILLS
56
COURT
95
NOTT
PURYES
AV.
196
199
47
MEADOW
ST.
197
96
31
ST.
47
CREEK
NOTT AV.
Scale 60 Ft to One Inch.
Canal
Map Division

SITE PHOTOS

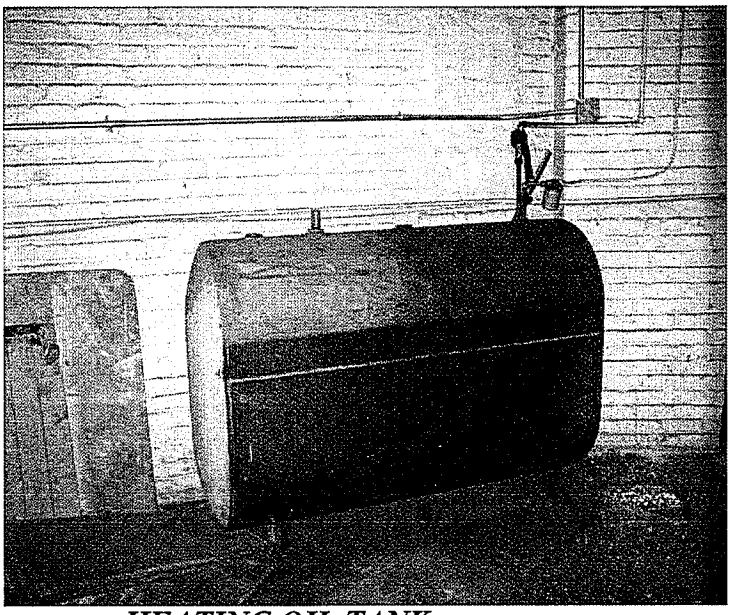
REAR TWO STORY BUILDING



FORMER REPAIR AREA

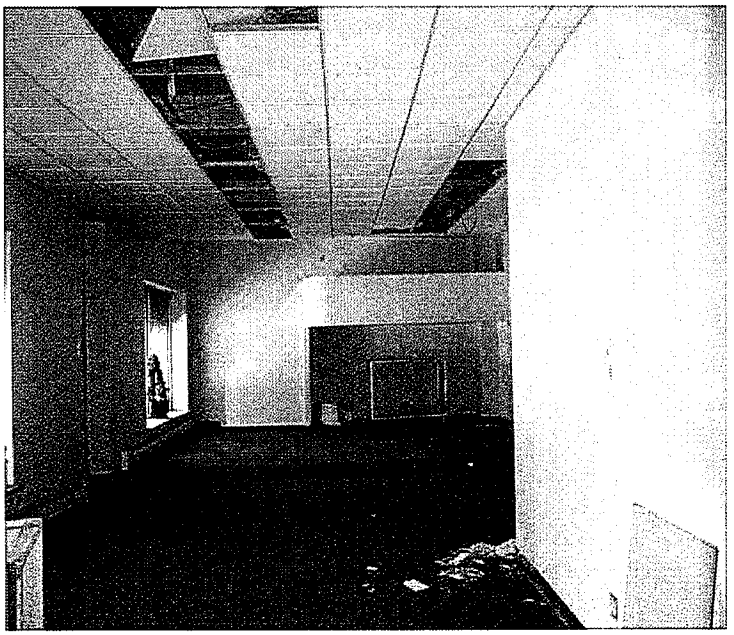


BOILER UNIT



HEATING OIL TANK

HEATING OIL AND WASTE OIL TANK



OFFICE AREA

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS

November 5, 2006

Mr. Dani Weiss
Weiss & Company
22 West 38th Street – 12th Floor
New York, NY 10018

Re: 44-32 through 44-38 Purves Street, Long Island City, NY

Dear Mr. Weiss:

Environmental Business Consultants (EBC) has prepared the following summary report to document the results of the Phase II Investigation performed on February 21, 2006 at the above referenced site. The investigation consisted of the collection and analysis of soil and groundwater samples from borings located throughout the site.

The scope of work, as defined in our October 16, 2006 proposal, was based upon that as previously specified and agreed to by the lender's consultant, Langan Engineering.

BACKGROUND

The subject site is identified as Block 268 lot 1 in the borough of Queen. It is located at 44-32 through 44-38 Purves Street, 2733 44th Drive and 2801 through 2811 Thomson Avenue in Long Island City, New York (see **Figure 1**). It is improved with six brick and masonry buildings which front on both Purves Street and Thomson Avenue. The buildings are not currently occupied.

According to the Phase I ESA and a preliminary site inspection performed by EBC, the buildings were most recently used as a night club, body shop, contractor's office / storage yard, real estate office and automobile repair shop. Historical uses included an automobile radiator repair shop, chemical laboratory, heat exchanger company, filter cleaner company, hardware warehouse a paper embossing company and a taxi- repair facility. Two underground storage tanks (USTs) were shown on the 1950 Fire Insurance map within what is now the body shop building. Since the body shop building was added in 1960, the Phase I concluded that it was highly likely that the tanks were removed during construction. Although there are no records indicating that the tanks were ever registered or removed, they do not appear on subsequent fire insurance maps.

FIELD ACTIVITIES

Soil Borings

Three soil borings were installed at the site on October 24, 2006, PWGC in accordance with the previously defined scope of work. The borings were located as shown in **Figure 2** with one

boring behind the small 2-story office in the contractor's yard, one located in front of the garage bay doors at the rear of the auto repair shop and one located within the autobody shop adjacent to the location of the former USTs.

At each boring location, soil was collected continuously from grade to a depth of 20 feet, approximately 12 feet below the water table (approximately 7.5 feet below grade). Samples were collected using a Geoprobe direct-push drill rig, with a four-foot macro-core sampler and disposable acetate liners. Non-dedicated sampling equipment was decontaminated with a laboratory grade detergent and clean water rinse.

Soils were field screened for the presence of volatile organic compounds (VOCs) with a photo-ionization detector (PID) and visually inspected for evidence of contamination. Subsurface soils at locations B1 and B3 generally consisted of fill materials to a depth of approximately 2 feet followed by fine to medium sand and silt to 20 feet. At location B2, however, the fill material extended to a depth of 8 feet followed by med-very coarse sand and rock fragments. Thin layers (3-6inches) of peat were also reported at this location at depths of 15.5 and 19 feet. Based upon the lack of PID response and lack of visual evidence of contamination, a shallow (7-8 feet below grade) and deep (17-18 feet below grade) soil sample was collected from each boring in accordance with the agreed upon scope of work. Boring logs are provided in **Appendix A**.

At each boring location a temporary monitoring well was installed to facilitate groundwater sample collection. Temporary wells were constructed of 15 feet 1-inch diameter 0.010 inch slot pvc screen with 5 feet of 1-inch diameter pvc riser. Approximately 2 feet of riser extended above surface grade resulting in a total well depth of approximately 18 feet. Each well was purged with a peristaltic pump to remove sediments before sampling. After purging groundwater samples were collected through dedicated polyethylene tubing, using a stainless-steel ball and check valve.

All samples were collected in pre-cleaned, laboratory supplied glassware, stored in a cooler with ice and submitted for analysis to York Analytical Laboratories of Stratford, Connecticut. Soil samples were analyzed for the presence of VOCs by EPA Method 8260 (STARS), and semi-volatile organic compounds (SVOCs) by EPA Method 8270 (STARS). Groundwater samples were analyzed for the same suite of analysis as for the soil samples.

ANALYTICAL RESULTS

Soil sample results were compared to the Recommended Soil Cleanup Objectives (RSCOs) specified in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*, January 1994. Groundwater sample analytical data was compared to the Class GA groundwater standards as specified in the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, June 1998.

25 Central Avenue
Hauppauge, NY 11788

PHONE 631.234.4280
FAX 631.234.4297
Cell Phone 631.357.4927
E-MAIL csosik2@optonline.net

Analytical data is summarized in **Tables 1, and 2** and a copy of the laboratory analytical report is included in **Appendix B**.

Soil Samples

With the exception of pyrene in the shallow sample from SB2 (7-8 ft), SVOCs were not detected above the laboratory method detection limit (MDL) in any of the soil samples. Pyrene in SB2 (7-8 ft) was detected at a concentration of 190 ug/Kg which is well below the recommended soil cleanup objective of 50,000 ug/kg.

No VOCs were detected at concentrations above the laboratory MDL in any of the soil samples submitted for analysis.

Groundwater Samples

No VOCs or SVOCs were detected above the laboratory MDL in any of the groundwater samples submitted for analysis.

CONCLUSIONS

Based on the results of this investigation including the analysis of 6 soil and 3 groundwater samples from targeted locations including the suspected former location of a UST, there are no environmental impacts to the property as a result of past use. As stated in the Phase I report, it is unlikely that the two USTs, as shown on the 1950 fire insurance map are still present. However, a contingency to properly remove and close the tanks should be in place in the event that they are discovered during construction of the new building's foundation.

If you have any questions or require additional information please do not hesitate to contact me.

Very truly yours,

Charles B. Sosik, P.G.
Senior Project Manager

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Hauppauge, NY 11788

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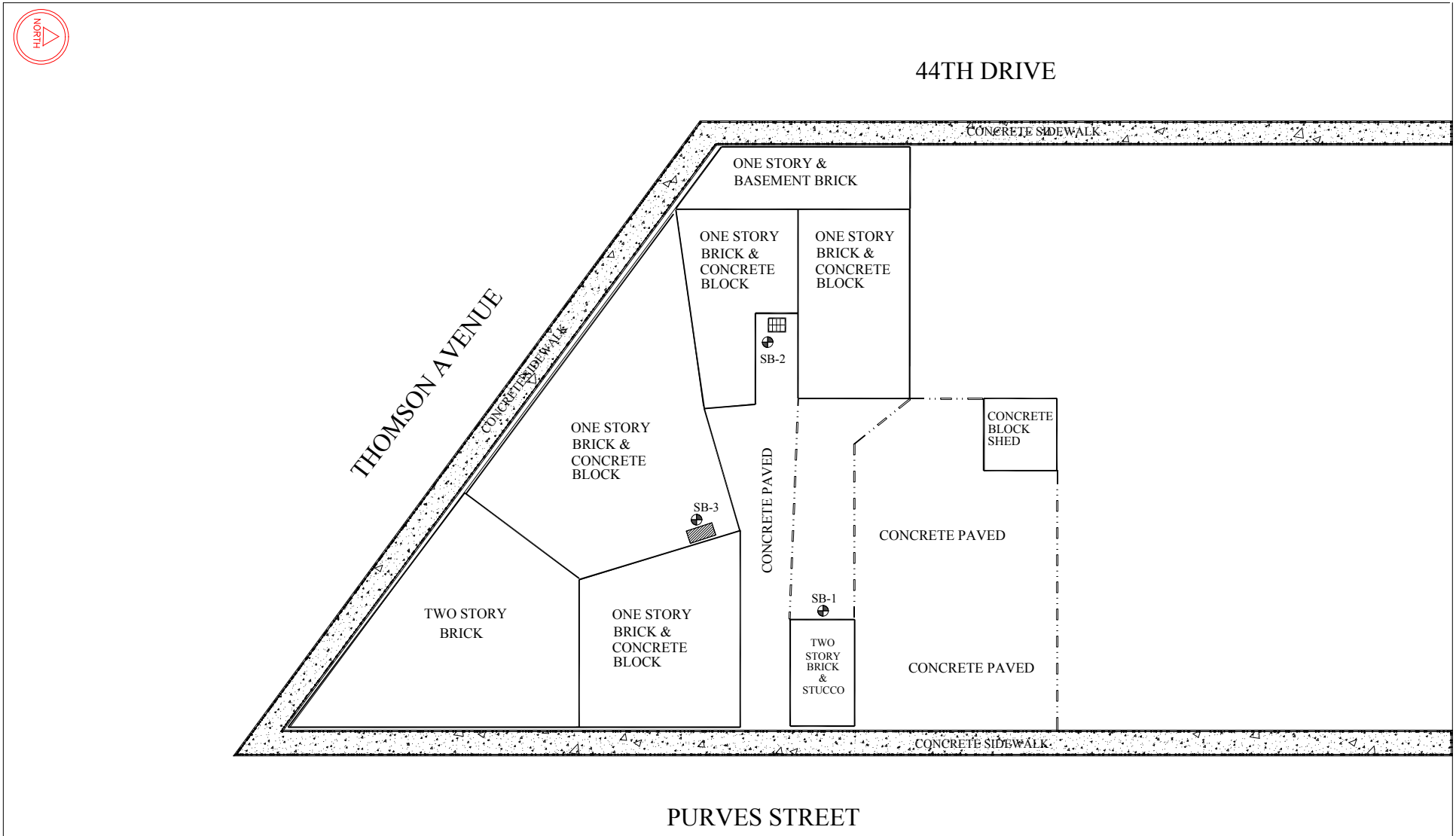
Cell Phone 631.357.4927
E-MAIL csosik2@optonline.net

FIGURES

FIGURE 1 - SITE LOCATION MAP



LEGEND

- BORING LOCATION
- FENCE
- BUILDING
- DRAIN
- SUSPECT LOCATION OF FORMER USTS

EBC

Environmental Business Consultants

FIGURE 2.0 - SITE DIAGRAM

SITE LOCATION: 44/32 - 44/38 PURVES STREET
LONG ISLAND CITY, NEW YORK

DATE: NOVEMBER 7, 2006

SCALE: 1" = 50'

0 25 50

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8260

44/32 - 44-38 Purves Street Long Island City, New York

Compound	NYSDEC Clean-up Objectives [1]	October 24, 2006					
		SB1 (7'-8')	SB1 (17'-18')	SB2 (7'-8')	SB2 (17'-18')	SB3 (7'-8')	SB3 (17'-18')
Volatile Organic Compounds by 8260 - ug/kg							
1,2,4-Trichlorobenzene	3,400	<10	<10	<10	<10	<10	<10
1,3,5-Trimethylbenzene	3,300	<10	<10	<10	<10	<10	<10
Benzene	60 or MDL	<2	<2	<2	<2	<2	<2
Ethyl Benzene	5,500	<10	<10	<10	<10	<10	<10
Isopropylbenzene	2300	<10	<10	<10	<10	<10	<10
m + p Xylene	1200*	<10	<10	<10	<10	<10	<10
Naphthalene(v)	13,000	<10	<10	<10	<10	<10	<10
n-Butylbenzene	10,000	<10	<10	<10	<10	<10	<10
n-Propylbenzene	3,700	<10	<10	<10	<10	<10	<10
o Xylene	1200*	<10	<10	<10	<10	<10	<10
p-Isopropyltoluene	NS	<10	<10	<10	<10	<10	<10
sec-Butylbenzene	10,000	<10	<10	<10	<10	<10	<10
MTBE	120	<10	<10	<10	<10	<10	<10
tert-Butylbenzene	10,000	<10	<10	<10	<10	<10	<10
Toluene	1,500	<10	<10	<10	<10	<10	<10

Notes:
(1) NYSDEC Recommended Soil Cleanup Objectives (RSCO), Technical and Administrative Guidance Memorandum (TAGM) #4
MDL - Method detection limit
Bold/highlighted - indicated exceedance of the NYSDEC Cleanup Objective
*-Sum of all isomers
NS - No Standard
NA - Not Analyzed

TABLE 2
SOIL ANALYTICAL RESULTS FOR
SEMI-VOLATILE ORGANIC COMPOUNDS

44/32-44/38 Purves Street
Long Island City, New York

Compound	NYSDEC Clean-up Objectives [1]	October 24, 2006					
		SB1 (7'-8')	SB1 (17'-18')	SB2 (7'-8')	SB2 (17'-18')	SB3 (7'-8')	SB3 (17'-18')
Semi-Volatile Organic Compounds by 8270 - ug/kg							
Acenaphthene	50,000	<165	<165	<165	<165	<165	<165
Anthracene	50,000	<165	<165	<165	<165	<165	<165
Benzo(a)anthracene	224 or MDL	<165	<165	<165	<165	<165	<165
Benzo(a)pyrene	61 or MDL	<165	<165	<165	<165	<165	<165
Benzo(b)fluoranthene	220 or MDL	<165	<165	<165	<165	<165	<165
Benzo(ghi)perylene	50,000	<165	<165	<165	<165	<165	<165
Benzo(k)fluoranthene	220 or MDL	<165	<165	<165	<165	<165	<165
Chrysene	400	<165	<165	<165	<165	<165	<165
Dibenzo(a,h)anthracene	14 or MDL	<165	<165	<165	<165	<165	<165
Fluoranthene	50,000	<165	<165	<165	<165	<165	<165
Fluorene	50,000	<165	<165	<165	<165	<165	<165
Ideno(1,2,3-cd)pyrene	3,200	<165	<165	<165	<165	<165	<165
Naphthalene	13,000	<165	<165	<165	<165	<165	<165
Phenanthrene	50,000	<165	<165	<165	<165	<165	<165
Pyrene	50,000	<165	<165	190	<165	<165	<165

Notes:
(1) NYSDEC Recommended Soil Cleanup Objectives (RSCO), Technical and Administrative Guidance Memorandum (TAGM)
MDL - Method detection limit
Bold/highlighted - indicated exceedance of the NYSDEC Cleanup Objective
NS - No Standard
NA - Not Analyzed

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8260

44/32-44/38 Purves Street
Long Island City, New York

Compound	NYSDEC Ambient Water Quality Standards	October 3, 2006	
		B2 (GW)	B5 (GW)
Volatile Organic Compounds by 8260 - ug/L			
124-Trimethylbenzene	5	5.0 U	5.0 U
135-Trimethylbenzene	5	5.0 U	5.0 U
Benzene	1	1.0 U	1.0 U
Ethyl Benzene	5	5.0 U	5.0 U
Isopropylbenzene	NS	5.0 U	5.0 U
ter.ButylMethylEther	5	5.0 U	5.0 U
Naphthalene	NS	5.0 U	5.0 U
n-Butylbenzene	NS	5.0 U	5.0 U
n-Propylbenzene	NS	5.0 U	5.0 U
o Xylene	5	5.0 U	5.0 U
m + p Xylene	5	5.0 U	5.0 U
p-isopropyltoluene	NS	5.0 U	5.0 U
sec-Butylbenzene	NS	5.0 U	5.0 U
tert-Butylbenzene	NS	5.0 U	5.0 U
Toluene	5	5.0 U	5.0 U

Notes:
* - Guidance Value
** - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998
*** - NYSDEC Ambient Water Quality Standards and Guidance Values, Addendum April 2000
ND - Non-detect
NS - No Standard
U - Undetected
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 4
GROUNDWATER ANALYTICAL RESULTS FOR
SEMI-VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8270

Compound	NYSDEC Ambient Water Quality Standards	October 3, 2006	
		B2 (GW)	B5 (GW)
Semi-Volatile Organic Compounds by 8270 - ug/L			
Acenaphthene	20	5.4 U	6.2 U
Anthracene	50*	5.4 U	6.2 U
Benzo(a)anthracene	0.002	5.4 U	6.2 U
Benzo(a)pyrene	ND	5.4 U	6.2 U
Benzo(b)fluoranthene	0.002	5.4 U	6.2 U
Benzo(ghi)perylene	NS	5.4 U	6.2 U
Benzo(k)fluoranthene	0.002	5.4 U	6.2 U
Chrysene	0.002	5.4 U	6.2 U
Dibenzo(a,h)anthracene	50	5.4 U	6.2 U
Fluoranthene	50	5.4 U	6.2 U
Fluorene	50	5.4 U	6.2 U
Indeno(1,2,3-cd)pyrene	0.002	5.4 U	6.2 U
Naphthalene(sv)	10	5.4 U	6.2 U
Phenanthrene	50	5.4 U	6.2 U
Pyrene	50	5.4 U	6.2 U

Notes:

** - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998

ND - Non-detect

U - Undetected

* - Guidance Value

NS - No Standard

Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

(1) Applies to each isomer (1,2 - 1,3 and 1,4) individually

APPENDIX A
BORING LOGS

Geologic Boring Log Details

EBC
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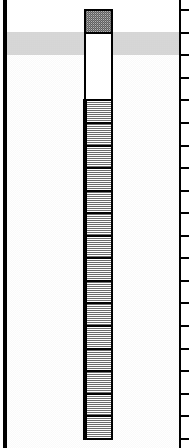
B1 Boring Log

Location: Behind 2 story brick bldg. on contractors yard lot		Depth to Water (ft. from grade.)		Site Elevation Datum
Site Name: WCO0601	Address: 44/32-44/38 Purves St. LI City, NY	Date	DTW	Ground Elevation 10 ft
Drilling Company: LVS Inc.	Method: 4 ft macrocore Geoprobe		8 ft	Well Specifications
Date Started: 10/24/2006	Date Completed: 10/24/2006			1" diameter temporary well 18 feet total depth, 15 ft screen
Completion Depth: 20'	Hydrogeologist C. Sosik			



B-1 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	SAMPLES Blow per 6 in.	SAMPLES OVM (ppm)	SOIL DESCRIPTION
	0				
	4			0	Asphalt base and fill material to 2 ft. Brown fine sand to 4 ft No odor or staining.
	8			0	Brown fine sand. No odor or staining. Wet @ 8 ft. * *Collected soil sample (7-8ft)*
	12			0	Brown fine sand & silt. No odor or staining. Wet.
	16			0	Brown fine sand & silt. Clayey silt last 6". No odor or staining. Wet.
	20			0	Brown fine sand & clayey silt. Medium sand @ 19-20 feet. No odor or staining. Wet. * *Collected soil sample (17-18 ft)*

LEGEND:

- Natural Backfill
- Bentonite
- Cement
- Silica
- Screen
- End Cap

NTS - Not to Scale

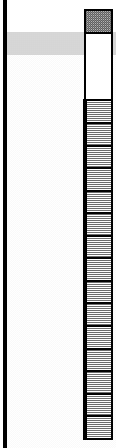
DTW - Depth to Water

Geologic Boring Log Details

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS

B2 Boring Log

Location: In front of garage bay doors at rear (west) end of contractors yard		Depth to Water (ft. from grade.)		Site Elevation Datum
Site Name: WCO0601	Address: 44/32-44/38 Purves St. LI City, NY	Date	DTW	Ground Elevation 10 ft
Drilling Company: LVS Inc.	Method: 4 ft macrocore Geoprobe		8 ft	Well Specifications
Date Started: 10/24/2006	Date Completed: 10/24/2006			1" diameter temporary well 18 feet total depth, 15 ft screen
Completion Depth: 20'	Hydrogeologist C. Sosik			

B-1 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	SAMPLES Blow per 6 in.	OVM (ppm)	SOIL DESCRIPTION
	0				
	4			0	Concrete rubble and sub-base to 2 ft. Grey-black urban fill w/ brick fragments & rubble. No odor or staining.
	8			0	Grey black silty urban fill material, water @ 7.5 ft. Very coarse material and rock fragments @ 7-8'. No odor or staining. Wet. ** Collected soil sample (7-8ft)*
	12			0	Very coarse sand & rock fragments. Med-coarse grey brown sand @ 11-12 ft. No odor or staining. Wet.
	16			0	Very coarse sand & rock fragments. Fine-coarse sand @ 14-15.5 ft. Peat/bog material from 15.5-16 ft. Swamp-bog odor. Wet.
	20			0	Peat/bog material top 6" of sample. Very coarse sand w/rock fragments to 19 ft. Peat mixed with sand in 3" layer @ 19 ft. Grey fine sand from 19-20 ft. No odor or staining. Wet. ** Collected soil sample (17-18 ft)*

LEGEND:

- Natural Backfill
- Bentonite
- Cement
- Silica
- Screen
- End Cap

NTS - Not to Scale

DTW - Depth to Water

Geologic Boring Log Details

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS

B3 Boring Log

Location: Within body shop bldg. in front of former UST area.		Depth to Water (ft. from grade.)		Site Elevation Datum
Site Name: WCO0601	Address: 44/32-44/38 Purves St. LI City, NY	Date	DTW	Ground Elevation 10 ft
Drilling Company: LVS, Inc.	Method: 4 ft macrocore Geoprobe		8 ft	Well Specifications
Date Started: 10/24/2006	Date Completed: 10/24/2006			1" diameter temporary well 18 feet total depth, 15 ft screen
Completion Depth: 20'	Hydrogeologist C. Sosik			

B-1 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	SAMPLES Blow per 6 in.	OVM (ppm)	SOIL DESCRIPTION
	0				
	4			0	Core through 6 " concrete floor. Concrete dust and concrete base material to 2 ft. Brown med-fine sand to 4 ft. No odor or staining.
	8			0	Brown med-fine sand. No odor or staining. Wet @ 7.5 ft. * *Collected soil sample (7-8ft)*
	12			0	Grey-brown fine sand. Silty at top of msample getting coarser w/ depth. No odor or staining. Wet.
	16			0	Brown to grey-brown fine to med sand. No odor or staining. Wet.
	20			0	Brown fine silty sand to 19 ft. Grey brown medium to fine sand @ 19-20 feet. No odor or staining. Wet. * *Collected soil sample (17-18 ft)*

LEGEND:

- Natural Backfill
- Bentonite
- Cement
- Silica
- Screen
- End Cap

NTS - Not to Scale

DTW - Depth to Water

APPENDIX B
LABORATORY REPORTS

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Associated Environmental
Services, Ltd.
P.O. Box 695
Shoreham, NY 11786
Attention: Charles Sosik

Report Date: 11/3/2006
Re: Client Project ID: 44-32-44-38 Purves St., Long Island City, NY
York Project No.: 06100812

CT License No. PH-0723 New York License No. 10854

Report Date: 11/3/2006
Client Project ID: 44-32-44-38 Purves St., Long Island City, NY
York Project No.: 06100812

Associated Environmental
Services, Ltd.
P.O. Box 695
Shoreham, NY 11786
Attention: Charles Sosik

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 10/25/06. The project was identifed as your project "44-32-44-38 Purves St., Long Island City, NY ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			SB1 (7-8')		SB1 (17-18')	
York Sample ID			06100812-01		06100812-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles- STARS List	SW846-8260	ug/Kg	---	---	---	---
1,2,4-Trimethylbenzene			Not detected	10.0	Not detected	10.0
1,3,5-Trimethylbenzene			Not detected	10.0	Not detected	10.0
Benzene			Not detected	2.00	Not detected	2.00
Ethylbenzene			Not detected	10.0	Not detected	10.0
Isopropylbenzene			Not detected	10.0	Not detected	10.0
Methyl-tert-butyl ether			Not detected	10.0	Not detected	10.0
Naphthalene			Not detected	10.0	Not detected	10.0
n-Butylbenzene			Not detected	10.0	Not detected	10.0
n-Propylbenzene			Not detected	10.0	Not detected	10.0
o-Xylene			Not detected	10.0	Not detected	10.0
p- & m- Xylenes			Not detected	10.0	Not detected	10.0
p-Isopropyltoluene			Not detected	10.0	Not detected	10.0
sec-Butylbenzene			Not detected	10.0	Not detected	10.0
tert-Butylbenzene			Not detected	10.0	Not detected	10.0
Toluene			Not detected	10.0	Not detected	10.0

YORK

Client Sample ID			SB1 (7-8')		SB1 (17-18')	
York Sample ID			06100812-01		06100812-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
STARS Target Semi-Volatiles	SW846-8270	ug/kG	---	---	---	---
Acenaphthene			Not detected	165	Not detected	165
Anthracene			Not detected	165	Not detected	165
Benzo[a]anthracene			Not detected	165	Not detected	165
Benzo[a]pyrene			Not detected	165	Not detected	165
Benzo[b]fluoranthene			Not detected	165	Not detected	165
Benzo[g,h,i]perylene			Not detected	165	Not detected	165
Benzo[k]fluoranthene			Not detected	165	Not detected	165
Chrysene			Not detected	165	Not detected	165
Dibenz[a,h]anthracene			Not detected	165	Not detected	165
Fluoranthene			Not detected	165	Not detected	165
Fluorene			Not detected	165	Not detected	165
Indeno[1,2,3-cd]pyrene			Not detected	165	Not detected	165
Naphthalene			Not detected	165	Not detected	165
Phenanthrene			Not detected	165	Not detected	165
Pyrene			Not detected	165	Not detected	165

Client Sample ID			SB2 (7-8')		SB2 (17-18')	
York Sample ID			06100812-03		06100812-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles- STARS List	SW846-8260	ug/Kg	---	---	---	---
1,2,4-Trimethylbenzene			Not detected	10.0	Not detected	10.0
1,3,5-Trimethylbenzene			Not detected	10.0	Not detected	10.0
Benzene			Not detected	2.00	Not detected	2.00
Ethylbenzene			Not detected	10.0	Not detected	10.0
Isopropylbenzene			Not detected	10.0	Not detected	10.0
Methyl-tert-butyl ether			Not detected	10.0	Not detected	10.0
Naphthalene			Not detected	10.0	Not detected	10.0
n-Butylbenzene			Not detected	10.0	Not detected	10.0
n-Propylbenzene			Not detected	10.0	Not detected	10.0
o-Xylene			Not detected	10.0	Not detected	10.0
p- & m- Xylenes			Not detected	10.0	Not detected	10.0
p-Isopropyltoluene			Not detected	10.0	Not detected	10.0
sec-Butylbenzene			Not detected	10.0	Not detected	10.0
tert-Butylbenzene			Not detected	10.0	Not detected	10.0
Toluene			Not detected	10.0	Not detected	10.0
STARS Target Semi-Volatiles	SW846-8270	ug/kG	---	---	---	---
Acenaphthene			Not detected	165	Not detected	165
Anthracene			Not detected	165	Not detected	165
Benzo[a]anthracene			Not detected	165	Not detected	165
Benzo[a]pyrene			Not detected	165	Not detected	165
Benzo[b]fluoranthene			Not detected	165	Not detected	165
Benzo[g,h,i]perylene			Not detected	165	Not detected	165
Benzo[k]fluoranthene			Not detected	165	Not detected	165
Chrysene			Not detected	165	Not detected	165
Dibenz[a,h]anthracene			Not detected	165	Not detected	165
Fluoranthene			Not detected	165	Not detected	165
Fluorene			Not detected	165	Not detected	165

YORK

Client Sample ID			SB2 (7-8')		SB2 (17-18')	
York Sample ID			06100812-03		06100812-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Indeno[1,2,3-cd]pyrene			Not detected	165	Not detected	165
Naphthalene			Not detected	165	Not detected	165
Phenanthrene			Not detected	165	Not detected	165
Pyrene			190	165	Not detected	165

Client Sample ID			SB3 (7-8')		SB3 (17-18')	
York Sample ID			06100812-05		06100812-06	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles- STARS List	SW846-8260	ug/Kg	---	---	---	---
1,2,4-Trimethylbenzene			Not detected	10.0	Not detected	10.0
1,3,5-Trimethylbenzene			Not detected	10.0	Not detected	10.0
Benzene			Not detected	2.00	Not detected	2.00
Ethylbenzene			Not detected	10.0	Not detected	10.0
Isopropylbenzene			Not detected	10.0	Not detected	10.0
Methyl-tert-butyl ether			Not detected	10.0	Not detected	10.0
Naphthalene			Not detected	10.0	Not detected	10.0
n-Butylbenzene			Not detected	10.0	Not detected	10.0
n-Propylbenzene			Not detected	10.0	Not detected	10.0
o-Xylene			Not detected	10.0	Not detected	10.0
p- & m- Xylenes			Not detected	10.0	Not detected	10.0
p-Isopropyltoluene			Not detected	10.0	Not detected	10.0
sec-Butylbenzene			Not detected	10.0	Not detected	10.0
tert-Butylbenzene			Not detected	10.0	Not detected	10.0
Toluene			Not detected	10.0	Not detected	10.0
STARS Target Semi-Volatiles	SW846-8270	ug/kG	---	---	---	---
Acenaphthene			Not detected	165	Not detected	165
Anthracene			Not detected	165	Not detected	165
Benzo[a]anthracene			Not detected	165	Not detected	165
Benzo[a]pyrene			Not detected	165	Not detected	165
Benzo[b]fluoranthene			Not detected	165	Not detected	165
Benzo[g,h,i]perylene			Not detected	165	Not detected	165
Benzo[k]fluoranthene			Not detected	165	Not detected	165
Chrysene			Not detected	165	Not detected	165
Dibenz[a,h]anthracene			Not detected	165	Not detected	165
Fluoranthene			Not detected	165	Not detected	165
Fluorene			Not detected	165	Not detected	165
Indeno[1,2,3-cd]pyrene			Not detected	165	Not detected	165
Naphthalene			Not detected	165	Not detected	165
Phenanthrene			Not detected	165	Not detected	165
Pyrene			Not detected	165	Not detected	165

YORK

Client Sample ID			SB1		SB2	
York Sample ID			06100812-07		06100812-08	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles-STARS List	SW846-8260	ug/L	---	---	---	---
1,2,4-Trimethylbenzene			Not detected	5	Not detected	5
1,3,5-Trimethylbenzene			Not detected	5	Not detected	5
Benzene			Not detected	1	Not detected	1
Ethylbenzene			Not detected	5	Not detected	5
Isopropylbenzene			Not detected	5	Not detected	5
Methyl-tert-butyl ether			Not detected	5	Not detected	5
Naphthalene			Not detected	5	Not detected	5
n-Butylbenzene			Not detected	5	Not detected	5
n-Propylbenzene			Not detected	5	Not detected	5
o-Xylene			Not detected	5	Not detected	5
p- & m- Xylenes			Not detected	5	Not detected	5
p-Isopropyltoluene			Not detected	5	Not detected	5
sec-Butylbenzene			Not detected	5	Not detected	5
tert-Butylbenzene			Not detected	5	Not detected	5
Toluene			Not detected	5	Not detected	5
STARS- Target Semi-Volatiles	SW846-8270	ug/L	---	---	---	---
Acenaphthene			Not detected	5.4	Not detected	6.2
Anthracene			Not detected	5.4	Not detected	6.2
Benzo[a]anthracene			Not detected	5.4	Not detected	6.2
Benzo[a]pyrene			Not detected	5.4	Not detected	6.2
Benzo[b]fluoranthene			Not detected	5.4	Not detected	6.2
Benzo[g,h,i]perylene			Not detected	5.4	Not detected	6.2
Benzo[k]fluoranthene			Not detected	5.4	Not detected	6.2
Chrysene			Not detected	5.4	Not detected	6.2
Dibenz[a,h]anthracene			Not detected	5.4	Not detected	6.2
Fluoranthene			Not detected	5.4	Not detected	6.2
Fluorene			Not detected	5.4	Not detected	6.2
Indeno[1,2,3-cd]pyrene			Not detected	5.4	Not detected	6.2
Naphthalene			Not detected	5.4	Not detected	6.2
Phenanthrene			Not detected	5.4	Not detected	6.2
Pyrene			Not detected	5.4	Not detected	6.2

Client Sample ID			SB3	
York Sample ID			06100812-09	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
Volatiles-STARS List	SW846-8260	ug/L	---	---
1,2,4-Trimethylbenzene			Not detected	5
1,3,5-Trimethylbenzene			Not detected	5
Benzene			Not detected	1
Ethylbenzene			Not detected	5
Isopropylbenzene			Not detected	5
Methyl-tert-butyl ether			Not detected	5
Naphthalene			Not detected	5
n-Butylbenzene			Not detected	5
n-Propylbenzene			Not detected	5
o-Xylene			Not detected	5

YORK

Client Sample ID			SB3	
York Sample ID			06100812-09	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
p- & m- Xylenes			Not detected	5
p-Isopropyltoluene			Not detected	5
sec-Butylbenzene			Not detected	5
tert-Butylbenzene			Not detected	5
Toluene			Not detected	5
STARS- Target Semi-Volatiles	SW846-8270	ug/L	---	---
Acenaphthene			Not detected	5.9
Anthracene			Not detected	5.9
Benzo[a]anthracene			Not detected	5.9
Benzo[a]pyrene			Not detected	5.9
Benzo[b]fluoranthene			Not detected	5.9
Benzo[g,h,i]perylene			Not detected	5.9
Benzo[k]fluoranthene			Not detected	5.9
Chrysene			Not detected	5.9
Dibenz[a,h]anthracene			Not detected	5.9
Fluoranthene			Not detected	5.9
Fluorene			Not detected	5.9
Indeno[1,2,3-cd]pyrene			Not detected	5.9
Naphthalene			Not detected	5.9
Phenanthrene			Not detected	5.9
Pyrene			Not detected	5.9

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 06100812

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: Robert Q. Bradley
Managing Director

Date: 11/3/2006

YORK

Page ___ of ___

YORK
ANALYTICAL LABORATORIES, INC.

120 Research Drive Stratford, CT 06615
(203) 325-1371 Fax (203) 357-0166

Field Chain-of-Custody Record

0610081 2

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
Associated Environmental	Maria Sasik	John Stratemeyer	44-32-44-38 Purves St Long Island City, NY	Maria Sasik
				Name (Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
1	SB1 7-8'	10/24/06		✓			VOCs 8260 SVOCs 8270 (STARS)	(1) 40z Jar (1) 80z Jar
2	SB1 17-18'	10/24/06		✓				
3	SB2 7-8'			✓				
4	SB2 17-18'			✓				
5	SB3 7-8'			✓				
6	SB3 17-18'			✓				
7	SB1 [illegible]		✓					2 VOAs
8	SB2		✓					
9	SB3		✓					
			~~✓~~					

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Maria Sasik Sample Relinquished by	10:45 Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time
		Sample Received by	Date/Time
		Sample Received in LAB by	10/25 3P Date/Time

Comments/Special Instructions
Fax + Email Results

Turn Around Time
✓ Standard ___ RUSH(define)_____

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

44-26 to 44-30 Purves Street
Queens, New York 11101

Prepared for:
Pearson Acquisition LLC c/o Brause Realty, Inc.
New York, New York

December 9, 2011
IVI Project No. PC1119280

IVI Assessment Services, Inc.

THIS REPORT IS THE PROPERTY OF IVI AND PEARSON ACQUISITION LLC C/O BRAUSE REALTY, INC. AND WAS PREPARED FOR A SPECIFIC USE, PURPOSE, AND RELIANCE AS DEFINED WITHIN THE AGREEMENT BETWEEN IVI AND PEARSON ACQUISITION LLC C/O BRAUSE REALTY, INC. AND WITHIN THIS REPORT. THERE SHALL BE NO THIRD PARTY BENEFICIARIES, INTENDED OR IMPLIED, UNLESS SPECIFICALLY IDENTIFIED HEREIN.

PROPERTY CONDITION & ENVIRONMENTAL DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.
55 West Red Oak Lane
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-1335 (fax)
www.ivi-intl.com

December 9, 2011

Mr. David Brause
Pearson Acquisition LLC c/o Brause Realty, Inc.
52 Vanderbilt Avenue
New York, New York 10017
(212) 697-5454
dab@brauserealty.com

Re: Phase I Environmental Site Assessment
44-26 to 44-30 Purves Street
Queens, New York 11101
IVI Project No.: PC1119280

Dear Mr. Brause:

IVI Assessment Services, Inc. ("IVI") is pleased to submit this copy of our Phase I Environmental Site Assessment on the above-referenced property. This report outlines the findings of IVI's site reconnaissance, historical land use research, review of governmental records, interviews, and our Pre-survey Questionnaire.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *environmental professional* as defined in § 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the *subject property*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Please contact the undersigned at **914.694.9600 (x-1933)** or by email at michael.kennedy@ivi-intl.com should you have any questions.

Sincerely,

IVI Assessment Services, Inc.

Michael Kennedy
Environmental Professional

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This report documents IVI's findings from our Phase I Environmental Site Assessment on 44-26 to 44-30 Purves Street, Queens, New York (the "Subject"). The property, which is situated in an urban area characterized by residential, retail, commercial, industrial/manufacturing, and vacant land, consists of four adjoining parcels of vacant land that total approximately 0.58 acres. Former onsite use included a chemical laboratory, radiator repair and automobile repair, auto body work, controller manufacturing, fine chemical manufacturing, and paper embossing. The Subject was also historically occupied by contracting, freight, and towing companies. Prior to 1940 the Subject was developed with three residential structures on the northeastern portion.

The purpose of this Phase I Environmental Site Assessment was to assess existing site conditions and render an opinion as to the identified or potential presence of recognized environmental conditions in connection with the property within the scope and limitations of ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05 and the limitations identified herein. Exceptions to or deletions from the scope of work are described in Section 2.0.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

Historic Site Use

Historic Sanborn Maps and City Directories indicated past site use that had the potential to negatively impact the Subject. A chemical laboratory and radiator repair structure was identified on the western side of the Subject on Sanborn maps from 1947 to 1970. On maps from 1947 to 1950 were located two gasoline tanks on the south central portion of the Subject in an open area labeled as a contractor's yard. Located on the northeastern portion of the Subject were buildings labeled as repairing, storage, controller manufacturing, and fine chemicals manufacturing. On the 1970 map was a larger structure located on the southern portion of the Subject labeled as a warehouse on the first floor and paper embossing on the second floor. This building was labeled as being constructed in 1960 and was in the location of the gasoline tanks that were identified on the 1947 and 1950 Sanborn Maps. Also on the 1970 map, the building on the northwestern side of the Subject formerly labeled as a chemical lab was labeled as auto repair. On Sanborn maps from 1980 to 2006 the large structure on the southern side of the Subject was labeled as auto repair on the first floor and paper embossing on the second floor. Former listings for the Subject on city directories included a contracting company, machine manufacturer, chemical manufacturer, automobile radiator service, automobile repair shop, paper embossing company, freight company, filter cleaning company, auto body shop, taxi service, limousine service, and towing service.

There is the potential for onsite contamination resulting from former onsite uses including chemical laboratory and chemical manufacturing, radiator repair/automobile repair, auto body work, controller manufacturing, chemical manufacturing, and paper embossing. In addition, it appears that two now inactive gasoline underground storage

tanks (USTs) were located in the vicinity of the south central portion of the Subject and have the potential to still be located onsite. We have no knowledge as to the regulatory and physical status of these underground storage tanks. There is the potential for the USTs to have negatively impacted the Subject.

IVI was provided with a correspondence from the demolition contractor indicating that they did not encounter contaminated soil or any other environmentally hazardous conditions. However, inasmuch as the demolition activities did not include subsurface testing, these observations by the demolition contractor do not alleviate our concerns.

IVI recommends that a subsurface investigation be conducted and that soil and groundwater on the Subject be analyzed for contamination.

Adjacent Site Use

Historic Sanborn Maps indicated adjacent and surrounding industrial and manufacturing land use. The following adjacent site uses that have the potential to have negatively impacted the Subject were identified. On maps from 1936-1950 the adjacent southern building (44-46 Purves Street) was identified as a chromium plating facility and on maps from 1970 to 2006 an auto body shop was identified. On maps from 1936 the adjacent northwestern building (22-19 to 22-27 44th Drive) was identified as a garage with a gasoline tank that may be an underground storage tank (UST). This building was then identified as a photochemical warehouse on the 1947 and 1950 map, a commercial/manufacturing building on the 1970 map, and as an auto repair shop on maps from 1977 to 2006. On the map from 1936 gasoline tanks (possibly USTs) were identified in manufacturing buildings located to the east of the Subject across Purves Street. Manufacturing of textile printing inks was also identified on a building to the east (44-23 to 44-27 Purves Street) on maps from 1947 to 1995 with auto repair identified on maps from 2001 to 2006. An auto repair shop was identified to the east across Purves Street (44-29 to 44-35 Purves Street) on the map from 1995. IVI recommends that the above-recommended a subsurface investigation be expanded in scope to include a determination as to if adjacent former site uses and USTs have negatively impacted the Subject.

2.0 INTRODUCTION

2.1 General

IVI was retained by Pearson Acquisition LLC c/o Brause Realty, Inc. ("Client" or "User") to prepare a Phase I Environmental Site Assessment, in conformance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05 on the Subject in accordance with our Agreement dated November 16, 2011.

2.2 Purpose and Scope

2.2.1 Purpose

The purpose of this report is to identify Recognized Environmental Conditions in connection with the property, using the methodology recommended by ASTM International in order to qualify for the innocent landowner defense to CERCLA liability and/or to help understand potential environmental conditions that could materially impact the operation of the business associated with the Subject. Specifically, this methodology is referred to as *Standard Practice for Environmental Site Assessments: Phase l Environmental Site Assessment Process* Designation: E 1527-05.

The term Recognized Environmental Condition is defined by ASTM Standard E 1527-05 as "...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

2.2.2 Scope

In general, the scope of this assessment consisted of reviewing readily available information and environmental data relating to the property; interviewing readily available persons knowledgeable about the site; reviewing readily available maps, aerial photographs and records maintained by federal, state, and local regulatory agencies; and conducting a site visit.

Of importance, the client is advised that federal, state, and local laws may impose environmental assessment obligations beyond the scope of this practice. Client is also notified that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the Subject that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance.

The specific scope of this assignment included the following:

2.2.2.1 Performing a site reconnaissance to characterize on-site conditions and assess the site's location with respect to surrounding property uses and natural surface features. In addition, IVI conducted a reconnaissance of the surrounding roads and readily accessible adjacent properties to identify obvious potential environmental conditions on neighboring properties. Photographs taken as part of the site reconnaissance are provided in Appendix A.

The site visit was conducted on December 5, 2011, by Maria Sinnamon representing IVI. The site was not represented. It was partly cloudy and the temperature was approximately 55° F at the time of our site survey. IVI conducted the site reconnaissance in a systematic manner. The Subject, which was vacant land, was surveyed in a grid pattern.

2.2.2.2 Interviewing persons familiar with the property to obtain information on present and previous on-site activities potentially resulting in the environmental degradation of the site or adjoining properties. A Pre-survey Questionnaire to be filled out and returned to IVI by someone knowledgeable about the site was provided to Mr. David Brause. A blank copy of the Pre-survey Questionnaire is provided in Appendix B.

The following table presents a summary of the individuals contacted or to whom requests for documentation were made as part of this assessment:

Name	Affiliation	Telephone No.
Building Information System (BIS)	New York City Department of Buildings	(212) 312-8062
Ms. Marie Dooley	New York City Department of Environmental Protection	(718) 595-6530
Mr. Fawzy Abelsadek	New York State Department of Environmental Conservation	(718) 482-4949
Ms. Rena Bryant	New York City Health Department	(212) 788-5013

Name	Affiliation	Telephone No.
Bureau of Fire Prevention	New York City Fire Department	(718) 999-2442
Mr. David Brause	Subject Property	(212) 697-5454

2.2.2.3 If provided, reviewing of information such as previously prepared appraisals, building plans and specifications, and environmental reports.

2.2.2.4 Reviewing readily available historical documents, such as topographic maps, aerial photographs, city directories, Sanborn Fire Insurance Maps and atlases, to identify previous activities on and in the vicinity of the Subject. Copies of these documents are included in Appendix C.

2.2.2.5 Reviewing readily available environmental databases maintained by federal, state, and local agencies within the approximate minimum search distances as described within the Regulatory Review Section 6.0 of this report. A copy of the Computerized Environmental Report, provided by Environmental Data Resources, Inc. can be referenced in Appendix D.

2.2.2.6 Conducting a visual survey of readily accessible common areas to identify the presence of the most obvious and common types of suspect asbestos containing materials (ACM). The basis for "suspect" determination is taken from the materials listed in Appendix G of the United States Environmental protection Agency (USEPA) publication Managing Asbestos in Place (also known as the Green Book). All building materials listed within Appendix G of the Green Book are considered to be suspect ACMs at the Subject. This screening is not intended to be used for demolition, abatement, renovation, or repair work.

THIS LIMITED SURVEY IS NOT TO BE CONSTRUED AS A COMPREHENSIVE ASBESTOS SURVEY, WHICH OFTEN ENTAILS DESTRUCTIVE TESTING OR THE SURVEY OF AREAS BEHIND WALLS, ABOVE CEILINGS, IN TENANT SPACES AND IN OTHER TYPICALLY INACCESSIBLE AREAS. MOREOVER, IVI DOES NOT WARRANT THAT ALL ACMs AT THE SUBJECT HAVE BEEN IDENTIFIED.

2.2.2.7 Reviewing published radon occurrence maps to determine whether the site is located in an area with a propensity for elevated radon concentrations.

2.2.2.8 An analysis of mold and/or mold issues was beyond the scope of this report.

2.2.2.9 Assessing the age of the Subject to determine whether it is predisposed to contain lead-based paint. During our walkthrough survey, IVI noted the condition of the paint observed. Note, a compliance audit for lead paint was not conducted.

2.2.2.10 Testing, if any, was designed solely to meet the requirements of the client's scope of work, not to meet any local, State or Federal regulations and shall not be utilized as such.

2.3 Data Gaps

According to § 3.3.20 of ASTM Standard E 1527-05 a data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts to gather same. Data gaps may result from incompleteness in any of the activities required by the ASTM Standard. The following data gaps occurred in connection with this report:

Data Gap	Explanation	Significance of Gap
Site History	History not conducted back to a time when the site was undeveloped land (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as aerial photographs, historic topographic maps, city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.
Site History	Site history not conducted in 5-year intervals (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as aerial photographs, historic topographic maps, city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.
User Interview	Pre-Survey Questionnaire not returned to IVI	Unknown. However, if receipt of questionnaires alters the Report's conclusion, the client will be notified
Former Owner or Operator Interview	Unable to interview former site owner or operator due to inability to locate	Low - not likely to alter Report's conclusions

Data Gap	Explanation	Significance of Gap
Governmental Records	FOIAs not returned (See § 8.6)	Unknown. However, if receipt of FOIAs alters the Report's conclusion, the client will be notified

Salient Assignment Information	
IVI Project No.:	PC1119280
Project Name:	44-26 to 44-30 Purves Street
Street Address:	44-26 to 44-30 Purves Street
City, State and Zip:	Queens, New York 11101
Primary Use:	Vacant Land
Year Built and Age of Improvements:	N/A
Site Area:	0.58 Acres
Building Size:	N/A
Reported Number of Units:	N/A
Number of Buildings:	N/A

4.1 Property Location

The Subject is located at 44-26 to 44-30 Purves Street in the Borough of Queens, New York City, New York and is identified on the City of New York tax maps as Block 268, Lots 1, 24, 25, and 26. Refer to the Site Plan provided within Appendix C.

4.2 Surrounding Land Use

The property is located in an urban setting characterized by residential, retail, commercial, industrial/manufacturing and vacant land. The following is a tabulation of surrounding property usage:

Direction	Adjacent Properties	Surrounding Properties
North	Vacant land and former auto repair shop (27-21 44th Drive)	Industrial/manufacturing and commercial properties
South	Auto Repair Shop (44-46 Purves Street)	Thomson Avenue followed by railroad lines and industrial/manufacturing properties beyond
East	Purves Street followed by a condominium tower (44-27 Purves Street), a commercial building utilized as an arts center (44-19 Purves Street), and vacant land	Vacant land, auto repair shop to the southeast (44-43 Purves Street), parking lot, and industrial/manufacturing properties beyond
West	Thomson Avenue followed by a commercial retail and residential building (27-28 Thomson Avenue)	Auto repair shop to the northwest (27-17 44th Drive), commercial and institutional properties beyond

4.3 Physical Site Setting

4.3.1 Size and Shape of Parcel

The property consists of four parcels, is irregular in shape, and totals approximately 0.58 acres in size. The Subject exhibits frontage on Purves Street, Thomson Avenue and 44th Drive. A concrete retaining wall is located on the southern and southwestern sides of the Subject along Thomson Avenue and 44th Drive.

4.3.2 Topography

The Subject is essentially level, however, properties to the northeast are at a higher topographic elevation. The topography of the area is best described as gently sloping. According to the United States Geological Survey (USGS) *Brooklyn, N.Y.* 7.5 Minute Series topographic map, the Subject's topographic elevation is approximately 19 feet above mean sea level (msl).

4.3.3 Surface Waters and Wetlands

Surface Waters

There are no surface water bodies or streams on or adjacent to the Subject. The closest open surface water to the Subject is Dutch Kills, a tributary of the Newtown Creek, which is located approximately 0.21 miles to the south.

Wetlands

IVI reviewed a wetlands map of the Subject area prepared using the US Department of the Interior, Fish and Wildlife Service's Internet Wetland Interactive Mapper. The source material used to produce the National Wetlands Inventory digital data for these maps was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Based on this review, IVI did not identify any federally regulated wetlands on the Subject property. Additionally, IVI did not observe vegetation characteristic of wetlands on the Subject site.

4.3.4 Soils, Geology and Groundwater

Soils

The soil at the Subject is classified as Urban Land. Urban Land complex are those soils in which the soil's original structure and content have been so altered by human activities that it has lost its original characteristics and is thus unidentifiable.

Geology

There are no predominant geological surface features such as rock outcroppings on the Subject. According to previously conducted geotechnical surveys, bedrock is encountered on the Subject at approximately 43 to 61 feet below ground surface (bgs).

According to a report titled "Potentiometric Surface of the Water Table, Magothy and Lloyd Aquifer on Long Island, New York in 1984, Water Resources Investigation Report 86--4189 and published by USGS in 1987, the subsurface geology in the vicinity of the Subject consists of the Upper Glacial Deposits, Gardiners Clay, Jameco Gravel, the Raritan formation, and bedrock.

The unconsolidated Upper Glacial layer, deposited during the Pleistocene, extends to a depth of 175' below grade surface (bgs) and consists of glacial outwash deposits composed of sands and gravel. The permeability of this unit is moderate to high.

The Upper Glacial deposits are underlain by Gardiners Clay consisting of clay, silt, and a few layers of sand. Also deposited during Pleistocene, the Gardiners Clay extends to a depth of 200' below sea level (bsl). The permeability of this unit is very low, so it constitutes a confining unit for the underlying aquifer.

The Gardiners Clay is underlain by the Jameco Gravel unit consisting primarily of sand and gravel with a few layers of clay and silt. This unit extends to a depth of 250' bsl and is moderately to highly permeable.

The Jameco Gravel is underlain by the Raritan formation consisting of the Raritan Confining Unit and the Lloyd Sand Member, deposited during the Cretaceous Period. The Raritan Confining Unit extends to a depth of 300' bsl and is composed of clay (solid and silty), with a few lenses and layers of sand, lignite, and pyrite. The permeability of this unit is very poor. The Lloyd Sand Member extends to a depth of 400' bsl and is composed of sand and gravel within a clayey matrix. The permeability of this layer is poor to moderate.

Underlying the Raritan formation is bedrock. Paleozoic and Precambrian in age, the bedrock consists of metamorphic and metaigneous rocks (muscovite and biotic schist, gneiss and metagranites). The bedrock is poorly permeable to virtually impregnable, and constitutes the lower boundary of groundwater reservoir.

Groundwater

Under natural, undisturbed conditions, shallow groundwater flow generally follows the topography of the land surface and on this basis the topography suggests that groundwater flow across the Subject is in a southwesterly direction. However, localized conditions can alter flow direction and thus the presumed flow may not coincide with the actual in the subject area. According to previously conducted geotechnical surveys groundwater at the Subject is encountered at a depth of approximately 5.5 to 10 feet below ground surface.

4.4 Site Improvements

4.4.1 Utilities

The Subject is served with the following utilities:

Water:	Not provided
Sanitary Sewer:	Not provided
Storm Sewer:	New York City Department of Environmental Protection (NYCDEP)
Electric:	Not provided

As the Subject is vacant land it is not connected to the public water, sanitary sewer, and electric systems that are provided in the Subject area.

Stormwater runoff collected by catch basins is discharged into the municipal stormwater management system.

4.4.2 Building Description

There are no buildings on the Subject.

4.5 Current Property Use

The subject property is currently vacant land with no activities occurring onsite.

4.6 Environmental Permits

Based on our research, no environmental permits such as wastewater discharge, National Pollutant Discharge Elimination System (NPDES), air emissions, or petroleum bulk storage (PBS) tank registrations are required at the Subject.

4.7 Plans and Specifications

Neither building drawings nor specifications were provided for our review.

5.1 Historical Summary

Currently, the subject site is vacant land. The Subject was identified with three dwellings on the northeastern portion of the Subject (Lots 24, 25 and 26) on Sanborn Maps from 1898 to 1936. A chemical lab and radiator repair structure was identified on the western side of the subject on maps from 1947 to 1970. On maps from 1947 to 1950 were two gasoline tanks on the south central portion of the Subject in an open area labeled as a contractor's yard. A storage building was located on the southern portion of the Subject and a garage was located on the southeastern corner. Storage and office buildings were located on the northwestern portion of the Subject. Located on the northeastern portion of the Subject (Lots 24, 25, and 26) were buildings labeled as repairing, storage, controller manufacturing and fine chemicals manufacturing. An addition to the building on the northwest portion of the Subject was identified on the 1970 map. Also on the 1970 map was a larger structure located on the southern portion of the Subject labeled as a warehouse on the first floor and paper embossing on the second floor. This building was labeled as being constructed in 1960 and was in the location of the gasoline tanks that were identified on the 1947 and 1950 Sanborn Maps. The buildings on the northeastern portion of the Subject were not present on the 1970 map and a small structure identified as a contractor's storage warehouse was located on the eastern side of the Subject. On the 1970 map the building on the northwestern side of the Subject formerly labeled as a chemical lab was labeled as auto repair (through the 2006 map) and an addition was added to the small warehouse structure on the eastern side of the Subject. On Sanborn maps from 1980 to 2006 the large structure on the southern side of the Subject was labeled as auto repair on the first floor and paper embossing on the second floor. On maps from 2001 to 2006 the northeastern portion of the Subject (vacant area) was labeled as storage.

Former listings for the Subject from city directories included a contracting company, machine manufacturer, chemical manufacturer, automobile radiator service, automobile repair shop, paper embossing company, freight company, filter cleaning company, auto body shop, taxi service, limousine service, and towing service.

5.2 Topographic Maps

IVI reviewed the USGS *Brooklyn, N.Y.* 7.5 Minute Series topographic map of the Subject area, which was last revised in 1995. The topographic map does not identify individual buildings or development on the Subject property due to the concentration of structures in the highly urbanized area, but rather shows the area to be shaded denoting urbanized land use, and identifies only landmarks as distinct structures. Nevertheless, the topographic map does not identify any industrial complexes, landfills or wetlands on or adjacent to the Subject site. Railroad tracks are identified to the south of the Subject.

5.3 Historical Maps

Sanborn Fire Insurance Maps (Sanborn Maps)

IVI had a search conducted for Sanborn Maps, which reference the property. The findings of this review are summarized below:

Year	Subject Property	Adjacent and Surrounding Properties
1898	The central and southern portion of the Subject (Lot 1) is identified with multiple vacant lots. The northern portion of the Subject (Lots 24, 25, and 26) are identified with two-story dwellings and storage sheds.	Vacant lots and a two story building identified as Kennels is located to the south. Dwellings are located to the north and east. To the north at 16 Purves Street is a two story building labeled as "Vac Wrech." Stores and a junk yard are located further north. To the southeast across Purves Street are buildings identified as a manufacturer of baker's tools, ovens, and mixing and storage. The Long Island Railroad is identified further south. Located to the south and west across Thomson Street is vacant land, a shed and a store. To the north west across Nott Avenue (currently 44th Drive) is a Second Hand Building Material yard with store, contractor building and wagon shed.
1915	Similar to previous map reviewed except that that the present day Lot 1 is divided into two parcels.	Vacant lots are identified to the south of the Subject. Dwellings are located to the north of the Subject followed by junk storage buildings, a junk yard and stores. Dwellings and a Sub-Station are located to the east of the Subject across Purves Street. The Manhattan Steam Bakery is identified to the southeast across Purves Street. The railroad is present further south. Vacant land is present to the southwest across Thomson Avenue. To the west across Nott Avenue is Stevenson's Construction Company (contractors).
1936	Similar to previous map reviewed.	The adjacent southern building is labeled as Bottlers Supplies Manufacturing and Grand Chromium Plating Corporation. The parcel adjacent to the Subject to the north is vacant land and is followed by a building labeled as Controller Manufacturing. A building adjacent to the Subject to the northeast is identified as a Garage with furniture storage and is identified with a gasoline tank. Located further north are structures labeled as iron works, lumber sheds, and stores. Located

Year	Subject Property	Adjacent and Surrounding Properties
		to the east of the Subject across Purves Street are a substation, Anchor Cap and Closure Corp. with a gasoline tank, Welsch Brothers Contractors with a garage and gasoline tank, dwellings, and a junk yard. Located to the southwest across Thomson Avenue is the large commercial building labeled as the Metropolitan Life Insurance Company and built in 1920-21.
1947	The Subject is identified with a chemical lab on the western side (also labeled as radiator repair), a contractors yard with two gasoline tanks in the south-central portion of the Subject, a one story storage building on the southern side, a private garage on the southeast corner, and a storage building and an office building on the northern portion of Lot 1. Located in the vicinity of Lots 24, 25, and 26 are a building labeled as repairing, a storage building, a building labeled as Controller Manufacturing, a second storage building and a building labeled as fine chemicals manufacturing.	The adjacent southern building is labeled as chromium plating. The adjacent building to the northwest is labeled as a paper warehouse and photo chemicals warehouse. Adjacent to the north is a building labeled as controller manufacturing and storage. Further north are buildings labeled as steel storage and machine parts, carton warehouse, Lucite manufacturing, lumber storage, machine shop and stores. Located to the east across Purves Street are buildings labeled as iron works, manufacturing textile printing inks, private garage and paper warehouse, dwellings, stores, and firefighting equipment warehouse. Properties to the south and west across 44th Drive (Nott Avenue) appear similar to the previous map except that a filling station with four gasoline tanks is identified to the west of 44th Drive.
1950	Similar to previous map reviewed.	Similar to previous map reviewed except that the large commercial buildings located across Thomson Avenue is labeled as the Bickford Building.
1970	Lots 24, 25, and 26 appear as vacant land. The chemical lab is identified. The storage buildings on the northwestern portion of the Subject are also labeled as radiator repair and include a building addition. A larger structure labeled as a warehouse on the first floor and paper embossing on the second floor (built in 1960) is located on the southern portion of the Subject and is attached to the structure formerly identified as a garage. This newer structure is also over the location of the gasoline tanks that were identified on previous maps. A small commercial structure remains on the eastern portion of the Subject and is labeled as a	Vacant land and a building labeled as welding and repairs are located to the north of the Subject. The northwestern adjacent building is labeled as commercial/manufacturing. Further north are identified a junk yard, parking garage, vacant lots, lumber sheds, and machine shops. The building adjacent to the south is labeled as auto body repair. Located to the east across Purves Street are buildings labeled as warehouses, manufacturing textile printing inks, hardware manufacturing, offices, and private garage, and parking area. Properties to the south and further to the west appear similar to the previous map.

Year	Subject Property	Adjacent and Surrounding Properties
	contractor's storage warehouse.	
1977	The building formerly labeled as a chemical lab on the northwestern side of the Subject is now labeled as auto repair. The additional north western structures are labeled as warehouses. The large southern structure is labeled as a warehouse on the first floor and paper embossing on the second floor. A small addition has been added to the small warehouse building on the eastern side of the Subject.	Similar to previous map except that the northwestern adjacent building is labeled as an autobody shop. An auto body repair shop is also located further to the northwest across 44th Drive.
1980	Similar to previous map reviewed except that the large building on the southern portion of the Subject is labeled as auto repair on the first floor and paper embossing on the second floor.	Similar to previous map except that the southern adjacent building is labeled as a heating supply warehouse on the first floor and an auto body repair shop on the second floor. Also, the former filling station located to the west of 44th Drive is labeled as an auto repair shop and no gasoline tanks are identified.
1985	Similar to previous map reviewed.	Similar to previous map reviewed.
1990	Similar to previous map reviewed.	Similar to previous map reviewed except that the commercial building located to the south of Thomson Avenue is labeled as Eagle Electric Manufacturing Company, Inc.
1995	Similar to previous map reviewed.	Similar to previous map reviewed except that a building located to the east of Purves Street formerly labeled as a garage is labeled as auto repair.
2001	Similar to previous map reviewed except that the northern vacant portion of the Subject is labeled as storage.	Similar to previous map reviewed except for the following: Located to the east of Purves Street is an auto repair shop and warehouse, contracting company, oil burner utility company, manufacturing building and parking area.
2006	Similar to previous map reviewed.	Similar to previous map reviewed.

5.4 Aerial Photographs

Aerial photographs frequently provide visual documentation of site conditions at the time of the photographs. Activities such as dumping or industrial use of a site can often be discerned through the examination of aerial photographs. Inasmuch

as the Subject has been sufficiently covered by other standard historic information sources, aerial photographs were not consulted as part of this assessment.

5.5 Chain-of-Ownership

A copy of the Subject's Chain-of-Title has not been provided to IVI for review.

5.6 Previous Reports

IVI reviewed previous environmental documents related to the Subject. The information obtained was not verified for accuracy by IVI and a critique of the documents was beyond the scope of this assessment.

- *Update To Phase I Environmental Site Assessment Report, Property located at 44-32/38 Purves Street In Long Island City, New York,* prepared by Middleton Environmental, Inc. on behalf of Weiss and Company and dated April 27, 2006. This report was prepared as an update to the Phase I Environmental Site Assessment (ESA) prepared by Middleton Environmental, Inc. (MEI) and dated September 30, 2003. The September 2003 Phase I was not provided to IVI for review. The update was conducted to determine if there were any recognized environmental conditions with regard to the subject site since the original report. The site was identified as Lot 1 and there were two commercial buildings on site. The main building was approximately 17,860 square feet in size with two floors and no basement. This building was vacant and was formerly utilized as an automobile repair facility and a carpet storage facility. The second building was a small two story building with a basement that was formerly utilized as a realty office. The portion of the building along Purves Street (where a carpet company was located) and a small portion of the building on the corner of Thomson Avenue and 44th Drive (that housed the offices for the automobile repair company) were reportedly constructed in 1939. The larger portion of the building that housed the automobile repair facility and connected the two original buildings was reportedly constructed in 1960. Sanborn Fire Insurance Maps and City Directories indicated that the original building on Purves Street was utilized as a private garage while the original building on the corner of Thompson Avenue and 44th Drive was originally utilized as a chemical laboratory and automobile radiator repair facility (while the remainder of the property was utilized as a contractors storage yard). The larger portion of the building that was constructed in 1960 was utilized in the past by a heat exchanger company, a filter cleaner company, a hardware warehouse, a paper embossing company, and a taxi repair facility. The small two story office had been utilized as a realty office and by a contracting company and was constructed between 1936 and 1940.

Drains were identified in the automobile repair area that the property owner indicated were connected to the municipal sewer system. Two 275 gallon above ground heating oil storage tanks and one 275 gallon above ground waste oil tank were located within the main buildings with no signs of staining or leakage. The heating oil tanks were registered with the New York City Fire Department; however the waste oil tank was not registered. There was one paint spray booth on the lower level of the main building that was properly vented outside the building.

A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two buried gasoline storage tanks behind the carpet storage area portion of the building. No evidence of the tanks was identified during the site inspection. MEI stated that it is highly likely that the tanks were removed when the rear portion of the building was constructed and that later Sanborn maps did not indicate the presence of any buried tanks on the site. MEI concluded that no further testing, subsurface or otherwise, was required on the Subject site.

- *Phase I Environmental Site Assessment Report, Property located at 4426/30 Purves Street in Long Island City, New York,* prepared by Middleton Environmental, Inc. on behalf of Weiss and Company and dated April 26, 2006. The subject was identified as vacant Lots 24, 25, and 26. Sanborn Maps indicated that three dwellings were located on the site prior to 1898 and were demolished between 1936 and 1950. The 1950 Sanborn Map indicated three small buildings on the site utilized by a controller manufacturing company, a pine chemical company, and an air freight company. These buildings were demolished prior to 1970 and the property has been vacant since that time. During the site inspection several small piles of miscellaneous debris and construction/demolition debris were identified on the site. Two 55-gallon drums were also identified. MEI recommended that the drums and piles of debris be removed from the site prior to any planned construction activities on the property. MEI did not identify any recognized environmental conditions associated with the Subject site and no further testing, subsurface or otherwise, was recommended.

- *Review of Environmental Reports, 44-30 Purves Street, Long Island City, New York,* prepared by Steven A. Ciambruschini of Langan Engineering and Environmental Services on behalf of GSO Capital Partners and dated August 4, 2006. This letter report stated that the two previously described Phase I reports were reviewed. The letter report stated that based on the former site use as an automobile repair shop and paper embossing and the former presence of two gasoline underground storage tanks (USTs), acid tanks, and a chemical lab, that contamination may be encountered during site work. The letter also indicated that it should not be assumed that the

gasoline USTs, and any contaminated soil or groundwater associated with the tanks, were removed when the building addition was constructed. Due to the possible presence of USTs and impacted soils, the letter recommended completing a limited subsurface investigation (three test borings finished as monitoring wells) to identify significant impact associated with historic site uses. Note that no subsurface investigation that included analysis of soils and groundwater for contaminants of concern was identified through IVI's assessment.

- *Geotechnical Engineering Study, Proposed Residential Development, 4430 Purves Street, Queens, New York,* prepared by Langan Engineering and Environmental Services (Langan) on behalf of Omni Holding Group and dated February 1, 2008. This geotechnical study was conducted in preparation for the proposed development of two towers on the Subject; one 11-story tower located on Purves Street and one 31-story tower located on Thomson Avenue. The report indicates that three borings, identified as SB-1, SB-2, and SB-3 were installed on the site in 2005 by Soil Mechanics Drilling Corp (a letter report tor this geotechnical study was dated February 25,2005). The 2008 Langan Investigation included seventeen borings (B-1 through B-17). Three groundwater monitoring wells were installed in completed borings B-4, B-10, and B-16. Two test pits (TP-1 and TP-2) were also excavated to determine the type, condition, and depth of the Thomson Avenue and 44th Drive retaining wall foundations. Subsurface conditions encountered in the 2008 study were indicated to be generally consistent with those encountered in the Soil Mechanics 2005 investigation. The general subsurface stratigraphy consisted of a layer of sandy fill overlaying successive strata of silty sands, silts, clays and decomposed rock to the bedrock. A layer of uncontrolled fill, generally consisting of black coarse sand, some gravel with varying amounts of brick and concrete covered the site. The thickness of the fill varied from approximately five feet to nine feet. Bedrock was encountered at depths ranging from approximately 43 feet to 61 feet below ground surface. Groundwater level was measured in the observation wells. The measured groundwater depths averaged approximately 9 to 10 feet below the sidewalk grade. A concrete foundation from a demolished building was encountered during the installation of the test pits. Groundwater was encountered at approximately 7.5 feet below existing grade at TP-1 and at approximately 5.5 feet below grade at TP-2. Langan concluded that the uncontrolled fill and underlying loose sandy and soft silt and clay materials were not suitable for support of a shallow foundation system. A deep foundation system was recommended for the buildings to transfer the building loads to the underlying bedrock. Langan made recommendations regarding feasible foundation systems, permanent groundwater control, and construction.

- IVI was also provided with a correspondence dated January 8, 2008 from DiSano Construction Co. Inc. which indicated that they performed the demolition of former site improvements. During such demolition, they did not encounter contaminated soil, asbestos, PCBs, CFCs or any other environmentally hazardous conditions. However, inasmuch as the demolition activities did not include subsurface testing, these observations by the demolition contractor do not alleviate our concerns.

5.7 City Directories

IVI commissioned EDR to obtain a historical City Directory Abstract for the Subject for the years 1922, 1934, 1939, 1945, 1950, 1962, 1967, 1970, 1976, 1983, 1991, 1996, 2000 and 2005. Refer to Appendix F for City Directory Abstract. IVI also reviewed city directories included in the previous Phase I Environmental Site Assessments conducted for the Subject. The Subject is also identified with addresses along Thomson Avenue and 44th Drive. This review yielded the following information:

Year	Subject Property
1934	Augusta Schwarta (44-30 Purves Street)
1940	Welsh Brothers Contracting Company (trucking) (44-30 Purves Street)
1945	FR Machine Works (44-26 Purves Street) Welsh Brothers Contracting Co. (trucking) (44-30 Purves Street)
1950	Ortho Chemical Corp (44-26 Purves Street) Central Auto Radiator Service, Tru-Synthetics Inc. and Welsh Brothers Contractors (trucking) (44-30 Purves Street) Central Auto Repair Company (28-01 44th Drive)
1960	Freight Company (44-26 Purves Street) Berdell Industries Inc, Roscoe T. Copes, Gertrude Green, Tru Synthetics Inc., and Welsh Brothers Contracting Company (44-30 Purves Street) Berdell Industries Inc (heat exchangers), Central Auto Radiator Co. Inc., Filter Cleaner Co. (28-01 Thomson Avenue) National Announcements, Inc. (28-11 Thomson Avenue)
1962	Gertrude Green, Welsh Brothers Contracting Company (trucking), Roscoe T Copes, and Tru Synthetics Inc. (44-30 Purves Street) Central Auto Radiator Co. Inc., Berdell Industries Inc. (heat exchangers), and Filter Cleaner Co. (28-01 Thomson Avenue) National Announcements Inc. (28-11 Thomson Avenue)
1967	Welsh Brothers Contracting Co (trucking), Gertrude Green and Roscoe T Copes (44-30 Purves Street) Hydro Cote Corp. of America, Berdell Industries Inc. (heat exchangers), Central Auto Radiator Co. Inc., and Filter Cleaner Co. (28-01 Thomson Avenue) National Announcement Inc. and Rosner Card & Paper Co. (28-11 Thomson Avenue)

Year	Subject Property
1970	Berdell Industries Inc. (heat exchangers) and Welsh Brothers Contracting Company (trucking) (44-30 Purves Street) Central Auto Radiator Co Inc., Filter Cleaner Co, and Hydro Cote Corp of America (28-01 44th Drive and Thomson Avenue) National Announcements, Inc., Rosner Card and Paper Company (28-11 44th Drive and Thomson Avenue)
1976	Filter Cleaning Co., Berdell Industries Inc. (heat exchange), and Central Auto Radiator Co Inc. (28-11 Thomson Avenue)
1980	LC Construction and Welsh Brothers Contracting Company (trucking) (44-30 Purves Street) Jema Coach Auto Body (28-01 44th Drive) Taxi Brokers Inc. and Taxi City (28-11 44th Drive)
1983	Welsh Brother Contracting Co and LC Construction (44-30 Purves Street) Jema Coach Auto Body (28-01 Thomson Avenue) Parliament Limousine Service Inc., Taxi City, Timeley Towing Inc. (28-11 Thomson Avenue)
1991	Jema Coach Auto Body (28-01 Thomson Avenue) Marling Auto Repair Inc. (28-11 Thomson Avenue) LC Construction (44-30 Purves Street)
2000	Vincent Barellino (44-26 Purves Street) LLC Construction Inc and Welsh Brothers Contracting (44-30 Purves Street)
2005	Welsh Brothers Contracting Co (44-30 Purves Street)

The Subject is listed as 44-26 and 44-30 Purves Street, 28-01 44th Drive, and 28-01 and 28-11Thomson Avenue. Former listings for the Subject included a contracting company, machine manufacturer, chemical manufacturer, automobile radiator service, automobile repair shop, paper embossing company, freight company, filter cleaning company, auto body shop, taxi service, limousine service, and towing service. There is the potential for former onsite activities to have negatively impacted the Subject. Listings for surrounding properties included chemical manufacturing and auto body listings.

5.8 Municipal Records

Tax Assessor Records

According to the tax assessor records reviewed, the Subject includes the following adjoining lots on Block 268: Lot 1 (0.42 acres), Lot 24 (0.06 acres), Lot 25 (0.05 acres), and Lot 26 (0.05 acres). All four lots are vacant land. The owner is identified as Thomson Purves LLC.

Building Department Records

IVI reviewed building permits and records for the Subject on the New York City Department of Buildings (NYCDOB) database.

The following relevant permits were reviewed:

Permit Number	Date	Purpose of Permit
FO 90-86	2/19/1986	Oil Burner Application for Lot 1
NB 2163-45	1945	Construct new building on Lot 1
NB 2390-07	1907	Construct new building on Lot 1

The previously conducted Phase I update prepared by Middleton Environmental, Inc. identified certificates of occupancy for Lot 1 which was formerly known as 44-38 Purvis Street. The certificate of occupancy is dated January 13, 1961. Permissible use included a factory and loading and unloading of trucks on the first floor and a factory, office, and loading and unloading of trucks on the second floor. A second certificate of occupancy was dated November 5, 1976 also for Lot 1 which was identified as 28-01Thomson Avenue. Permissible use included a biological analysis laboratory, used car sales and auto repair on the first floor and a repair shop, used car sales and auto repair on the second floor.

In addition, a violation for the Lot 1 of the Subject (Violation number 051500C02FS01), listed on the NYCDOB database, was issued on May 15, 2000 for the illegal use of the vacant lot as a junk yard. The material onsite was listed as non-hazardous.

Fire Department Records

The previously conducted Phase I update prepared by Middleton Environmental, Inc. included records from the City of New York Fire Department indicating that one 550 gallon heating oil AST (permit expired on August 31, 1984) was registered at 44-38 Purves Street (Lot 1), one 275 gallon heating oil AST (permit expired on April 14, 1998) was registered at 28-01 Thomson Avenue (Lot 1) and two 275 gallon heating oil ASTs (permits expired on April 21, 1998) were registered for 44-30 Purves Street.

5.9 Internet Search

IVI conducted a cursory internet search for the Subject's name and address using the Google search engine on December 6, 2011. No environmentally related information was identified on the first page of the Google search engine.

A copy of regulatory database information contained within a Computerized Environmental Report (CER) provided by Environmental Data Resources, Inc. (EDR) appears in Appendix D. The CER is a listing of sites identified on select federal and state standard source environmental databases within the approximate minimum search distance specified by ASTM Standard Practice for Environmental Site Assessments E 1527-05. IVI reviewed each environmental database to determine if certain sites identified in the CER are suspected to represent a material negative environmental impact to the Subject. The following table lists the number of sites by regulatory database within the prescribed minimum search distance appearing in the CER.

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
Federal National Priorities List (NPL) Site List	One-Mile	0
Federal Delisted NPL Site List	One-Half Mile	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	One-Half Mile	0
Federal CERCLIS No Further Remedial Action Planned (NFRAP) Sites	One-Half Mile	0
Federal Resource Conservation and Recovery Information System (RCRIS) Treatment, Storage, and Disposal (TSD) List	One-Half Mile	0
Federal RCRIS Generators List	On-Site and Adjoining Properties	1
Federal Corrective Action Tracking System (CORRACTS)	One-Mile	4
Federal Emergency Response Notification System (ERNS) List	On-Site	0
Federal Institutional/Engineering Control Registries	On-Site	0
New York and Tribal Lists of NPL Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Mile	0
New York and Tribal Lists of CERCLIS Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Half Mile	1
New York and Tribal Landfills or Solid Waste Facilities List	One-Half Mile	2
New York and Tribal Petroleum Bulk Storage Tank List	On-Site and Adjoining Properties	0
New York and Tribal Leaking UST/Spill List	One-Half Mile	46
New York and Tribal Institutional/Engineering Control Registries	On-Site	0
New York and Tribal Voluntary Cleanup Sites	One-Half Mile	3
New York and Tribal Brownfields Sites	One-Half Mile	1

The CER identified 20 "Orphan Sites". "Orphan Sites" are those sites that could not be mapped or "geocoded" due to inadequate address information. Refer to the CER for a list of these "Orphan Sites". IVI attempted to locate these sites via a review of street maps, vehicular reconnaissance and/or interviews with people familiar with the area. "Orphan Sites" that were identified in this manner were analyzed in their respective regulatory database below.

A description of the databases reviewed by IVI and an analysis of sites identified within the prescribed search area are presented below.

6.1 Federal Databases

NPL

The NPL database is a listing of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund"). A site must be on the NPL to receive money from the Trust Fund for Remedial Action.

Analysis/Comment: The CER did not identify NPL sites within the AMSD.

Delisted NPL Site List

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the National Contingency Plan (55 FR 8845, March 8, 1990). Sites that have been deleted from the NPL remain eligible for further Superfund-financed remedial action in the unlikely event that conditions in the future warrant such action. Partial deletions can also be conducted at NPL sites.

Analysis/Comment: The CER did not identify Delisted NPL sites within the AMSD.

CERCLIS

CERCLIS is the USEPA's system for tracking potential hazardous-waste sites within the Superfund program. A site's presence on CERCLIS does not imply a level of federal activity or progress at a site, nor does it indicate that hazardous conditions necessarily exist at the location. Within one year of being entered into CERCLIS, the USEPA performs a preliminary assessment of a site. Based upon the results of the preliminary assessment, the USEPA may conduct additional investigation, which could lead to a site being listed on the NPL.

Analysis/Comment: The CER did not identify CERCLA sites within the AMSD.

CERCLIS No Further Remedial Action Planned (NFRAP) Sites

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to warrant Federal Superfund Action or NPL consideration.

Analysis/Comment: The CER did not identify CERCLA NFRAP sites within the AMSD.

RCRIS TSD

The RCRIS TSD contains information pertaining to those facilities that treat, store, or dispose of hazardous waste. While these facilities represent some form of hazardous waste activity, they are most significant if determined to be out of compliance or to have violations.

Analysis/Comment: The CER did not identify RCRIS TSD facilities within the AMSD.

RCRIS Generators

IVI reviewed the list of sites, which have filed notification with the USEPA in accordance with RCRA requirements. These sites include generators of hazardous waste regulated under RCRA. Under RCRA, hazardous waste generators are classified by the quantity of hazardous waste generated in a calendar month into the following categories: Large Quantity Generator (LQG), greater than 1,000 kilograms (kg); Small Quantity Generator (SQG), 100 to 1,000 kg; and Conditionally-Exempt Small Quantity Generator (CESQG), less than 100 kg. RCRA Generators, while they represent some form of hazardous waste activity, are most significant if they are determined to have Class I Violations or to be non-compliant.
Analysis/Comment: The CER identified the following RCRA Generator located within the AMSD:

Property Name/ Address	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
A-1 Auto Collision Inc. 2831 Thomson Avenue	South	Upgradient	Compliant/No Violations

The above listed facility is located adjacent to the Subject to the south and is listed as a RCRA Non Generator with EPA ID number NYD986884872. This site was formerly listed as a small quantity generator in 1989. Inasmuch as no violations or compliance infractions were identified in connection with the above-referenced RCRA site, it is not suspected that contamination origination at this site associated with the RCRA listing, if any exists, has encroached upon the Subject.

Corrective Action Tracking System (CORRACTS)

CORRACTS is a list of facilities that are found to have had hazardous waste releases and require RCRA corrective action activity, which can range from site investigations to remediation.

Analysis/Comment: The CER identified the following CORRACTS sites within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Compliance Status
Active Steel Drum Co. Inc. 52-30 34th Street	0.723	South Southeast	Crossgradient	RFA completed
Kosan Industrial Corp. 5-49 49th Avenue	0.616	West	Downgradient	RFA completed
Accurate Associates 5-36 46th Road	0.730	West	Downgradient	RFA completed
Con Edison Ravenwood Generating Station 38-54 Vernon Blvd	0.880	North Northwest	Downgradient	RFA completed

The above-tabulated CORRACTS sites are located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same.
The sites are also located hydrogeologically crossgradient or downgradient of the Subject. As such IVI does not suspect these sites of having had a negative environmental impact on the Subject.

ERNS

The ERNS is a database of notifications of oil discharges and hazardous substance releases made to the Federal government. These notifications are used by "On-Scene Coordinators" to determine an emergency response and release prevention. When a call is made to the National Response Center or one of the 10 USEPA Regions, a report is created containing all of the release information that the caller provided. This report is transferred to an appropriate agency to evaluate the need for a response and the records are electronically transferred to the ERNS database. As such, if a reported release of oil or a hazardous substance is deemed to require

a response, it should also be listed in the appropriate federal or state environmental database such as CERCLIS, state equivalent CERCLIS, or state leaking underground storage tank or spills lists.

Analysis/Comment: The CER did not identify the Subject on the ERNS database.

Federal Institutional Control/Engineering Control Registries

These Federal registries contain listings of those sites which have either engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners and treatment methods to eliminate pathways for regulated substances to enter the environment or affect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions (Activity and Use Limitations) are generally required as part of institutional controls.

Analysis/Comment: The CER did not identify the Subject on the Federal Institutional or Engineering Control registries.

6.2 New York State Department of Environmental Conservation (NYSDEC) and Tribal Databases

Registry of Inactive Hazardous Waste Disposal Sites (IHWDS) and Tribal NPL Equivalent State Hazardous Waste Sites (SHWS)

The IHWDS and Tribal NPL Equivalent SHWS list is an inventory of toxic sites listed by New York and/or Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

Analysis/Comment: The CER did not identify any IHWDS and/or Tribal NPL Equivalent Hazardous Waste sites within the AMSD.

Vapor Intrusion Legacy Site List

"Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on this additional information, the NYSDEC is currently re-evaluating pre-2003

remedial decisions on IHWDS where chlorinated hydrocarbons were released to determine the possibility of vapor intrusion at the sites. The Vapor Intrusion Legacy Site List is a database of these sites.

Analysis/Comment: The CER identified the following Vapor Intrusion Legacy sites within a mile of the Subject.

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Standard Motor Products, Inc. 37-18 Northern Boulevard	East Northeast	0.893	Upgradient	Complete

The above-tabulated Vapor Intrusion site is located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same.

New York and Tribal CERCLIS Equivalent Hazardous Waste Sites

The State HWS is an inventory of dumps, landfills, and other toxic sites listed by Environmental and Health Authorities. The Tribal NPL Equivalent HWS list is an inventory of toxic sites listed by Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

Analysis/Comment: The CER identified the following New York and/or Tribal CERCLIS Equivalent Hazardous Waste site within the AMSD:

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
21-03 44th Avenue	0.356	Northwest	Crossgradient	Active

The above-tabulated state hazardous waste site is classified as a significant threat to the public health or environment and action is required. However, this site is located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted the same.

New York and/or Tribal Solid Waste Facilities (SWF) List

The SWF list is an inventory of landfills, incinerators, transfer stations, and other sites that manage solid wastes.

Analysis/Comment: The CER identified the following SWF sites the AMSD.

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
C&H Sand and Stone, Corp. 21-16 Jackson Avenue	0.352	West Southwest	Downgradient	Inactive
United Waste Removal, Inc. 2116 Jackson Avenue	0.353	West Southwest	Downgradient	Inactive

The above-tabulated SWF sites are located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. The sites are also hydrogeologically downgradient from the Subject. As such it is not suspected that the solid waste facilities have had a negative environmental impact upon the Subject.

Petroleum Bulk Storage (PBS) Tanks List and/or Tribal Registered Storage Tanks (RST) Facility List

The PBS Tank list is an inventory of registered liquid bulk storage tanks maintained either by the county or the NYSDEC. Inclusion of a site on the PBS Tank list does not necessarily constitute environmental contamination, but instead merely indicates the presence of registered bulk storage tanks.

Analysis/Comment: The CER did not identify PBS Tank sites within the AMSD.

New York Leaking Underground Storage Tanks (LUST) and Spill Lists

The LUST list is an inventory of spills and leaks, both active and inactive reported to regulatory authorities. They include stationary and non-stationary source spills reported to state and federal agencies, including remediated and contaminated leaking UST sites. The Spills list is a compilation of data collected on spills and reported to the NYSDEC pursuant to either Article 12 of the Navigation Law, or 6 NYCRR Section 595.2.

Analysis/Comment: The CER identified 46 LUST/Spill sites within the prescribed search distance. Of these 46 sites, all are i.) located over one-eighth mile away from the Subject, and based on the general non-sensitivity of the urban setting of the Subject, are not considered to represent a significant environmental concern; and/or ii.) have been granted a “Case Closed” status by the NYSDEC. This classification is granted to those sites that have been remediated to the satisfaction of the NYSDEC or are not suspected to pose a significant threat to human health or the environment. As such, IVI does not suspect that these sites have had a negative environmental impact upon the Subject.

New York and Tribal Institutional Control/Engineering Control Registries

According to the NYSDEC website, Institutional Controls shall mean any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a brownfield site.

Engineering Control shall mean any physical barrier or method employed to actively or passively contain, stabilize, or monitor hazardous waste or petroleum, restrict the movement of hazardous waste or petroleum to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to hazardous waste or petroleum. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

Features and Requirements of Institutional Controls:

- If an IC/EC is used as a component of a site cleanup plan, the Remedial Work Plan must include: a complete description of the IC/ECs and the mechanisms that will be used to implement, maintain, monitor, and enforce such restrictions and controls, both by the applicant and by any state and local government, and an evaluation of the reliability, viability, and costs of the long-term implementation, maintenance, monitoring, and enforcement of any IC/EC.
- Financial assurance for the long-term maintenance, monitoring, and enforcement of IC/ECs may be required.
- Any EC must be used in conjunction with an IC.
- The final remediation report must include a certification that any IC/ECs are included in an environmental easement that has been duly recorded.
- An annual certification that the IC/ECs are in place and protective of public health and the environment must be submitted to the NYSDEC.
- The NYSDEC must create, update, and maintain a data base available to the public of sites using IC/ECs.
- Any proposal for a change in site use must include an evaluation of the impacts of the change on the viability, reliability, and effectiveness of any IC/ECs.

Analysis/Comment: The CER did not identify the Subject on the New York and Tribal Institutional or Engineering Control registries.

New York and Tribal Voluntary Cleanup Program Sites

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. New York's Voluntary Cleanup Program is a cooperative approach among the NYSDEC, lenders, developers and prospective purchasers to investigate and/or remediate contaminated sites. Under the VCP, a volunteer performs remedial activities pursuant to one or more NYSDEC approved work plans. The volunteer agrees to remediate the site to a level which is protective of public health and the environment for the present or intended use of the property. Investigation and remediation is carried out under the oversight of the NYSDEC and the New York State Department of Health (DOH) and the volunteer pays the State's oversight costs. When the volunteer completes work, a release from liability from the NYSDEC is provided with standard reservations. Once the required remedial actions have been completed, the NYSDEC issues a letter declaring that it agrees that the volunteer has met their obligations and that, barring an event triggering a reopener, the Department does not contemplate further action will need to be taken at the site. Non-PRP volunteers also receive a release that covers natural resource damages. All of the volunteer's successors and assigns (except the site's PRPs) benefit from the release given to the volunteer. The NYSDEC's release binds only itself, and does not bind private parties harmed, does not bind the State's Attorney General, the State's Comptroller, and does not bind the USEPA.

The Release is subject to the following reservations for further investigation or remediation the NYSDEC deems necessary due to:

- Off-site migration of contamination causing significant impacts if the Volunteer is a PRP;
- Environmental conditions or information related to the Site that were unknown when the Release was issued and that indicate that site conditions under the Contemplated Use are not sufficiently protective of human health and the environment;
- Failure to comply with the VCA (e.g., not completing OM&M, not paying State costs, not maintaining use restrictions, etc.);
- Fraud committed by the Volunteer in entering into or implementing the VCA;
- A release, discharge or threat thereof after the effective date of the VCA; or
- A change of use where the new use requires a lower level of residual contamination.

Analysis/Comment: The CER identified the following VCP sites within the AMSD.

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Outlet City, Queens Blvd and Jackson Avenue	0.268	Northeast	Upgradient	Active
Formerly Acco Brands, Inc. 32-00 Skillman Avenue	0.436	East	Upgradient	Active
21-16 44th Road, LLC 21-16 44th Road	0.343	West Northwest	Downgradient	Active

The above-tabulated VCP sites are located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same.

New York and Tribal Brownfield Sites

According to the NYSDEC website, brownfields are abandoned, idled, or under-used properties where expansion or redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. The impediments to contaminated site redevelopment in New York are complex. The existing liability scheme may hold all owners of contaminated property liable for cleanup costs, regardless of when or how the property was acquired. The potential cost of cleanup, which may not be known for certain at the time of purchase, is also a deterrent to parties wishing to build, relocate, or expand businesses. Lenders have been reluctant to extend credit for the purchase and cleanup of contaminated sites, fearing future liability issues.

A Brownfield Cleanup Agreement (BCA) is required for all parties who wish to participate in the Brownfield Cleanup Program. By executing a BCA, an Applicant makes a commitment to undertake certain remedial activities under the NYSDEC's oversight.

Analysis/Comment: The CER identified the following Brownfield site within a one-half mile radius of the Subject.

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Queens Plaza Residential Development 28-10 Jackson Avenue	0.195	Northeast	Downgradient	Active

The above-tabulated Brownfield site is located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. The above tabulated Brownfield site is also located hydrogeolocially downgradient from the Subject. As such, it is unlikely that this Brownfield site has had a significant negative environmental impact upon the Subject.

New York City Building Information System

The City Environmental Quality Review (CEQR) designation "E" on New York City Zoning Maps indicates that environmental requirements pertaining to potential hazardous material contamination or noise or air quality impacts have been established on one or more tax lots. These "E" designations function as indicators of the environmental review that must be conducted when the lots are developed in accordance with the regulations of the rezoned district.

New York City Zoning Resolution § 11-15 provides that the New York City Department of Buildings (NYCDOB) may not issue a building permit for work on a tax lot labeled with an "E" due to potential hazardous material contamination, if the building permit would allow: (1) a development; (2) an enlargement, extension or change of use involving a residential or community facility use; or (3) an enlargement that disturbs the soil. The NYCDOB identifies haz-mat "E" lots on its Building Information System ("BIS").

An "E" designation for potential hazardous material contamination may be satisfied and removed from a zoning map following receipt of a report from the New York City Department of Environmental Protection (NYCDEP) stating that the environmental requirements for the lot have been met. These requirements may include subsurface investigations and/or remediation of contamination to the satisfaction of the NYCDEP.

Analysis/Comments: Based on our review of the NYCDOB BIS and New York City Zoning Maps an "E" designation has not been declared on the Subject.

Drycleaners

A listing of all registered drycleaning facilities.

Analysis/Comments: The CER identified the following Drycleaners site within a one-quarter mile radius of the Subject.

Property Name/ Address	Distance (Miles)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Top Star Fabriccare 43-43 Queens Street	0.116	East northeast	Downgradient	Active

The above-tabulated drycleaner site is not listed on any other database indicative of a contamination condition and is located hydrogeolocially downgradient from the Subject. As such, it is unlikely that this drycleaners site has had a significant negative environmental impact upon the Subject.

6.3 EDR Proprietary Databases

EDR Historic Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Analysis/Comment: The CER did not identify the Subject or any adjacent properties on the historical auto stations database.

EDR Historic Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Analysis/Comment: The CER did not identify the Subject or any adjacent properties on the historical cleaners database.

EDR Manufactured Gas Plants

This database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to the 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of wastes. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Analysis/Comment: The CER did not identify the Subject or any adjacent properties on the manufactured gas plant database.

7.1 Chemical Storage and Usage

The Subject is vacant land and no chemical storage was identified on the Subject.

7.2 Bulk Storage Tanks

Underground Storage Tanks (USTs)

Common indicators of removed or closed-in-place USTs such as abandoned vent and fill pipes or pavement cuts were not observed during our site survey. However, based on our review of Sanborn maps from 1947 and 1950 it appears that two now inactive gasoline USTs were or are on-site. The USTs were identified on the south central portion of the Subject. We have no knowledge as to the status of these USTs.

Aboveground Storage Tanks (ASTs)

No ASTs were observed and IVI did not identify any equipment, which should require such tanks. IVI did not observe evidence of former on-site ASTs such as secondary containment structures, cradles, or concrete support pedestals. However**,** based on the previously conducted Phase I update prepared by Middleton Environmental, Inc. (MEI), records from the City of New York Fire Department indicated that one 550 gallon heating oil AST (permit expired on August 31, 1984) was registered at 44-38 Purves Street (Lot 1), one 275 gallon heating oil AST (permit expired on April 14, 1998) was registered at 28-01 Thomson Avenue (Lot 1) and two 275 gallon heating oil ASTs (permits expired on April 21, 1998) were registered at 44-30 Purves Street. During MEI's site reconnaissance in 2006 two 275 gallon above ground heating oil storage tanks and one 275 gallon above ground waste oil tank were located within the former main buildings with no signs of staining or leakage.

7.3 Site Waste and Wastewater

Solid Waste

No solid waste is generated on the site and no solid waste dumpsters were located on the Subject. Small piles of brick debris, a tire, a few wooden pallets and wood debris were identified on the Subject. An empty 55 gallon drum of cleaning solution was also identified on the Subject. In addition, large boulders were identified on the southeastern edge of the Subject.

Sanitary Sewage

Sanitary sewage disposal in the Subject area is provided by the municipality. As the Subject is currently vacant it is not connected to the municipal sewer system.

Hazardous Waste

No hazardous waste was observed or reported to be generated on the Subject. Furthermore, IVI's review of the USEPA's database of sites regulated under RCRA did not identify the Subject as a generator of hazardous waste. However, previous site use including auto body/auto repair shops and chemical manufacturers (refer to section 5.1) indicates that hazardous waste may have been generated onsite in the form of solvents, metals and petroleum products.

7.4 Stained Soil, Stained Pavement, or Stressed Vegetation

There was no evidence of significant soil staining, stained pavement, or stressed vegetation observed on-site.

7.5 Liquid Discharges

No visible evidence of liquid discharges, suspected to represent an environmental concern were observed during our survey.

7.6 Pools of Liquid

IVI did not observe significant standing surface water or pools containing liquids likely to be hazardous substances or petroleum products.

7.7 Pits, Ponds, or Lagoons

No pits, ponds or lagoons suspected of containing hazardous substances or petroleum products were identified on-site.

7.8 Wells

Two inactive monitoring wells were observed along the northern portion of the Subject and are associated with a former geotechnical study (refer to section 5.6). Reportedly, the wells were installed to determine groundwater depth. The wells appeared to be damaged and the caps were not secured. Since the wells are no longer in use, we recommend that they be closed in accordance with governmental regulations and good and customary practice.

7.9 On-Site Fill

A geotechnical survey conducted in 2008 indicated that a layer of uncontrolled fill, generally consisting of black coarse sand, some gravel with varying amounts of brick and concrete covered the Subject. Refer to Section 5.6.

7.10 Drums and Containers for Storing Waste

IVI did not identify containers suspected of storing waste.

7.11 Floor Drains and Sumps

The Subject is vacant land and no floor drains or sumps on the Subject were identified. The previously conducted Phase I update prepared by Middleton Environmental, Inc. (MEI) stated that drains were identified in the former automobile repair building and that the property owner indicated they were connected to the municipal sewer system.

7.12 Odors

IVI did not identify strong, pungent, or noxious odors suspected to represent an environmental concern.

7.13 Air Emissions

IVI did not identify processes or equipment that emit noticeable vapors or fumes. The previously conducted Phase I update prepared by Middleton Environmental, Inc. (MEI) stated that there was one paint spray booth on the lower level of the main building that was properly vented outside the building. No evidence of paint was identified on the Subject.

7.14 Polychlorinated Biphenyls (PCBs)

No electrical transformers, capacitors, hydraulic systems or other potentially PCB-containing equipment were observed on-site.

7.15 Asbestos-Containing Material (ACM)

There are no building onsite and asbestos is not a concern on the Subject.

7.16 Lead-in-Drinking Water

As there are no buildings on the Subject, water is currently not supplied to the Subject.

7.17 Radon

Based on statistical information maintained within the U.S. Department of the Interior and U.S. Geological Survey's *Geologic Radon Potential,* dated 1993, radon concentrations in Richmond County average 1.4 picocuries per liter (pCi/L), which is below the 4.0 pCi/L action level established by the USEPA.

Based solely on this data, it is unlikely that radon represents an environmental concern at this time.

7.18 Lead-Based Paint (LBP)

There are no buildings onsite and as such lead-based paint is not a concern.

8.0 INTERVIEWS

8.1 Questionnaires

IVI sent a Pre-survey Questionnaire and an AAI User Questionnaire to the site contact and the User, respectively. The purpose of these questionnaires was to disclose any previous or existing hazardous waste or toxic material conditions, which may not have been apparent at the time of our site reconnaissance and to satisfy the User interview all appropriate inquiry requirements. The AAI User Questionnaire was completed and returned to IVI.

8.2 User

8.2.1 Title Records

A copy of the Subject's Chain-of-Title has not been provided to IVI for review.

8.2.2 Environmental Clean Up Liens and Activity and Use Limitations (AULs)

Pearson Acquisition LLC c/o Brause Realty, Inc. had no knowledge of any environmental liens against the Subject that have been filed or recorded under federal, tribal, state or local law. Moreover, Pearson Acquisition LLC c/o Brause Realty, Inc. was not aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in-place at the Subject or have been filed or recorded under federal, tribal, state or local law.

8.2.3 Specialized Knowledge

Pearson Acquisition LLC c/o Brause Realty, Inc. had no specialized knowledge of recognized or potential recognized environmental conditions in connection with the Subject.

8.2.4 Relationship of Purchase Price to Fair Market Value Due to Contamination in Connection with the Subject

Pearson Acquisition LLC c/o Brause Realty, Inc. has indicated they are unaware of any environmental conditions in connection with the Subject that have resulted in the diminution of its purchase price in relation to its Fair Market Value.

8.2.5 Common Knowledge or Reasonably Ascertainable Information

Pearson Acquisition LLC c/o Brause Realty, Inc. had no common knowledge of recognized or potential recognized environmental conditions in connection with the Subject.

8.2.6 Purpose for Conducting the Phase I Environmental Site Assessment

The purpose of conducting this Phase I Environmental Site Assessment was for the acquisition of the parcel.

8.2.7 Proceedings Involving the Property

The User had no knowledge of pending, threatened, or past litigation, administrative proceedings, or notices from governmental agencies regarding violations of environmental laws regarding hazardous substances or petroleum products.

8.3 Key Site Manager

8.3.1 Historic Site Use

Mr. David Brause and Mr. Brian Kim (current owner) provided IVI with reports indicating prior site usage including: automobile repair, carpet storage, chemical laboratory, chemical manufacturing, realty office, contractor's storage yard, heat exchanger company, filter cleaning, hardware warehouse, paper embossing, controller manufacturing, and an air freight company .

8.3.2 Proceedings Involving the Property

Mr. Brause had no knowledge of pending, threatened, or past litigation, administrative proceedings, or notices from governmental agencies regarding violations of environmental laws regarding hazardous substances or petroleum products.

8.4 Occupants

A local police officer indicated that the Subject site had recently been cleared of piles of debris. The officer also warned of the potential for drug paraphernalia (including hypodermic needles) to be located on the Subject.

8.5 Past Owners

IVI was unable to locate the site's former owner.

8.6 Local Regulatory Agency Interviews and/or File Reviews

Fire Department

IVI has sent a request to the New York City Fire Department for environmental information such as underground storage tank registration pertaining to the subject property. As of this writing, the Fire Department has not responded to our request. Should receipt of a response from the Fire Department change the conclusions of this report, Pearson Acquisition will be notified in writing by IVI.

Health Department

IVI has sent a request to the local Health Department for environmental information pertaining to the subject property. As of this writing, the Health Department has not responded to our request. Should receipt of a response from the Health Department change the conclusions of this report, Pearson Acquisition will be notified in writing by IVI.

Building Department

IVI reviewed building permits and records for the Subject on the New York City Department of Buildings (NYCDOB) database. Refer to Section 5.9 for further detail.

Department of Environmental Conservation

IVI has sent a request to the New York State Department of Environmental Conservation (DEC) for environmental information pertaining to the Subject property. As of this writing, the DEC has not responded to our request. Should receipt of a response from the DEC change the conclusions of this report, Pearson Acquisition will be notified in writing by IVI. In addition the Subject property was not listed on the DEC's spill incidents, remedial site, and bulk storage databases.

Department of Environmental Protection

IVI has sent a request to the New York City Department of Environmental Protection (DEP) for environmental information pertaining to the Subject property. As of this writing, the DEP has not responded to our request. Should receipt of a response from the DEP change the conclusions of this report, Pearson Acquisition will be notified in writing by IVI.

9.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

IVI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E1527-05 of 44-26 to 44-30 Purves Street, Queens, New York. Any exceptions to, or deletions from, the standard practice are described within Section 2.0 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

Historic Site Use

Historic Sanborn Maps and City Directories indicated past site use that had the potential to negatively impact the Subject. A chemical laboratory and radiator repair structure was identified on the western side of the Subject on Sanborn maps from 1947 to 1970. On maps from 1947 to 1950 were located two gasoline tanks on the south central portion of the Subject in an open area labeled as a contractor's yard. Located on the northeastern portion of the Subject were buildings labeled as repairing, storage, controller manufacturing, and fine chemicals manufacturing. On the 1970 map was a larger structure located on the southern portion of the Subject labeled as a warehouse on the first floor and paper embossing on the second floor. This building was labeled as being constructed in 1960 and was in the location of the gasoline tanks that were identified on the 1947 and 1950 Sanborn Maps. Also on the 1970 map, the building on the northwestern side of the Subject formerly labeled as a chemical lab was labeled as auto repair. On Sanborn maps from 1980 to 2006 the large structure on the southern side of the Subject was labeled as auto repair on the first floor and paper embossing on the second floor. Former listings for the Subject on city directories included a contracting company, machine manufacturer, chemical manufacturer, automobile radiator service, automobile repair shop, paper embossing company, freight company, filter cleaning company, auto body shop, taxi service, limousine service, and towing service.

There is the potential for onsite contamination resulting from former onsite uses including chemical laboratory and chemical manufacturing, radiator repair/automobile repair, auto body work, controller manufacturing, chemical manufacturing, and paper embossing. In addition, it appears that two now inactive gasoline underground storage tanks (USTs) were located in the vicinity of the south central portion of the Subject and have the potential to still be located onsite. We have no knowledge as to the regulatory and physical status of these underground storage tanks. There is the potential for the USTs to have negatively impacted the Subject.

IVI was provided with a correspondence from the demolition contractor indicating that they did not encounter contaminated soil or any other environmentally hazardous conditions. However, inasmuch as the demolition activities did not include subsurface testing, these observations by the demolition contractor do not alleviate our concerns.

IVI recommends that a subsurface investigation be conducted and that soil and groundwater on the Subject be analyzed for contamination.

Adjacent Site Use

Historic Sanborn Maps indicated adjacent and surrounding industrial and manufacturing land use. The following adjacent site uses that have the potential to have negatively impacted the Subject were identified. On maps from 1936-1950 the adjacent southern building (44-46 Purves Street) was identified as a chromium plating facility and on maps from 1970 to 2006 an auto body shop was identified. On maps from 1936 the adjacent northwestern building (22-19 to 22-27 44th Drive) was identified as a garage with a gasoline tank that may be an underground storage tank (UST). This building was then identified as a photochemical warehouse on the 1947 and 1950 map, a commercial/manufacturing building on the 1970 map, and as an auto repair shop on maps from 1977 to 2006. On the map from 1936 gasoline tanks (possibly USTs) were identified in manufacturing buildings located to the east of the Subject across Purves Street. Manufacturing of textile printing inks was also identified on a building to the east (44-23 to 44-27 Purves Street) on maps from 1947 to 1995 with auto repair identified on maps from 2001 to 2006. An auto repair shop was identified to the east across Purves Street (44-29 to 44-35 Purves Street) on the map from 1995. IVI recommends that the above-recommended a subsurface investigation be expanded in scope to include a determination as to if adjacent former site uses and USTs have negatively impacted the Subject.

10.1 This report has been prepared in compliance with the ASTM standard entitled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" E1527-05.

10.2 The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services within the constraints imposed by the client. The work described in this report was carried out in accordance with the Terms and Conditions of the contract.

10.3 In preparing this report, IVI has relied on certain information provided by federal, state, and local officials and other parties referenced therein, and on information contained in the files of governmental agencies, that were readily available to IVI at the time of this assessment. Although there may have been some degree of overlap in the information provided by these various sources, IVI did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment. Observations were made of the site and of the structures on the site as indicated in this report. Where access to portions of the site or to structures on the site was unavailable or limited, IVI renders no opinion as to the presence of direct or indirect evidence relating to petroleum substances, hazardous substances, or both, in that portion of the site and structure. In addition, IVI renders no opinion as to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the ground surface, interior walls, floors, ceiling or a structure is obstructed by objects or materials, including snow, covering on or over these surfaces.

10.4 As part of this assessment, IVI submitted requests for information via the Freedom of Information Act (FOIA) to various governmental agencies. As of the preparation of this report these requests may not have been fulfilled. The conclusions of this report are subject to change upon receipt of a response from these FOIA requests.

10.5 IVI does not represent that the site referred to herein contains no petroleum or hazardous or toxic substances or other conditions beyond those observed by IVI during the site walkthrough.

10.6 IVI has produced this document under an agreement between IVI and Pearson Acquisition LLC c/o Brause Realty, Inc. All terms and conditions of that agreement are included within this document by reference. Any reliance upon this document, or upon IVI's performance of services in preparing this document, is conditioned upon the relying party's acceptance and acknowledgement of the limitations, qualifications, terms, conditions and indemnities set forth in that agreement, and property ownership/management disclosure limitations, if any. It is not to be relied upon by any party other than Pearson Acquisition LLC c/o Brause Realty, Inc. nor used for any purpose other than that specifically stated in our Agreement or within this Report's Introduction section without IVI's advance and express written consent. The Phase I report is only valid if completed within 180 days of an acquisition or the transaction necessitating the report.

10.7 TIME LIMITATION TO ENACT CLAIM AGAINST IVI If in the opinion of the client, or any third party claiming reliance on IVI's report or services, that IVI was negligent or in breach of contract, such aforementioned parties shall have one year from the date of IVI's site visit to make a claim.

10.8 Unless specifically identified within Section 2, Chinese drywall, indoor air quality and any other non-ASTM scope issues as identified in ASTM E1527-05, Section 13.1.5, are excluded from the scope of this assessment.

1

Southern portion of Subject

2

Groundwater monitoring well on northern portion of Subject

3

Northern portion of Subject

4

Western portion of Subject

5

Groundwater monitoring well on northeastern portion of Subject

6

Boulders on southeastern border of Subject

7

Brick debris on Subject

8

Empty drum of cleaning product on southern portion of Subject

9

Area of concrete visible beneath sand and gravel

10

Surrounding Property to the West

11

Adjacent Property to the North (vacant lot)

12

Adjacent Property to the South

13

Adjacent Properties to the East

14

Adjacent Property to the West

IVI ASSESSMENT SERVICES, INC.
PROPERTY CONDITION & ENVIRONMENTAL
DUE-DILIGENCE

IVI Assessment Services, Inc.
55 West Red Oak Lane
White Plains, New York 10604
(914) 694-1900 (tel)
(914) 694-8549 (fax)
www.ivi-intl.com

November 18, 2011

Property Manager
Re: Phase I Site Assessment
44-26 to 44-30 Purves Street
0.75 Acre Vacant Parcel
44-26 to 44-30 Purves Street
Queens, New York
IVI Project No. PC1119280

Dear Property Manager:

On behalf of Pearson Acquisition LLC c/o Brause Realty, Inc., IVI has been retained to conduct a Phase I Site Assessment of the above referenced property.

Attached are our Pre-Survey Questionnaire and Document & Information Checklist, which we are requesting that someone knowledgeable with the property complete and return by fax to our office. Your quick response to provide this information will facilitate both the commencement of our survey and the completion of our report. Furthermore, these documents, along with your responses, will appear as exhibits in our report.

Sincerely,

IVI ASSESSMENT SERVICES, INC.

Michael Kennedy
Senior Project Manager

enclosures (questionnaire and checklist)

IVI Assessment Services, Inc.

PROPERTY CONDITION & ENVIRONMENTAL DUE-DILIGENCE
55 West Red Oak Lane
White Plains, New York 10604
914.694.1900 (tel)
914.694.8549 (fax)

Phase I Environmental Site Assessment
Pre-Survey Questionnaire

Someone familiar with the site should complete this questionnaire prior to our site visit. For those questions that are not applicable, please respond "N/A", and "U/K" for those questions in which the answer is not known. If you have any questions about how to answer any of the questions, please call IVI. If additional pages for responses are necessary, please attach hereto and reference it to the appropriate question number. Upon completing this form, please fax it to the above fax number. This document and your written response will be included as an exhibit in the final report.

Subject Name: 44-26 to 44-30 Purves Street

Project Manager: Montgomery, Charles

Street: 44-26 to 44-30 Purves Street

IVI Project No.: PC1119280

City/State: Queens, New York

Date: November 18, 2011

Key Site Contact:
Telephone:
Fax:

A. GENERAL

PREPARER

1. Name, title and telephone number of person completing this questionnaire:

_____
Name

_____
Title

_____
Signature

_____
Telephone Number

2. How long has the preparer been familiar with the site or facility?
If less than five years, who held the position prior?

3. Property Owner/Occupant Information

_____
Owner's Name

_____
Owner's Address

_____
Occupant's Name

_____
Occupant's Address

VALUATION REDUCTION

Was/is the purchase price of the Subject property significantly less than the purchase price of comparable properties due to environmental conditions? Yes o No o U/K o

If yes, please explain below.

B. Property Description

1. Land

a. Size of Parcel? _____ Acres

b. Shape of Parcel? o Rectangular o Irregular ¨ Other

c. Are there any surface waters or wetlands on the site? Yes o No o U/K o

d. Is there a well on the site? Yes o No o U/K o

If so, what type of well is it?:

Drinking Water	o
Irrigation	o
Monitoring	o
Dry Well	o

Have contaminants in excess of governmental

guidelines been identified in the water? Yes o No o

e. Was or is there a septic system on the property? Yes o No o U/K o

If so, is the septic system currently in use? Yes o No o

f. Has fill been imported onto the Subject? Yes o No o U/K o

g. Are there currently or has there previously been waste treatment or disposal pits, ponds, or lagoons on the site? Yes o No o U/K o

h. Where is the site's stormwater discharged to? _____

B. PROPERTY DESCRIPTION – continued

2. Site Improvements This includes all buildings ¨ N/A

a. Describe the size (square foot) of the existing building(s).

b. How old is the building(s)?

c. Describe the heating and cooling system.

d. Who provides the following utilities?

Water: _____

Sanitary Sewer: _____

Storm Drainage: _____

Natural Gas: _____

Electric: _____

e. Are there any floor drains on the site? Yes o No o U/K o

If so, where do they discharge to?

3. Site History

a. Were there any buildings or other improvements on the property prior to the existing improvements? Yes o No o U/K o

If so, what were they?

b. Is or has the property been used for industrial or agricultural purposes, or as a gasoline station, auto repair, dry cleaner, junkyard, or landfill? Yes o No o U/K o

If so, please describe.

B. PROPERTY DESCRIPTION – continued

4. Site Operations

To the best of your knowledge, do any of the following operations take place on the Subject or have ever taken place on the Subject:

Ÿ	Dry Cleaning:	Yes o	No o
Ÿ	Battery Storage/Sales:	Yes o	No o
Ÿ	Paint Storage/Sales:	Yes o	No o
Ÿ	Petroleum Storage/Sales:	Yes o	No o
Ÿ	Photo or X-Ray Finishing:	Yes o	No o
Ÿ	Electronic Equipment Assembly or Manufacturing:	Yes o	No o
Ÿ	Solvent Storage or Sales:	Yes o	No o
Ÿ	Chemical Manufacturing/Sales:	Yes o	No o
Ÿ	Automobile Storage, Repair, or Disposal:	Yes o	No o
Ÿ	Agriculture:	Yes o	No o
Ÿ	Medical or Dental Offices:	Yes o	No o

5. Previous Studies/Documentation

a. Do you have any knowledge of previously prepared Environmental Site Assessment Reports, asbestos surveys, lead-based paint studies or testing (soil, groundwater, tank tightness testing, lead-based paint testing, asbestos testing, indoor air quality, mold (bacteria and fungi testing), etc.) conducted on the site? If so, please either provide copies of the reports or list the title, date, preparer and recipient of such report(s) below:

o I have no knowledge of any environmental related studies or reports prepared on the Subject.

b. Are you in possession of a title report, site drawings, building drawings and specifications and/or a survey for the site? Yes o No o

If so, please provide copies of same.

Please provide all available environmental information from yours or your Client's records including, but not limited to, documentation in connection with any pending or threatened public or private proceedings or litigation with respect to environmental liability, environmental permits and permit applications, underground and above ground tank registration and information (including removal and testing of such tanks), environmental reports, asbestos, lead-based paint or indoor air quality studies, spill information and compliance information and programs.

C. SURROUNDING PROPERTIES

1. Has any adjoining properties been used for industrial purposes, or as a gasoline station, auto repair shop, junkyard, dry cleaner or landfill? Yes o No o U/K o

If so, please explain.

2. Are you aware of any contamination conditions on adjoining or nearby properties? Yes o No o U/K o

3. Are there any open surface waters or wetlands adjacent to the site? Yes o No o U/K o

4. Are you aware of any active or former waste treatment or disposal pits, ponds, or lagoons on adjacent or nearby sites? Yes o No o U/K o

5. Is any neighboring property engaged in the storing, transporting or disposal of hazardous waste, or chemicals? Yes o No o U/K o

D. REGULATORY

1. Are you aware of any pending, threatened, or past litigation relevant to *harardouse substances* or *petroleum products* in, on, or from the *property*? Yes o No o U/K o

If so, please explain.

2. Are you aware of any pending, threatened, or past administrative proceedings relevant to *hazardous substances* or *petroleum products* in, on, or from the *property*? Yes o No o U/K o

If so, please state the circumstances.

3. Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to *hazardous substances* or *petroleum products*? Yes o No o U/K o

If so, please explain.

E. ASBESTOS

1. Do you have knowledge of any materials or substances on the site that are known or suspected to contain asbestos? Yes o No o U/K o

If so, what materials and where are they located?

E. ASBESTOS – continued

2. Has an inspection for asbestos ever been conducted on the Subject? Yes o No o U/K o

3. Has asbestos been removed from the Subject? Yes o No o U/K o

4. Does the building have:

- Spray-on or troweled-on fireproofing, insulation or finishes? Yes o No o U/K o
- Insulation on piping, boilers, tanks, chillers, or other mechanical equipment? Yes o No o U/K o
- Transite used in cooling towers, exterior walls, ceilings fascia panels, etc.? Yes o No o U/K o
- Resilient floor tile? Yes o No o U/K o
- Suspended acoustical ceiling tiles? Yes o No o U/K o
- A built-up or rolled roofing system? Yes o No o U/K o

F. PCBs

1. Are there any on-site electrical transformers? Yes o No o U/K o

If so, do any of the transformers contain PCBs? Yes o No o U/K o

Who owns the transformers and where are they located?

2. Did any on-site transformers formerly contain PCBs, but later had the dielectric fluid replaced? Yes o No o U/K o

3. Is there any hydraulic equipment such as elevators or automotive lifts on-site? Yes o No o U/K o

If so, who services the equipment?

Are you aware of any hydraulic fluid leaks or evidence of leakage such as unexplained fluid loss in connection with the hydraulic equipment? Yes o No o U/K o

F. Storage Tanks

1. Are there any (active or inactive) Underground Storage Tanks (UST) or Aboveground Storage Tanks (AST) on the site? Yes o No o U/K o

If so, please fill out the following schedule:

Active or Inactive Tanks

Location of Tank	Size of Tank (Gallons)	AST or UST	Tank Contents	Age of Tank (Years)	Does the Tank Have Corrosion Protection? (Yes/No)	Does the Tank Have Leak Detection? (Yes/No)	Is the Tank In-Use? (Yes/No)

Have any of the tanks been tightness tested? Yes o No o U/K o

1. Do you have any knowledge of tanks that were either removed or closed in-place at the site? Yes o No o U/K o

If so, please fill out the following schedule:

Tanks Removed or Closed In-Place

Location of Former Tank	Size of Tank (Gallons)	AST or UST	Tank Contents	Tank Removal Company	Year Tank Was Removed

H. LEAD

1. Are you aware of any lead-based paint (LBP) applications on the site? Yes o No o U/K o

2. Has LBP testing been conducted? Yes o No o U/K o

3. Have there been any reported incidences of children with elevated blood lead levels residing at the site? Yes o No o U/K o

4. Are there any children younger than 7 years old residing at the site or frequenting the site on a daily basis? Yes o No o U/K o

5. Have any LBP abatements been conducted? Yes o No o U/K o

6. Has the water been tested for lead? Yes o No o U/K o

If so, please provide a copy of the results

I. HAZARDOUS MATERIALS

1. Are hazardous materials or chemicals stored or used on-site? Yes o No o U/K o

If so, please fill out the following schedule (attach separate page if more room is required):

Schedule of Hazardous or Toxic Substances Stored On-Site

Material Type	Quantity (Gallons)	Location

2. Are there any hazardous or medical waste or fluids generated or used that employ an outside service for their periodic supply and removal? Yes o No o U/K o

If so, please provide the name, address, & telephone number of the disposal company and the facility generating the waste.

J. INDOOR AIR QUALITY

1. Have strong mold odors and/or mold staining been observed onsite? Yes o No o U/K o

2. Has there been any employee or tenant reports of symptoms consistent with mold contamination or other indoor air quality concerns? Yes o No o U/K o

3. Are you aware of elevated radon gas concentrations on-site? Yes o No o U/K o

K. AAI USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLP) offered by the Small Business Liability Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? Yes o No o U/K o

2. Are you aware of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, slate or local law? Yes o No o U/K o

3. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? Yes o No o U/K o

4. Does/Did the purchase price paid for this property reasonably reflect the fair market value of the property? Yes o No o U/K o

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? Yes o No o U/K o

5. Are you aware of commonly known or reasonably ascertainable information about the properly that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

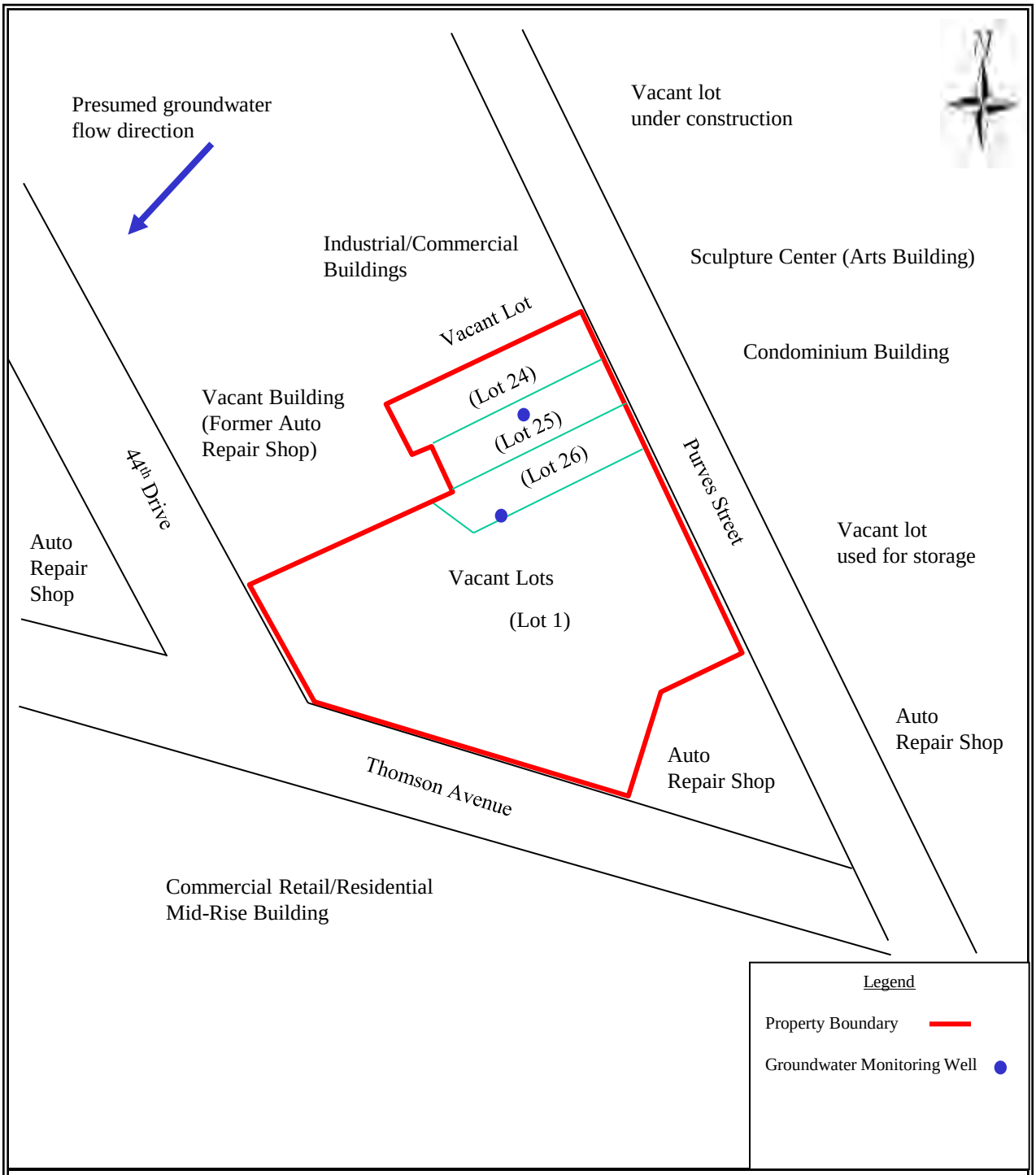
(a.) Do you know the past uses of the property? Yes o No o U/K o

(b.) Do you know of specific chemicals that are present or once were present at the property? Yes o No o U/K o

(c.) Do you know of spills or other chemical releases that have taken place at the property? Yes o No o U/K o

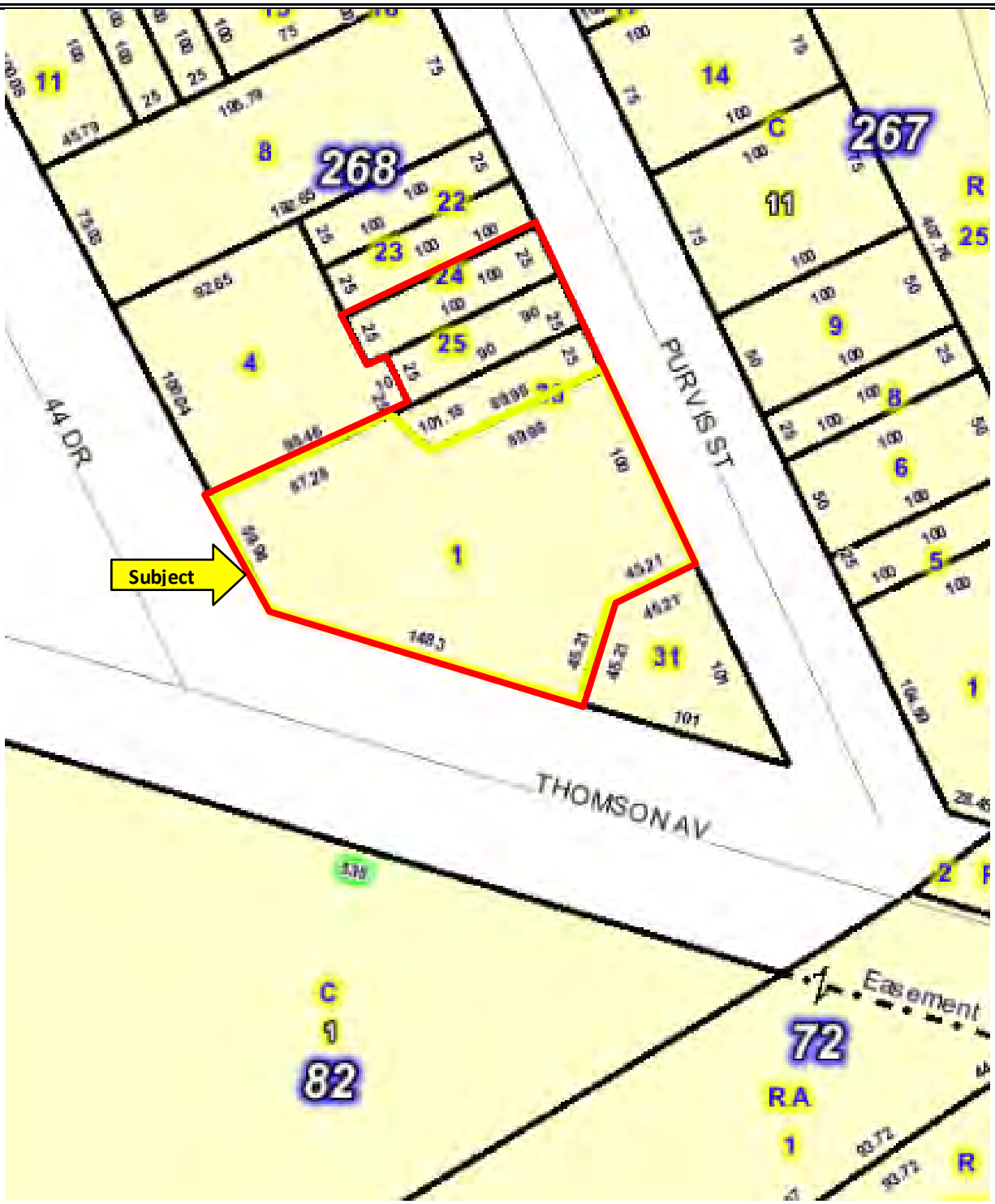
(d.) Do you know of any environmental cleanups that have taken place at the property? Yes o No o U/K o

6. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? Yes o No o U/K o



SITE PLAN

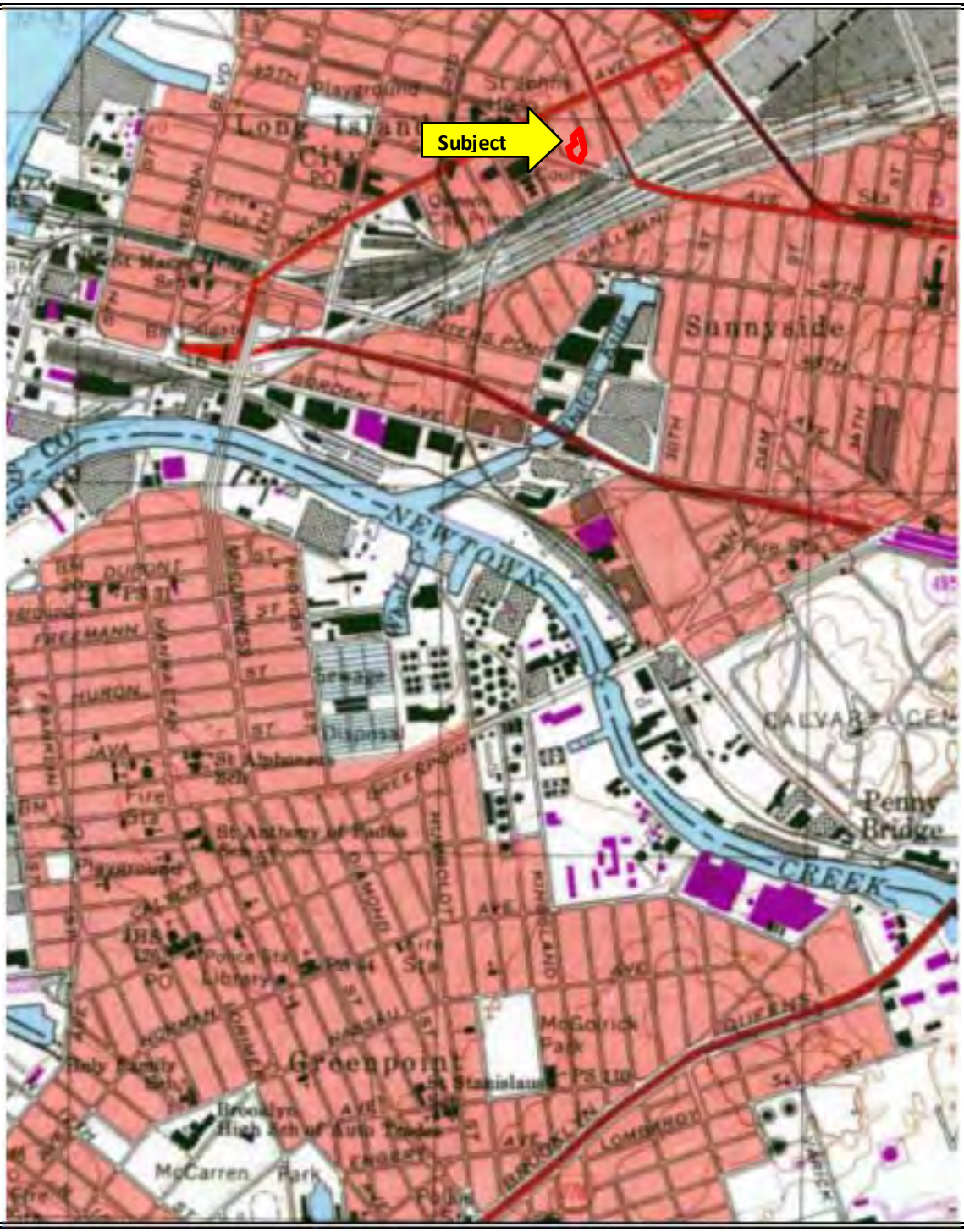
44-26 to 44-30 Purves Street Queens, New York	IVI ASSESSMENT SERVICES, INC. 55 WEST RED OAK LANE WHITE PLAINS, NY 10604 (914) 694-9600 (TEL) (914) 694-3727 (FAX)	Project No: PC1119280
		Boundaries are approximate. Not to scale.



Tax Map

Source: Tax Assessor

Project Name: 44-26 to 44-30 Purves Street
Queens, New York
Project Number: PC1119280



Historic USGS Topographic Map

Source: USGS Quadrangle
Brooklyn, N.Y. Year Revised: 1995

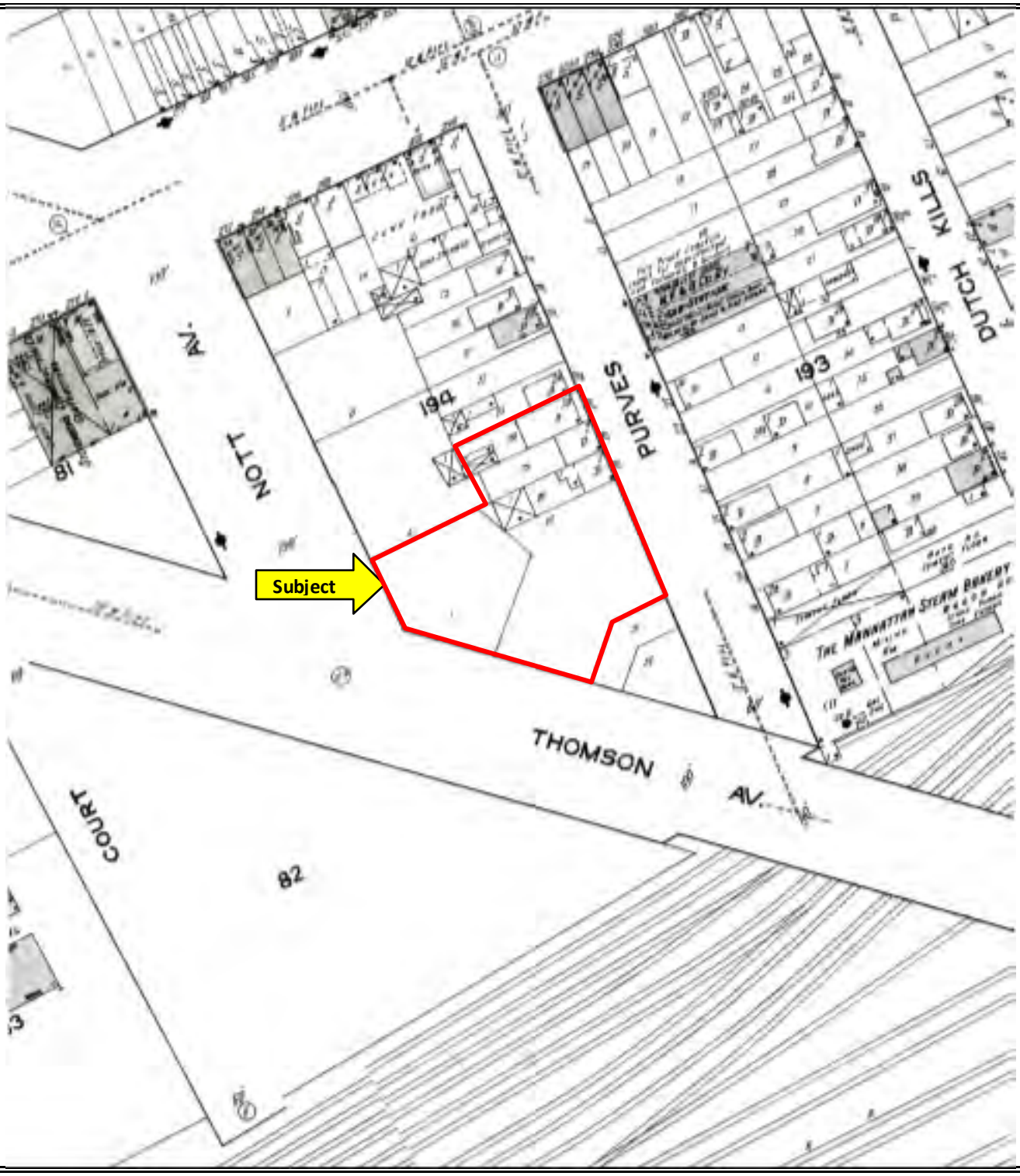
Project Name: 44-26 to 44-30 Purves Street
Queens, New York
Project Number: PC1119280

IVI

Sanborn Map

1898

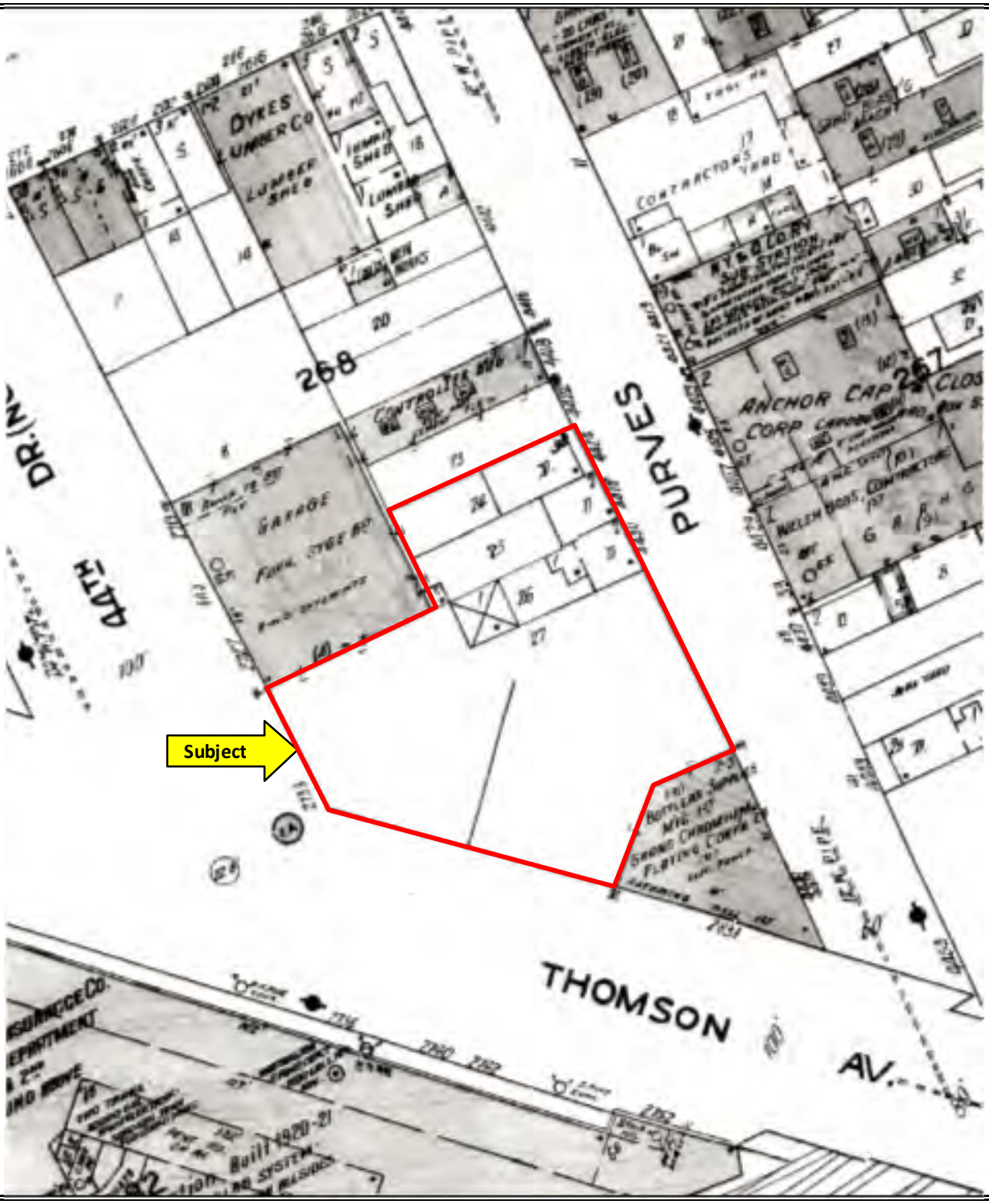
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1915

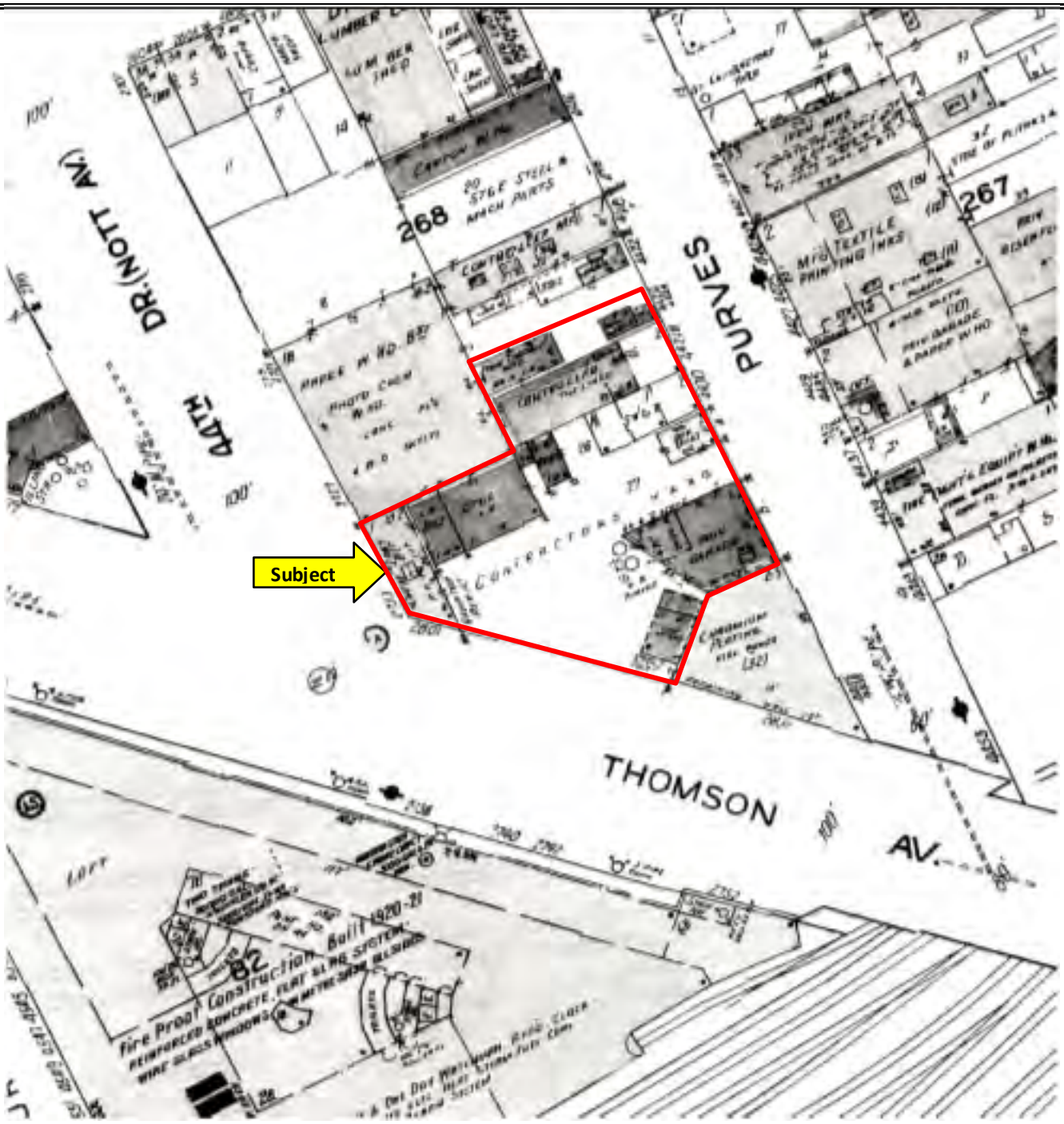
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1936

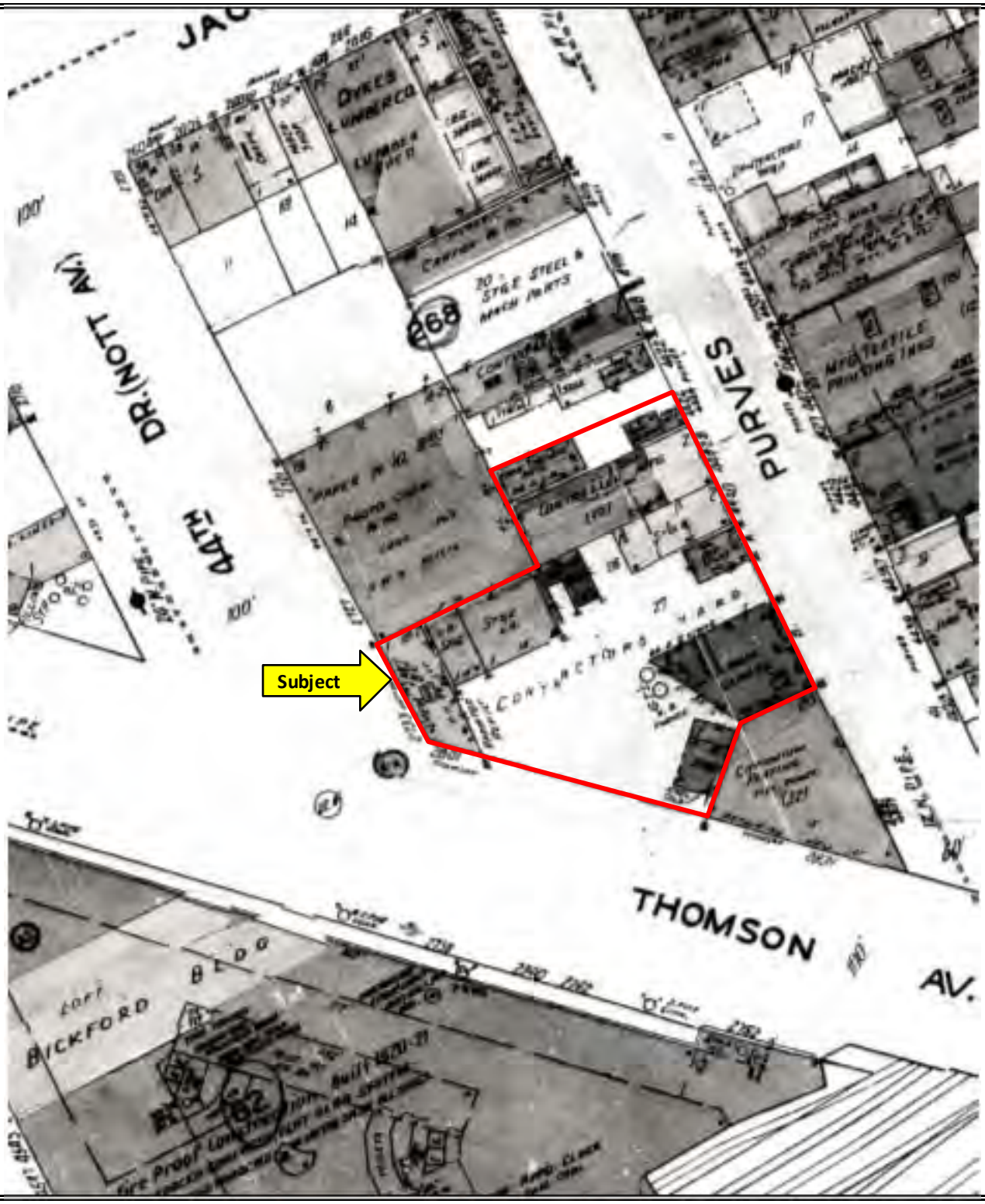
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1947

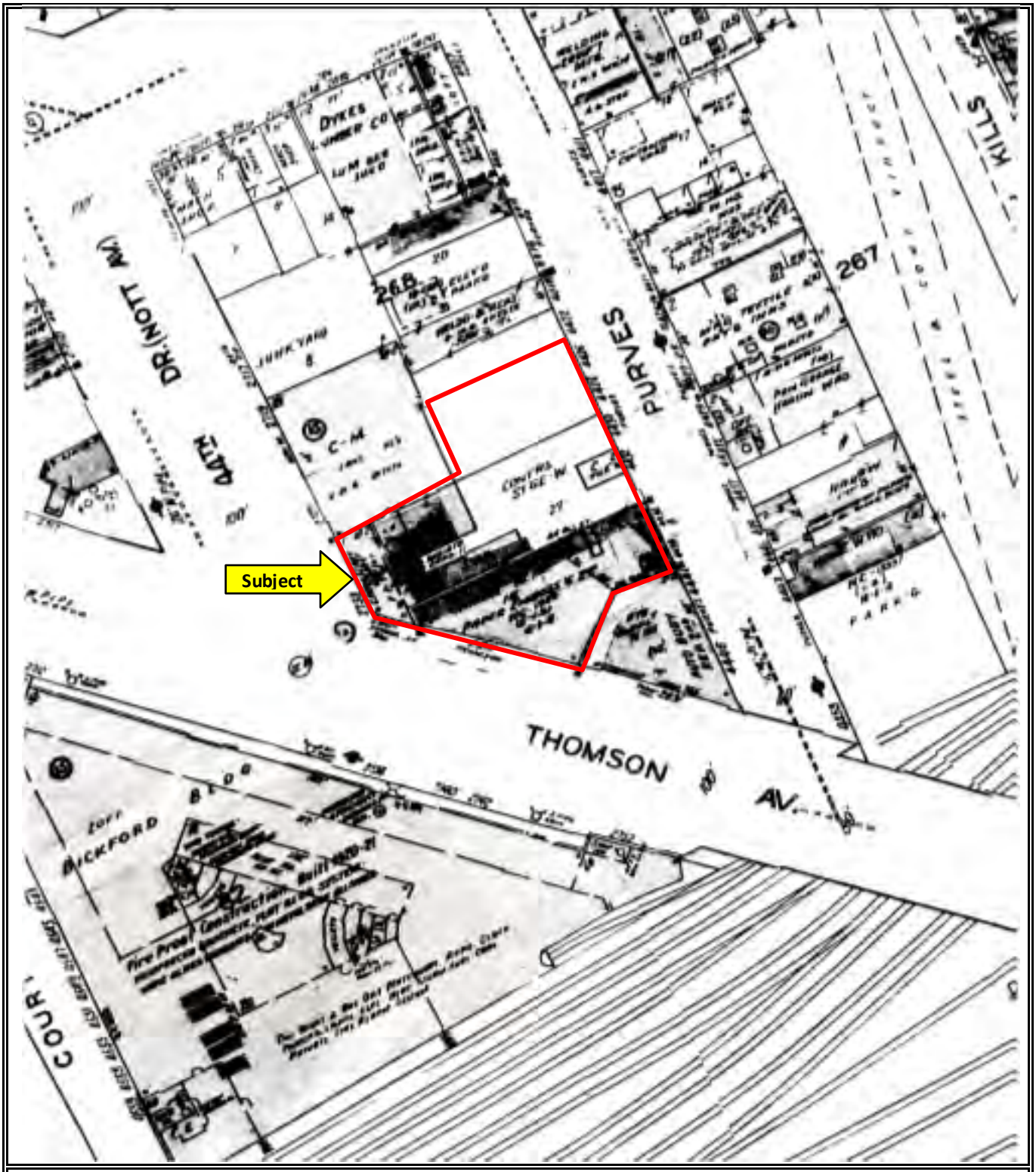
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1950

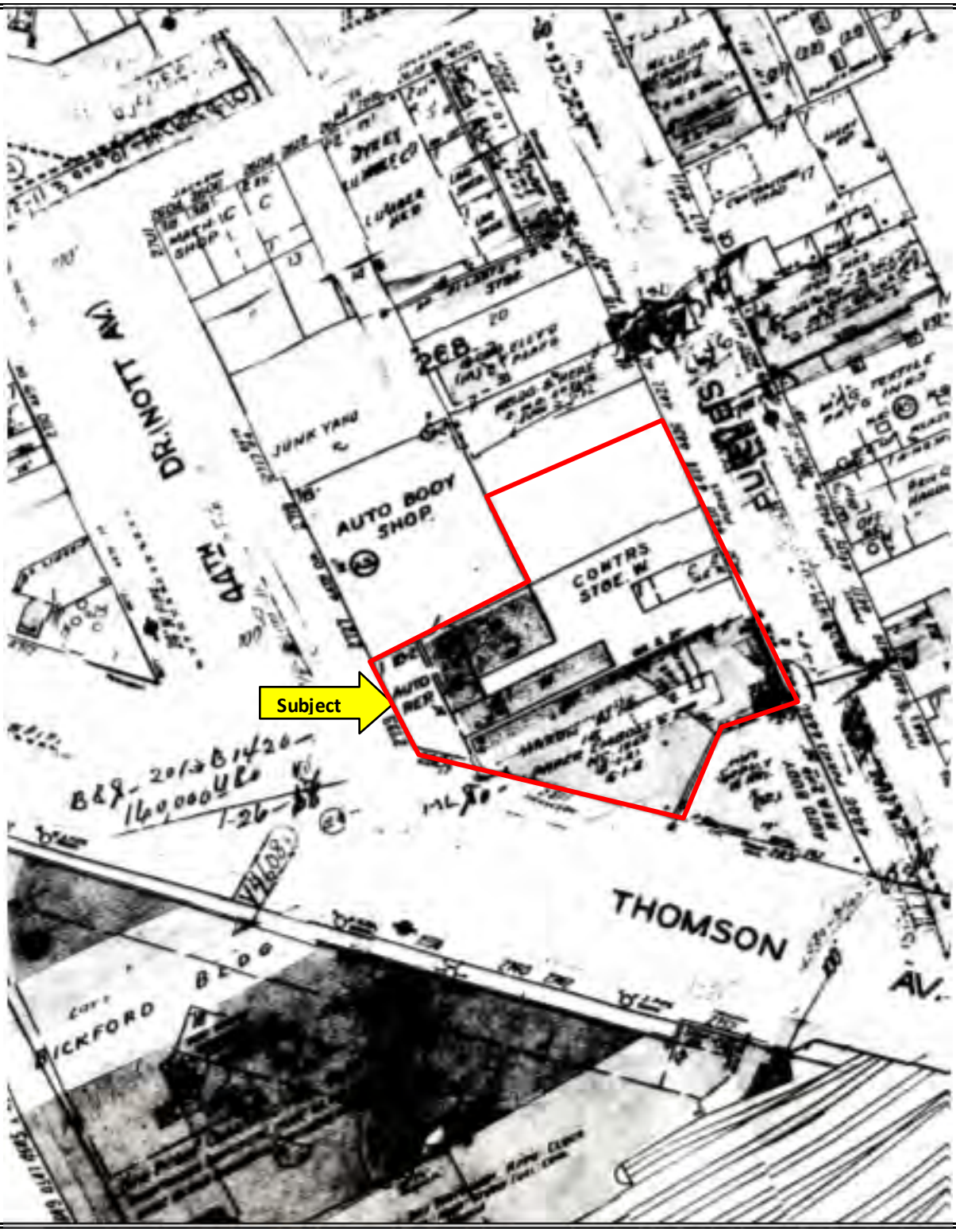
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1970

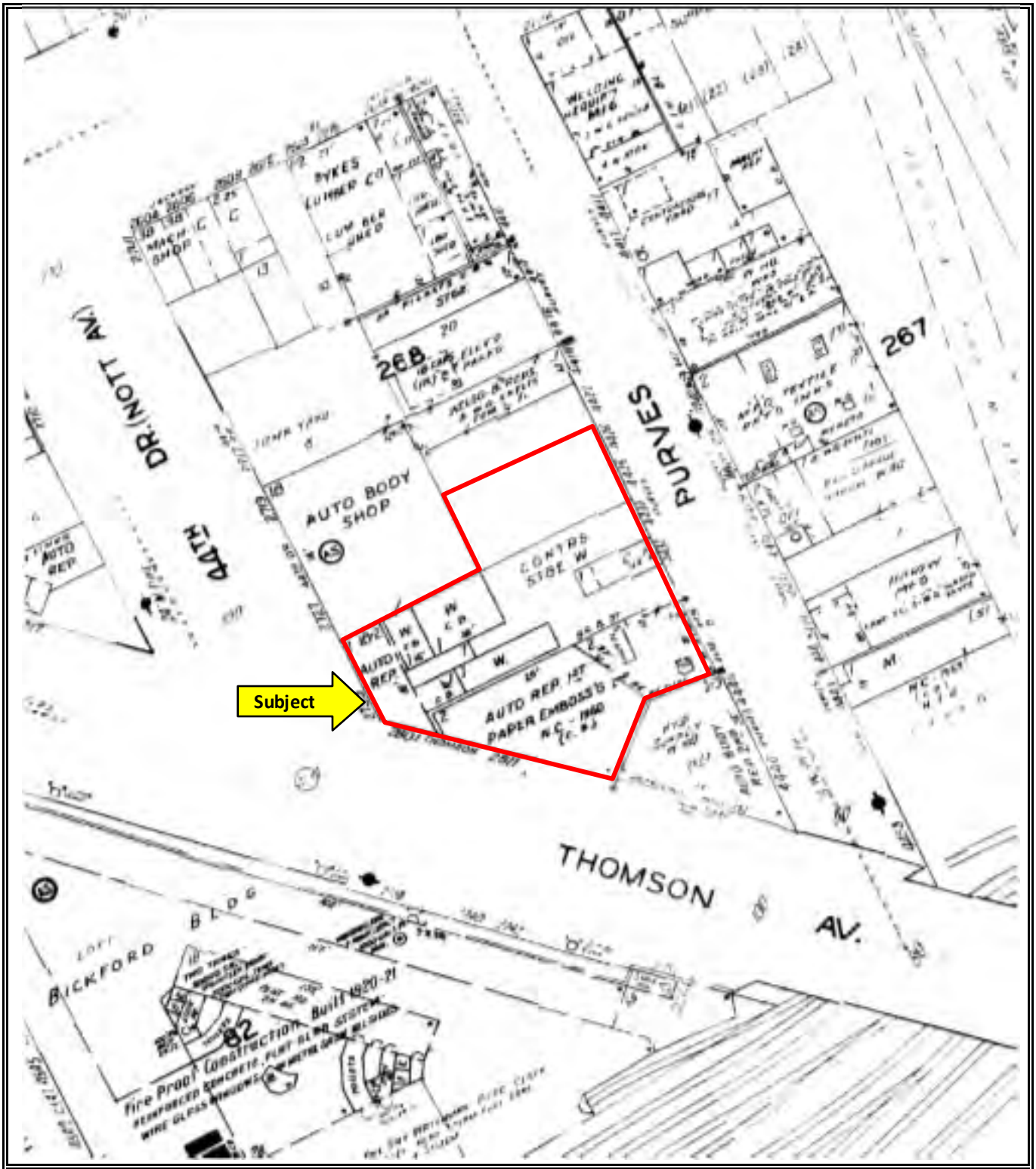
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1977

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1980

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280

Sanborn Map

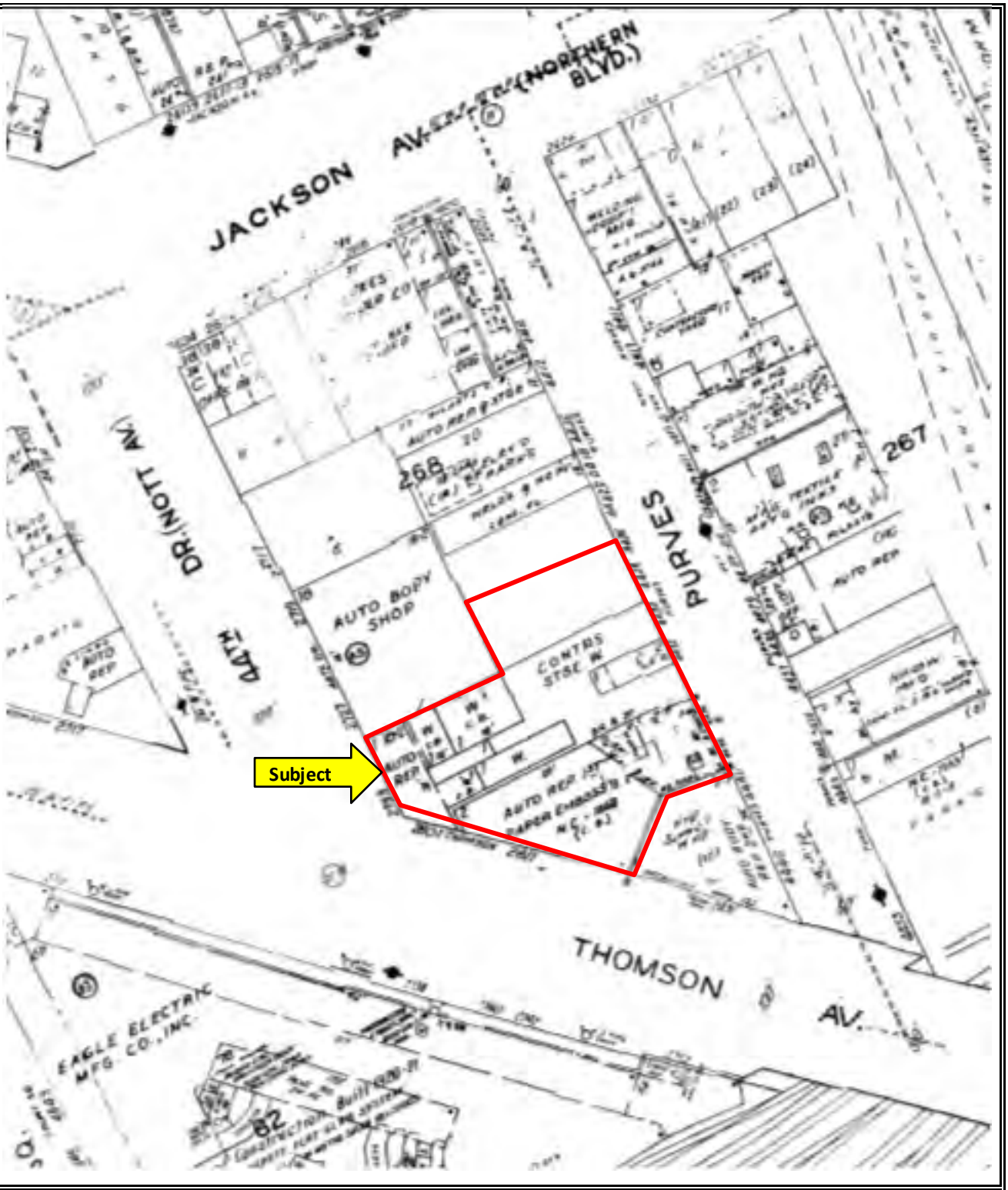
1985

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280

Sanborn Map

1990

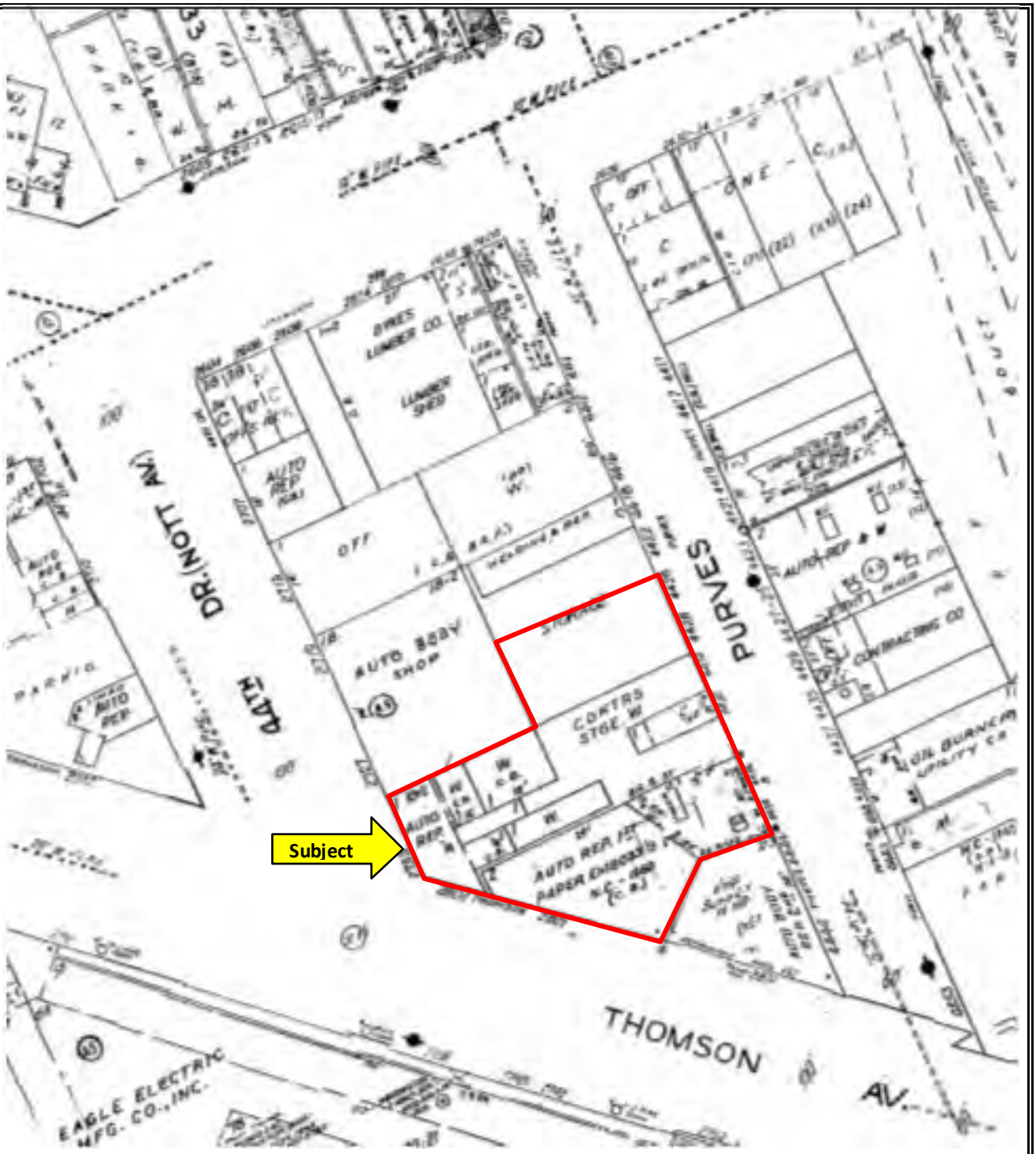
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

1995

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

2001

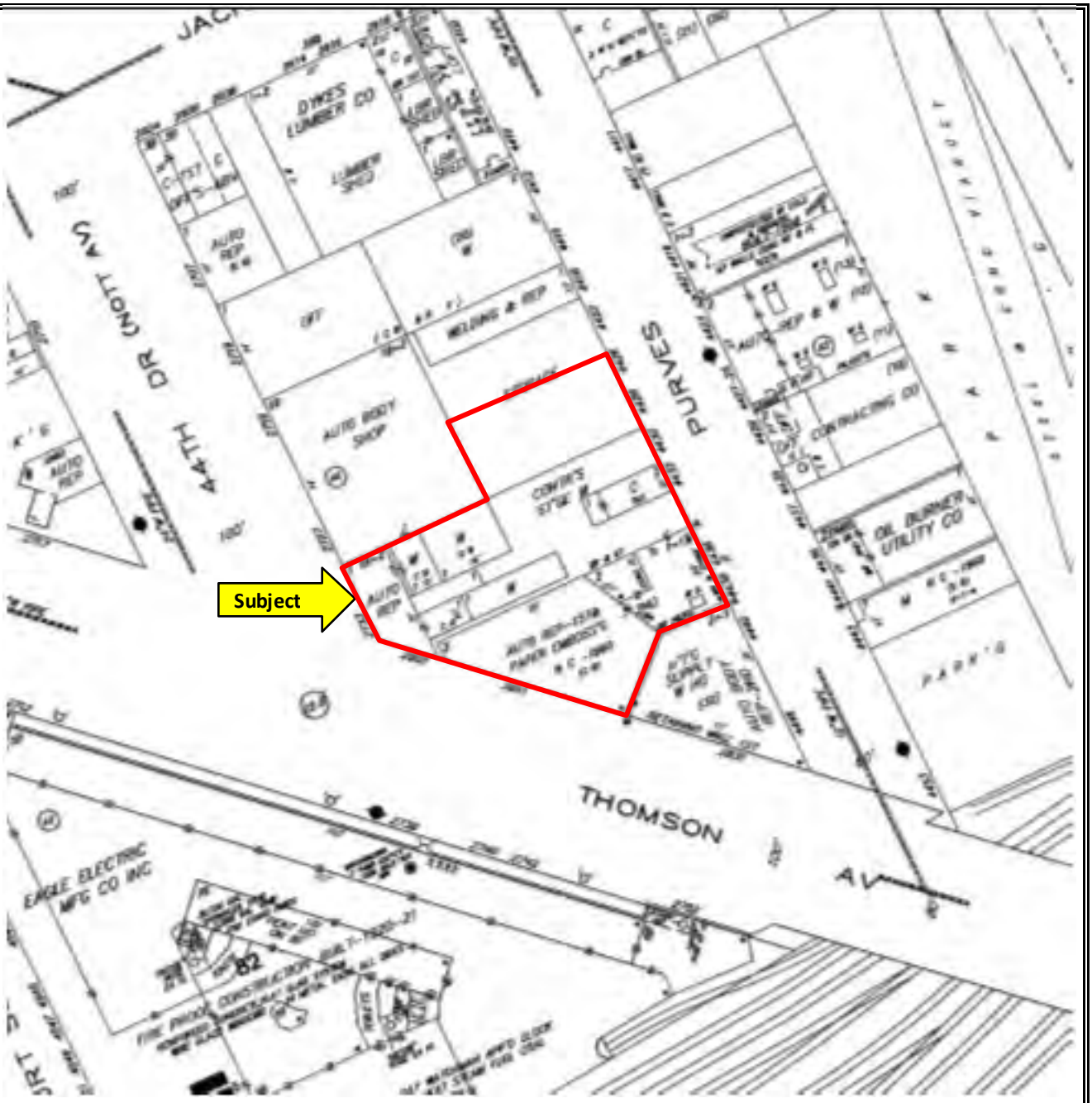
Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280

IVI

Sanborn Map

2004

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280



Sanborn Map

2006

Source: EDR	Project Name: 44-26 to 44-30 Purves Street Queens, New York Project Number: PC1119280

44-26 To 44-30 Pirves Street
44-26 To 44-30 Purves Street
Long Island City, NY 11101

Inquiry Number: 03217979.2r
December 02, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

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Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

44-26 TO 44-30 PURVES STREET
LONG ISLAND CITY, NY 11101

COORDINATES

Latitude (North):	40.746400 - 40˚ 44' 47.0''
Longitude (West):	73.941200 - 73˚ 56' 28.3''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	589390.3
UTM Y (Meters):	4510933.5
Elevation:	19 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	40073-F8 BROOKLYN, NY
Most Recent Revision:	1995
North Map:	40073-G8 CENTRAL PARK, NY
Most Recent Revision:	1995

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2009, 2010
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

TANKS ..... Storage Tank Faciliy Listing
CBS UST ..... Chemical Bulk Storage Database
MOSF UST ..... Major Oil Storage Facilities Database
MOSF AST ..... Major Oil Storage Facilities Database
MOSF ..... Major Oil Storage Facility Site Listing
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

RES DECL ..... Restrictive Declarations Listing

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

ERP ..... Environmental Restoration Program Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
SWTIRE	Registered Waste Tire Storage & Facility List
SWRCY	Registered Recycling Facility List
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

HIST AST	Historical Petroleum Bulk Storage Database

Local Land Records

LIENS 2	CERCLA Lien Information
LUCIS	Land Use Control Information System

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
HSWDS	Hazardous Substance Waste Disposal Site Inventory
UIC	Underground Injection Control Wells
NPDES	State Pollutant Discharge Elimination System
AIRS	Air Emissions Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER	PCB Transformer Registration Database

EXECUTIVE SUMMARY

COAL ASH EPA ---------- Coal Combustion Residues Surface Impoundments List
COAL ASH ---------- Coal Ash Disposal Site Listing
FINANCIAL ASSURANCE --- Financial Assurance Information Listing
COAL ASH DOE ---------- Sleam-Electric Plan Operation Data

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants ---- EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations -- EDR Proprietary Historic Gas Stations
EDR Historical Cleaners ---- EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/09/2011 has revealed that there are 4 CORRACTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ACTIVE STEEL DRUM CO INC	***52-30 34TH ST***	***SSE 1/2 - 1 (0.723 mi.)***	***164***	***576***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
KOSAN INDUSTRIAL CORP	***5-49 49TH AVE***	***W 1/2 - 1 (0.616 mi.)***	***162***	***544***
ACCURATE ASSOCIATES	***5-36 46TH RD***	***W 1/2 - 1 (0.730 mi.)***	***165***	***584***
CON EDISON RAVENSWOOD GENERATI	***38-54 VERNON BLVD***	***NNW 1/2 - 1 (0.880 mi.)***	***169***	***644***

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/15/2011 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ROCKROSE CONSTRUCTION CORP	43-29 CRESCENT ST	NNW 1/8 - 1/4 (0.167 mi.)	N65	217

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/15/2011 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KOREA NEWS	***42-22 27TH ST***	***NNE 1/8 - 1/4 (0.230 mi.)***	***U113***	***377***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MTA NYCT - VENT PLANT 5103	HUNTER ST & 43RD AVE	NNW 1/8 - 1/4 (0.129 mi.)	G46	159
MTA NYCT - VENT PLANT 6406-7	JACKSON AVE & 45TH AVE	W 1/8 - 1/4 (0.149 mi.)	J56	187

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 06/15/2011 has revealed that there are 6 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EAGLE ELECTRIC MANUFACTURING C	***45-31 COURT SQUARE***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I42***	***121***
LIRR - HUNTERS POINT YARD	***SKILLMAN AVE & 27TH ST***	***SSE 1/8 - 1/4 (0.145 mi.)***	***54***	***181***
SUBACCHI FURNITURE	***46-24 28TH ST***	***SSE 1/8 - 1/4 (0.191 mi.)***	***88***	***292***
MTA NYCT - JACKSON & WEST SUBS	***28-20 JACKSON AVE***	***NE 1/8 - 1/4 (0.209 mi.)***	***S99***	***330***
OUTLET CITY INCORPORATED	***42-16 WEST STREET***	***NE 1/8 - 1/4 (0.227 mi.)***	***X108***	***356***
NYCT - FLUSHING AVENUE LINE (#	***DAVIS & 23RD ST***	***W 1/8 - 1/4 (0.235 mi.)***	***Y114***	***390***

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Conservation's Inactive Hazardous waste Disposal Sites in New York State.

A review of the SHWS list, as provided by EDR, and dated 09/27/2011 has revealed that there are 6 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
21-03 44TH AVENUE	21-03 44TH AVENUE	NW 1/4 - 1/2 (0.356 mi.)	136	468
Class Code: Significant threat to the public health or environment - action required.				
AMTRAK SUNNYSIDE YARD	***3929 HONEYWELL STREET***	***NE 1/2 - 1 (0.619 mi.)***	***163***	***550***
Class Code: Significant threat to the public health or environment - action required.				
JUNG SUN LAUNDRY PLUME	***37-10 24TH STREET***	***NNE 1/2 - 1 (0.806 mi.)***	***166***	***602***
Class Code: Significant threat to the public health or environment - action required.				
ROEHR CHEMICALS INC	***52-20 37TH ST***	***SSE 1/2 - 1 (0.874 mi.)***	***168***	***610***
Class Code: Site is properly closed - requires continued management.				
STANDARD MOTOR PRODUCTS, INC.	***37-18 NORTHERN BOULEVARE***	***NE 1/2 - 1 (0.893 mi.)***	***170***	***667***
Class Code: Significant threat to the public health or environment - action required.				

Lower Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL RUBBER ADHESIVES, INC	***38-31 9TH STREET***	***N 1/2 - 1 (0.857 mi.)***	***167***	***604***
Class Code: Significant threat to the public health or environment - action required.				

VAPOR REOPENED: "Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on this additional information, New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

A review of the VAPOR REOPENED list, as provided by EDR, and dated 08/01/2011 has revealed that there is 1 VAPOR REOPENED site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STANDARD MOTOR PRODUCTS, INC.	***37-18 NORTHERN BOULEVARE***	***NE 1/2 - 1 (0.893 mi.)***	***170***	***667***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the list.

A review of the SWF/LF list, as provided by EDR, and dated 10/11/2011 has revealed that there are 2

SWF/LF sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
C&H SAND AND STONE; CORP.	21-16 JACKSON AVENUE	WSW 1/4 - 1/2 (0.352 mi.)	AD132	461
UNITED WASTE REMOVAL;INC.	2116 JACKSON AVENUE	WSW 1/4 - 1/2 (0.353 mi.)	AD133	462

State and tribal leaking storage tank lists

LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the LTANKS list, as provided by EDR, and dated 09/27/2011 has revealed that there are 36 LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAGUARDIA COMM COLLEGE Date Closed: 1/31/2002	31-10 THOMSON AVE	ESE 1/4 - 1/2 (0.330 mi.)	130	448
NYC TRANSIT AUTHORITY Date Closed: 11/30/2000	***29-50 NORTHERN BLVD***	***NE 1/4 - 1/2 (0.359 mi.)***	***137***	***470***
GETTY S/S #344 - GETTY PROPERT Date Closed: 1/5/2007	31-05 QUEENS BLVD	E 1/4 - 1/2 (0.361 mi.)	AE138	472
GETTY #344 Date Closed: 12/2/2004	***31-05 QUEENS BLVD***	***E 1/4 - 1/2 (0.361 mi.)***	***AE139***	***474***
LUK OIL Date Closed: 2/8/2007	3105 QUEENS BLVD	E 1/4 - 1/2 (0.361 mi.)	AE140	479
LOVOUR HOME Date Closed: 2/17/2010	2512 41ST AVE	NNE 1/4 - 1/2 (0.414 mi.)	AG143	485
32-32 QUEENS BLVD/SUNOCO	***32032 QUEENS BLVD***	***ESE 1/4 - 1/2 (0.431 mi.)***	***145***	***490***
APRT Date Closed: 4/2/2008	2403 41ST AVE	N 1/4 - 1/2 (0.435 mi.)	146	495
CLOSED-LACKOF RECENT INFO Date Closed: 3/6/2003	***32-00 SKILLMAN AVE***	***E 1/4 - 1/2 (0.436 mi.)***	***AH147***	***496***
32-00 SKILLMAN AVE Date Closed: 7/29/2005	32-00 SKILLMAN AVE	E 1/4 - 1/2 (0.436 mi.)	AH149	501
CLOSED-LACKOF RECENT INFO Date Closed: 3/14/2003	***40-40 CRESCENT ST***	***NNE 1/4 - 1/2 (0.441 mi.)***	***150***	***502***
GULF STATION Date Closed: 8/28/2009 Date Closed: 1/7/2004	23-01 41ST AVE	N 1/4 - 1/2 (0.459 mi.)	157	533
43-41 32ND PLACE Date Closed: 6/25/1993	***43-41 32ND PLACE***	***E 1/4 - 1/2 (0.463 mi.)***	***158***	***536***
32-32 QUEENS BLVD Date Closed: 7/27/1994	***32-32 QUEENS BLVD***	***ESE 1/4 - 1/2 (0.467 mi.)***	***159***	***538***

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported Date Closed: 6/30/2003	***43-09 HUNTER ST***	***NNW 1/8 - 1/4 (0.125 mi.)***	***G36***	***105***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
COURT PLAZA	5 COURT SQUARE	WSW 1/8 - 1/4 (0.132 mi.)	E51	171
42-64 HUNTER STREET	***42-64 HUNTER STREET***	***N 1/8 - 1/4 (0.148 mi.)***	***55***	***184***
Date Closed: 11/22/1993				
26-32 SKILLMAN AVE	26-32 SKILLMAN AVE	S 1/8 - 1/4 (0.166 mi.)	O63	211
Date Closed: 2/17/2006				
Date Closed: 1/7/2004				
MID TOWN OPERATING COMPANY TTF	42-50 24TH ST	NNW 1/8 - 1/4 (0.246 mi.)	AA120	420
Date Closed: 1/21/2010				
ON SIDEWALK	47-15 PEARSON PL	SSW 1/8 - 1/4 (0.248 mi.)	Z122	428
Date Closed: 7/31/2003				
47-22 PEARSON PLACE	***47-22 PEARSON PLACE***	***SSW 1/4 - 1/2 (0.255 mi.)***	***Z125***	***436***
Date Closed: 7/29/1993				
47-20 30TH ST	***47-20 30TH ST***	***SE 1/4 - 1/2 (0.301 mi.)***	***AB127***	***442***
Date Closed: 11/2/1992				
JOMEIRA REALITY	47-20 30TH ST	SE 1/4 - 1/2 (0.301 mi.)	AB128	445
Date Closed: 3/1/2002				
CONDEA SUPPLY CORP	21-21 44TH RD	WNW 1/4 - 1/2 (0.302 mi.)	129	446
Date Closed: 6/21/2006				
Not reported	***21ST ST/44TH RD***	***WNW 1/4 - 1/2 (0.353 mi.)***	***AC134***	***463***
Date Closed: 10/30/2003				
ST. FRANCIS OF ASSISI	***45-02 21ST AVE.***	***W 1/4 - 1/2 (0.355 mi.)***	***135***	***465***
Date Closed: 1/25/1989				
COMMERCIA PROPERTY	29-10 HUNTERS POINT AVE	S 1/4 - 1/2 (0.393 mi.)	AF141	481
Date Closed: 5/15/2006				
NY ENVELOPE	***2910 HUNTERS POINT AV***	***S 1/4 - 1/2 (0.394 mi.)***	***AF142***	***482***
Date Closed: 6/17/2005				
Not reported	23-30 50TH AVE	SW 1/4 - 1/2 (0.444 mi.)	151	505
Date Closed: 11/17/2003				
ANDREA ELECTRONICS	***11-40 45TH DRIVE***	***W 1/4 - 1/2 (0.447 mi.)***	***152***	***507***
Date Closed: 12/17/2002				
12-12 43RD AVE	***12-12 23RD AVE***	***NW 1/4 - 1/2 (0.450 mi.)***	***153***	***510***
TYPHIN STEEL	***49-49 30TH STREET***	***SSE 1/4 - 1/2 (0.452 mi.)***	***154***	***519***
Date Closed: 1/14/1994				
INTERNATIONAL MASONRY INS	***12-07 44TH AV***	***WNW 1/4 - 1/2 (0.453 mi.)***	***155***	***528***
Date Closed: 3/31/2006				
11-15 45TH AVENUE	***11-15 45TH AVENUE***	***WNW 1/4 - 1/2 (0.459 mi.)***	***156***	***531***
Date Closed: 5/20/1994				
RESIDANCE	1120 43RD ROAD	NW 1/4 - 1/2 (0.498 mi.)	AI160	541
Date Closed: 12/19/2007				
X	11-20 43RD RD	NW 1/4 - 1/2 (0.498 mi.)	AI161	542
Date Closed: 2/28/2006				

EXECUTIVE SUMMARY

HIST LTANKS: A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database.

A review of the HIST LTANKS list, as provided by EDR, and dated 01/01/2002 has revealed that there are 21 HIST LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NYC TRANSIT AUTHORITY Date Closed: 11/30/00	***29-50 NORTHERN BLVD***	***NE 1/4 - 1/2 (0.359 mi.)***	***137***	***470***
GETTY #344 Date Closed: / /	***31-05 QUEENS BLVD***	***E 1/4 - 1/2 (0.361 mi.)***	***AE139***	***474***
MAMM REALTY Date Closed: / /	***25-11 41ST AVE***	***NNE 1/4 - 1/2 (0.415 mi.)***	***AG144***	***487***
32-32 QUEENS BLVD/SUNOCO Date Closed: / /	***32032 QUEENS BLVD***	***ESE 1/4 - 1/2 (0.431 mi.)***	***145***	***490***
CLOSED-LACKOF RECENT INFO Date Closed: / /	***32-00 SKILLMAN AVE***	***E 1/4 - 1/2 (0.436 mi.)***	***AH147***	***496***
CLOSED-LACKOF RECENT INFO Date Closed: / /	***40-40 CRESCENT ST***	***NNE 1/4 - 1/2 (0.441 mi.)***	***150***	***502***
43-41 32ND PLACE Date Closed: 06/25/93	***43-41 32ND PLACE***	***E 1/4 - 1/2 (0.463 mi.)***	***158***	***536***
32-32 QUEENS BLVD Date Closed: 07/27/94	***32-32 QUEENS BLVD***	***ESE 1/4 - 1/2 (0.467 mi.)***	***159***	***538***

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported Date Closed: / /	***43-09 HUNTER ST***	***NNW 1/8 - 1/4 (0.125 mi.)***	***G36***	***105***
42-64 HUNTER STREET Date Closed: 11/22/93	***42-64 HUNTER STREET***	***N 1/8 - 1/4 (0.148 mi.)***	***55***	***184***
OUTLET CITY INCORPORATED Date Closed: / /	***42-16 WEST STREET***	***NE 1/8 - 1/4 (0.227 mi.)***	***X108***	***356***
47-22 PEARSON PLACE Date Closed: 07/29/93	***47-22 PEARSON PLACE***	***SSW 1/4 - 1/2 (0.255 mi.)***	***Z125***	***436***
47-20 30TH ST Date Closed: 11/02/92	***47-20 30TH ST***	***SE 1/4 - 1/2 (0.301 mi.)***	***AB127***	***442***
Not reported Date Closed: / /	***21ST ST/44TH RD***	***WNW 1/4 - 1/2 (0.353 mi.)***	***AC134***	***463***
ST. FRANCIS OF ASSISI Date Closed: / /	***45-02 21ST AVE.***	***W 1/4 - 1/2 (0.355 mi.)***	***135***	***465***
NY ENVELOPE Date Closed: / /	***2910 HUNTERS POINT AV***	***S 1/4 - 1/2 (0.394 mi.)***	***AF142***	***482***
ANDREA ELECTRONICS Date Closed: / /	***11-40 45TH DRIVE***	***W 1/4 - 1/2 (0.447 mi.)***	***152***	***507***
12-12 43RD AVE Date Closed: / /	***12-12 23RD AVE***	***NW 1/4 - 1/2 (0.450 mi.)***	***153***	***510***
TYPHIN STEEL Date Closed: 01/14/94	***49-49 30TH STREET***	***SSE 1/4 - 1/2 (0.452 mi.)***	***154***	***519***

Lower Elevation	Address	Direction / Distance	Map ID	Page
INTERNATIONAL MASONRY INS Date Closed: / /	***12-07 44TH AV***	***WNW 1/4 - 1/2 (0.453 mi.)***	***155***	***528***
11-15 45TH AVENUE Date Closed: 05/20/94	***11-15 45TH AVENUE***	***WNW 1/4 - 1/2 (0.459 mi.)***	***156***	***531***

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the UST list, as provided by EDR, and dated 10/04/2011 has revealed that there are 16 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KRK EXPEDITING CO INC	***42-21 CRESCENT ST***	***N 1/8 - 1/4 (0.249 mi.)***	***124***	***433***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GASGO PETROLEUM INC	***27-01 JACKSON AVENUE***	***N 0 - 1/8 (0.078 mi.)***	***B17***	***47***
ELECTRIC REALTY CO, LLC.	43-22 QUEENS STREET	ENE 0 - 1/8 (0.119 mi.)	F29	84
CITICORP AT COURT SQUARE	25-01 JACKSON AVENUE	W 1/8 - 1/4 (0.130 mi.)	J47	160
CAB MANAGEMENT CORP	***27-34 JACKSON AVENUE***	***NNE 1/8 - 1/4 (0.132 mi.)***	***K52***	***176***
45-17 PEARSON ST 45-18 CRT SQ	***45-17 PEARSON ST (45-18***	***SW 1/8 - 1/4 (0.165 mi.)***	***M60***	***197***
SATT REALTY CORP.	***26-32 SKILLMAN AVENUE***	***S 1/8 - 1/4 (0.166 mi.)***	***O64***	***213***
43-00 CRESCENT ST.	***43-00 CRESCENT ST***	***NNW 1/8 - 1/4 (0.179 mi.)***	***N71***	***233***
CITYWIDE SELF STORAGE	45-55 PEARSON STREET	SW 1/8 - 1/4 (0.181 mi.)	M77	262
GAP REALTY CO	***45-56 PEARSON ST***	***SW 1/8 - 1/4 (0.182 mi.)***	***M78***	***266***
21-45 44TH DRIVE	21-45 44TH DRIVE	WNW 1/8 - 1/4 (0.189 mi.)	R86	287
BAGWIN BROTHERS SERVICE CENTER	42-37 CRESCENT STREET	N 1/8 - 1/4 (0.219 mi.)	V103	342
FORDHAM ROAD CONCRETE	47-17 27TH STREET	S 1/8 - 1/4 (0.222 mi.)	W105	346
PARKING LOT	***23-14 44TH ROAD***	***NW 1/8 - 1/4 (0.227 mi.)***	***107***	***351***
OUTLET CITY INC	***42-16 WEST ST***	***NE 1/8 - 1/4 (0.227 mi.)***	***X109***	***365***
MIDTOWN OPERATING CORP	***42-50 24TH STREET***	***NNW 1/8 - 1/4 (0.246 mi.)***	***AA121***	***422***

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the AST list, as provided by EDR, and dated 10/04/2011 has revealed that there are 18 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAGUARDIA COMMUNITY COLLEGE	29-10 THOMSON AVENUE	ESE 1/8 - 1/4 (0.205 mi.)	T94	311
STAR JOURNAL BUILDING	42-26 28TH STREET	NNE 1/8 - 1/4 (0.211 mi.)	101	335

Lower Elevation	Address	Direction / Distance	Map ID	Page
INCOME STAR CORPORATION	***27-35 JACKSON AVE***	***NNE 0 - 1/8 (0.120 mi.)***	***D31***	***88***
EAGLE ELECTRIC MFG CO INC	***45-31 COURT SQ***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I38***	***111***
45-30 COURT SQUARE	***45-30 COURT SQUARE***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I41***	***118***
CITICORP AT COURT SQUARE	25-01 JACKSON AVENUE	W 1/8 - 1/4 (0.130 mi.)	J48	163

Lower Elevation	Address	Direction / Distance	Map ID	Page
5 COURT SQUARE	***5 COURT SQUARE***	***WSW 1/8 - 1/4 (0.132 mi.)***	***E50***	***168***
2415 44TH ROAD LLC	***43-32 CRESCENT STREET***	***NNW 1/8 - 1/4 (0.165 mi.)***	***N61***	***202***
KATT CORPORATION	43-29 CRESCENT STREET	NNW 1/8 - 1/4 (0.167 mi.)	N66	218
46-20 27TH STREET LLC	46-20 27TH STREET	SSE 1/8 - 1/4 (0.175 mi.)	P67	221
CITYWIDE SELF STORAGE	45-55 PEARSON STREET	SW 1/8 - 1/4 (0.181 mi.)	M76	259
2415 44TH ROAD LLC	24-15 44TH ROAD	NW 1/8 - 1/4 (0.182 mi.)	79	271
RML CO.	***24-20 JACKSON AVENUE***	***W 1/8 - 1/4 (0.184 mi.)***	***Q80***	***273***
EAGLE ELECTRIC MFG CO INC	***43-35 24TH STREET***	***NNW 1/8 - 1/4 (0.206 mi.)***	***98***	***326***
MORBECK CORP	***24-15 43 AVE***	***NNW 1/8 - 1/4 (0.214 mi.)***	***102***	***337***
BRANCO LEATHER INC	***44-02 23RD ST***	***NW 1/8 - 1/4 (0.242 mi.)***	***116***	***408***
METRO MACHINING & FABRICATING	***47-24 27TH STREET***	***S 1/8 - 1/4 (0.242 mi.)***	***W117***	***411***
PROPERTY CLERK WAREHOUSE	***47-15 PEARSON PLACE***	***SSW 1/8 - 1/4 (0.248 mi.)***	***Z123***	***429***

CBS AST: Chemical Bulk Storage Database. Registration data collected as required by 6 NYCRR Part 596. It includes facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. Includes facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed.

A review of the CBS AST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 3 CBS AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
S & M AUTOMATIC PRECISION CO.	***44-43 PURVES ST***	***E 0 - 1/8 (0.020 mi.)***	***A2***	***9***

Lower Elevation	Address	Direction / Distance	Map ID	Page
EAGLE ELECTRIC MANUFACTURING C	***45-31 COURT SQUARE***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I42***	***121***
ANTHONY CONCRETE	***47-17 27TH ST***	***S 1/8 - 1/4 (0.222 mi.)***	***W106***	***349***

CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the CBS list, as provided by EDR, and dated 10/04/2011 has revealed that there are 3 CBS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
S & M AUTOMATIC PRECISION CO.	***44-43 PURVES ST***	***E 0 - 1/8 (0.020 mi.)***	***A2***	***9***

Lower Elevation	Address	Direction / Distance	Map ID	Page
EAGLE ELECTRIC MANUFACTURING C	***45-31 COURT SQUARE***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I42***	***121***
ANTHONY CONCRETE	***47-17 27TH ST***	***S 1/8 - 1/4 (0.222 mi.)***	***W106***	***349***

State and tribal institutional control / engineering control registries

ENG CONTROLS: Environmental Remediation sites that have engineering controls in place.

A review of the ENG CONTROLS list, as provided by EDR, and dated 09/27/2011 has revealed that there is 1 ENG CONTROLS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
21-16 44TH ROAD , LIC	***21-16 44TH ROAD***	***WNW 1/4 - 1/2 (0.343 mi.)***	***AC131***	***449***

INST CONTROL: Environmental Remediation sites that have institutional controls in place.

A review of the INST CONTROL list, as provided by EDR, and dated 09/27/2011 has revealed that there is 1 INST CONTROL site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
21-16 44TH ROAD , LIC	***21-16 44TH ROAD***	***WNW 1/4 - 1/2 (0.343 mi.)***	***AC131***	***449***

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Agreements. The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination.

A review of the VCP list, as provided by EDR, and dated 09/27/2011 has revealed that there are 3 VCP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OUTLET CITY, QUEENS BLVD. & JA	QUEENS BLVD. & JACKSON	NE 1/4 - 1/2 (0.268 mi.)	126	441
FORMERLY ACCO BRANDS, INC.	32-00 SKILLMAN AVENUE	E 1/4 - 1/2 (0.436 mi.)	AH148	499

Lower Elevation	Address	Direction / Distance	Map ID	Page
21-16 44TH ROAD , LIC	***21-16 44TH ROAD***	***WNW 1/4 - 1/2 (0.343 mi.)***	***AC131***	***449***

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site List

A review of the BROWNFIELDS list, as provided by EDR, and dated 09/27/2011 has revealed that there is 1 BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
QUEENS PLAZA RESIDENTIAL DEVEL	28-10 JACKSON AVENUE	NE 1/8 - 1/4 (0.195 mi.)	S91	306

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

DEL SHWS: A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

A review of the DEL SHWS list, as provided by EDR, and dated 08/23/2011 has revealed that there is 1 DEL SHWS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER MANHATTAN ADHESIVES PLA	425-459 GREENPOINT AVEN	S 1/2 - 1 (0.931 mi.)	171	673

Local Lists of Registered Storage Tanks

HIST UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the HIST UST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 13 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KRK EXPEDITING CO INC	***42-21 CRESCENT ST***	***N 1/8 - 1/4 (0.249 mi.)***	***124***	***433***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GASGO PETROLEUM INC	***27-01 JACKSON AVENUE***	***N 0 - 1/8 (0.078 mi.)***	***B17***	***47***
EAGLE ELECTRIC MFG CO INC	43-22 QUEENS BLVD	ENE 0 - 1/8 (0.119 mi.)	F30	86
CITICORP AT COURT SQUARE	25-01 JACKSON AVENUE	W 1/8 - 1/4 (0.130 mi.)	J49	166
CAB MANAGEMENT CORP	***27-34 JACKSON AVENUE***	***NNE 1/8 - 1/4 (0.132 mi.)***	***K52***	***176***
45-17 PEARSON ST 45-18 CRT SQ	***45-17 PEARSON ST (45-18***	***SW 1/8 - 1/4 (0.165 mi.)***	***M60***	***197***
SATT REALTY CORP.	***26-32 SKILLMAN AVENUE***	***S 1/8 - 1/4 (0.166 mi.)***	***O64***	***213***
43-00 CRESCENT ST.	***43-00 CRESCENT ST***	***NNW 1/8 - 1/4 (0.179 mi.)***	***N71***	***233***
MARKETING INDUSTRIES GROUP LTD	45-55 PEARSON STREET	SW 1/8 - 1/4 (0.181 mi.)	M75	255
GAP REALTY CO	***45-56 PEARSON ST***	***SW 1/8 - 1/4 (0.182 mi.)***	***M78***	***266***
PARKING LOT	***23-14 44TH ROAD***	***NW 1/8 - 1/4 (0.227 mi.)***	***107***	***351***
OUTLET CITY INC	***42-16 WEST ST***	***NE 1/8 - 1/4 (0.227 mi.)***	***X109***	***365***
MIDTOWN OPERATING CORP	***42-50 24TH STREET***	***NNW 1/8 - 1/4 (0.246 mi.)***	***AA121***	***422***

Records of Emergency Release Reports

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 09/27/2011 has revealed that there are 10 NY Spills sites within approximately 0.125 miles of the target property.

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANHOLE # 514 Date Closed: 9/27/2001	***44-27 PERVES ST***	***ENE 0 - 1/8 (0.019 mi.)***	***A1***	***7***
44-43 PURVES ST Date Closed: 5/14/1998	***44-43 PURVES ST***	***E 0 - 1/8 (0.020 mi.)***	***A3***	***11***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CONED MANHOLE#515 Date Closed: 10/23/2006	PURVES STREET/JACKSON	N 0 - 1/8 (0.073 mi.)	B15	43
GASGO Date Closed: 9/7/2005	***27-01 JACKSON AVE***	***N 0 - 1/8 (0.078 mi.)***	***B16***	***44***
Not reported Date Closed: 11/8/2002	JACKSON AV & 44TH DR	NW 0 - 1/8 (0.082 mi.)	C19	64
DUTCH KILL/SCRAP YARD Date Closed: 7/23/1992	***DUTCH KILL***	***E 0 - 1/8 (0.094 mi.)***	***21***	***67***
43-40 COURT SQUARE / QUEE Date Closed: 6/17/1987	***43-40 COURT SQUARE***	***WSW 0 - 1/8 (0.115 mi.)***	***E24***	***74***
MANHOLE 4440 Date Closed: 1/7/2000	***4327 QUEENS ST***	***ENE 0 - 1/8 (0.116 mi.)***	***F25***	***77***
AMTRAK LINE 4 Date Closed: 11/10/2008	43-47 QUEENS ST	ENE 0 - 1/8 (0.117 mi.)	F27	80
VS# 2196 Date Closed: 3/26/2002	***43-22 QUEENS ST***	***ENE 0 - 1/8 (0.119 mi.)***	***F28***	***81***

NY Hist Spills: This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database.

A review of the NY Hist Spills list, as provided by EDR, and dated 01/01/2002 has revealed that there are 7 NY Hist Spills sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANHOLE # 514	***44-27 PERVES ST***	***ENE 0 - 1/8 (0.019 mi.)***	***A1***	***7***
44-43 PURVES ST	***44-43 PURVES ST***	***E 0 - 1/8 (0.020 mi.)***	***A3***	***11***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GASGO	***27-01 JACKSON AVE***	***N 0 - 1/8 (0.078 mi.)***	***B16***	***44***
DUTCH KILL/SCRAP YARD	***DUTCH KILL***	***E 0 - 1/8 (0.094 mi.)***	***21***	***67***
43-40 COURT SQUARE / QUEE	***43-40 COURT SQUARE***	***WSW 0 - 1/8 (0.115 mi.)***	***E24***	***74***
MANHOLE 4440	***4327 QUEENS ST***	***ENE 0 - 1/8 (0.116 mi.)***	***F25***	***77***
VS# 2196	***43-22 QUEENS ST***	***ENE 0 - 1/8 (0.119 mi.)***	***F28***	***81***

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 06/15/2011 has revealed that there are 37 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
S N B INC	*44-16 PURVES ST*	*NE 0 - 1/8 (0.020 mi.)*	*A4*	*13*
A-1 AUTO COLLISION INC	*2831 THOMSON AVE*	*SSW 0 - 1/8 (0.024 mi.)*	*5*	*15*
INTERNATIONAL DESIGN CENTER	*29-10 THOMPSON AVE 9TH*	*ESE 1/8 - 1/4 (0.151 mi.)*	*L58*	*193*
NYSDOT G CAMPBELL PAINTING D25	*THOMPSON AVE BRIDGE*	*ESE 1/8 - 1/4 (0.153 mi.)*	*L59*	*196*
J BROTHERS AUTO BODY INC	*28-20 42ND RD*	*NNE 1/8 - 1/4 (0.190 mi.)*	*87*	*289*
NYC LAGUARDIA COMMUNITY COLLEG	*29-10 THOMSON AVE - BLD*	*ESE 1/8 - 1/4 (0.205 mi.)*	*T95*	*315*
BURNHAM PRODUCTS CORP	*42-24 ORCHARD ST*	*ESE 1/8 - 1/4 (0.205 mi.)*	*T96*	*320*
SCRIPTO EVERGLIDE	*29-10 THOMSON AVE*	*ESE 1/8 - 1/4 (0.205 mi.)*	*T97*	*324*

Lower Elevation	Address	Direction / Distance	Map ID	Page
SEAL-KAP PACKAGING INC	*11-5 44TH DR*	*N 0 - 1/8 (0.070 mi.)*	*B6*	*17*
A A A STAMP & SEAL	*26-20 JACKSON AVE*	*NNW 0 - 1/8 (0.072 mi.)*	*B10*	*28*
NYCTA	*44TH DR & JACKSON AVE*	*NW 0 - 1/8 (0.082 mi.)*	*C20*	*66*
NYSDOT - THOMSON AVENUE BRIDGE	*JACKSON AVE & DUTCH KIL*	*NNE 0 - 1/8 (0.101 mi.)*	*D22*	*70*
CENTRALIZED LAB SERVICES INC	*43-25 HUNTER ST*	*NNW 1/8 - 1/4 (0.126 mi.)*	*H37*	*108*
ROGERS ENGRAVING CO INC	*45-61 COURT SQ*	*WSW 1/8 - 1/4 (0.129 mi.)*	*I40*	*116*
COURT SQUARE	*45-18 COURT SQ*	*WSW 1/8 - 1/4 (0.129 mi.)*	*I43*	*147*
KENT BRAGALINE INC	*27-45 JACKSON AVE*	*NE 1/8 - 1/4 (0.141 mi.)*	*K53*	*179*
NYCT - COURT SQUARE STA G LINE	*JACKSON ST & COURT SQ*	*W 1/8 - 1/4 (0.149 mi.)*	*J57*	*188*
AEROSOURCE INC	*25-19 43RD AVE*	*NNW 1/8 - 1/4 (0.175 mi.)*	*N68*	*223*
CON EDISON MANHOLE 954	*47TH ST & SKILLMAN AVE*	*S 1/8 - 1/4 (0.178 mi.)*	*69*	*226*
FEDERAL PACIFIC ELECTRIC CO	*4300 CRESCENT ST*	*NNW 1/8 - 1/4 (0.179 mi.)*	*N70*	*228*
MATSON MFG CO INC	*45-17 PEARSON ST*	*WSW 1/8 - 1/4 (0.179 mi.)*	*M72*	*241*
STERNBERGER MOTOR - G A P REAL	*45-55 PEARSON ST APT UN*	*SW 1/8 - 1/4 (0.181 mi.)*	*M73*	*252*
E ZAPPI DERMATOPATHOLOGY LAB I	*21-51 44TH DR*	*WNW 1/8 - 1/4 (0.189 mi.)*	*R81*	*277*
JAGUAR GOLD PRODUCT	*21-30 44TH DR*	*WNW 1/8 - 1/4 (0.189 mi.)*	*R82*	*279*
ROSS WATCH CASE CORP	*21-30-42 44TH DR*	*WNW 1/8 - 1/4 (0.189 mi.)*	*R83*	*283*
DENTSPLY TRU-BYTE	10-39 44TH DR	WNW 1/8 - 1/4 (0.189 mi.)	R84	284
CLEANCO INDUSTRIAL SERVICES OF	*10-39 44TH DR*	*WNW 1/8 - 1/4 (0.189 mi.)*	*R85*	*286*
MICHELANGELO SCULPTURE	*27-01 47TH AVE*	*SSE 1/8 - 1/4 (0.194 mi.)*	*P90*	*304*
PERENNIALLY GREEN INC	*23-13 44TH DR*	*WNW 1/8 - 1/4 (0.199 mi.)*	*R92*	*307*
NYCTA - 11TH STREET SUBSTATION	*JACKSON AVE & 45TH RD*	*W 1/8 - 1/4 (0.203 mi.)*	*Q93*	*310*
ANOCA PLATING SERVICE CORP	*27-04 42ND RD*	*N 1/8 - 1/4 (0.211 mi.)*	*U100*	*333*
EPPY PLATING	*42-40 CRESCENT ST*	*N 1/8 - 1/4 (0.220 mi.)*	*V104*	*344*
CITY SPORTS & GRAPHIC	*45-12 DAVIS ST*	*WSW 1/8 - 1/4 (0.228 mi.)*	*110*	*371*
MTA NYCT - COURT HOUSE SQ STA	*JACKSON AVE & 23RD ST*	*W 1/8 - 1/4 (0.235 mi.)*	*Y115*	*402*
METRO MACHINING & FABRICATING	*47-24 27TH STREET*	*S 1/8 - 1/4 (0.242 mi.)*	*W117*	*411*
MANHEIMER J INC	*47-22 PEARSON PL*	*SSW 1/8 - 1/4 (0.243 mi.)*	*Z118*	*416*
NYC POLICE DEPT - PROPERTY CLE	*47-07 PEARSON PL*	*SSW 1/8 - 1/4 (0.244 mi.)*	*Z119*	*419*

EXECUTIVE SUMMARY

MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the MANIFEST list, as provided by EDR, and dated 08/01/2011 has revealed that there are 31 MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A-1 AUTO COLLISION INC	***2831 THOMSON AVE***	***SSW 0 - 1/8 (0.024 mi.)***	***5***	***15***
INTERNATIONAL DESIGN CENTER	***29-10 THOMPSON AVE 9TH***	***ESE 1/8 - 1/4 (0.151 mi.)***	***L58***	***193***
J BROTHERS AUTO BODY INC	***28-20 42ND RD***	***NNE 1/8 - 1/4 (0.190 mi.)***	***87***	***289***
NYC LAGUARDIA COMMUNITY COLLEG	***29-10 THOMSON AVE - BLD***	***ESE 1/8 - 1/4 (0.205 mi.)***	***T95***	***315***
BURNHAM PRODUCTS CORP	***42-24 ORCHARD ST***	***ESE 1/8 - 1/4 (0.205 mi.)***	***T96***	***320***
KOREA NEWS	***42-22 27TH ST***	***NNE 1/8 - 1/4 (0.230 mi.)***	***U113***	***377***

Lower Elevation	Address	Direction / Distance	Map ID	Page
A A A STAMP & SEAL	***26-20 JACKSON AVE***	***NNW 0 - 1/8 (0.072 mi.)***	***B10***	***28***
CENTRALIZED LAB SERVICES INC	***43-25 HUNTER ST***	***NNW 1/8 - 1/4 (0.126 mi.)***	***H37***	***108***
EAGLE ELECTRIC MANUFACTURING C	***45-31 COURT SQUARE***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I42***	***121***
COURT SQUARE	***45-18 COURT SQ***	***WSW 1/8 - 1/4 (0.129 mi.)***	***I43***	***147***
MTA NYCT - VENT PLANT 5103	HUNTER ST & 43RD AVE	NNW 1/8 - 1/4 (0.129 mi.)	G45	151
KENT BRAGALINE INC	***27-45 JACKSON AVE***	***NE 1/8 - 1/4 (0.141 mi.)***	***K53***	***179***
LIRR - HUNTERS POINT YARD	***SKILLMAN AVE & 27TH ST***	***SSE 1/8 - 1/4 (0.145 mi.)***	***54***	***181***
NYCT - COURT SQUARE STA G LINE	***JACKSON ST & COURT SQ***	***W 1/8 - 1/4 (0.149 mi.)***	***J57***	***188***
CONSTRUCTION SITE	***4329 CRESCENT STREET***	***NNW 1/8 - 1/4 (0.166 mi.)***	***N62***	***205***
AEROSOURCE INC	***25-19 43RD AVE***	***NNW 1/8 - 1/4 (0.175 mi.)***	***N68***	***223***
CON EDISON MANHOLE 954	***47TH ST & SKILLMAN AVE***	***S 1/8 - 1/4 (0.178 mi.)***	***69***	***226***
FEDERAL PACIFIC ELECTRIC CO	***4300 CRESCENT ST***	***NNW 1/8 - 1/4 (0.179 mi.)***	***N70***	***228***
MATSON MFG CO INC	***45-17 PEARSON ST***	***WSW 1/8 - 1/4 (0.179 mi.)***	***M72***	***241***
STERNBERGER MOTOR - G A P REAL	***45-55 PEARSON ST APT UN***	***SW 1/8 - 1/4 (0.181 mi.)***	***M73***	***252***
STERNBERGER WAREHOUSE	45-55 PEARSON ST	SW 1/8 - 1/4 (0.181 mi.)	M74	254
JAGUAR GOLD PRODUCT	***21-30 44TH DR***	***WNW 1/8 - 1/4 (0.189 mi.)***	***R82***	***279***
SUBACCHI FURNITURE	***46-24 28TH ST***	***SSE 1/8 - 1/4 (0.191 mi.)***	***88***	***292***
CONSOLIDATED EDISON	PEARSON ST & JACKSON AV	W 1/8 - 1/4 (0.194 mi.)	Q89	303
MICHELANGELO SCULPTURE	***27-01 47TH AVE***	***SSE 1/8 - 1/4 (0.194 mi.)***	***P90***	***304***
PERENNIALLY GREEN INC	***23-13 44TH DR***	***WNW 1/8 - 1/4 (0.199 mi.)***	***R92***	***307***
MTA NYCT - JACKSON & WEST SUBS	***28-20 JACKSON AVE***	***NE 1/8 - 1/4 (0.209 mi.)***	***S99***	***330***
OUTLET CITY INCORPORATED	***42-16 WEST STREET***	***NE 1/8 - 1/4 (0.227 mi.)***	***X108***	***356***
NYCT - FLUSHING AVENUE LINE (#	***DAVIS & 23RD ST***	***W 1/8 - 1/4 (0.235 mi.)***	***Y114***	***390***
MTA NYCT - COURT HOUSE SQ STA	***JACKSON AVE & 23RD ST***	***W 1/8 - 1/4 (0.235 mi.)***	***Y115***	***402***
MANHEIMER J INC	***47-22 PEARSON PL***	***SSW 1/8 - 1/4 (0.243 mi.)***	***Z118***	***416***

DRYCLEANERS: A listing of all registered drycleaning facilities.

A review of the DRYCLEANERS list, as provided by EDR, and dated 06/28/2011 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOP STAR FABRICARE	43-43 QUEENS STREET	ENE 0 - 1/8 (0.116 mi.)	F26	79

EXECUTIVE SUMMARY

E DESIGNATION: Lots designation with an ?E? on the Zoning Maps of the City of New York for potential hazardous material contamination, air and/or noise quality impacts.

A review of the E DESIGNATION list, as provided by EDR, and dated 09/08/2011 has revealed that there are 12 E DESIGNATION sites within approximately 0.125 miles of the target property.

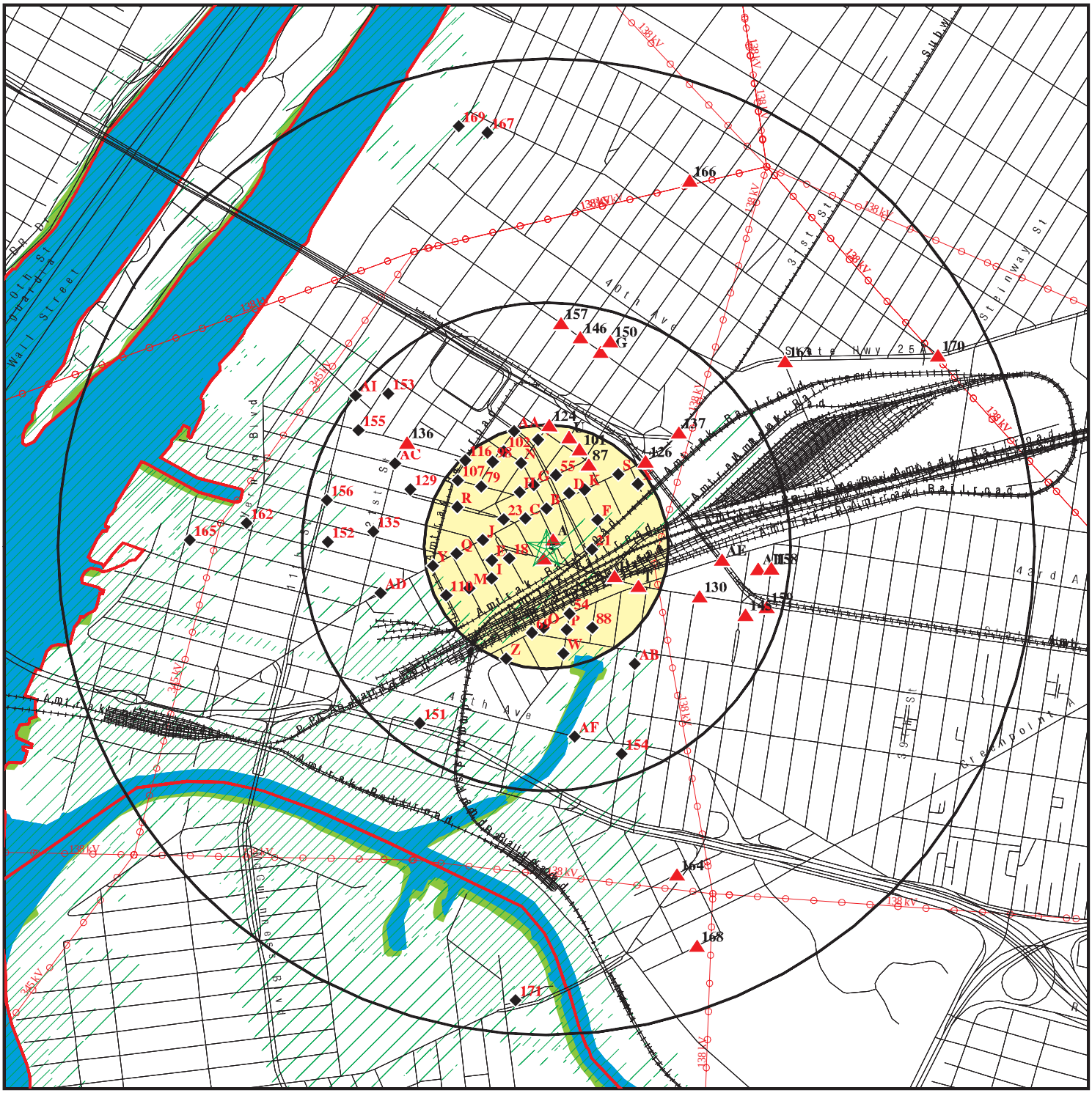
Lower Elevation	Address	Direction / Distance	Map ID	Page
LOT 6,TAXBLOCK 433	26-15 JACKSON AVENUE	NNW 0 - 1/8 (0.071 mi.)	B7	19
LOT 5,TAXBLOCK 433	26-19 JACKSON AVENUE	NNW 0 - 1/8 (0.071 mi.)	B8	22
LOT 4,TAXBLOCK 433	26-21 JACKSON AVENUE	NNW 0 - 1/8 (0.071 mi.)	B9	25
LOT 3,TAXBLOCK 433	26-23 JACKSON AVENUE	NNW 0 - 1/8 (0.072 mi.)	B11	30
LOT 8,TAXBLOCK 433	26-11 JACKSON AVENUE	NW 0 - 1/8 (0.072 mi.)	C12	33
LOT 2,TAXBLOCK 433	26-25 JACKSON AVENUE	N 0 - 1/8 (0.073 mi.)	B13	37
LOT 1,TAXBLOCK 433	26-27 JACKSON AVENUE	N 0 - 1/8 (0.073 mi.)	B14	40
LOT 12,TAXBLOCK 433	25-25 44 DRIVE	WNW 0 - 1/8 (0.104 mi.)	23	71
LOT 8,TAXBLOCK 432	27-35 JACKSON AVENUE	NNE 0 - 1/8 (0.120 mi.)	D32	93
LOT 41,TAXBLOCK 433	27-10 43 AVENUE	N 0 - 1/8 (0.124 mi.)	G33	96
LOT 35,TAXBLOCK 433	43-15 HUNTER STREET	NNW 0 - 1/8 (0.124 mi.)	H34	99
LOT 36,TAXBLOCK 433	43-11 HUNTER STREET	NNW 0 - 1/8 (0.124 mi.)	G35	102

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
NYSDOT BIN 1066220	FINDS,MANIFEST
CONSOLIDATED EDISON	MANIFEST
CON ED	FINDS,MANIFEST,RCRA-CESQG
NYCTA	FINDS,RCRA-CESQG,MANIFEST
CONSOLIDATED EDISON CO	MANIFEST
CONSOLIDATED EDISON CO	MANIFEST
CONSOLIDATED EDISON	MANIFEST
CONSOLIDATED EDISON	MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
NYC DEPARTMENT OF EDUCATION	MANIFEST
NYC OFF TRACK BETTING CORP	MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
CONSOLIDATED EDISON	RCRA-NLR,MANIFEST
NYCDEP - BORDEN AVE VENTURI FLOW C	RCRA-NLR
MTA EXISTING RAIL YARD	RCRA-NLR
NYCDOT BRIDGES BIN 2247260	FINDS,RCRA-NLR
CLASSIC DREAM CARS-45-25 39TH STRE	FINDS

OVERVIEW MAP - 03217979.2r



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 44-26 To 44-30 Pirves Street	CLIENT: IVI Assessment Services, Inc.
ADDRESS: 44-26 To 44-30 Purves Street Long Island City NY 11101	CONTACT: Sandy Smith INQUIRY #: 03217979.2r
LAT/LONG: 40.7464 / 73.9412	DATE: December 02, 2011 7:07 pm

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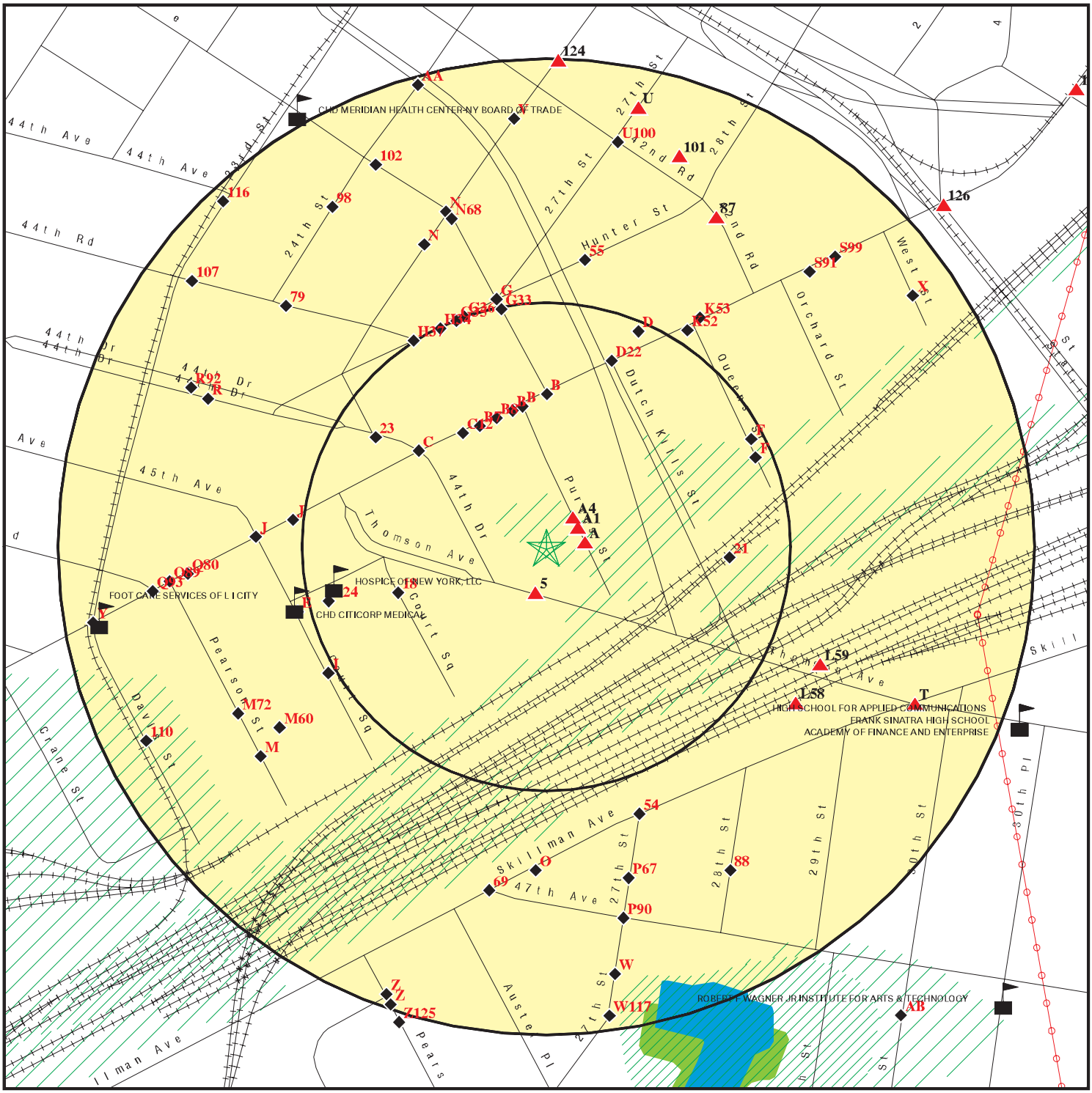
DETAIL MAP - 03217979.2r



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 44-26 To 44-30 Pirves Street ADDRESS: 44-26 To 44-30 Purves Street Long Island City NY 11101 LAT/LONG: 40.7464 / 73.9412	CLIENT: IVI Assessment Services, Inc. CONTACT: Sandy Smith INQUIRY #: 03217979.2r DATE: December 02, 2011 7:08 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	4	NR	4
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	1	NR	NR	NR	1
RCRA-SQG		0.250	0	3	NR	NR	NR	3
RCRA-CESQG		0.250	0	6	NR	NR	NR	6
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		1.000	0	0	1	5	NR	6
VAPOR REOPENED		1.000	0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	2	NR	NR	2
State and tribal leaking storage tank lists								
LTANKS		0.500	0	6	30	NR	NR	36
HIST LTANKS		0.500	0	3	18	NR	NR	21
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
TANKS		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST		0.250	2	14	NR	NR	NR	16
CBS UST		0.250	0	0	NR	NR	NR	0
MOSF UST		0.500	0	0	0	NR	NR	0
AST		0.250	1	17	NR	NR	NR	18
CBS AST		0.250	1	2	NR	NR	NR	3
MOSF AST		0.500	0	0	0	NR	NR	0
MOSF		0.500	0	0	0	NR	NR	0
CBS		0.250	1	2	NR	NR	NR	3
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS		0.500	0	0	1	NR	NR	1
INST CONTROL		0.500	0	0	1	NR	NR	1
RES DECL		0.125	0	NR	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	3	NR	NR	3
State and tribal Brownfields sites								
ERP		0.500	0	0	0	NR	NR	0
BROWNFIELDS		0.500	0	1	0	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
SWTIRE		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
DEL SHWS		1.000	0	0	0	1	NR	1
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST		0.250	2	11	NR	NR	NR	13
HIST AST		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
NY Spills		0.125	10	NR	NR	NR	NR	10
NY Hist Spills		0.125	7	NR	NR	NR	NR	7
Other Ascertainable Records								
RCRA-NonGen		0.250	6	31	NR	NR	NR	37
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
HSWDS		0.500	0	0	0	NR	NR	0
UIC		TP	NR	NR	NR	NR	NR	0
MANIFEST		0.250	3	33	NR	NR	NR	36
DRYCLEANERS		0.250	1	0	NR	NR	NR	1
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
E DESIGNATION		0.125	12	NR	NR	NR	NR	12
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
COAL ASH		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **MANHOLE # 514** **NY Spills** **S104653985**
ENE **44-27 PERVES ST** **NY Hist Spills** **N/A**
< 1/8 **QUEENS, NY**
0.019 mi.
100 ft. **Site 1 of 4 in cluster A**

Relative:
Higher

Actual:
20 ft.

NY Spills:

Site ID:	299059
Facility Addr2:	Not reported
Facility ID:	0003644
Spill Number:	0003644
Facility Type:	ER
SWIS:	4101
Investigator:	JHOCONNE
Referred To:	Not reported
Spill Date:	6/24/2000
Reported to Dept:	6/24/2000
CID:	281
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Affected Persons
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	9/27/2001
Remediation Phase:	0
Date Entered In Computer:	6/24/2000
Spill Record Last Update:	10/10/2001
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	ZZ -
Spiller Company:	001
Contact Name:	BRIAN JOYCE
Contact Phone:	(212) 580-6763
DEC Region:	2
DER Facility ID:	241946
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "O'CONNELL" Con Ed e2mis Notes: 6/24/00 2gal unknown oil on 1000gal water in manhole. Sample returned <1ppm PCB. 6/25/00 Cleanup completed. Oil was solidified and structure was double washed with slix. Liquids removed by tanker and solids by vactor. No earthen sump. (KMF 10/10/01)
Remarks:	ABOVE MATERIAL DISCOVERED AT ABOVE LOCATION ON TOP OF 1,000 GALLONS WATER. SAMPLE HAS BEEN TAKEN AND CLEANUP IS PENDING LAB RESULTS. CON ED # 132002. NO CALL BACK REQUESTED.

Material:

Site ID:	299059
Operable Unit ID:	826047
Operable Unit:	01
Material ID:	551961
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported

MANHOLE # 514 (Continued) **S104653985**

Material FA:	Petroleum
Quantity:	2
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	0003644
Investigator:	O'CONNELL
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	06/24/2000 19:10
Reported to Dept Date/Time:	06/24/00 19:43
SWIS:	63
Spiller Name:	UNKNOWN
Spiller Contact:	Not reported
Spiller Phone:	( ) -
Spiller Contact:	BRIAN JOYCE
Spiller Phone:	(212) 580-6763
Spiller Address:	Not reported
Spiller City,St,Zip:	-
Spill Cause:	Unknown
Reported to Dept:	On Land
Water Affected:	Not reported
Spill Source:	12
Spill Notifier:	Affected Persons
PBS Number:	Not reported
Cleanup Ceased:	/ /
Cleanup Meets Std:	False
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.

MANHOLE # 514 (Continued) **S104653985**

Spill Closed Dt: 09/27/01
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 06/24/00
Date Spill Entered In Computer Data File: Not reported
Update Date: 10/10/01
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 2
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Con Ed e2mis Notes: 6/24/00 2gal unknown oil on 1000gal water in manhole. Sample returned <1ppm PCB. 6/25/00 Cleanup completed. Oil was solidified and structure was double washed with slix. Liquids removed by tanker and solids by vactor. Noearthen sump. KMF 10/10/01)
Remark: ABOVE MATERIAL DISCOVERED AT ABOVE LOCATION ON TOP OF 1,000 GALLONS WATER. SAMPLE HAS BEEN TAKEN AND CLEANUP IS PENDING LAB RESULTS. CON ED 132002. NO CALL BACK REQUESTED.

A2 **S & M AUTOMATIC PRECISION CO.** **CBS AST** **S102638733**
East **44-43 PURVES ST** **CBS** **N/A**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.020 mi.
105 ft. **Site 2 of 4 in cluster A**

Relative:
Higher

Actual:
23 ft.

CBS AST:
CBS Number: 2-000087
Region: STATE
ICS Number: 2-125780
PBS Number: Not reported
MOSF Number: Not reported
Telephone: (718) 937-1413
Facility Town: NEW YORK CITY
Operator: S & M AUTOMATIC PRECISION CO.
Emrgncy Contact: G. MIGNAT
Emrgncy Phone: (718) 457-9855
Expiration Date: 07/07/2001
Owner Name: S & M AUTOMATIC PRECISION CO.
Owner Address: 44-43 PURVES ST
Owner City,St,Zip: LONG ISLAND CITY, NY 11101
Owner Telephone: (718) 937-1413
Owner type: Corporate/Commercial

S & M AUTOMATIC PRECISION CO. (Continued) **S102638733**

Facility Type: MANUFACTURING
Mail Name: S & M AUTOMATIC PRECISION CO.
Mail Contact Addr: 44-43 PURVES ST
Mail Contact Addr2: Not reported
Mail Contact Contact: G. MIGNAT
Mail Contact City,St,Zip: LONG ISLAND CITY, NY 11101
Mail Phone: (718) 937-1413
SPDES Number: Not reported
Facility Status: ACTIVE FACILITY
Owner Sub Type: Not reported

Tank Id: 001
Date Entered: 07/07/1989
Capacity (Gal): 500
Chemical: Tetrachloroethylene
Tank Closed: 12/99
Tank Status: 0
Tank Type: Steel/carbon steel
Install Date: 06/79
Certified Date: 04/14/1999
CAS Number: 127184
Substance: More than one Hazardous Substance on DEC List
Tank Location: ABOVEGROUND
Intrnl Protection: None
Extrnl Protection: Painted/Asphalt Coating
Pipe Location: Aboveground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: 0
Pipe Containment: None
Tank Containment: Diking
Leak Detection: None
Overfill Protection: Product Level Gauge
Haz Percent: 50
Total Tanks: 0
Tank Secret: False
Last Test: Not reported
Due Date: Not reported
Tank Error Status: No Missing Data
SWIS Code: 6301
Lat/Long: Not reported
Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 04/01/93
Is it There: F
Deliquent: F
Date Expired: 07/07/95
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 04/01/1999
Total Capacity of All Active Tanks(gal): 0

CBS:
CBS Number: 2-000087

S & M AUTOMATIC PRECISION CO. (Continued) **S102638733**

Program Type:	CBS
Dec Region:	2
Expiration Date:	N/A
Facility Status:	Unregulated
UTMX:	589363.32235999
UTMY:	4511253.1193899

A3 **44-43 PURVES ST** **NY Spills** **S103036270**
East **44-43 PURVES ST** **NY Hist Spills** **N/A**
< 1/8 **LONG ISLAND CITY, NY**
0.020 mi.
105 ft. **Site 3 of 4 in cluster A**

Relative:
Higher

Actual:
23 ft.

NY Spills:

Site ID:	184909
Facility Addr2:	Not reported
Facility ID:	9713189
Spill Number:	9713189
Facility Type:	ER
SWIS:	4101
Investigator:	TOMASELLO
Referred To:	Not reported
Spill Date:	2/26/1998
Reported to Dept:	2/26/1998
CID:	205
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Commercial Vehicle
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	5/14/1998
Remediation Phase:	0
Date Entered In Computer:	2/26/1998
Spill Record Last Update:	5/22/1998
Spiller Name:	CALLER
Spiller Company:	MARISOL INC
Spiller Address:	213 WEST UNION AVE
Spiller City,St,Zip:	BOUND BROOK, NJ 08805-
Spiller Company:	001
Contact Name:	CALLER
Contact Phone:	(732) 469-5100
DEC Region:	2
DER Facility ID:	154694
DEC Memo:	Not reported
Remarks:	hose broke on tank truck while delivering product.caller is attorney for company.

Material:

Site ID:	184909
Operable Unit ID:	1056121
Operable Unit:	01
Material ID:	324213

44-43 PURVES ST (Continued) **S103036270**

Material Code: 0059A
Material Name: SOLVENTS
Case No.: Not reported
Material FA: Other
Quantity: 100
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

NY Hist Spills:
Region of Spill: 2
Spill Number: 9713189
Investigator: TOMASELLO
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 02/26/1998 09:15
Reported to Dept Date/Time: 02/26/98 09:59
SWIS: 63
Spiller Name: MARISOL INC
Spiller Contact: CALLER
Spiller Phone: Not reported
Spiller Contact: CALLER
Spiller Phone: (732) 469-5100
Spiller Address: 213 WEST UNION AVE
Spiller City,St,Zip: BOUND BROOK, NJ 08805-
Spill Cause: Equipment Failure
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 07
Spill Notifier: Responsible Party
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /

44-43 PURVES ST (Continued) **S103036270**

UST Involvement: False
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 05/14/98
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 02/26/98
Date Spill Entered In Computer Data File: Not reported
Update Date: 05/22/98
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Hazardous Material
Quantity Spilled: 100
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: SOLVENTS
Class Type: SOLVENTS
Times Material Entry In File: 424
CAS Number: Not reported
Last Date: 19940928
DEC Remarks: CONTAINED ON CEMENT. NO SOIL OR SEWERS. DRIVER HAS BEGUN CLEAN-UP. I SPOKE TO THEIR HAZMAT GUY, TIMBRADEN. FAXED RO DEP HAZMAT CLEANED BY SPILLER. SEE FILE.
Remark: hose broke on tank truck while delivering product.caller is attorney for company.

A4 **S N B INC** **RCRA-NonGen** **1000990347**
NE **44-16 PURVES ST** **FINDS** **NYR000003061**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.020 mi.
107 ft. **Site 4 of 4 in cluster A**

Relative:
Equal

Actual:
19 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: S N B INC
Facility address: 44-16 PURVES ST
LONG ISLAND CITY, NY 11101
EPA ID: NYR000003061
Mailing address: PO BOX 640-786
FLUSHING, NY 113640788
Contact: WALTER SCHMIDICHEN
Contact address: PO BOX 640-786
FLUSHING, NY 113640788
Contact country: US
Contact telephone: (718) 224-3711
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator

S N B INC (Continued) **1000990347**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: WESLH BROS
Owner/operator address: 44-30 PURVES ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 729-7330
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: WESLH BROS
Owner/operator address: 44-30 PURVES ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 729-7330
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: S N B INC
Classification: Not a generator, verified

Date form received by agency: 04/13/1995
Facility name: S N B INC
Classification: Not a generator, verified

Violation Status: No violations found

FINDS:

Registry ID: 110004512661

Environmental Interest/Information System

S N B INC (Continued) **1000990347**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

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5 SSW < 1/8 0.024 mi. 127 ft.

A-1 AUTO COLLISION INC
2831 THOMSON AVE
LONG ISLAND CITY, NY 11101

RCRA-NonGen 1000102743
MANIFEST NYD986884872

Relative: Higher

Actual: 21 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	A-1 AUTO COLLISION INC
Facility address:	2831 THOMSON AVE LONG ISLAND CITY, NY 111012902
EPA ID:	NYD986884872
Mailing address:	THOMSON AVE LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	THOMSON AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	GLEN TOMPKINS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GLEN TOMPKINS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

A-1 AUTO COLLISION INC (Continued) **1000102743**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: A-1 AUTO COLLISION INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: A-1 AUTO COLLISION INC
Classification: Not a generator, verified

Date form received by agency: 12/04/1989
Facility name: A-1 AUTO COLLISION INC
Classification: Small Quantity Generator

Violation Status: No violations found

NY MANIFEST:
EPA ID: NYD986884872
Country: USA
Mailing Name: A 1 AUTO COLLISION INCORPORATED
Mailing Contact: TOMPKINS R GLEN
Mailing Address: 2831 THOMSON AVENUE
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-786-0024

Document ID: NJA1317333
Manifest Status: Completed copy
Trans1 State ID: NJDEPS103
Trans2 State ID: Not reported
Generator Ship Date: 920218
Trans1 Recv Date: 920218
Trans2 Recv Date: Not reported
TSD Site Recv Date: 920219
Part A Recv Date: 920227
Part B Recv Date: 920303
Generator EPA ID: NYD986884872
Trans1 EPA ID: NJD986608941
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544

A-1 AUTO COLLISION INC (Continued) **1000102743**

Waste Code:	F003 - UNKNOWN
Quantity:	00105
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	92

Document ID:	NJA0963706
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJDEPS103
Trans2 State ID:	Not reported
Generator Ship Date:	901206
Trans1 Recv Date:	901206
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	901207
Part A Recv Date:	901231
Part B Recv Date:	910115
Generator EPA ID:	NYD986884872
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002454544
Waste Code:	F003 - UNKNOWN
Quantity:	00070
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	90

B6 **SEAL-KAP PACKAGING INC** **RCRA-NonGen** **1000275468**
North **11-5 44TH DR** **FINDS** **NYD061944187**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.070 mi.
371 ft. **Site 1 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	SEAL-KAP PACKAGING INC
Facility address:	11-5 44TH DR LONG ISLAND CITY, NY 11101
EPA ID:	NYD061944187
Mailing address:	44TH DR LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	44TH DR LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

SEAL-KAP PACKAGING INC (Continued) **1000275468**

Owner/Operator Summary:
- Owner/operator name: Not reported
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: (212) 555-1212
- Legal status: Private
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: Not reported
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: (212) 555-1212
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Historical Generators:
- Date form received by agency: 01/01/2006
- Facility name: SEAL-KAP PACKAGING INC
- Classification: Not a generator, verified

- Date form received by agency: 12/31/1979
- Facility name: SEAL-KAP PACKAGING INC
- Classification: Not a generator, verified

- Violation Status: No violations found

Evaluation Action Summary:
- Evaluation date: 03/19/1990
- Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
- Area of violation: Not reported
- Date achieved compliance: Not reported
- Evaluation lead agency: State

SEAL-KAP PACKAGING INC (Continued) **1000275468**

FINDS:

Registry ID: 110004362715

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

B7 **LOT 6,TAXBLOCK 433** **E DESIGNATION** **S108469575**
NNW **26-15 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.071 mi.
373 ft. **Site 2 of 11 in cluster B**

Relative:
Lower

Actual:
14 ft.

E DESIGNATION:

Tax Lot(s):	6
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	G2
Land Use Category:	10
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	N J F PROPERTIES INC
Lot Area:	000004267
Total Building Floor Area:	00000003433
Commercial Floor Area:	00000003433
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000003433

LOT 6,TAXBLOCK 433 (Continued) **S108469575**

Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0042.67
Lot Depth:	0100.00
Building Frontage:	0042.92
Building Depth:	0080.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000054000
Total Assessed Value:	00000117000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1941
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.80
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330006
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000342
Y Coordinate:	0211651
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	6
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN

LOT 6,TAXBLOCK 433 (Continued) **S108469575**

Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	G2
Land Use Category:	10
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	N J F PROPERTIES INC
Lot Area:	000004267
Total Building Floor Area:	00000003433
Commercial Floor Area:	00000003433
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000003433
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0042.67
Lot Depth:	0100.00
Building Frontage:	0042.92
Building Depth:	0080.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000054000
Total Assessed Value:	00000117000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1941
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.80
Maximum Allowable Far:	10.00
Borough Code:	4

LOT 6,TAXBLOCK 433 (Continued) **S108469575**

Borough Tax Block And Lot:	4004330006
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000342
Y Coordinate:	0211651
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

B8 **LOT 5,TAXBLOCK 433** **E DESIGNATION** **S108469573**
NNW **26-19 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.071 mi.
373 ft. **Site 3 of 11 in cluster B**

Relative:
Lower

Actual:
14 ft.

E DESIGNATION:

Tax Lot(s):	5
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	K9
Land Use Category:	05
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	ISABEL NADEL
Lot Area:	000002500

LOT 5,TAXBLOCK 433 (Continued) **S108469573**

Total Building Floor Area:	00000005050
Commercial Floor Area:	00000005050
Office Floor Area:	00000000000
Retail Floor Area:	00000002525
Garage Floor Area:	00000000000
Storage Floor Area:	00000002525
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0025.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000069750
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0002.02
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330005
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000383
Y Coordinate:	0211644
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1
Tax Lot(s):	5
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported

LOT 5,TAXBLOCK 433 (Continued) **S108469573**

Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	K9
Land Use Category:	05
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	ISABEL NADEL
Lot Area:	000002500
Total Building Floor Area:	00000005050
Commercial Floor Area:	00000005050
Office Floor Area:	00000000000
Retail Floor Area:	00000002525
Garage Floor Area:	00000000000
Storage Floor Area:	00000002525
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0025.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000069750
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000

LOT 5,TAXBLOCK 433 (Continued) **S108469573**

Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0002.02
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330005
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000383
Y Coordinate:	0211644
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

B9 **LOT 4,TAXBLOCK 433** **E DESIGNATION** **S109318001**
NNW **26-21 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.071 mi.
376 ft. **Site 4 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

E DESIGNATION:

Tax Lot(s):	4
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2

LOT 4,TAXBLOCK 433 (Continued) **S109318001**

Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	26-21 JACKSON
Lot Area:	000002000
Total Building Floor Area:	00000003500
Commercial Floor Area:	00000001155
Office Floor Area:	00000000000
Retail Floor Area:	00000001155
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0055.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000004551
Total Assessed Value:	00000019780
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1930
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.75
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330004
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000385
Y Coordinate:	0211681
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

LOT 4,TAXBLOCK 433 (Continued) **S109318001**

Tax Lot(s):	4
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2
Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	26-21 JACKSON
Lot Area:	000002000
Total Building Floor Area:	00000003500
Commercial Floor Area:	00000001155
Office Floor Area:	00000000000
Retail Floor Area:	00000001155
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0055.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000004551
Total Assessed Value:	00000019780
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000

LOT 4,TAXBLOCK 433 (Continued) **S109318001**

Year Built:	1930
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.75
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330004
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000385
Y Coordinate:	0211681
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

B10 **A A A STAMP & SEAL** **RCRA-NonGen** **1001224371**
NNW **26-20 JACKSON AVE** **FINDS** **NYR000055889**
< 1/8 **QUEENS, NY 11101** **MANIFEST**
0.072 mi.
379 ft. **Site 5 of 11 in cluster B**

Relative:
Lower

Actual:
12 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	A A A STAMP & SEAL
Facility address:	26-20 JACKSON AVE QUEENS, NY 11101
EPA ID:	NYR000055889
Mailing address:	JACKSON AVE QUEENS, NY 11101
Contact:	BARRY GOLDMAN
Contact address:	JACKSON AVE QUEENS, NY 11101
Contact country:	US
Contact telephone:	(718) 361-8087
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JULIUS REINHARDT
Owner/operator address:	1 WOODHOLLOW LANE OLD BROOKVILLE, NY 11545
Owner/operator country:	US

A A A STAMP & SEAL (Continued) **1001224371**

Owner/operator telephone: (718) 897-0310
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JULIUS REINHARDT
Owner/operator address: 1 WOODHOLLOW LANE
OLD BROOKVILLE, NY 11545
Owner/operator country: US
Owner/operator telephone: (718) 897-0310
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: A A A STAMP & SEAL
Classification: Not a generator, verified

Date form received by agency: 06/08/1998
Facility name: A A A STAMP & SEAL
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110008103809

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A A A STAMP & SEAL (Continued) **1001224371**

NY MANIFEST:

EPA ID:	NYR000055889
Country:	USA
Mailing Name:	AAA STAMP & SEAL
Mailing Contact:	BARRY GOLDMAN
Mailing Address:	26-20 JACKSON AVE
Mailing Address 2:	Not reported
Mailing City:	QUEENS
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-361-8087

Document ID:	NYC5398244
Manifest Status:	Not reported
Trans1 State ID:	ILD984908202
Trans2 State ID:	SCD987574647
Generator Ship Date:	10/13/1998
Trans1 Recv Date:	10/13/1998
Trans2 Recv Date:	10/21/1998
TSD Site Recv Date:	10/29/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000055889
Trans1 EPA ID:	SCD077995488
Trans2 EPA ID:	Not reported
TSDF ID:	LP3931NY
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00
Year:	98

B11 **LOT 3,TAXBLOCK 433** **E DESIGNATION** **S109317999**
NNW **26-23 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.072 mi.
380 ft. **Site 6 of 11 in cluster B**

Relative:
Lower

Actual:
12 ft.

E DESIGNATION:

Tax Lot(s):	3
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048

LOT 3,TAXBLOCK 433 (Continued) **S109317999**

School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2
Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	MARIA KUI
Lot Area:	000002000
Total Building Floor Area:	00000003351
Commercial Floor Area:	00000001106
Office Floor Area:	00000000000
Retail Floor Area:	00000001106
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0050.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000005291
Total Assessed Value:	00000019537
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1931
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.68
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330003
Condominium Number:	00000
Census Tract 2:	0019

LOT 3,TAXBLOCK 433 (Continued) **S109317999**

X Coordinate:	1000413
Y Coordinate:	0211660
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1
Tax Lot(s):	3
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2
Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	MARIA KUI
Lot Area:	000002000
Total Building Floor Area:	00000003351
Commercial Floor Area:	00000001106
Office Floor Area:	00000000000
Retail Floor Area:	00000001106
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7

LOT 3,TAXBLOCK 433 (Continued) **S109317999**

Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0050.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000005291
Total Assessed Value:	00000019537
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1931
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.68
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330003
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000413
Y Coordinate:	0211660
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

C12
NW
< 1/8
0.072 mi.
381 ft.

LOT 8,TAXBLOCK 433
26-11 JACKSON AVENUE
QUEENS, NY 11101

Site 1 of 3 in cluster C

E DESIGNATION **S108469582**
N/A

Relative:
Lower

Actual:
15 ft.

E DESIGNATION:

Tax Lot(s):	8
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b

LOT 8,TAXBLOCK 433 (Continued) **S108469582**

Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F1
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	26 JACKSON AVENUE LLC
Lot Area:	000006450
Total Building Floor Area:	00000015500
Commercial Floor Area:	00000015500
Office Floor Area:	00000006500
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000009000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00003
Lot Frontage:	0064.42
Lot Depth:	0100.00
Building Frontage:	0064.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000090000
Total Assessed Value:	00000266400
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1961
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0002.40

LOT 8,TAXBLOCK 433 (Continued) **S108469582**

Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330008
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000308
Y Coordinate:	0211612
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1
Tax Lot(s):	8
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F1
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	26 JACKSON AVENUE LLC
Lot Area:	000006450
Total Building Floor Area:	00000015500
Commercial Floor Area:	00000015500
Office Floor Area:	00000006500
Retail Floor Area:	00000000000

LOT 8,TAXBLOCK 433 (Continued) **S108469582**

Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000009000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00003
Lot Frontage:	0064.42
Lot Depth:	0100.00
Building Frontage:	0064.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000090000
Total Assessed Value:	00000266400
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1961
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0002.40
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330008
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000308
Y Coordinate:	0211612
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

B13 **LOT 2,TAXBLOCK 433** **E DESIGNATION** **S109317998**
North **26-25 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.073 mi.
385 ft. **Site 7 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

E DESIGNATION:

Tax Lot(s):	2
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2
Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	26-25 JACKSON L.L.C.
Lot Area:	000002000
Total Building Floor Area:	00000002400
Commercial Floor Area:	00000000800
Office Floor Area:	00000000000
Retail Floor Area:	00000000800
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0040.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5

LOT 2,TAXBLOCK 433 (Continued) **S109317998**

Basement Type Grade:	5
Land Assessed Value:	00000006240
Total Assessed Value:	00000022380
Land Exempt Value:	00000001430
Total Exempt Value:	00000001430
Year Built:	1900
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.20
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330002
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000415
Y Coordinate:	0211703
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	2
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC

LOT 2,TAXBLOCK 433 (Continued) **S109317998**

All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	S2
Land Use Category:	04
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	26-25 JACKSON L.L.C.
Lot Area:	000002000
Total Building Floor Area:	00000002400
Commercial Floor Area:	00000000800
Office Floor Area:	00000000000
Retail Floor Area:	00000000800
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	003.00
Residential Units:	00002
Non and Residential Units:	00003
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0040.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000006240
Total Assessed Value:	00000022380
Land Exempt Value:	00000001430
Total Exempt Value:	00000001430
Year Built:	1900
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.20
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330002
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000415
Y Coordinate:	0211703
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006

LOT 2,TAXBLOCK 433 (Continued) **S109317998**

Date of Mass Appraisal Data: 11/2005
Date of Political and Adm Data: 08/2005
Pluto-Base Map Indicator: 1

B14 **LOT 1,TAXBLOCK 433** **E DESIGNATION** **S109317996**
North **26-27 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.073 mi.
385 ft. **Site 8 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

E DESIGNATION:

Tax Lot(s):	1
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F4
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	2627 REALTY CORP
Lot Area:	000002000
Total Building Floor Area:	00000003900
Commercial Floor Area:	00000003900
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000003900
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0020.00
Lot Depth:	0100.00

LOT 1,TAXBLOCK 433 (Continued) **S109317996**

Building Frontage:	0020.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	3
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000061200
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1945
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.95
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330001
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000446
Y Coordinate:	0211678
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	1
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported

LOT 1,TAXBLOCK 433 (Continued) **S109317996**

Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F4
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	2627 REALTY CORP
Lot Area:	000002000
Total Building Floor Area:	00000003900
Commercial Floor Area:	00000003900
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000003900
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0020.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0100.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	3
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000061200
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1945
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.95
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330001
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000446
Y Coordinate:	0211678
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005

LOT 1,TAXBLOCK 433 (Continued) **S109317996**

Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

B15 **CONED MANHOLE#515** **NY Spills** **S106698169**
North **PURVES STREET/JACKSON** **N/A**
< 1/8 **QUEENS, NY**
0.073 mi.
385 ft. **Site 9 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

NY Spills:

Site ID:	160044
Facility Addr2:	Not reported
Facility ID:	0405105
Spill Number:	0405105
Facility Type:	ER
SWIS:	4101
Investigator:	JHOCONNE
Referred To:	Not reported
Spill Date:	8/9/2004
Reported to Dept:	8/10/2004
CID:	444
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	10/23/2006
Remediation Phase:	0
Date Entered In Computer:	8/10/2004
Spill Record Last Update:	10/23/2006
Spiller Name:	ERT DESK
Spiller Company:	CONED MANHOLE #515
Spiller Address:	PURVES STREET/JACKSON
Spiller City,St,Zip:	QUEENS, NY
Spiller Company:	001
Contact Name:	ERT DESK
Contact Phone:	(212) 580-8383
DEC Region:	2
DER Facility ID:	135180
DEC Memo:	10/23/06 - See e-docs for Con Ed report detailing cleanup and closure. Prior to Sept, 2004 data translation this spill Lead_DEC Field was "O'CONNELL" e2mis no. 154784: APPROX 2-GALLONS OF UNKNOWN OIL ON 150 GALLONS OF WATER IN MH-515. IT APPEARS TO BE CONTAINED. CLEANUP PENDING TEST RESULT. Lab Sequence Number: 04-06282-001 PCB <1 ppm.
Remarks:	on 150 gallons of water: TAKING OFF THE 24 HR CLOCK: NEED TIME TO GET

CONED MANHOLE#515 (Continued) **S106698169**

REPAIRED ON MIDNIGHT SHIFT: NO TO 5 QUESTIOS: CONED # 154784

Material:

Site ID:	160044
Operable Unit ID:	887979
Operable Unit:	01
Material ID:	489124
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	2
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

B16 **GASGO** **NY Spills** **S104510008**
North **27-01 JACKSON AVE** **NY Hist Spills** **N/A**
< 1/8 **LONG ISLAND CITY, NY**
0.078 mi.
413 ft. **Site 10 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

NY Spills:

Site ID:	116791
Facility Addr2:	Not reported
Facility ID:	9913082
Spill Number:	9913082
Facility Type:	ER
SWIS:	4101
Investigator:	MDBRAND
Referred To:	Not reported
Spill Date:	2/16/2000
Reported to Dept:	2/17/2000
CID:	323
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Gasoline Station
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response.

GASGO (Continued) **S104510008**

	Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	9/7/2005
Remediation Phase:	0
Date Entered In Computer:	2/17/2000
Spill Record Last Update:	9/7/2005
Spiller Name:	MICHAEL MAZZA
Spiller Company:	GASGO
Spiller Address:	27-01 JACKSON AV
Spiller City,St,Zip:	LONG ISLAND CITY, ZZ
Spiller Company:	999
Contact Name:	FRANCIS ONAGA
Contact Phone:	(732) 390-0969
DEC Region:	2
DER Facility ID:	101610
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ROMMEL" 2/17/2000 ECO Lum was at the site and wrote a ticket for failure to notify. After Lum issued ticket, this call was received on the Hotline. Rommel said the site appeared to be within standards, tanks were excavated, soil was stock piled and covered. Anticipate sample report to be submitted soon. 07/18/2005: Sent letter to Michael Mazza, site owner, requesting information. M. Brand NYSDEC DER Albany. 07/27/2005: Spoke with Michael Mazza, site owner. Site was completely renovated, 10 old tanks removed, four new tanks installed, 600-700 tons of contaminated soil removed. Mazza will send in information. M. Brand NYSDEC DER Albany. 08/03/2005: Received information from site owner. Information included: - Disposal tickets and invoices for the off-site disposal of 698.01 tons of contaminated soil; - Laboratory analyses for samples of stockpiled soil; - Test results for gasoline dispensers and new tanks dated 09/19/2002 (for new tanks installed in 2000); - Petroleum Bulk Storage Registration Certificate for four new tanks installed on 02/01/2000; and, - Invoice for recent inspection (03/01/2004) of facility and underground tanks by the NYC Fire Department Bureau of Fire Protection. M. Brand NYSDEC DER Albany. 09/07/2005: Information reviewed and determined to be acceptable documentation of site cleanup. Site closed and NFA letter sent to site owner. M. Brand NYSDEC DER Albany.
Remarks:	WHILE UNCOVERING TANKS FOR REMOVAL, CONTAMINATED SOIL WAS DISCOVERED. SAMPLES TAKEN.

Material:

Site ID:	116791
Operable Unit ID:	1087622
Operable Unit:	01
Material ID:	294942
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported

GASGO (Continued) **S104510008**

Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

NY Hist Spills:
Region of Spill: 2
Spill Number: 9913082
Investigator: SANGESLAND
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 02/16/2000 11:00
Reported to Dept Date/Time: 02/17/00 09:05
SWIS: 63
Spiller Name: GASGO
Spiller Contact: FRANCIS ONAGA
Spiller Phone: (732) 390-0969
Spiller Contact: FRANCIS ONAGA
Spiller Phone: (732) 390-0969
Spiller Address: 27-01 JACKSON AV
Spiller City,St,Zip: LONG ISLAND CITY
Spill Cause: Unknown
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 05
Spill Notifier: Other
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 02/17/00
Date Spill Entered In Computer Data File: Not reported
Update Date: 02/18/00
Is Updated: False

Tank:
PBS Number: Not reported

GASGO (Continued) **S104510008**

Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: 2/17/2000 ECO Lum was at the site and wrote a ticket for failure to notify. After Lum issued ticket, this call was received on the Hotline. Rommel said the site appeared to be within standards, tanks were excavated, soil was stock piled and covered. Anticipate sample report to be submitted soon.
Remark: WHILE UNCOVERING TANKS FOR REMOVAL, CONTAMINATED SOIL WAS DISCOVERED. SAMPLES TAKEN.

B17 **GASGO PETROLEUM INC** **UST U000394734**
North **27-01 JACKSON AVENUE** **HIST UST N/A**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.078 mi.
413 ft. **Site 11 of 11 in cluster B**

Relative:
Lower

Actual:
13 ft.

UST:
Facility Id: 2-090565
Region: STATE
DEC Region: 2
Site Status: Active
Program Type: PBS
Expiration Date: 2012/08/24
UTM X: 589379.1875
UTM Y: 4511273.5

Affiliation Records:
Site Id: 2216
Affiliation Type: Owner
Company Name: MAZZA & AVENA INC
Contact Type: PRESIDENT
Contact Name: BALBIR S. SANDHU
Address1: 166-11 27TH AVENUE
Address2: Not reported
City: FLUSHING
State: NY
Zip Code: 11358
Country Code: 001
Phone: (718) 539-5284
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: KXTANG
Date Last Modified: 6/8/2007

GASGO PETROLEUM INC (Continued) **U000394734**

Site Id:	2216
Affiliation Type:	Mail Contact
Company Name:	MAZZA & AVENA INC
Contact Type:	Not reported
Contact Name:	MICHAEL MAZZA
Address1:	166-11 27TH AVENUE
Address2:	Not reported
City:	FLUSHING
State:	NY
Zip Code:	11358
Country Code:	001
Phone:	(718) 539-5284
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	6/8/2007

Site Id:	2216
Affiliation Type:	Emergency Contact
Company Name:	MAZZA & AVENA INC
Contact Type:	Not reported
Contact Name:	MICHAEL MAZZA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 539-5284
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	6/8/2007

Site Id:	2216
Affiliation Type:	On-Site Operator
Company Name:	GASGO PETROLEUM INC
Contact Type:	Not reported
Contact Name:	BALBIR S. SANDHU
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 433-2687
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	6/8/2007

Equipment Records:

C02 - Pipe Location - Underground/On-ground
H00 - Tank Leak Detection - None

GASGO PETROLEUM INC (Continued) **U000394734**

H00 - Tank Leak Detection - None
H05 - Tank Leak Detection - In-Tank System (ATG)
I00 - Overfill - None
I00 - Overfill - None
G03 - Tank Secondary Containment - Vault (w/o access)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
G03 - Tank Secondary Containment - Vault (w/o access)
G03 - Tank Secondary Containment - Vault (w/o access)
B04 - Tank External Protection - Fiberglass
B04 - Tank External Protection - Fiberglass
I00 - Overfill - None
H05 - Tank Leak Detection - In-Tank System (ATG)
K01 - Spill Prevention - Catch Basin
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I02 - Overfill - High Level Alarm
G03 - Tank Secondary Containment - Vault (w/o access)
C01 - Pipe Location - Aboveground
H05 - Tank Leak Detection - In-Tank System (ATG)
F04 - Pipe External Protection - Fiberglass
K01 - Spill Prevention - Catch Basin
I02 - Overfill - High Level Alarm
G03 - Tank Secondary Containment - Vault (w/o access)
I02 - Overfill - High Level Alarm
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
J01 - Dispenser - Submersible
C00 - Pipe Location - No Piping
C00 - Pipe Location - No Piping
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
K01 - Spill Prevention - Catch Basin
J01 - Dispenser - Submersible
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
F04 - Pipe External Protection - Fiberglass
F04 - Pipe External Protection - Fiberglass
I00 - Overfill - None
A00 - Tank Internal Protection - None
J01 - Dispenser - Submersible
J01 - Dispenser - Submersible
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
C00 - Pipe Location - No Piping
I00 - Overfill - None
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None

GASGO PETROLEUM INC (Continued) **U000394734**

D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)
G04 - Tank Secondary Containment - Double-Walled (Underground)
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
B00 - Tank External Protection - None
B00 - Tank External Protection - None
I00 - Overfill - None
I00 - Overfill - None
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
G03 - Tank Secondary Containment - Vault (w/o access)
F00 - Pipe External Protection - None
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
D02 - Pipe Type - Galvanized Steel
C00 - Pipe Location - No Piping
G03 - Tank Secondary Containment - Vault (w/o access)
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
D02 - Pipe Type - Galvanized Steel
A00 - Tank Internal Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
J01 - Dispenser - Submersible
A00 - Tank Internal Protection - None
J01 - Dispenser - Submersible
D02 - Pipe Type - Galvanized Steel
D02 - Pipe Type - Galvanized Steel
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
A00 - Tank Internal Protection - None
D02 - Pipe Type - Galvanized Steel
J01 - Dispenser - Submersible
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
I00 - Overfill - None
G03 - Tank Secondary Containment - Vault (w/o access)

GASGO PETROLEUM INC (Continued) **U000394734**

H00 - Tank Leak Detection - None
G04 - Tank Secondary Containment - Double-Walled (Underground)
G03 - Tank Secondary Containment - Vault (w/o access)
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
I00 - Overfill - None
C02 - Pipe Location - Underground/On-ground
I02 - Overfill - High Level Alarm
J01 - Dispenser - Submersible
F00 - Pipe External Protection - None
G03 - Tank Secondary Containment - Vault (w/o access)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
B04 - Tank External Protection - Fiberglass
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
F04 - Pipe External Protection - Fiberglass
K01 - Spill Prevention - Catch Basin
H05 - Tank Leak Detection - In-Tank System (ATG)
I00 - Overfill - None
C00 - Pipe Location - No Piping

Tank Info:

Site ID:	2216
Tank Number:	001
Tank ID:	3507
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1956
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	2216
Tank Number:	002
Tank ID:	3508
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1956
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

GASGO PETROLEUM INC (Continued) **U000394734**

Site ID: 2216

Tank Number: 003
Tank ID: 3509
Tank Status: Closed - Removed
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 5/1/1966
Capacity Gallons: 550
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: 2/1/2000
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Site ID: 2216

Tank Number: 004
Tank ID: 3510
Tank Status: Closed - Removed
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 5/1/1966
Capacity Gallons: 550
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: 2/1/2000
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Site ID: 2216

Tank Number: 005
Tank ID: 3511
Tank Status: Closed - Removed
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 5/1/1966
Capacity Gallons: 550
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: 2/1/2000
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

GASGO PETROLEUM INC (Continued) **U000394734**

Site ID:	2216
Tank Number:	006
Tank ID:	3512
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1966
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	2216
Tank Number:	007
Tank ID:	3513
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1966
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	2216
Tank Number:	008
Tank ID:	3514
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1966
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

GASGO PETROLEUM INC (Continued) **U000394734**

Site ID:	2216
Tank Number:	009
Tank ID:	3515
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1966
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	2216
Tank Number:	010
Tank ID:	3516
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1966
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	2/1/2000
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	2216
Tank Number:	011
Tank ID:	3517
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	2/1/2000
Capacity Gallons:	4000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Equivalent technology
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

GASGO PETROLEUM INC (Continued) **U000394734**

Site ID: 2216

Tank Number: 012
Tank ID: 3518
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 2/1/2000
Capacity Gallons: 4000
Tightness Test Method: NN
Next Test Date: 2/1/2015
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Equivalent technology
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Site ID: 2216

Tank Number: 013
Tank ID: 55357
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 2/1/2000
Capacity Gallons: 4000
Tightness Test Method: NN
Next Test Date: 2/1/2015
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Equivalent technology
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Site ID: 2216

Tank Number: 014
Tank ID: 55358
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 2/1/2000
Capacity Gallons: 4000
Tightness Test Method: NN
Next Test Date: 2/1/2015
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Equivalent technology
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

GASGO PETROLEUM INC (Continued) **U000394734**

HIST UST:

PBS Number:	2-090565
SPDES Number:	Not reported
Emergency Contact:	MICHAEL MAZZA
Emergency Telephone:	(718) 392-1441
Operator:	MAKHAN SINGH
Operator Telephone:	(718) 433-4323
Owner Name:	MAZZA & AVENA INC
Owner Address:	166-11 27TH AVENUE
Owner City,St,Zip:	FLUSHING, NY 11358
Owner Telephone:	(718) 392-1441
Owner Type:	Not reported
Owner Subtype:	Not reported
Mailing Name:	MAZZA & AVENA INC
Mailing Address:	166-11 27TH AVENUE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	FLUSHING, NY 11358
Mailing Contact:	MICHAEL MAZZA
Mailing Telephone:	(718) 392-1441
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	27001 JACKSON AVENUE
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	RETAIL GASOLINE SALES
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	11/18/1998
Expiration Date:	08/24/2002
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	16000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	Minor Data Missing
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	Closed-Removed
Install Date:	19561001
Capacity (gals):	550
Product Stored:	UNLEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported

GASGO PETROLEUM INC (Continued) **U000394734**

Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 002
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19561001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 003
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19660501
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported

GASGO PETROLEUM INC (Continued) **U000394734**

Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 004
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19660501
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 005
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19660501
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None

GASGO PETROLEUM INC (Continued) **U000394734**

Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 006
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19661001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 007
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19661001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported

GASGO PETROLEUM INC (Continued) **U000394734**

Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 008
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19661001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 009
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19661001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000

GASGO PETROLEUM INC (Continued) **U000394734**

Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 010
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19661001
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: GALVANIZED STEEL
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: Diking
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: 02/01/2000
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 011
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: 20000201
Capacity (gals): 4000
Product Stored: UNLEADED GASOLINE
Tank Type: Fiberglass reinforced plastic [FRP]
Tank Internal: Fiberglass Liner (FRP)
Tank External: Fiberglass
Pipe Location: None
Pipe Type: GALVANIZED STEEL
Pipe Internal: Fiberglass Liner (FRP)
Pipe External: Fiberglass
Second Containment: Vault (w/access)
Leak Detection: 41
Overfill Prot: High Level Alarm, Catch Basin
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: 10/01/1956
Test Method: Not reported
Deleted: False
Updated: True

GASGO PETROLEUM INC (Continued) **U000394734**

Lat/long: Not reported

Tank Id: 012
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: 20000201
Capacity (gals): 4000
Product Stored: UNLEADED GASOLINE
Tank Type: Fiberglass reinforced plastic [FRP]
Tank Internal: Fiberglass Liner (FRP)
Tank External: Fiberglass
Pipe Location: Underground
Pipe Type: STAINLESS STEEL ALLOY
Pipe Internal: Fiberglass Liner (FRP)
Pipe External: Fiberglass
Second Containment: Vault (w/access)
Leak Detection: 41
Overfill Prot: High Level Alarm, Catch Basin
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 013
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: 20000201
Capacity (gals): 4000
Product Stored: UNLEADED GASOLINE
Tank Type: Fiberglass reinforced plastic [FRP]
Tank Internal: Fiberglass Liner (FRP)
Tank External: Fiberglass
Pipe Location: Underground
Pipe Type: STAINLESS STEEL ALLOY
Pipe Internal: Fiberglass Liner (FRP)
Pipe External: Fiberglass
Second Containment: Vault (w/access)
Leak Detection: 41
Overfill Prot: High Level Alarm, Catch Basin
Dispenser: Submersible
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

GASGO PETROLEUM INC (Continued) **U000394734**

Tank Id:	014
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	20000201
Capacity (gals):	4000
Product Stored:	DIESEL
Tank Type:	Fiberglass reinforced plastic [FRP]
Tank Internal:	Fiberglass Liner (FRP)
Tank External:	Fiberglass
Pipe Location:	Underground
Pipe Type:	STAINLESS STEEL ALLOY
Pipe Internal:	Fiberglass Liner (FRP)
Pipe External:	Fiberglass
Second Containment:	Vault (w/access)
Leak Detection:	14
Overfill Prot:	High Level Alarm, Catch Basin
Dispenser:	Submersible
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

18
WSW
< 1/8
0.079 mi.
419 ft.

EAGLE ELECTRIC MFG., INC. **MANIFEST** **S109781999**
45-31 COURT SQUARE **N/A**
LONG ISLAND, NY

Relative:
Lower

Actual:
14 ft.

CT MANIFEST:

Waste:

Manifest No:	CTF0534537
Waste Occurence:	1
UNNA:	3077
Hazard Class:	9
US Dot Description:	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
No of Containers:	001
Container Type:	CM
Quantity:	19933
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	4/26/2004
DEO Who Last Modified Record:	IG

Waste CD:

Manifest No:	CTF0534537
Waste Occurence:	1
EPA Waste Code:	F006
Recycled Waste?:	F
Date Record Was Last Modified:	4/26/2004
DEO Who Last Modified Record:	IG

EAGLE ELECTRIC MFG., INC. (Continued) **S109781999**

Detail:

Year:	1998
Manifest ID:	CTF0534537
TSDF EPA ID:	CND000000002
TSDF Name:	STABLEX CANADA INC.
TSDF Address:	760 INDUSTRIAL BLVD.
TSDF City,St,Zip:	BLAINVILLE, CA 00000
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	12/29/1998
Transporter EPA ID:	CTD021816889
Transporter Name:	UNITED OIL RECOVERY INC./UIS DBA ADVANCED LIQ. REC
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
EPA ID:	NYD001267986
Generator Phone:	7189378000
Generator Mailing Addr:	45-31 COURT SQUARE LONG ISLAND
Generator Mailing Town:	Not reported
Generator Mailing State:	NY
Generator Mailing Zip:	Not reported
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Yes
Date Shipped:	12/29/1998
Date Received:	12/30/1998
Last modified date:	4/26/2004
Last modified by:	IG
Comments:	Not reported

C19 **NY Spills** **S106009138**
NW **JACKSON AV & 44TH DR** **N/A**
< 1/8 **QUEENS, NY**
0.082 mi.
431 ft. **Site 2 of 3 in cluster C**

Relative:
Lower

Actual:
16 ft.

NY Spills:

Site ID:	285206
Facility Addr2:	Not reported
Facility ID:	0208224
Spill Number:	0208224
Facility Type:	ER
SWIS:	4101
Investigator:	JHOCONNE
Referred To:	Not reported
Spill Date:	11/8/2002
Reported to Dept:	11/8/2002
CID:	297
Spill Cause:	Equipment Failure
Water Affected:	Not reported

(Continued) **S106009138**

Spill Source:	Commercial Vehicle
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/8/2002
Remediation Phase:	0
Date Entered In Computer:	11/8/2002
Spill Record Last Update:	11/8/2002
Spiller Name:	Not reported
Spiller Company:	CON ED
Spiller Address:	4 IRVING PLACE
Spiller City,St,Zip:	NEW YORK, NY 10003
Spiller Company:	001
Contact Name:	KEVIN MCARDLE
Contact Phone:	(212) 580-6763
DEC Region:	2
DER Facility ID:	231269
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "O'CONNELL" e2mis no. 145-953: 11/08/02=0140HRS VEHICLE #603 SPILLED APPROX. 9-GALLONS OF HYDRAUKIC FLUID FROM 2" HOSE REEL DRIVE ONTO ASPHALT AT JACKSON AVE & 44 DRIVE. IT IS CONTAINED. NO SEWERS OR WATERWAYS EFFECTED. DIAPERS PLACED. CLEANUP IN PROGRESS. 11/08/02=030HRS CLEANUP COMPLETED. VEHICLE WILL BE TURNED IN TO TRANSP.
Remarks:	AN HYDRAULIC LINE RUPTURED ON A CON ED REEL VEHICLE, CLEAN UP CREWS ON SITE - CON ED SPILL #145953

Material:

Site ID:	285206
Operable Unit ID:	859742
Operable Unit:	01
Material ID:	515225
Material Code:	0010
Material Name:	Hydraulic Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	9
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported

(Continued) **S106009138**

Test Method: Not reported

C20 **NYCTA** **RCRA-NonGen** **1004759192**
NW **44TH DR & JACKSON AVE** **FINDS** **NYR000001032**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.082 mi.
431 ft. **Site 3 of 3 in cluster C**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	NYCTA
Facility address:	44TH DR & JACKSON AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000001032
Mailing address:	LIVINGSTON ST BROOKLYN, NY 112015190
Contact:	JOHN HENSLEY
Contact address:	LIVINGSTON ST BROOKLYN, NY 112015190
Contact country:	US
Contact telephone:	(516) 867-7395
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NEW YORK CITY TRANSIT AUTHORITY
Owner/operator address:	130 LIVINGSTON ST BROOKLYN, NY 11201
Owner/operator country:	US
Owner/operator telephone:	(718) 694-5290
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NEW YORK CITY TRANSIT AUTHORITY
Owner/operator address:	130 LIVINGSTON ST BROOKLYN, NY 11201
Owner/operator country:	US
Owner/operator telephone:	(718) 694-5290
Legal status:	Municipal
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

NYCTA (Continued) **1004759192**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYCTA
Classification: Not a generator, verified

Date form received by agency: 02/28/1995
Facility name: NYCTA
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110008088835

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

21
East
< 1/8
0.094 mi.
496 ft.

Relative:
Lower

Actual:
18 ft.

DUTCH KILL/SCRAP YARD
DUTCH KILL
LONG ISLAND CITY, NY

NY Spills **S102143117**
NY Hist Spills **N/A**

NY Spills:
Site ID: 127567
Facility Addr2: Not reported
Facility ID: 9204680
Spill Number: 9204680
Facility Type: ER
SWIS: 4101
Investigator: KSTANG
Referred To: Not reported
Spill Date: 7/23/1992
Reported to Dept: 7/23/1992
CID: Not reported
Spill Cause: Unknown
Water Affected: NEWTOWN CREEK
Spill Source: Unknown
Spill Notifier: Federal Government
Cleanup Ceased: 7/23/1992
Cleanup Meets Std: True
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended

DUTCH KILL/SCRAP YARD (Continued) **S102143117**

UST Trust:	False
Spill Class:	Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	7/23/1992
Remediation Phase:	0
Date Entered In Computer:	7/28/1992
Spill Record Last Update:	9/30/2004
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	***Update***, ZZ
Spiller Company:	001
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	110138
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TANG" 10/10/95: This is additional information about material spilled from the translation of the old spill file: SHEEN.
Remarks:	SHEEN CONFIRMED NON-RECOVERABLE BY USCG.

Material:

Site ID:	127567
Operable Unit ID:	972187
Operable Unit:	01
Material ID:	412378
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Not reported
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	9204680
Investigator:	TANG
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported

DUTCH KILL/SCRAP YARD (Continued) **S102143117**

Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 07/23/1992 13:20
Reported to Dept Date/Time: 07/23/92 13:32
SWIS: 63
Spiller Name: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spill Cause: Unknown
Reported to Dept: Surface Water
Water Affected: NEWTOWN CREEK
Spill Source: 12
Spill Notifier: Federal Government
PBS Number: Not reported
Cleanup Ceased: 07/23/92
Cleanup Meets Std: True
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 07/23/92
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 07/28/92
Date Spill Entered In Computer Data File: Not reported
Update Date: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: 10/10/95: This is additional information about material spilled from the translation of the old spill file: SHEEN.

DUTCH KILL/SCRAP YARD (Continued) **S102143117**

Remark: SHEEN CONFIRMED NON-RECOVERABLE BY USCG.

D22 **NYSDOT - THOMSON AVENUE BRIDGE** **RCRA-NonGen** **1000554113**
NNE **JACKSON AVE & DUTCH KILLS RD** **FINDS** **NYD986965705**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.101 mi.
533 ft. **Site 1 of 3 in cluster D**

Relative:
Lower

Actual:
14 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	NYSDOT - THOMSON AVENUE BRIDGE
Facility address:	JACKSON AVE & DUTCH KILLS RD LONG ISLAND CITY, NY 11101
EPA ID:	NYD986965705
Mailing address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact:	JOSEPH FARO
Contact address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 786-7017
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NYSDOT
Owner/operator address:	ONE HUNTERS POINT PLZ LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 482-4801
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NYSDOT
Owner/operator address:	ONE HUNTERS POINT PLZ LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 482-4801
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No

NYSDOT - THOMSON AVENUE BRIDGE (Continued) **1000554113**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYSDOT - THOMSON AVENUE BRIDGE
Classification: Not a generator, verified

Date form received by agency: 08/02/1991
Facility name: NYSDOT - THOMSON AVENUE BRIDGE
Classification: Not a generator, verified

Violation Status: No violations found

FINDS:

Registry ID: 110008064995

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

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23 **LOT 12,TAXBLOCK 433** **E DESIGNATION** **S108469532**
WNW **25-25 44 DRIVE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.104 mi.
548 ft.

Relative:
Lower

Actual:
17 ft.

E DESIGNATION:
Tax Lot(s): 12
E-No: E-104
Effective Date: 7/26/2001
Satisfaction Date: Not reported
Ceqr Number: 00DCP055Q
Ulurp Number: 000406 (A) ZMQ
Zoning Map No: 8d, 9b
Description: Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code: QN
Community District: 402
Census Tract: 19
Census Block: 2048
School District: 30
City Council District: 26
Fire Company: L115
Health Area: 41
Police Precinct: 108
Zone District 1: M1-6/R10
Zone District 2: Not reported
Commercial Overlay1: Not reported

LOT 12,TAXBLOCK 433 (Continued) **S108469532**

Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	O6
Land Use Category:	05
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	2525 44 DRIVE LLC C/O
Lot Area:	000020000
Total Building Floor Area:	00000004320
Commercial Floor Area:	00000004320
Office Floor Area:	00000004320
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0128.00
Lot Depth:	0115.50
Building Frontage:	0080.00
Building Depth:	0054.00
Proximity Code:	0
Irregular Lot Code:	Y
Lot Type:	3
Basement Type Grade:	5
Land Assessed Value:	00000202500
Total Assessed Value:	00000315000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1964
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.22
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330012
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000165
Y Coordinate:	0211633
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006

LOT 12,TAXBLOCK 433 (Continued) **S108469532**

Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1
Tax Lot(s):	12
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	O6
Land Use Category:	05
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	2525 44 DRIVE LLC C/O
Lot Area:	000020000
Total Building Floor Area:	00000004320
Commercial Floor Area:	00000004320
Office Floor Area:	00000004320
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0128.00
Lot Depth:	0115.50
Building Frontage:	0080.00
Building Depth:	0054.00

LOT 12,TAXBLOCK 433 (Continued) **S108469532**

Proximity Code:	0
Irregular Lot Code:	Y
Lot Type:	3
Basement Type Grade:	5
Land Assessed Value:	00000202500
Total Assessed Value:	00000315000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1964
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.22
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330012
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000165
Y Coordinate:	0211633
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

E24 **43-40 COURT SQUARE / QUEE** **NY Spills** **S104495129**
WSW **43-40 COURT SQUARE** **NY Hist Spills** **N/A**
< 1/8 **LONG ISLAND CITY, NY**
0.115 mi.
606 ft. **Site 1 of 3 in cluster E**

Relative:
Lower

Actual:
14 ft.

NY Spills:

Site ID:	130778
Facility Addr2:	Not reported
Facility ID:	8702187
Spill Number:	8702187
Facility Type:	ER
SWIS:	4101
Investigator:	TOMASELLO
Referred To:	Not reported
Spill Date:	6/17/1987
Reported to Dept:	6/17/1987
CID:	Not reported
Spill Cause:	Human Error
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Police Department

43-40 COURT SQUARE / QUEE (Continued) **S104495129**

Cleanup Ceased:	6/17/1987
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Not reported
Spill Closed Dt:	6/17/1987
Remediation Phase:	0
Date Entered In Computer:	6/19/1987
Spill Record Last Update:	11/26/1996
Spiller Name:	Not reported
Spiller Company:	EAGLE ELECTRIC
Spiller Address:	43-40 COURT SQUARE
Spiller City,St,Zip:	QUEENS, NY
Spiller Company:	001
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	112689
DEC Memo:	Not reported
Remarks:	FORK LIFT ACCIDENT RUPTURED CONTAINERS, MATERIALS MIXED AFTER ACCIDENT AND CAUSED A GAS TO FORM.

Material:

Site ID:	Not reported
Operable Unit ID:	Not reported
Operable Unit:	Not reported
Material ID:	Not reported
Material Code:	Not reported
Material Name:	Not reported
Case No.:	Not reported
Material FA:	Not reported
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Resource Affected:	Not reported
Oxygenate:	Not reported

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	8702187
Investigator:	TOMASELLO
Caller Name:	Not reported
Caller Agency:	Not reported

43-40 COURT SQUARE / QUEE (Continued) **S104495129**

Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	06/17/1987 05:21
Reported to Dept Date/Time:	06/17/87 09:30
SWIS:	63
Spiller Name:	EAGLE ELECTRIC
Spiller Contact:	Not reported
Spiller Phone:	(718) 937-8000
Spiller Address:	43-40 COURT SQUARE
Spiller City,St,Zip:	QUEENS, NEW YORK
Spill Cause:	Human Error
Reported to Dept:	On Land
Water Affected:	Not reported
Spill Source:	01
Spill Notifier:	Police Department
PBS Number:	Not reported
Cleanup Ceased:	06/17/87
Cleanup Meets Std:	True
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Not reported
Spill Closed Dt:	06/17/87
Corrective Action Plan Submitted:	/ /
Date Region Sent Summary to Central Office:	/ /
Date Spill Entered In Computer Data File:	06/19/87
Date Spill Entered In Computer Data File:	Not reported
Update Date:	11/26/96
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	Not reported
Quantity Spilled:	Not reported
Unkonwn Quantity Spilled:	Not reported
Units:	Not reported
Quantity Recovered:	Not reported
Unkonwn Quantity Recovered:	Not reported
Material:	Not reported
Class Type:	Not reported
Times Material Entry In File:	Not reported
CAS Number:	Not reported
Last Date:	Not reported
DEC Remarks:	10/10/95: This is additional information about material spilled from the translation of the old spill file: NICKEL, CYANIDE,.
Remark:	FORK LIFT ACCIDENT RUPTURED CONTAINERS, MATERIALS MIXED AFTER ACCIDENT AND

43-40 COURT SQUARE / QUEE (Continued) **S104495129**

CAUSED A GAS TO FORM.

F25 **MANHOLE 4440** **NY Spills** **S103936850**
ENE **4327 QUEENS ST** **NY Hist Spills** **N/A**
< 1/8 **QUEENS, NY**
0.116 mi.
613 ft. **Site 1 of 6 in cluster F**

Relative:
Lower

Actual:
15 ft.

NY Spills:

Site ID:	301394
Facility Addr2:	Not reported
Facility ID:	9901252
Spill Number:	9901252
Facility Type:	ER
SWIS:	4101
Investigator:	CAENGELH
Referred To:	Not reported
Spill Date:	5/3/1999
Reported to Dept:	5/3/1999
CID:	382
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	1/7/2000
Remediation Phase:	0
Date Entered In Computer:	5/3/1999
Spill Record Last Update:	6/14/2000
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller Company:	999
Contact Name:	BILL MURPHY
Contact Phone:	(212) 580-6763
DEC Region:	2
DER Facility ID:	243541
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ENGELHARDT" Con ed e2mis notes: Found undiaperable sheen on approx 800 gallons of water. <1.00ppm how performed? Structure was double washed using bio gen 760. cleaned 100% Reports found undiaperable sheen on approx 800 gallons of water in mh. Double washed structure with biogen 760 - 100% cleaned. Also inspected structrue and found no damage. Tag removed. Flush reports he put 10 gallons of cement in sump.
Remarks:	SHEEN FOUND ON 800 GAL OF WATER CONTAINED IN MANHOLE. CLEAN UP PENDING LAB RESULTS. CON ED 124-599.

Material:

Site ID:	301394
Operable Unit ID:	1079956

MANHOLE 4440 (Continued) **S103936850**

Operable Unit:	01
Material ID:	304798
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	9901252
Investigator:	ENGELHARDT
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	05/03/1999 10:20
Reported to Dept Date/Time:	05/03/99 11:27
SWIS:	63
Spiller Name:	UNKNOWN
Spiller Contact:	Not reported
Spiller Phone:	( ) -
Spiller Contact:	BILL MURPHY
Spiller Phone:	(212) 580-6763
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spill Cause:	Unknown
Reported to Dept:	On Land
Water Affected:	Not reported
Spill Source:	12
Spill Notifier:	Other
PBS Number:	Not reported
Cleanup Ceased:	/ /
Cleanup Meets Std:	False
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /

MANHOLE 4440 (Continued) **S103936850**

Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 01/07/00
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 05/03/99
Date Spill Entered In Computer Data File: Not reported
Update Date: 06/14/00
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Con ed e2mis notes: Found undiaperable sheen on approx 800 gallons of water. <1.00ppm how performed? Structure was double washed using bio gen 760. cleaned 100 Reports found undiaperable sheen on approx 800 gallons of water in mh. Double washed structure with biogen 760 - 100 cleaned. Also inspected structrue and found no damage. Tag removed. Flush reports he put 10 gallons of cement in sump.
Remark: SHEEN FOUND ON 800 GAL OF WATER CONTAINED IN MANHOLE. CLEAN UP PENDING LAB RESULTS. CON ED 124-599.

F26 **TOP STAR FABRICARE** **DRYCLEANERS** **S110248144**
ENE **43-43 QUEENS STREET** **N/A**
< 1/8 **LI CITY, NY 11101**
0.116 mi.
615 ft. **Site 2 of 6 in cluster F**

Relative:
Lower

Actual:
16 ft.

DRYCLEANERS:
Facility ID: 2-6304-00678
Phone Number: Not reported
Region: 2
Registration Effective Date: 10/5/2007
Inspection Date: 07SEP12
Install Date: Not reported
Drop Shop: Not reported
Shutdown: Not reported
Alternate Solvent: Not reported
Current Business: PERC DRY CLEANER

F27 **AMTRAK LINE 4** **NY Spills** **S109371737**
ENE **43-47 QUEENS ST** **N/A**
< 1/8 **QUEENS, NY**
0.117 mi.
616 ft. **Site 3 of 6 in cluster F**

Relative:
Lower

Actual:
16 ft.

NY Spills:

Site ID:	404364
Facility Addr2:	Not reported
Facility ID:	0807048
Spill Number:	0807048
Facility Type:	ER
SWIS:	4101
Investigator:	RMPIPER
Referred To:	Not reported
Spill Date:	9/23/2008
Reported to Dept:	9/23/2008
CID:	Not reported
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Railroad Car
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/10/2008
Remediation Phase:	0
Date Entered In Computer:	9/23/2008
Spill Record Last Update:	11/10/2008
Spiller Name:	HARRY SEUBERT
Spiller Company:	AMTRACK
Spiller Address:	4347 QUEENS ST
Spiller City,St,Zip:	QUEENS, NY
Spiller Company:	999
Contact Name:	HARRY SEUBERT
Contact Phone:	(212) 630-6707
DEC Region:	2
DER Facility ID:	353626
DEC Memo:	Broken haose caused 30 gal release onto soil. Pads were put down as well as a bio remediator. I requested that the surface soils be drummed along with the spent pads and the soils replaced with ballast or such. Amtrak will notify DEC Piper when complete. 9/24/08- I spoke with Harry at Amtrak. Work has been completed. I requested him to fax me disposal manifests of cont debris that was drummed.. He is having clean harbors to pick them up next week. 11/10/08- DECPiper- I received copy of disposal manifest. Closed. See e-docs if warranted.
Remarks:	CALLER STATES THAT A HOSE BROKE ON A GRAPPLE TRUCK SPILLING ABOUT 30 GALLONS OF HYDRAULIC FLUID. CLEAN UP IS IN PROGRESS WITH S200, PADS HAVE BEEN DEPLOYED.

Material:

Site ID:	404364
Operable Unit ID:	1161026
Operable Unit:	01
Material ID:	2152214

AMTRAK LINE 4 (Continued) **S109371737**

Material Code:	0010
Material Name:	Hydraulic Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	30
Units:	Gallons
Recovered:	30
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

F28 **VS# 2196** **NY Spills** **S104510846**
ENE **43-22 QUEENS ST** **NY Hist Spills** **N/A**
< 1/8 **QUEENS, NY**
0.119 mi.
626 ft. **Site 4 of 6 in cluster F**

Relative:
Lower

Actual:
15 ft.

NY Spills:

Site ID:	193623
Facility Addr2:	Not reported
Facility ID:	9914143
Spill Number:	9914143
Facility Type:	ER
SWIS:	4101
Investigator:	JHOCONNE
Referred To:	Not reported
Spill Date:	3/15/2000
Reported to Dept:	3/15/2000
CID:	366
Spill Cause:	Unknown
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Affected Persons
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	3/26/2002
Remediation Phase:	0
Date Entered In Computer:	3/15/2000
Spill Record Last Update:	3/26/2002
Spiller Name:	Not reported

VS# 2196 (Continued) **S104510846**

Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller Company:	999
Contact Name:	JIMMY FOX
Contact Phone:	(212) 580-6763
DEC Region:	2
DER Facility ID:	161437
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "O'CONNELL"
Remarks:	CALLER REPORTING THAT APPROX 2 QTS OF AN UNKNOWN OIL FOUND ON 5,000 GALS OF WATER. SAMPLES TAKEN AND CLEAN UP PENDING RESULTS. CON ED #130414.

Material:

Site ID:	193623
Operable Unit ID:	1092374
Operable Unit:	01
Material ID:	552996
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

NY Hist Spills:

Region of Spill:	2
Spill Number:	9914143
Investigator:	O'CONNELL
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	03/15/2000 11:00
Reported to Dept Date/Time:	03/15/00 11:49
SWIS:	63
Spiller Name:	UNKNOWN
Spiller Contact:	Not reported

VS# 2196 (Continued) **S104510846**

Spiller Phone: ( ) -
Spiller Contact: JIMMY FOX
Spiller Phone: (212) 580-6763
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spill Cause: Unknown
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 12
Spill Notifier: Affected Persons
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 03/15/00
Date Spill Entered In Computer Data File: Not reported
Update Date: 03/20/00
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Remark: CALLER REPORTING THAT APPROX 2 QTS OF AN UNKNOWN OIL FOUND ON 5,000 GALS OF WATER. SAMPLES TAKEN AND CLEAN UP PENDING RESULTS. CON ED 130414.

F29 **ELECTRIC REALTY CO, LLC.** **UST** **U004076103**
ENE **43-22 QUEENS STREET** **N/A**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.119 mi.
626 ft. **Site 5 of 6 in cluster F**

Relative:
Lower

Actual:
15 ft.

UST:

Facility Id:	2-017396
Region:	STATE
DEC Region:	2
Site Status:	Active
Program Type:	PBS
Expiration Date:	2013/01/07
UTM X:	591026.60716000001
UTM Y:	4510867.53835

Affiliation Records:

Site Id:	131
Affiliation Type:	Owner
Company Name:	ELECTRIC REALTY LLC
Contact Type:	PROPERTY MGR
Contact Name:	ALFRED PIZZUTO
Address1:	457 KNICKERBOCKER AVENUE
Address2:	Not reported
City:	BROOKLYN
State:	NY
Zip Code:	11237
Country Code:	001
Phone:	(718) 919-0824
Phone Ext:	Not reported
Email:	APIZZUTO@HOTMAIL.COM
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	10/26/2007

Site Id:	131
Affiliation Type:	Mail Contact
Company Name:	ELECTRIC REALTY LLC
Contact Type:	Not reported
Contact Name:	AL PIZZUTO
Address1:	457 KNICKERBOCKER AVENUE
Address2:	Not reported
City:	BROOKLYN
State:	NY
Zip Code:	11237
Country Code:	001
Phone:	(718) 706-9855
Phone Ext:	Not reported
Email:	APIZZUTO@HOTMAIL.COM
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	10/26/2007

Site Id:	131
Affiliation Type:	On-Site Operator
Company Name:	ELECTRIC REALTY CO, LLC.
Contact Type:	Not reported
Contact Name:	ELECTRIC REALTY CO
Address1:	Not reported
Address2:	Not reported

ELECTRIC REALTY CO, LLC. (Continued) **U004076103**

City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 706-9855
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	10/26/2007

Site Id:	131
Affiliation Type:	Emergency Contact
Company Name:	ELECTRIC REALTY LLC
Contact Type:	Not reported
Contact Name:	AL PIZZUTO
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 813-7161
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	10/26/2007

Equipment Records:

B00 - Tank External Protection - None
F00 - Pipe External Protection - None
I05 - Overfill - Vent Whistle
B00 - Tank External Protection - None
K00 - Spill Prevention - None
I05 - Overfill - Vent Whistle
C01 - Pipe Location - Aboveground
G02 - Tank Secondary Containment - Vault (w/access)
J02 - Dispenser - Suction
J02 - Dispenser - Suction
I04 - Overfill - Product Level Gauge (A/G)
G02 - Tank Secondary Containment - Vault (w/access)
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
F00 - Pipe External Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None
L09 - Piping Leak Detection - Exempt Suction Piping
C01 - Pipe Location - Aboveground
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
E02 - Piping Secondary Containment - Vault (with Access)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
E02 - Piping Secondary Containment - Vault (with Access)

ELECTRIC REALTY CO, LLC. (Continued) **U004076103**

Tank Info:

Site ID:	131
Tank Number:	001
Tank ID:	27004
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	10/1/1990
Capacity Gallons:	10000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	6
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	kakyer
Last Modified:	10/26/2007
Site ID:	131
Tank Number:	002
Tank ID:	27005
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	2/25/1942
Capacity Gallons:	5000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	6
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	kakyer
Last Modified:	10/26/2007

F30 **EAGLE ELECTRIC MFG CO INC** **HIST UST** **U001838870**
ENE **43-22 QUEENS BLVD** **N/A**
< 1/8 **LIC, NY 11101**
0.119 mi.
626 ft. **Site 6 of 6 in cluster F**

Relative:
Lower

Actual:
15 ft.

HIST UST:

PBS Number:	2-017396
SPDES Number:	Not reported
Emergency Contact:	ALFRED PIZZUTO
Emergency Telephone:	(914) 962-6467
Operator:	EAGLE ELECTRIC MFG CO INC
Operator Telephone:	(718) 937-8000
Owner Name:	EAGLE ELECTRIC MFG CO INC
Owner Address:	45-31 COURT SQ
Owner City,St,Zip:	LIC, NY 11101
Owner Telephone:	(718) 937-8000
Owner Type:	Corporate/Commercial

EAGLE ELECTRIC MFG CO INC (Continued) **U001838870**

Owner Subtype:	Not reported
Mailing Name:	EAGLE ELECTRIC MFG CO INC
Mailing Address:	45-31 COURT SQ
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LIC, NY 11101
Mailing Contact:	AL PIZZUTO
Mailing Telephone:	(718) 937-8000
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	43022 QUEENS BLVD
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	Not reported
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	09/30/1999
Expiration Date:	10/23/2002
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	15000
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND, VAULTED, WITH ACCESS
Tank Status:	In Service
Install Date:	19901001
Capacity (gals):	10000
Product Stored:	NOS 5 OR 6 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	None
Tank External:	None
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	Fiberglass
Second Containment:	Diking
Leak Detection:	None
Overfill Prot:	Product Level Gauge, Vent Whistle
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported

EAGLE ELECTRIC MFG CO INC (Continued) **U001838870**

Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: 002
Tank Location: UNDERGROUND, VAULTED, WITH ACCESS
Tank Status: In Service
Install Date: Not reported
Capacity (gals): 5000
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: None
Tank External: None
Pipe Location: Aboveground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: Fiberglass
Second Containment: Diking
Leak Detection: None
Overfill Prot: Product Level Gauge, Vent Whistle
Dispenser: Suction
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

D31 **INCOME STAR CORPORATION** **AST** **U003388903**
NNE **27-35 JACKSON AVE** **HIST AST** **N/A**
< 1/8 **LONG ISLAND CITY, NY 11101**
0.120 mi.
633 ft. **Site 2 of 3 in cluster D**

Relative:
Lower

Actual:
15 ft.

AST:
Region: STATE
DEC Region: 2
Site Status: Active
Facility Id: 2-283118
Program Type: PBS
UTM X: 589473.25162999996
UTM Y: 4511320.2492399998
Expiration Date: 2012/10/23

Affiliation Records:
Site Id: 12486
Affiliation Type: Emergency Contact
Company Name: 27-35 JACKSON AVENUE PROPERTY LLC
Contact Type: Not reported
Contact Name: TONY CHENG
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN

INCOME STAR CORPORATION (Continued) **U003388903**

Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-8600
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	12486
Affiliation Type:	Owner
Company Name:	27-35 JACKSON AVENUE PROPERTY LLC
Contact Type:	OWNER
Contact Name:	PHYLLIS SHIH
Address1:	27-35 JACKSON AVENUE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 366-6688
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KAKYER
Date Last Modified:	8/16/2007

Site Id:	12486
Affiliation Type:	On-Site Operator
Company Name:	MINI M,ICRO SUPPLI INC
Contact Type:	Not reported
Contact Name:	TONY CHENG
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-8600
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	12486
Affiliation Type:	Mail Contact
Company Name:	MINI MICRO SUPPLY INC
Contact Type:	Not reported
Contact Name:	PHYLLIS SHIH
Address1:	27-35 JACKSON AVE
Address2:	Not reported
City:	L.I.C.
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 482-8600

INCOME STAR CORPORATION (Continued) **U003388903**

Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

D01 - Pipe Type - Steel/Carbon Steel/Iron
G03 - Tank Secondary Containment - Vault (w/o access)
B01 - Tank External Protection - Painted/Asphalt Coating
C01 - Pipe Location - Aboveground
I04 - Overfill - Product Level Gauge (A/G)
F00 - Pipe External Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
I04 - Overfill - Product Level Gauge (A/G)
H99 - Tank Leak Detection - Other
C01 - Pipe Location - Aboveground
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
H99 - Tank Leak Detection - Other
G03 - Tank Secondary Containment - Vault (w/o access)
A00 - Tank Internal Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
J02 - Dispenser - Suction
E02 - Piping Secondary Containment - Vault (with Access)
E02 - Piping Secondary Containment - Vault (with Access)

Tank Info:

Tank Number:	005
Tank Id:	14851
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	12/1/1965
Capacity Gallons:	5000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	KAKYER
Last Modified:	8/16/2007

Tank Number:	008
Tank Id:	14852
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported

INCOME STAR CORPORATION (Continued) **U003388903**

Install Date:	12/1/1965
Capacity Gallons:	8000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	KAKYER
Last Modified:	8/16/2007

HIST AST:

PBS Number:	2-283118
SWIS Code:	6301
Operator:	MARITZA TONG
Facility Phone:	(718) 417-1668
Facility Addr2:	27035 JACKSON AVE
Facility Type:	OTHER
Emergency:	MARITZA TONG
Emergency Tel:	(718) 417-1668
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	INCOME STAR REALTY COPORATION
Owner Address:	27-35 JACKSON AVENUE
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Federal ID:	Not reported
Owner Tel:	(718) 366-6688
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	MARITZA TONG CORPORATION
Mailing Name:	INCOME STAR CORPORATION
Mailing Address:	56-72 49TH PLACE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	MASPETH, NY 11378
Mailing Telephone:	(718) 366-6688
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	10/29/1997
Expiration:	10/23/2002
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	13000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

INCOME STAR CORPORATION (Continued) **U003388903**

Tank ID:	005
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE
Tank Status:	In Service
Install Date:	19651201
Capacity (Gal):	5000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	0
Tank External:	1
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	0
Tank Containment:	Diking
Leak Detection:	9
Overfill Protection:	4
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

Tank ID:	008
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE
Tank Status:	In Service
Install Date:	19651201
Capacity (Gal):	8000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	0
Tank External:	1
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	0
Tank Containment:	Diking
Leak Detection:	9
Overfill Protection:	4
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

D32 **LOT 8,TAXBLOCK 432** **E DESIGNATION** **S108469581**
NNE **27-35 JACKSON AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.120 mi.
633 ft. **Site 3 of 3 in cluster D**

Relative:
Lower

Actual:
15 ft.

E DESIGNATION:

Tax Lot(s):	8
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	1004
School District:	30
City Council District:	26
Fire Company:	E258
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-5/R9
Zone District 2:	M1-5/R7-3
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-5/R9/LIC
All Components2:	M1-5/R7-3
Split Boundary Indicator:	Y
Building Class:	F2
Land Use Category:	06
Number of Easements:	1
Owner, Type of Code:	Not reported
Owner Name:	27-35 JACKSON AVENUE
Lot Area:	000022500
Total Building Floor Area:	00000078500
Commercial Floor Area:	00000078500
Office Floor Area:	00000016500
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000016500
Factory Floor Area:	00000045500
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	004.00
Residential Units:	00000
Non and Residential Units:	00004
Lot Frontage:	0225.00
Lot Depth:	0099.75
Building Frontage:	0220.00
Building Depth:	0090.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5

LOT 8,TAXBLOCK 432 (Continued) **S108469581**

Basement Type Grade:	5
Land Assessed Value:	00000350100
Total Assessed Value:	00001291500
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1965
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0003.49
Maximum Allowable Far:	07.52
Borough Code:	4
Borough Tax Block And Lot:	4004320008
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000782
Y Coordinate:	0211864
Zoning Map:	09B
Sanborn Map:	401 024
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	8
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	1004
School District:	30
City Council District:	26
Fire Company:	E258
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-5/R9
Zone District 2:	M1-5/R7-3
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-5/R9/LIC

LOT 8,TAXBLOCK 432 (Continued) **S108469581**

All Components2:	M1-5/R7-3
Split Boundary Indicator:	Y
Building Class:	F2
Land Use Category:	06
Number of Easements:	1
Owner, Type of Code:	Not reported
Owner Name:	27-35 JACKSON AVENUE
Lot Area:	000022500
Total Building Floor Area:	00000078500
Commercial Floor Area:	00000078500
Office Floor Area:	00000016500
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000016500
Factory Floor Area:	00000045500
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	004.00
Residential Units:	00000
Non and Residential Units:	00004
Lot Frontage:	0225.00
Lot Depth:	0099.75
Building Frontage:	0220.00
Building Depth:	0090.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000350100
Total Assessed Value:	00001291500
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1965
Year Built Code:	Not reported
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0003.49
Maximum Allowable Far:	07.52
Borough Code:	4
Borough Tax Block And Lot:	4004320008
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000782
Y Coordinate:	0211864
Zoning Map:	09B
Sanborn Map:	401 024
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006

LOT 8,TAXBLOCK 432 (Continued) **S108469581**

Date of Mass Appraisal Data: 11/2005
Date of Political and Adm Data: 08/2005
Pluto-Base Map Indicator: 1

G33 **LOT 41,TAXBLOCK 433** **E DESIGNATION** **S108469568**
North **27-10 43 AVENUE** **N/A**
< 1/8 **QUEENS, NY 11101**
0.124 mi.
654 ft. **Site 1 of 5 in cluster G**

Relative:
Lower

Actual:
12 ft.

E DESIGNATION:

Tax Lot(s):	41
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	G9
Land Use Category:	07
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	COMASKEY HOLDINGS,
Lot Area:	000002000
Total Building Floor Area:	00000002250
Commercial Floor Area:	00000002250
Office Floor Area:	00000000250
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000002000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0080.00

LOT 41,TAXBLOCK 433 (Continued) **S108469568**

Building Frontage:	0025.00
Building Depth:	0080.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000063000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.13
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330041
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000399
Y Coordinate:	0211751
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	41
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported

LOT 41,TAXBLOCK 433 (Continued) **S108469568**

Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	G9
Land Use Category:	07
Number of Easements:	0
Owner, Type of Code:	P
Owner Name:	COMASKEY HOLDINGS,
Lot Area:	000002000
Total Building Floor Area:	00000002250
Commercial Floor Area:	00000002250
Office Floor Area:	00000000250
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000002000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0080.00
Building Frontage:	0025.00
Building Depth:	0080.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000027000
Total Assessed Value:	00000063000
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0001.13
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330041
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000399
Y Coordinate:	0211751
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005

LOT 41,TAXBLOCK 433 (Continued) **S108469568**

Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

H34 **LOT 35,TAXBLOCK 433** **E DESIGNATION** **S108469561**
NNW **43-15 HUNTER STREET** **N/A**
< 1/8 **QUEENS, NY 11101**
0.124 mi.
656 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
11 ft.

E DESIGNATION:

Tax Lot(s):	35
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	B2
Land Use Category:	01
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	43-15 HUNTER STREET,
Lot Area:	000002500
Total Building Floor Area:	00000001992
Commercial Floor Area:	00000000000
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001

LOT 35,TAXBLOCK 433 (Continued) **S108469561**

Number of Floors:	002.00
Residential Units:	00002
Non and Residential Units:	00002
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0025.00
Building Depth:	0036.00
Proximity Code:	2
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	2
Land Assessed Value:	00000003330
Total Assessed Value:	00000018679
Land Exempt Value:	00000001430
Total Exempt Value:	00000001430
Year Built:	1920
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.80
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330035
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000273
Y Coordinate:	0211765
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	35
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26

LOT 35,TAXBLOCK 433 (Continued) **S108469561**

Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	B2
Land Use Category:	01
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	43-15 HUNTER STREET,
Lot Area:	000002500
Total Building Floor Area:	00000001992
Commercial Floor Area:	00000000000
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000000
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code	7
Number of Buildings:	00001
Number of Floors:	002.00
Residential Units:	00002
Non and Residential Units:	00002
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0025.00
Building Depth:	0036.00
Proximity Code:	2
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	2
Land Assessed Value:	00000003330
Total Assessed Value:	00000018679
Land Exempt Value:	00000001430
Total Exempt Value:	00000001430
Year Built:	1920
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.80
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330035
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000273
Y Coordinate:	0211765

LOT 35,TAXBLOCK 433 (Continued) **S108469561**

Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

G35 **LOT 36,TAXBLOCK 433** **E DESIGNATION** **S108469562**
NNW **43-11 HUNTER STREET** **N/A**
< 1/8 **QUEENS, NY 11101**
0.124 mi.
657 ft. **Site 2 of 5 in cluster G**

Relative:
Lower

Actual:
11 ft.

E DESIGNATION:

Tax Lot(s):	36
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Window Wall Attenuation & Alternate Ventilation
Borough Code:	QN
Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F9
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	43-11 HUNTER STREET,
Lot Area:	000002500
Total Building Floor Area:	00000000500
Commercial Floor Area:	00000000500
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000

LOT 36,TAXBLOCK 433 (Continued) **S108469562**

Storage Floor Area:	00000000000
Factory Floor Area:	00000000500
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0025.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000029250
Total Assessed Value:	00000033885
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.20
Maximum Allowable Far:	10.00
Borough Code:	4
Borough Tax Block And Lot:	4004330036
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000306
Y Coordinate:	0211744
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

Tax Lot(s):	36
E-No:	E-104
Effective Date:	7/26/2001
Satisfaction Date:	Not reported
Ceqr Number:	00DCP055Q
Ulurp Number:	000406 (A) ZMQ
Zoning Map No:	8d, 9b
Description:	Underground Gasoline Storage Tanks* Testing Protocol.
Borough Code:	QN

LOT 36,TAXBLOCK 433 (Continued) **S108469562**

Community District:	402
Census Tract:	19
Census Block:	2048
School District:	30
City Council District:	26
Fire Company:	L115
Health Area:	41
Police Precinct:	108
Zone District 1:	M1-6/R10
Zone District 2:	Not reported
Commercial Overlay1:	Not reported
Commercial Overlay2:	Not reported
Special Purpose District1:	LIC
Special Purpose District2:	Not reported
All Components1:	M1-6/R10/LIC
All Components2:	Not reported
Split Boundary Indicator:	N
Building Class:	F9
Land Use Category:	06
Number of Easements:	0
Owner, Type of Code:	Not reported
Owner Name:	43-11 HUNTER STREET,
Lot Area:	000002500
Total Building Floor Area:	00000000500
Commercial Floor Area:	00000000500
Office Floor Area:	00000000000
Retail Floor Area:	00000000000
Garage Floor Area:	00000000000
Storage Floor Area:	00000000000
Factory Floor Area:	00000000500
Other Floor Area:	00000000000
Floor Area,Total Bld Source Code:	7
Number of Buildings:	00001
Number of Floors:	001.00
Residential Units:	00000
Non and Residential Units:	00001
Lot Frontage:	0025.00
Lot Depth:	0100.00
Building Frontage:	0020.00
Building Depth:	0025.00
Proximity Code:	0
Irregular Lot Code:	N
Lot Type:	5
Basement Type Grade:	5
Land Assessed Value:	00000029250
Total Assessed Value:	00000033885
Land Exempt Value:	00000000000
Total Exempt Value:	00000000000
Year Built:	1916
Year Built Code:	E
Year Altered1:	0000
Year Altered2:	0000
Historic District Name:	Not reported
Landmark Name:	Not reported
Built Floor Area Ratio-Far:	0000.20
Maximum Allowable Far:	10.00
Borough Code:	4

LOT 36,TAXBLOCK 433 (Continued) **S108469562**

Borough Tax Block And Lot:	4004330036
Condominium Number:	00000
Census Tract 2:	0019
X Coordinate:	1000306
Y Coordinate:	0211744
Zoning Map:	09B
Sanborn Map:	401 025
Tax Map:	40302
E Designation No:	E-104
Date of RPAD Data:	11/2005
Date of DCAS Data:	01/2006
Date of Zoning Data:	11/2005
Date of Major Property Data:	11/2005
Date of Landmark Data:	12/2005
Date of Base Map Data:	01/2006
Date of Mass Appraisal Data:	11/2005
Date of Political and Adm Data:	08/2005
Pluto-Base Map Indicator:	1

G36 **LTANKS** **S105135086**
NNW **43-09 HUNTER ST** **HIST LTANKS** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.125 mi.
661 ft. **Site 3 of 5 in cluster G**

Relative:
Lower

Actual:
12 ft.

LTANKS:

Site ID:	242115
Spill No:	0105318
Spill Date:	8/16/2001
Spill Cause:	Tank Overfill
Spill Source:	Commercial Vehicle
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	6/30/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	SMSANGES
Referred To:	Not reported
Reported to Dept:	8/16/2001
CID:	207
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	8/16/2001
Spill Record Last Update:	6/30/2003
Spiller Name:	CALLER
Spiller Company:	MB TRUCKING
Spiller Address:	1281 VIELE AV
Spiller City,St,Zip:	BRONX, NY 10474-
Spiller County:	001
Spiller Contact:	GABE RICCI
Spiller Phone:	(718) 328-3275
Spiller Extention:	Not reported

(Continued) **S105135086**

DEC Region: 2
DER Facility ID: 262305
DEC Memo: Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SANGESLAND"
Remarks: cleanup completed

Material:
Site ID: 242115
Operable Unit ID: 842224
Operable Unit: 01
Material ID: 533792
Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 3
Units: Gallons
Recovered: 3
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

HIST LTANKS:
Region of Spill: 2
Spill Number: 0105318
Spill Date: 08/16/2001
Spill Time: 10:00
Spill Cause: Tank Overfill
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Commercial Vehicle
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: SANGESLAND
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported

(Continued) **S105135086**

Notifier Extension: Not reported
Reported to Department Date: 08/16/01
Reported to Department Time: 10:44
SWIS: 63
Spiller Contact: GABE RICCI
Spiller Phone: (718) 328-3275
Spiller Extention: Not reported
Spiller Name: MB TRUCKING
Spiller Address: 1281 VIELE AV
Spiller City,St,Zip: BRONX, NY 10474-
Spiller Cleanup Date: / /
Facility Contact: CALLER
Facility Phone: (718) 328-3275
Facility Extention: Not reported
Spill Notifier: Responsible Party
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 08/16/01
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 08/16/01
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 3
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 3
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: cleanup completed

H37 **CENTRALIZED LAB SERVICES INC** **RCRA-NonGen** **1000418525**
NNW **43-25 HUNTER ST** **FINDS** **NYD057430100**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.126 mi.
663 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
11 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	CENTRALIZED LAB SERVICES INC
Facility address:	43-25 HUNTER ST LONG ISLAND CITY, NY 11101
EPA ID:	NYD057430100
Mailing address:	HUNTER ST LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	HUNTER ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

CENTRALIZED LAB SERVICES INC (Continued) **1000418525**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: CENTRALIZED LAB SERVICES INC
Classification: Not a generator, verified

Date form received by agency: 12/31/1979
Facility name: CENTRALIZED LAB SERVICES INC
Classification: Unverified

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 07/17/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004360851

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD057430100
Country: USA
Mailing Name: CENTRALIZED LAB SERVICES INC
Mailing Contact: CENTRALIZED LAB SERVICES INC
Mailing Address: 43-25 HUNTER ST
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-786-2300

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NYD082785429
Trans2 State ID: Not reported
Generator Ship Date: 2008-11-19

CENTRALIZED LAB SERVICES INC (Continued) **1000418525**

Trans1 Recv Date:	2008-11-19
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-11-19
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD057430100
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	80.0
Units:	P - Pounds
Number of Containers:	4.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	002447732FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD082785429
Trans2 State ID:	Not reported
Generator Ship Date:	2008-10-10
Trans1 Recv Date:	2008-10-10
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-10-10
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD057430100
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	130.0
Units:	P - Pounds
Number of Containers:	13.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	002446217FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N

CENTRALIZED LAB SERVICES INC (Continued) **1000418525**

Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

I38 **EAGLE ELECTRIC MFG CO INC** **AST U003393333**
WSW **45-31 COURT SQ** **HIST AST N/A**
1/8-1/4 **LIC, NY 11104**
0.129 mi.
682 ft. **Site 1 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-017418
Program Type:	PBS
UTM X:	589175.28622999997
UTM Y:	4511109.1542400001
Expiration Date:	2012/01/17

Affiliation Records:

Site Id:	132
Affiliation Type:	Mail Contact
Company Name:	TAG COURT SQUARE LLC
Contact Type:	Not reported
Contact Name:	WILLIAM BRETSCHGER
Address1:	430 PARK AVE 5TH FLR
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10022
Country Code:	001
Phone:	(212) 308-9000
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	msbaptis
Date Last Modified:	1/17/2007

Site Id:	132
Affiliation Type:	On-Site Operator
Company Name:	45-31 COURT SQ
Contact Type:	Not reported
Contact Name:	MICHAEL LICATA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 554-8288
Phone Ext:	Not reported
Email:	Not reported

EAGLE ELECTRIC MFG CO INC (Continued) **U003393333**

Fax Number:	Not reported
Modified By:	msbaptis
Date Last Modified:	1/17/2007

Site Id:	132
Affiliation Type:	Emergency Contact
Company Name:	TAG COURT SQUARE LLC
Contact Type:	Not reported
Contact Name:	MICHAEL LICATA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(917) 642-4423
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	msbaptis
Date Last Modified:	1/17/2007

Site Id:	132
Affiliation Type:	Owner
Company Name:	TAG COURT SQUARE LLC
Contact Type:	DIRECTOR
Contact Name:	WILLIAM BRETSCHGER
Address1:	430 PARK AVE
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10022
Country Code:	001
Phone:	(212) 308-9000
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	msbaptis
Date Last Modified:	1/17/2007

Equipment Records:

J02 - Dispenser - Suction
C00 - Pipe Location - No Piping
L09 - Piping Leak Detection - Exempt Suction Piping
F04 - Pipe External Protection - Fiberglass
H00 - Tank Leak Detection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
I05 - Overfill - Vent Whistle
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
G03 - Tank Secondary Containment - Vault (w/o access)
L09 - Piping Leak Detection - Exempt Suction Piping
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None
C00 - Pipe Location - No Piping

EAGLE ELECTRIC MFG CO INC (Continued) **U003393333**

B00 - Tank External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction
G03 - Tank Secondary Containment - Vault (w/o access)
I05 - Overfill - Vent Whistle

Tank Info:

Tank Number:	001
Tank Id:	27006
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1955
Capacity Gallons:	20000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	msbaptis
Last Modified:	1/17/2007

Tank Number:	002
Tank Id:	27007
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1955
Capacity Gallons:	20000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	msbaptis
Last Modified:	1/17/2007

HIST AST:

PBS Number:	2-017418
SWIS Code:	6301
Operator:	EAGLE ELECTRIC MFG CO INC
Facility Phone:	(718) 937-8000
Facility Addr2:	45031 COURT SQ
Facility Type:	Not reported
Emergency:	ALFRED PIZZUTO
Emergency Tel:	(914) 962-6467
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported

EAGLE ELECTRIC MFG CO INC (Continued) **U003393333**

Owner Name:	ENGLE ELECTRIC MFG CO INC
Owner Address:	45-31 COURT SQ
Owner City,St,Zip:	LIC, NY 11104
Federal ID:	Not reported
Owner Tel:	(718) 937-8000
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	AL PIZZUTO
Mailing Name:	EAGLE ELECTRIC MFG CO INC
Mailing Address:	45-31 COURT SQ
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LIC, NY 11104
Mailing Telephone:	(718) 937-8000
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	09/30/1999
Expiration:	10/23/2002
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	40000
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	20000
Product Stored:	NOS 5 OR 6 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	04
Tank Containment:	Diking
Leak Detection:	0
Overfill Protection:	46
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False

EAGLE ELECTRIC MFG CO INC (Continued) **U003393333**

Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

Tank ID:	002
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	20000
Product Stored:	NOS 5 OR 6 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	04
Tank Containment:	Diking
Leak Detection:	0
Overfill Protection:	46
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

I39 **EAGLE ELECTRIC** **MANIFEST** **S109782003**
WSW **45-31 COURT SQUARE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.129 mi.
682 ft. **Site 2 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

CT MANIFEST:

Waste:

Manifest No:	CTF0997184
Waste Occurence:	1
UNNA:	3077
Hazard Class:	9
US Dot Description:	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
No of Containers:	001
Container Type:	CM
Quantity:	15
Weight/Volume:	Y
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	4/27/2004
DEO Who Last Modified Record:	IG

Waste CD:

Manifest No:	CTF0997184
Waste Occurence:	1

EAGLE ELECTRIC (Continued) **S109782003**

EPA Waste Code: F006
Recycled Waste?: F
Date Record Was Last Modified: 4/27/2004
DEO Who Last Modified Record: IG

Detail:
Year: 2001
Manifest ID: CTF0997184
TSDF EPA ID: CTD002593887
TSDF Name: BRIDGEPORT UNITED RECYCLE (FORMERLY HITCHCOCK GAS)
TSDF Address: 50 CROSS STREET
TSDF City,St,Zip: BRIDGEPORT, CT 06608
TSDF Country: USA
TSDF Telephone: Not reported
Transport Date: 9/19/2001
Transporter EPA ID: CTD021816889
Transporter Name: UNITED OIL RECOVERY INC
Transporter Country: USA
Transporter Phone: Not reported
Trans 2 Date: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
Trans 2 Address: Not reported
Trans 2 City,St,Zip: CT
Trans 2 Country: USA
Trans 2 Phone: Not reported
EPA ID: NYD001287986
Generator Phone: 7183614868
Generator Mailing Addr: 45-31 COURT SQ
Generator Mailing Town: LONG ISLAND CITY
Generator Mailing State: NY
Generator Mailing Zip: 11101
Generator Mailing Country: USA
Special Handling: Not reported
Discrepancies: No
Date Shipped: 9/19/2001
Date Received: 9/27/2001
Last modified date: 4/27/2004
Last modified by: IG
Comments: Not reported

I40 **ROGERS ENGRAVING CO INC** **RCRA-NonGen** **1000217522**
WSW **45-61 COURT SQ** **FINDS** **NYD002405645**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.129 mi.
682 ft. **Site 3 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: ROGERS ENGRAVING CO INC
Facility address: 45-61 COURT SQ
LONG ISLAND CITY, NY 11101
EPA ID: NYD002405645
Mailing address: COURT SQ
LONG ISLAND CITY, NY 11101
Contact: JOSEPH DUFFY

ROGERS ENGRAVING CO INC (Continued) **1000217522**

Contact address: COURT SQ
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: (718) 786-6225
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: ROGERS ENGRAVING CO INC
Classification: Not a generator, verified

Date form received by agency: 11/26/1980
Facility name: ROGERS ENGRAVING CO INC
Classification: Not a generator, verified

ROGERS ENGRAVING CO INC (Continued) **1000217522**

Violation Status: No violations found

FINDS:

Registry ID: 110004341178

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

I41 **45-30 COURT SQUARE** **AST U003384691**
WSW **45-30 COURT SQUARE** **HIST AST N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.129 mi.
682 ft. **Site 4 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-092673
Program Type:	PBS
UTM X:	589165.14954000001
UTM Y:	4511102.4818799999
Expiration Date:	2012/02/14

Affiliation Records:

Site Id:	2404
Affiliation Type:	On-Site Operator
Company Name:	45-30 COURT SQUARE
Contact Type:	Not reported
Contact Name:	SABAHETA MRKULIC
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-3959
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	2404
Affiliation Type:	Owner
Company Name:	MICHAEL GELLING
Contact Type:	MEMBER
Contact Name:	MICHAEL GELLING
Address1:	33-08 148 STREET
Address2:	Not reported
City:	FLUSHING
State:	NY

45-30 COURT SQUARE (Continued) **U003384691**

Zip Code:	11354
Country Code:	001
Phone:	(718) 358-8177
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	DXLIVING
Date Last Modified:	5/8/2007

Site Id:	2404
Affiliation Type:	Mail Contact
Company Name:	Not reported
Contact Type:	Not reported
Contact Name:	MICHAEL GELLING
Address1:	33-08 148 STREET
Address2:	Not reported
City:	FLUSHING
State:	NY
Zip Code:	11354
Country Code:	001
Phone:	(718) 358-8177
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	DXLIVING
Date Last Modified:	5/8/2007

Site Id:	2404
Affiliation Type:	Emergency Contact
Company Name:	MICHAEL GELLING
Contact Type:	Not reported
Contact Name:	THERESIA SCHATZ
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 533-3450
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
L09 - Piping Leak Detection - Exempt Suction Piping
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
D01 - Pipe Type - Steel/Carbon Steel/Iron

45-30 COURT SQUARE (Continued) **U003384691**

Tank Info:

Tank Number:	001
Tank Id:	4244
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1916
Capacity Gallons:	2000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	DXLIVING
Last Modified:	5/8/2007

HIST AST:

PBS Number:	2-092673
SWIS Code:	6301
Operator:	ALFRED HERTRICH
Facility Phone:	(718) 729-2766
Facility Addr2:	45030 COURT SQUARE
Facility Type:	APARTMENT BUILDING
Emergency:	COASTAL PETROLEUM TANK CORP
Emergency Tel:	(212) 475-4263
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	FREDERICK SCHATZ
Owner Address:	28-31 43RD STREET
Owner City,St,Zip:	LONG ISLAND CITY, NY 11103
Federal ID:	Not reported
Owner Tel:	(718) 721-7682
Owner Type:	Private Resident
Owner Subtype:	Not reported
Mailing Contact:	Not reported
Mailing Name:	FREDERICK SCHATZ
Mailing Address:	28-31 43RD STREET
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11103
Mailing Telephone:	(718) 721-7682
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	05/05/1997
Expiration:	05/07/2002
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	2000
FAMT:	True

45-30 COURT SQUARE (Continued) **U003384691**

Facility Screen:	No Missing Data
Owner Screen:	Minor Data Missing
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2
Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	2000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Tank Containment:	None
Leak Detection:	0
Overfill Protection:	4
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
SPDES Number:	Not reported
Lat/Long:	Not reported

I42 **EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED** **RCRA-CESQG** **1000279162**
WSW **45-31 COURT SQUARE** **FINDS** **NYD001287986**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **CBS AST**
0.129 mi. **MANIFEST**
682 ft. **Site 5 of 7 in cluster I** **CBS**

Relative:
Lower

Actual:
13 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	COOPER WIRING DEVICES (EAGLE ELECTRIC)
Facility address:	45-01 COURT SQ LONG ISLAND CITY, NY 11101
EPA ID:	NYD001287986
Mailing address:	COURT SQ LONG ISLAND CITY, NY 11101
Contact:	SAED ABUASI
Contact address:	COURT SQ LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 361-4821
Contact email:	Not reported
EPA Region:	02

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: COOPER INDUSTRIES
Owner/operator address: 600 TRAVIS
HOUSTON, TX 77002
Owner/operator country: US
Owner/operator telephone: (713) 209-8618
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/16/2000
Owner/Op end date: Not reported

Owner/operator name: COOPER INDUSTRIES
Owner/operator address: 600 TRAVIS
HOUSTON, TX 77002
Owner/operator country: US
Owner/operator telephone: (713) 209-8618
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/16/2000
Owner/Op end date: Not reported

Owner/operator name: COOPER INDUSTRIES
Owner/operator address: 600 TRAVIS
HOUSTON, TX 77002
Owner/operator country: Not reported
Owner/operator telephone: (713) 209-8618
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/16/2000
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Classification: Small Quantity Generator

Date form received by agency: 01/20/2005
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Classification: Large Quantity Generator

Date form received by agency: 02/05/2002
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Classification: Large Quantity Generator

Date form received by agency: 01/14/2002
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: COOPER WIRING DEVICES
Classification: Small Quantity Generator

Date form received by agency: 01/01/2001
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MFG CO
Classification: Large Quantity Generator

Date form received by agency: 10/17/2000
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: COOPER WIRING DEVICES
Classification: Large Quantity Generator

Date form received by agency: 02/18/1998
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MFG CO INC
Classification: Large Quantity Generator

Date form received by agency: 05/24/1996
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MFG INC
Classification: Large Quantity Generator

Date form received by agency: 02/18/1994
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MFG. CO. INC.
Classification: Large Quantity Generator

Date form received by agency: 03/25/1992
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MANUFACTURING
Classification: Large Quantity Generator

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Date form received by agency: 03/01/1990
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: EAGLE ELECTRIC MANUFACTURING COMPANY
Classification: Large Quantity Generator

Date form received by agency: 10/31/1985
Facility name: COOPER WIRING DEVICES (EAGLE ELECTRIC)
Site name: COOPER WIRING DEVICES
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Waste code: F007
Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS

Waste code: F008
Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Facility Has Received Notices of Violations:
Regulation violated: SR - 373-3.3b & 373-3.9d1
Area of violation: Generators - General
Date violation determined: 02/12/1999
Date achieved compliance: 10/27/1999
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/21/1999
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 32508
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: SR - 373-3.3b & 373-3.9d1
Area of violation: Generators - General
Date violation determined: 02/12/1999
Date achieved compliance: 10/27/1999
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 03/31/2000
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 18000
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 10/01/1996
Date achieved compliance: 10/22/1996

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/01/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 04/12/1994
Date achieved compliance: 07/11/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/13/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/12/1994
Date achieved compliance: 07/11/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/13/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/18/1987
Date achieved compliance: 04/14/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/02/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - Manifest
Date violation determined: 10/15/1987
Date achieved compliance: 06/08/1988
Violation lead agency: State

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/15/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 500
Paid penalty amount: 500

Evaluation Action Summary:

Evaluation date: 05/09/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/27/1999
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 02/12/1999
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/27/1999
Evaluation lead agency: EPA

Evaluation date: 09/24/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/22/1996
Evaluation lead agency: State

Evaluation date: 02/09/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 07/11/1994
Evaluation lead agency: State

Evaluation date: 02/09/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/11/1994
Evaluation lead agency: State

Evaluation date: 12/18/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/14/1988
Evaluation lead agency: State

Evaluation date: 10/15/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - Manifest
Date achieved compliance: 06/08/1988
Evaluation lead agency: State

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

FINDS:

Registry ID: 110000323169

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

CBS AST:

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

CBS Number:	2-000041
Region:	STATE
ICS Number:	2-125791
PBS Number:	Not reported
MOSF Number:	Not reported
Telephone:	(718) 937-8000
Facility Town:	NEW YORK CITY
Operator:	CHARLES FARLEY
Emrgncy Contact:	ANTHONY TORCIA
Emrgncy Phone:	(718) 937-8000
Expiration Date:	05/12/1999
Owner Name:	EAGLE ELECTRIC MFG CO. INC.
Owner Address:	45-31 COURT SQUARE
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 937-8000
Owner type:	Corporate/Commercial
Facility Type:	MANUFACTURING
Mail Name:	EAGLE ELECTRIC MFG CO. INC.
Mail Contact Addr:	45-31 COURT SQUARE
Mail Contact Addr2:	Not reported
Mail Contact Contact:	ANTHONY TORCIA
Mail Contact City,St,Zip:	LONG ISLAND CITY, NY 11101
Mail Phone:	(718) 937-8000
SPDES Number:	Not reported
Facility Status:	ACTIVE FACILITY
Owner Sub Type:	Not reported

Tank Id:	Yes
Date Entered:	05/12/1989
Capacity (Gal):	4300
Chemical:	Sodium hydroxide
Tank Closed:	07/99
Tank Status:	0
Tank Type:	Fiberglass coated steel
Install Date:	11/87
Certified Date:	02/26/1997
CAS Number:	1310732
Substance:	Single Hazardous Substance on DEC List
Tank Location:	ABOVEGROUND
Intrnl Protection:	None
Extrnl Protection:	None
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	0
Pipe Containment:	None
Tank Containment:	Diking
Leak Detection:	None
Overfill Protection:	Catch Basin
Haz Percent:	50
Total Tanks:	0
Tank Secret:	False
Last Test:	Not reported
Due Date:	Not reported
Tank Error Status:	No Missing Data
SWIS Code:	6301
Lat/Long:	Not reported

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 06/14/93
Is it There: F
Deliquent: F
Date Expired: 05/12/95
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 09/06/2001
Total Capacity of All Active Tanks(gal): 0

NY MANIFEST:
EPA ID: CDD001287986
Country: USA
Mailing Name: EAGLE MANUFACTURING CO- EXPORTER
Mailing Contact: EAGLE MANUFACTURING CO- EXPORTER
Mailing Address: 45-31 COURT SQUARE-EXPORTER
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-937-8000

Document ID: NYA6405525
Manifest Status: Completed copy
Trans1 State ID: S-2498CT
Trans2 State ID: Not reported
Generator Ship Date: 871027
Trans1 Recv Date: 871027
Trans2 Recv Date: 871027
TSD Site Recv Date: 871028
Part A Recv Date: 871104
Part B Recv Date: 871106
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 32760
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405408
Manifest Status: Completed copy
Trans1 State ID: CT1469A
Trans2 State ID: 95918CT

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Generator Ship Date: 870608
Trans1 Recv Date: 870608
Trans2 Recv Date: 870608
TSD Site Recv Date: 870609
Part A Recv Date: 870612
Part B Recv Date: 870617
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: CTD980521280
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 33760
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 87

Document ID: NYA6405741
Manifest Status: Completed copy
Trans1 State ID: CT1469A
Trans2 State ID: Not reported
Generator Ship Date: 870701
Trans1 Recv Date: 870701
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870702
Part A Recv Date: 870723
Part B Recv Date: 870715
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 36620
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405543
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: G60164CT
Trans2 State ID: Not reported
Generator Ship Date: 870924
Trans1 Recv Date: 870924
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870925
Part A Recv Date: 870929
Part B Recv Date: 871109
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 87

Document ID: NYA6405426
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: CT1469A
Trans2 State ID: Not reported
Generator Ship Date: 870804
Trans1 Recv Date: 870804
Trans2 Recv Date: 870804
TSD Site Recv Date: 870805
Part A Recv Date: 870807
Part B Recv Date: 870918
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA3525761
Manifest Status: Completed copy
Trans1 State ID: D45636
Trans2 State ID: Not reported
Generator Ship Date: 870313
Trans1 Recv Date: 870313
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870313
Part A Recv Date: 870317
Part B Recv Date: 870317
Generator EPA ID: NYD001287986
Trans1 EPA ID: NYD050592807
Trans2 EPA ID: Not reported
TSDF ID: NYD000691949
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Document ID:	NYA6405732
Manifest Status:	Completed copy
Trans1 State ID:	CT1469A
Trans2 State ID:	Not reported
Generator Ship Date:	871019
Trans1 Recv Date:	871019
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871021
Part A Recv Date:	871027
Part B Recv Date:	871029
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	37400
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405498
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	G60164
Trans2 State ID:	S-2497CT
Generator Ship Date:	871202
Trans1 Recv Date:	871203
Trans2 Recv Date:	871203
TSD Site Recv Date:	871203
Part A Recv Date:	871207
Part B Recv Date:	880209
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	00030
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA3525750
Manifest Status:	Completed copy
Trans1 State ID:	B45636
Trans2 State ID:	Not reported
Generator Ship Date:	870226
Trans1 Recv Date:	870226
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870226
Part A Recv Date:	870305

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Part B Recv Date: 870311
Generator EPA ID: NYD001287986
Trans1 EPA ID: NYD050592807
Trans2 EPA ID: Not reported
TSDF ID: NYD000691949
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405444
Manifest Status: Completed copy
Trans1 State ID: C1469A
Trans2 State ID: 52496CT
Generator Ship Date: 870722
Trans1 Recv Date: 870722
Trans2 Recv Date: 870722
TSD Site Recv Date: 870724
Part A Recv Date: 870731
Part B Recv Date: 870807
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 34240
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 87

Document ID: NYA6405534
Manifest Status: Completed copy
Trans1 State ID: G60164CT
Trans2 State ID: Not reported
Generator Ship Date: 871006
Trans1 Recv Date: 871006
Trans2 Recv Date: 871006
TSD Site Recv Date: 871007
Part A Recv Date: 871009
Part B Recv Date: 871020
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 34460
Units: P - Pounds
Number of Containers: 001

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405417
Manifest Status: Completed copy
Trans1 State ID: CT1469A
Trans2 State ID: CT95579
Generator Ship Date: 870618
Trans1 Recv Date: 870618
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870619
Part A Recv Date: 870623
Part B Recv Date: 870707
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: CTD980521280
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 31640
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405615
Manifest Status: Completed copy
Trans1 State ID: CT-3371A
Trans2 State ID: CT95579
Generator Ship Date: 880517
Trans1 Recv Date: 880517
Trans2 Recv Date: 880517
TSD Site Recv Date: 880518
Part A Recv Date: 880520
Part B Recv Date: 880524
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: CTD980521280
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 31980
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 88

Document ID: NYA6405678
Manifest Status: Completed copy
Trans1 State ID: G-60164CT

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Trans2 State ID:	S-2496
Generator Ship Date:	880315
Trans1 Recv Date:	880315
Trans2 Recv Date:	880316
TSD Site Recv Date:	880316
Part A Recv Date:	880318
Part B Recv Date:	880329
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	41120
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	88

Document ID:	NYA6405696
Manifest Status:	Completed copy
Trans1 State ID:	G60164CT
Trans2 State ID:	95579CT
Generator Ship Date:	880204
Trans1 Recv Date:	880204
Trans2 Recv Date:	880204
TSD Site Recv Date:	880205
Part A Recv Date:	880210
Part B Recv Date:	880224
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	11480
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	88

Document ID:	NYA6405858
Manifest Status:	Completed copy
Trans1 State ID:	CT3371A
Trans2 State ID:	CT52498
Generator Ship Date:	910307
Trans1 Recv Date:	910307
Trans2 Recv Date:	910307
TSD Site Recv Date:	910307
Part A Recv Date:	910315
Part B Recv Date:	910320
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD983872748

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Trans2 EPA ID: CTD983872748
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 31614
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: L Landfill.
Specific Gravity: 100
Year: 91

Document ID: NYA6405867
Manifest Status: Completed copy
Trans1 State ID: CT3371A
Trans2 State ID: CT52497
Generator Ship Date: 910430
Trans1 Recv Date: 910430
Trans2 Recv Date: 910430
TSD Site Recv Date: 910501
Part A Recv Date: 910515
Part B Recv Date: 910522
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD983872748
Trans2 EPA ID: Not reported
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 26213
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 91

Document ID: NYA3524861
Manifest Status: Completed copy
Trans1 State ID: CT-3371A
Trans2 State ID: CTV-4165
Generator Ship Date: 911119
Trans1 Recv Date: 911119
Trans2 Recv Date: 911119
TSD Site Recv Date: 911120
Part A Recv Date: Not reported
Part B Recv Date: 911210
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD983872748
Trans2 EPA ID: CTD983872748
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 30684
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: L Landfill.
Specific Gravity: 100

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Year: 91

Document ID: NYB5110218
Manifest Status: Completed copy
Trans1 State ID: CT84552
Trans2 State ID: CT52908
Generator Ship Date: 940106
Trans1 Recv Date: 940106
Trans2 Recv Date: 940109
TSD Site Recv Date: 940110
Part A Recv Date: 940118
Part B Recv Date: 940127
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD983872748
Trans2 EPA ID: CTD983872748
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 29343
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: L Landfill.
Specific Gravity: 100
Year: 94

Document ID: NYB5110335
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: Not reported
Trans2 State ID: Not reported
Generator Ship Date: 970814
Trans1 Recv Date: 970814
Trans2 Recv Date: Not reported
TSD Site Recv Date: 970814
Part A Recv Date: 970829
Part B Recv Date: 970912
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD983872748
Trans2 EPA ID: Not reported
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 23770
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 97

Click this hyperlink while viewing on your computer to access
108 additional NY_MANIFEST: record(s) in the EDR Site Report.

EPA ID: NYD001287986
Country: USA
Mailing Name: EAGLE ELECTRIC MANUFACTURING CO
Mailing Contact: EAGLE ELECTRIC MANUFACTURING CO

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Mailing Address:	45-31 COURT SQUARE
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-937-8000

Document ID:	NYA6405525
Manifest Status:	Completed copy
Trans1 State ID:	S-2498CT
Trans2 State ID:	Not reported
Generator Ship Date:	871027
Trans1 Recv Date:	871027
Trans2 Recv Date:	871027
TSD Site Recv Date:	871028
Part A Recv Date:	871104
Part B Recv Date:	871106
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	32760
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405408
Manifest Status:	Completed copy
Trans1 State ID:	CT1469A
Trans2 State ID:	95918CT
Generator Ship Date:	870608
Trans1 Recv Date:	870608
Trans2 Recv Date:	870608
TSD Site Recv Date:	870609
Part A Recv Date:	870612
Part B Recv Date:	870617
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	33760
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Document ID:	NYA6405741
Manifest Status:	Completed copy
Trans1 State ID:	CT1469A
Trans2 State ID:	Not reported
Generator Ship Date:	870701
Trans1 Recv Date:	870701
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870702
Part A Recv Date:	870723
Part B Recv Date:	870715
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	36620
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405543
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	G60164CT
Trans2 State ID:	Not reported
Generator Ship Date:	870924
Trans1 Recv Date:	870924
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870925
Part A Recv Date:	870929
Part B Recv Date:	871109
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	00030
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405426
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	CT1469A
Trans2 State ID:	Not reported
Generator Ship Date:	870804
Trans1 Recv Date:	870804
Trans2 Recv Date:	870804
TSD Site Recv Date:	870805
Part A Recv Date:	870807

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Part B Recv Date: 870918
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA3525761
Manifest Status: Completed copy
Trans1 State ID: D45636
Trans2 State ID: Not reported
Generator Ship Date: 870313
Trans1 Recv Date: 870313
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870313
Part A Recv Date: 870317
Part B Recv Date: 870317
Generator EPA ID: NYD001287986
Trans1 EPA ID: NYD050592807
Trans2 EPA ID: Not reported
TSDF ID: NYD000691949
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405732
Manifest Status: Completed copy
Trans1 State ID: CT1469A
Trans2 State ID: Not reported
Generator Ship Date: 871019
Trans1 Recv Date: 871019
Trans2 Recv Date: Not reported
TSD Site Recv Date: 871021
Part A Recv Date: 871027
Part B Recv Date: 871029
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: Not reported
TSDF ID: CDD001287986
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 37400
Units: P - Pounds
Number of Containers: 001

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405498
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: G60164
Trans2 State ID: S-2497CT
Generator Ship Date: 871202
Trans1 Recv Date: 871203
Trans2 Recv Date: 871203
TSD Site Recv Date: 871203
Part A Recv Date: 871207
Part B Recv Date: 880209
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: CTD980521280
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA3525750
Manifest Status: Completed copy
Trans1 State ID: B45636
Trans2 State ID: Not reported
Generator Ship Date: 870226
Trans1 Recv Date: 870226
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870226
Part A Recv Date: 870305
Part B Recv Date: 870311
Generator EPA ID: NYD001287986
Trans1 EPA ID: NYD050592807
Trans2 EPA ID: Not reported
TSDF ID: NYD000691949
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 87

Document ID: NYA6405444
Manifest Status: Completed copy
Trans1 State ID: C1469A

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Trans2 State ID:	52496CT
Generator Ship Date:	870722
Trans1 Recv Date:	870722
Trans2 Recv Date:	870722
TSD Site Recv Date:	870724
Part A Recv Date:	870731
Part B Recv Date:	870807
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	34240
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405534
Manifest Status:	Completed copy
Trans1 State ID:	G60164CT
Trans2 State ID:	Not reported
Generator Ship Date:	871006
Trans1 Recv Date:	871006
Trans2 Recv Date:	871006
TSD Site Recv Date:	871007
Part A Recv Date:	871009
Part B Recv Date:	871020
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	Not reported
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	34460
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405417
Manifest Status:	Completed copy
Trans1 State ID:	CT1469A
Trans2 State ID:	CT95579
Generator Ship Date:	870618
Trans1 Recv Date:	870618
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870619
Part A Recv Date:	870623
Part B Recv Date:	870707
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD001287986
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	31640
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	87

Document ID:	NYA6405615
Manifest Status:	Completed copy
Trans1 State ID:	CT-3371A
Trans2 State ID:	CT95579
Generator Ship Date:	880517
Trans1 Recv Date:	880517
Trans2 Recv Date:	880517
TSD Site Recv Date:	880518
Part A Recv Date:	880520
Part B Recv Date:	880524
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	31980
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	88

Document ID:	NYA6405678
Manifest Status:	Completed copy
Trans1 State ID:	G-60164CT
Trans2 State ID:	S-2496
Generator Ship Date:	880315
Trans1 Recv Date:	880315
Trans2 Recv Date:	880316
TSD Site Recv Date:	880316
Part A Recv Date:	880318
Part B Recv Date:	880329
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD980521280
Trans2 EPA ID:	CTD980521280
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	41120
Units:	P - Pounds
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Year: 88

Document ID: NYA6405696
Manifest Status: Completed copy
Trans1 State ID: G60164CT
Trans2 State ID: 95579CT
Generator Ship Date: 880204
Trans1 Recv Date: 880204
Trans2 Recv Date: 880204
TSD Site Recv Date: 880205
Part A Recv Date: 880210
Part B Recv Date: 880224
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD980521280
Trans2 EPA ID: CTD980521280
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 11480
Units: P - Pounds
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: L Landfill.
Specific Gravity: 100
Year: 88

Document ID: NYA6405858
Manifest Status: Completed copy
Trans1 State ID: CT3371A
Trans2 State ID: CT52498
Generator Ship Date: 910307
Trans1 Recv Date: 910307
Trans2 Recv Date: 910307
TSD Site Recv Date: 910307
Part A Recv Date: 910315
Part B Recv Date: 910320
Generator EPA ID: NYD001287986
Trans1 EPA ID: CTD983872748
Trans2 EPA ID: CTD983872748
TSDF ID: CDD980756415
Waste Code: F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity: 31614
Units: P - Pounds
Number of Containers: 001
Container Type: CM - Metal boxes, cases, roll-offs
Handling Method: L Landfill.
Specific Gravity: 100
Year: 91

Document ID: NYA6405867
Manifest Status: Completed copy
Trans1 State ID: CT3371A
Trans2 State ID: CT52497
Generator Ship Date: 910430
Trans1 Recv Date: 910430

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Trans2 Recv Date:	910430
TSD Site Recv Date:	910501
Part A Recv Date:	910515
Part B Recv Date:	910522
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD983872748
Trans2 EPA ID:	Not reported
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	26213
Units:	P - Pounds
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	91

Document ID:	NYA3524861
Manifest Status:	Completed copy
Trans1 State ID:	CT-3371A
Trans2 State ID:	CTV-4165
Generator Ship Date:	911119
Trans1 Recv Date:	911119
Trans2 Recv Date:	911119
TSD Site Recv Date:	911120
Part A Recv Date:	Not reported
Part B Recv Date:	911210
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD983872748
Trans2 EPA ID:	CTD983872748
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	30684
Units:	P - Pounds
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	91

Document ID:	NYB5110218
Manifest Status:	Completed copy
Trans1 State ID:	CT84552
Trans2 State ID:	CT52908
Generator Ship Date:	940106
Trans1 Recv Date:	940106
Trans2 Recv Date:	940109
TSD Site Recv Date:	940110
Part A Recv Date:	940118
Part B Recv Date:	940127
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD983872748
Trans2 EPA ID:	CTD983872748
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER

EAGLE ELECTRIC MANUFACTURING COMPANY INCORPORATED (Continued) **1000279162**

Quantity:	29343
Units:	P - Pounds
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	94

Document ID:	NYB5110335
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	970814
Trans1 Recv Date:	970814
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	970814
Part A Recv Date:	970829
Part B Recv Date:	970912
Generator EPA ID:	NYD001287986
Trans1 EPA ID:	CTD983872748
Trans2 EPA ID:	Not reported
TSDF ID:	CDD980756415
Waste Code:	F006 - WW TREAT SL FM ELECTROPLATING OPER
Quantity:	23770
Units:	P - Pounds
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	97

Click this hyperlink while viewing on your computer to access
108 additional NY_MANIFEST: record(s) in the EDR Site Report.

CBS:

CBS Number:	2-000041
Program Type:	CBS
Dec Region:	2
Expiration Date:	N/A
Facility Status:	Unregulated
UTMX:	589216.38766999
UTMY:	4511035.8664899

I43 **COURT SQUARE** **RCRA-NonGen** **1000694118**
WSW **45-18 COURT SQ** **FINDS** **NYD987003910**
1/8-1/4 **LONG ISLAND CITY, NY 11001** **MANIFEST**
0.129 mi.
682 ft. **Site 6 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	COURT SQUARE
Facility address:	45-18 COURT SQ LONG ISLAND CITY, NY 11001
EPA ID:	NYD987003910
Mailing address:	E 56TH ST

COURT SQUARE (Continued) **1000694118**

NEW YORK, NY 10022
Contact: Not reported
Contact address: E 56TH ST
NEW YORK, NY 10022
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: UNKNOWN
Owner/operator address: NOT REQUIRED
NOT REQUIRED, NY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: UNKNOWN
Owner/operator address: NOT REQUIRED
NOT REQUIRED, NY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: COURT SQUARE
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: COURT SQUARE

COURT SQUARE (Continued) **1000694118**

Classification: Not a generator, verified

Date form received by agency: 05/12/1992
Facility name: COURT SQUARE
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110008075830

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD987003910
Country: USA
Mailing Name: COURT SQUARE
Mailing Contact: WILLIAM R KLEIN
Mailing Address: 60 EAST 56 STREET
Mailing Address 2: Not reported
Mailing City: NEW YORK
Mailing State: NY
Mailing Zip: 10022
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-751-4620

Document ID: NYB5586084
Manifest Status: Completed copy
Trans1 State ID: HL4120
Trans2 State ID: Not reported
Generator Ship Date: 920623
Trans1 Recv Date: 920623
Trans2 Recv Date: Not reported
TSD Site Recv Date: 920623
Part A Recv Date: 920716
Part B Recv Date: 920702
Generator EPA ID: NYD987003910
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00020
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 100

COURT SQUARE (Continued) **1000694118**

Year: 92

I44 **EAGLES ELECTRIC MFG CO. INC.** **MANIFEST** **S109781989**
WSW **45-31 COURT SQ.** **N/A**
1/8-1/4 **LONG ISLAND, NY 11101**
0.129 mi.
682 ft. **Site 7 of 7 in cluster I**

Relative:
Lower

Actual:
13 ft.

CT MANIFEST:

Waste:

Manifest No:	CTF0905130
Waste Occurence:	1
UNNA:	3077
Hazard Class:	9
US Dot Description:	ENVIRONMENTALLY HAZ. SUBSTANCES,SOLID
No of Containers:	001
Container Type:	CM
Quantity:	18257
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	4/27/2004
DEO Who Last Modified Record:	IG

Waste CD:

Manifest No:	CTF0905130
Waste Occurence:	1
EPA Waste Code:	F006
Recycled Waste?:	F
Date Record Was Last Modified:	4/27/2004
DEO Who Last Modified Record:	IG

Detail:

Year:	2000
Manifest ID:	CTF0905130
TSDF EPA ID:	CND000000002
TSDF Name:	STABLEX CANADA INC.
TSDF Address:	760 INDUSTRIAL BLVD.
TSDF City,St,Zip:	BLAINVILLE, CA 00000
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	2/15/2000
Transporter EPA ID:	CTD021816889
Transporter Name:	UNITED OIL RECOVERY INC./UIS DBA ADVANCED LIQ. REC
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
EPA ID:	NYD001126796
Generator Phone:	7819379000
Generator Mailing Addr:	45-31 COURT SQ. LONG ISLAND

EAGLES ELECTRIC MFG CO. INC. (Continued) **S109781989**

Generator Mailing Town:	Not reported
Generator Mailing State:	NY
Generator Mailing Zip:	11101
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Yes
Date Shipped:	2/15/2000
Date Received:	2/16/2000
Last modified date:	4/27/2004
Last modified by:	IG
Comments:	Not reported

G45 **MTA NYCT - VENT PLANT 5103** **MANIFEST** **S110306083**
NNW **HUNTER ST & 43RD AVE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.129 mi.
683 ft. **Site 4 of 5 in cluster G**

Relative:
Lower

Actual:
12 ft.

NY MANIFEST:

EPA ID:	NYR000171173
Country:	USA
Mailing Name:	MTA NYCT - VENT PLANT 5103
Mailing Contact:	MTA NYCT - VENT PLANT 5103
Mailing Address:	2 BROADWAY ROOM A27.64
Mailing Address 2:	Not reported
Mailing City:	NEW YORK
Mailing State:	NY
Mailing Zip:	10004
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	646-252-5777

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-04-01
Trans1 Recv Date:	2010-04-01
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-04-01
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	120.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000959575GBF
Import Ind:	N

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-04-01
Trans1 Recv Date:	2010-04-01
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-04-01
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	400.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000959575GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-04-01
Trans1 Recv Date:	2010-04-01
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-04-01
Part A Recv Date:	Not reported

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	400.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000959575GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-04-01
Trans1 Recv Date:	2010-04-01
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-04-01
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	120.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000959575GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-05-06
Trans1 Recv Date:	2010-05-06
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-05-06
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	120.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001055884GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-05-06
Trans1 Recv Date:	2010-05-06
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-05-06
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Quantity:	120.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001055884GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-05-06
Trans1 Recv Date:	2010-05-06
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-05-06
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	120.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001055884GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-10-07
Trans1 Recv Date:	2010-10-07
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-10-07
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	217.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	006877405JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2011-02-15
Trans1 Recv Date:	2011-02-15
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2011-02-15
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Year:	2011
Manifest Tracking Num:	001056812GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2011-02-15
Trans1 Recv Date:	2011-02-15
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2011-02-15
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2011
Manifest Tracking Num:	001056812GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2011-06-24
Trans1 Recv Date:	2011-06-24

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2011-06-24
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	60.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2011
Manifest Tracking Num:	003534930JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2011-06-24
Trans1 Recv Date:	2011-06-24
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2011-06-24
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000171173
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	40.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2011
Manifest Tracking Num:	003534930JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N

MTA NYCT - VENT PLANT 5103 (Continued) **S110306083**

Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

G46 **MTA NYCT - VENT PLANT 5103** **RCRA-SQG** **1012211710**
NNW **HUNTER ST & 43RD AVE** **NYR000171173**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.129 mi.
683 ft. **Site 5 of 5 in cluster G**

Relative:
Lower

Actual:
12 ft.

RCRA-SQG:

Date form received by agency:	12/29/2009
Facility name:	MTA NYCT - VENT PLANT 5103
Facility address:	HUNTER ST & 43RD AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000171173
Mailing address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Contact:	GERALD LEZEAU
Contact address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Contact country:	US
Contact telephone:	(646) 252-3535
Contact email:	GERALD.LEZEAU@NYCT.COM
EPA Region:	02
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MTA NYCT
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	03/01/1968
Owner/Op end date:	Not reported

Owner/operator name:	MTA NYCT
Owner/operator address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	03/01/1968
Owner/Op end date:	Not reported

MTA NYCT - VENT PLANT 5103 (Continued) **1012211710**

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Hazardous Waste Summary:
- Waste code: D008
- Waste name: LEAD

Violation Status: No violations found

J47 **CITICORP AT COURT SQUARE** **UST** **U004062303**
West **25-01 JACKSON AVENUE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.130 mi.
689 ft. **Site 1 of 5 in cluster J**

Relative:
Lower

Actual:
15 ft.

UST:
- Facility Id: 2-455040
- Region: STATE
- DEC Region: 2
- Site Status: Active
- Program Type: PBS
- Expiration Date: 2014/02/15
- UTM X: 589180.09545999998
- UTM Y: 4511172.6065400001

Affiliation Records:
- Site Id: 19999
- Affiliation Type: Emergency Contact
- Company Name: CITIBANK, N.A.
- Contact Type: Not reported
- Contact Name: KEITH OWEN
- Address1: Not reported
- Address2: Not reported
- City: Not reported
- State: NN
- Zip Code: Not reported
- Country Code: 999
- Phone: (516) 785-5955
- Phone Ext: Not reported
- Email: Not reported
- Fax Number: Not reported
- Modified By: exrossan
- Date Last Modified: 3/17/2004

CITICORP AT COURT SQUARE (Continued) **U004062303**

Site Id:	19999
Affiliation Type:	Owner
Company Name:	CITIBANK, N.A.
Contact Type:	CHIEF ENGINEER
Contact Name:	FRED VARONE
Address1:	25-01 JACKSON AVENUE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 248-1937
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	cgfreedm
Date Last Modified:	4/13/2004

Site Id:	19999
Affiliation Type:	Mail Contact
Company Name:	CUSHMAN & WAKEFIELD
Contact Type:	Not reported
Contact Name:	FRED VARONE
Address1:	25-01 JACKSON AVENUE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 248-0715
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	cgfreedm
Date Last Modified:	4/13/2004

Site Id:	19999
Affiliation Type:	On-Site Operator
Company Name:	CITICORP AT COURT SQUARE
Contact Type:	Not reported
Contact Name:	CUSHMAN AND WAKEFIELD
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 248-1937
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	cgfreedm
Date Last Modified:	4/13/2004

Equipment Records:

C02 - Pipe Location - Underground/On-ground
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring

CITICORP AT COURT SQUARE (Continued) **U004062303**

I02 - Overfill - High Level Alarm
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction
G04 - Tank Secondary Containment - Double-Walled (Underground)
K01 - Spill Prevention - Catch Basin
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
B04 - Tank External Protection - Fiberglass
E00 - Piping Secondary Containment - None
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
C01 - Pipe Location - Aboveground
L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping
G04 - Tank Secondary Containment - Double-Walled (Underground)
E00 - Piping Secondary Containment - None
I02 - Overfill - High Level Alarm
J02 - Dispenser - Suction
F04 - Pipe External Protection - Fiberglass
C02 - Pipe Location - Underground/On-ground
F06 - Pipe External Protection - Wrapped
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
F02 - Pipe External Protection - Original Sacrificial Anode
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
E00 - Piping Secondary Containment - None
F04 - Pipe External Protection - Fiberglass
E00 - Piping Secondary Containment - None
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A01 - Tank Internal Protection - Epoxy Liner
C02 - Pipe Location - Underground/On-ground
B04 - Tank External Protection - Fiberglass
I02 - Overfill - High Level Alarm
I02 - Overfill - High Level Alarm
B01 - Tank External Protection - Painted/Asphalt Coating
H05 - Tank Leak Detection - In-Tank System (ATG)
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
G01 - Tank Secondary Containment - Diking (Aboveground)
J02 - Dispenser - Suction
L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping

Tank Info:

Site ID:	19999
Tank Number:	01
Tank ID:	36937
Tank Status:	In Service
Tank Model:	104
Pipe Model:	C
Install Date:	6/1/1988
Capacity Gallons:	6000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported

CITICORP AT COURT SQUARE (Continued) **U004062303**

Tank Location:	5
Tank Type:	Equivalent technology
Date Test:	4/19/2003
Register:	True
Modified By:	cgfreedm
Last Modified:	4/13/2004
Site ID:	19999
Tank Number:	02
Tank ID:	178524
Tank Status:	In Service
Tank Model:	104
Pipe Model:	C
Install Date:	6/1/1988
Capacity Gallons:	6000
Tightness Test Method:	00
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Equivalent technology
Date Test:	4/19/2003
Register:	True
Modified By:	cgfreedm
Last Modified:	4/13/2004
Site ID:	19999
Tank Number:	03
Tank ID:	178525
Tank Status:	In Service
Tank Model:	104
Pipe Model:	C
Install Date:	6/1/1988
Capacity Gallons:	6000
Tightness Test Method:	00
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Equivalent technology
Date Test:	4/19/2003
Register:	True
Modified By:	cgfreedm
Last Modified:	4/13/2004

J48 **CITICORP AT COURT SQUARE** **AST** **A100293558**
West **25-01 JACKSON AVENUE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.130 mi.
689 ft. **Site 2 of 5 in cluster J**

Relative:
Lower

Actual:
15 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-455040
Program Type:	PBS
UTM X:	589180.09545999998

CITICORP AT COURT SQUARE (Continued) **A100293558**

UTM Y: 4511172.6065400001
Expiration Date: 2014/02/15

Affiliation Records:

Site Id: 19999
Affiliation Type: Emergency Contact
Company Name: CITIBANK, N.A.
Contact Type: Not reported
Contact Name: KEITH OWEN
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (516) 785-5955
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: exrossan
Date Last Modified: 3/17/2004

Site Id: 19999
Affiliation Type: Owner
Company Name: CITIBANK, N.A.
Contact Type: CHIEF ENGINEER
Contact Name: FRED VARONE
Address1: 25-01 JACKSON AVENUE
Address2: Not reported
City: LONG ISLAND CITY
State: NY
Zip Code: 11101
Country Code: 001
Phone: (718) 248-1937
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: cgfreedm
Date Last Modified: 4/13/2004

Site Id: 19999
Affiliation Type: Mail Contact
Company Name: CUSHMAN & WAKEFIELD
Contact Type: Not reported
Contact Name: FRED VARONE
Address1: 25-01 JACKSON AVENUE
Address2: Not reported
City: LONG ISLAND CITY
State: NY
Zip Code: 11101
Country Code: 001
Phone: (718) 248-0715
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: cgfreedm
Date Last Modified: 4/13/2004

CITICORP AT COURT SQUARE (Continued) **A100293558**

Site Id:	19999
Affiliation Type:	On-Site Operator
Company Name:	CITICORP AT COURT SQUARE
Contact Type:	Not reported
Contact Name:	CUSHMAN AND WAKEFIELD
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 248-1937
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	cgfreedm
Date Last Modified:	4/13/2004

Equipment Records:

C02 - Pipe Location - Underground/On-ground
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I02 - Overfill - High Level Alarm
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction
G04 - Tank Secondary Containment - Double-Walled (Underground)
K01 - Spill Prevention - Catch Basin
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
B04 - Tank External Protection - Fiberglass
E00 - Piping Secondary Containment - None
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
G04 - Tank Secondary Containment - Double-Walled (Underground)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
C01 - Pipe Location - Aboveground
L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping
G04 - Tank Secondary Containment - Double-Walled (Underground)
E00 - Piping Secondary Containment - None
I02 - Overfill - High Level Alarm
J02 - Dispenser - Suction
F04 - Pipe External Protection - Fiberglass
C02 - Pipe Location - Underground/On-ground
F06 - Pipe External Protection - Wrapped
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
F02 - Pipe External Protection - Original Sacrificial Anode
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
E00 - Piping Secondary Containment - None
F04 - Pipe External Protection - Fiberglass
E00 - Piping Secondary Containment - None
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A01 - Tank Internal Protection - Epoxy Liner
C02 - Pipe Location - Underground/On-ground
B04 - Tank External Protection - Fiberglass
I02 - Overfill - High Level Alarm
I02 - Overfill - High Level Alarm

CITICORP AT COURT SQUARE (Continued) **A100293558**

B01 - Tank External Protection - Painted/Asphalt Coating
H05 - Tank Leak Detection - In-Tank System (ATG)
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
G01 - Tank Secondary Containment - Diking (Aboveground)
J02 - Dispenser - Suction
L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping

Tank Info:

Tank Number:	04
Tank Id:	178526
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	201
Pipe Model:	Not reported
Install Date:	6/1/1988
Capacity Gallons:	275
Tightness Test Method:	00
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	cgfreedm
Last Modified:	4/13/2004

J49 **CITICORP AT COURT SQUARE** **HIST UST** **U001840376**
West **25-01 JACKSON AVENUE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.130 mi.
689 ft. **Site 3 of 5 in cluster J**

Relative:
Lower

Actual:
15 ft.

HIST UST:

PBS Number:	2-455040
SPDES Number:	Not reported
Emergency Contact:	KEITH OWEN
Emergency Telephone:	(516) 785-5955
Operator:	CUSHMAN AND WAKEFIELD
Operator Telephone:	(718) 248-2000
Owner Name:	CITIBANK, N.A.
Owner Address:	25-01 JACKSON AVENUE
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 248-2000
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	CITIBANK N.A.
Mailing Address:	C/O CUSHMAN & WAKEFIELD
Mailing Address 2:	25-01 JACKSON AVENUE
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	KEITH OWEN
Mailing Telephone:	(718) 248-2000
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	25001 JACKSON AVENUE

CITICORP AT COURT SQUARE (Continued) **U001840376**

SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	OTHER
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	12/15/1999
Expiration Date:	02/15/2004
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	18000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	19880601
Capacity (gals):	18000
Product Stored:	DIESEL
Tank Type:	Fiberglass reinforced plastic [FRP]
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Wrapped (Piping)
Second Containment:	Vault (w/access)
Leak Detection:	Not reported
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	06/01/2003
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

E50 **5 COURT SQUARE** **AST** **U003397123**
WSW **5 COURT SQUARE** **HIST AST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.132 mi.
696 ft. **Site 2 of 3 in cluster E**

Relative:
Lower

Actual:
14 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-603367
Program Type:	PBS
UTM X:	589183.38974999997
UTM Y:	4511109.3627899997
Expiration Date:	2013/03/09

Affiliation Records:

Site Id:	25285
Affiliation Type:	Emergency Contact
Company Name:	COURT SQUARE LLC
Contact Type:	Not reported
Contact Name:	VASILE DUMNICI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(347) 273-4382
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	dxliving
Date Last Modified:	1/29/2008

Site Id:	25285
Affiliation Type:	On-Site Operator
Company Name:	COURT SQUARE LLC
Contact Type:	Not reported
Contact Name:	VASILE DUMNICI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(347) 273-4382
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	dxliving
Date Last Modified:	1/29/2008

Site Id:	25285
Affiliation Type:	Owner
Company Name:	COURT SQUARE LLC
Contact Type:	MANAGER
Contact Name:	BENNY SOKOL
Address1:	152 W 57 STREET
Address2:	Not reported

5 COURT SQUARE (Continued) **U003397123**

City:	NEW YORK
State:	NY
Zip Code:	10019
Country Code:	001
Phone:	(212) 315-3390
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	dxliving
Date Last Modified:	1/29/2008

Site Id:	25285
Affiliation Type:	Mail Contact
Company Name:	FISHER ASSOCIATES
Contact Type:	Not reported
Contact Name:	BENNY SOKOL
Address1:	152 WEST 57TH STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10019
Country Code:	001
Phone:	(212) 315-3390
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	dxliving
Date Last Modified:	1/29/2008

Equipment Records:

F01 - Pipe External Protection - Painted/Asphalt Coating
C03 - Pipe Location - Aboveground/Underground Combination
H00 - Tank Leak Detection - None
A01 - Tank Internal Protection - Epoxy Liner
G00 - Tank Secondary Containment - None
I00 - Overfill - None
D02 - Pipe Type - Galvanized Steel
B01 - Tank External Protection - Painted/Asphalt Coating

Tank Info:

Tank Number:	001
Tank Id:	54019
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	5/24/1954
Capacity Gallons:	2020
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	dxliving
Last Modified:	1/29/2008

5 COURT SQUARE (Continued) **U003397123**

HIST AST:

PBS Number:	2-603367
SWIS Code:	6301
Operator:	LARRY GANGAWAY
Facility Phone:	(718) 784-9303
Facility Addr2:	Not reported
Facility Type:	Not reported
Emergency:	LARRY GANGAWAY
Emergency Tel:	(718) 781-9303
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	COURT SQUARE ASSOCIATES
Owner Address:	1775 BROADWAY
Owner City,St,Zip:	NEW YORK, NY 10019
Federal ID:	Not reported
Owner Tel:	(212) 315-3390
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	JACK BERKOVICH
Mailing Name:	FISHER ASSOCIATES
Mailing Address:	1775 BROADWAY, SUITE 515
Mailing Address 2:	Not reported
Mailing City,St,Zip:	NEW YORK, NY 10019
Mailing Telephone:	(212) 315-3390
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	03/11/1998
Expiration:	03/09/2003
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	2000
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	No Missing Data
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2
Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	2000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	1
Tank External:	1
Pipe Location:	Aboveground/Underground Combination

5 COURT SQUARE (Continued) **U003397123**

Pipe Type:	GALVANIZED STEEL
Pipe Internal:	None
Pipe External:	1
Tank Containment:	None
Leak Detection:	00
Overfill Protection:	00
Dispenser Method:	Gravity
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

E51 **COURT PLAZA** **LTANKS** **S110309405**
WSW **5 COURT SQUARE** **N/A**
1/8-1/4 **LONGISLAND CITY, NY**
0.132 mi.
696 ft. **Site 3 of 3 in cluster E**

Relative:
Lower

Actual:
14 ft.

LTANKS:

Site ID:	431696
Spill No:	1000528
Spill Date:	4/13/2010
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	Not reported
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	JMOCONNE
Referred To:	Not reported
Reported to Dept:	4/13/2010
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	1
Date Entered In Computer:	4/13/2010
Spill Record Last Update:	1/14/2011
Spiller Name:	Not reported
Spiller Company:	FISHER
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller County:	999
Spiller Contact:	RENE LEWIS
Spiller Phone:	(917) 299-9302
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	380682

COURT PLAZA (Continued) **S110309405**

DEC Memo: 04/13/10-Hiralkumar Patel. as oil was found on water in subway tunnel underneath the subject building, asked building manager to do tank test on a 2,000 gal #2 oil tank. 2:00 PM:- visited site. met Mr. Sokol, property manager. Eastmond did fill line test and it failed. asked Mr. Sokol, to seal fill port to prevent further release. fill port at the site is about 15 ft away from the area where oil found seeping into subway tunnel. asked Mr. Sokol to do tank only test also to confirm no leak from tank. Court Square LLC. **property owner** c/o Fisher Associates **management office** Carnegie Hall Tower 152 West 57th Street, 12th Floor New York, NY 10019 Attn.: Benny Sokol **property manager** Ph. (212) 315-3390 Ext. 214 (O) (347) 273-0998 (C) Fax (212) 937-8814 email: bsokol@fisherassoc.net 04/15/10-Hiralkumar Patel. received email from Mr. Sokol (at 6:53 PM on 04/13/10) with their insurance company info. Hub International **insurance broker** contact: Cynthia Chin PH. (212) 338-2858 10:09 AM:- spoke with Mr. Sokol. Eastmond is at the site to do tank only test and then will expose the fill line. asked Mr. Sokol to wait for excavation along fill line as may need approval from MTA. 10:14 AM:- spoke with Haroon in System Safety at MTA. Haroon mentioned that contractor doesn't need any approval from MTA for sidewalk breaking or fill line repair. asked Haroon to send someone to the site to guide contractor if deeper excavation is required (due to proximity to the subway structure). Haroon Aslam **spill case manager in MTA** PH. (646) 252-3607 (646) 252-5777 email: haroon.aslam@nyct.com 10:18 AM:- spoke with Mr. Sokol. asked him to finish tank only test first and expose fill line. informed Mr. Sokol that no deeper excavation should be performed until MTA approves the work. 11:45 AM:- visited site. met Mr. Sokol and Haroon. eastmond crew was working to test tank. spoke with Rene at Eastmond. they have applied for DOT permit and expect to start work on 04/19/10. inspected track area with Mr. Sokol and Haroon. area was in same condition with little more oil than previous site visit. some odors at the end of platform in leak area. Haroon asked to contact Rajen Udeshi at MTA about approval for excavation near subway structure. 04/16/10-Hiralkumar Patel. 9:38 AM:- sent email to Mr. Sokol with Mr. Udeshi's contact info. Rajen Udeshi Capital Program Management 2 Broadway, 7th Floor New York, NY 10004 Ph. (646) 252-3673 email: rajen.udeshi@nyct.com 04/16/10-Hiralkumar Patel. 11:01 AM:- received email from Mr. Sokol. after installing new fill and vent line and repairing manhole on tank, Eastmond tested tank system and it passed the test. Mr. Sokol will submit test result, once available. 04/19/10-Hiralkumar Patel. 11:55 AM:- spoke with Jen at MTA. they haven't got fingerprint sample results back yet. 12:47 PM:- received email from Mr. Sokol. they spoke with MTA who approved to excavated up to four feet without any engineer report. so Eastmond will expose old fill line tomorrow. Mr. Sokol also mentioned that their insurance company has hired Tetra Tech. 2:51 PM:- received message from Sandra from Tetra Tech. Sandra Gaurin Tetra Tech EM Inc. Ph. (973) 384-9799 (O) (973) 659-9996 Ext. 245 (201) 572-0835 (C) Fax (973) 659-1287 email: sandra.gaurin@tetratech.com 3:20 PM:- left message for Ms. Gaurin. 04/20/10-Hiralkumar Patel. 2:15 PM:- visited site. met Ms. Gaurin, Mr. Sokol and Rene. Eastmond crew exposed old fill line. when contractor tried to pull out fill line from ground, fill line separated in two pieces from coupling. no broken threads observed on pipe and looks like fill line was not properly installed. found that piece of fill line towards building was anchored in ground at coupling joint. piece of fill line towards building was corroded but

COURT PLAZA (Continued) **S110309405**

no holes found. corrosion holes found in piece of fill line towards sidewalk. fresh oil found under fill line. asked Ms. Gaurin to get DOT and MTA permits before further work. Eastmond will cover excavation with plastic and then backfill with clean sand as need permit for further work. Eastmond collected two soil samples (from same area) for fingerprint and age analysis. inspected subwary track area with Ms. Gaurin. found oil on tracks. asked Ms. Gaurin to submit claim number and insurance claim handler's information. asked Mr. Sokol to submit tank test result. 04/23/10-Hiralkumar Patel. received email from Ms. Gaurin (at 5:24 PM on 04/21/10) with contact info for project manager at insurance company. Ms. Gaurin is preparing work plan for further work and asked whether groundwater sample from temporary geoprobe is sufficient for initial groundwater quality check or permanent well is required. Dawn Krigstin Ironshore Environmental **insurance carrier** Ph. (646) 826-6785 email: Dawn.Krigstin@Ironshore.com spoke with Ms. Gaurin and informed her that permanent well is not required right now, but will be required if finds groundwater contamination in groundwater sample via temporary geoprobe. 04/23/10-Hiralkumar Patel. received email from Mr. Sokol (at 7:51 PM on 04/22/10) with tank test result. 12:34 PM:- received email from Jen from MTA including result of fingerpint analysis. sample collected from subway track area was found #2 oil. 04/26/10-Hiralkumar Patel. 10:18 AM:- received call from Mr. Daniels, environmental person at Chartis insurance which is second insurance company for the site. Mr. Daniels mentioned that both insurance companies are involved in project. asked Mr. Daniels to submit insurance claim project manager's info and clear information about who is going to handle entire cleanup project. Larry Daniels Chartis Insurance AIG Ph. (201) 631-7233 (O) (917) 783-6035 (C) Fax (201) 631-5053 email: larry.daniels@chartisinsurance.com 11:03 AM:- received email from Tanya Crawford, analyst working on insurance claim at Chartis. Tanya Crawford **analyst** Chartis 101 Hudson Street - 29th Floor Jersey City, NJ 07302 Ph. (201) 631-7158 Fax (866) 467-3498 email: tanya.crawford@chartisinsurance.com Chartis Claim Number: 182-111535 1:11 PM:- received email from Mr. Sokol with copy of delivery record from 01/07/08 to 04/01/10. 3:43 PM:- received email from Mr. Sokol with sample results. fingerprint analysis indicates #2 oil and found heavy VOC contamination in soil sample. 04/27/10-Hiralkumar Patel. 4:01 PM:- after discussion with DEC Austin, as fingerprint analysis results match (#2 oil) and proximity of the subject site to the impacted subway area, spill #: 1000435 will be closed and investigated under spill #: 1000528. 3:03 PM:- received email from Mr. Daniels and Ms. Gaurin requesting copy of MTA's fingerprint analysis result. 04/28/10-Hiralkumar Patel. 11:05 AM:- sent email to Mr. Daniels and Ms. Gaurin with copy of MTA's fingerprint analysis result. 11:08 AM:- sent letter to Mr. Sokol requiring soil delineation along remote fill line, endpoint samples and at least one groundwater sample near source area. letter emailed to Mr. Sokol, Ms. Aslam, Mr. Udeshi, Ms. Gaurin, Mr. Krigstin, Mr. Daniels and Ms. Crawford. 05/21/10-Hiralkumar Patel. 1:29 PM:- left message for Ms. Gaurin inquiring updates. 3:59 PM:- received email from Ms. Gaurin. she got drawings from MTA and now will prepare work plan for soil investigation. will submit work plan to DEC and MTA for approval next week. will apply for NYC DOT permit on 05/24/10. 06/01/10-Hiralkumar Patel. received email from Ms. Gaurin (at 9:13 AM on 05/28/10) requesting deadline extension. 11:00 AM:- received call from Ms. Gaurin. she mentioned that currently they are preparing work

COURT PLAZA (Continued) **S110309405**

plan and will submit by end of 06/04/10. she requested 45 days extension as work plan needs to be reviewed/approved by DEC and MTA and also they need permit from DOT. based on available information, approved her request. 06/08/10-Hiralkumar Patel. 10:31 AM:- received work plan from Ms. Gaurin. proposes to install 12 soil borings to a depth of 10-15 ft bg. will collect two soil samples (highest PID and deepest dry) from each boring. will install one temporary well point to collect groundwater water in area where old fill line was located. will collect one more soil sample from the deepest visually impacted material for a forensic fingerprint analysis to find date of the release. work plan is not acceptable as doesn't include work schedule and also site map included in work plan doesn't include the site address and location of old fill line. 06/10/10-Hiralkumar Patel. 1:03 PM:- received email from Jen from MTA. she confirmed that no more oil leak found on tracks. she asked for updates. 1:32 PM:- sent email to Jen informing that the department is currently reviewing the work plan for subsurface investigation. 1:36 PM:- spoke with Ms. Gaurin. asked her to submit revised work plan including timeline for report submission and general site map showing the subject site, old fill line and proposed boring locations. 06/16/10-Hiralkumar Patel. 4:34 PM:- received email from Ms. Gaurin with revised work plan. she proposes to submit report by end of 08/16/10. 06/17/10-Hiralkumar Patel. 2:21 PM:- sent work plan approval letter to Mr. Sokol requiring to submit report by end of 08/16/10. letter emailed to Mr. Udeshi, Mr. Aslam, Ms. Gaurin, Mr. Krigstin and Ms. Crawford. 07/27/10-Hiralkumar Patel. 11:38 AM:- received email from Ms. Gaurin. she mentioned that they have got required NYCDOT permits, but still waiting for approval from MTA. they are revising engineered drawings for MTA this week and hopefully will be in the field on August 9th. due to delay in getting approval from MTA, Ms. Gaurin requested deadline extension, for report submission, till 09/16/10. 07/28/10-Hiralkumar Patel. 11:25 AM:- sent email to Ms. Gaurin approving her request to submit report by 09/16/10. email copied to Mr. Sokol. 08/04/10-Hiralkumar Patel. 11:18 AM:- received email from Ms. Gaurin. she confirmed that work will start on 08/09/10. Francis Ronquillo (cell # 619-602-1745) from tetratech will supervise the field activities. 09/07/10-Hiralkumar Patel. 2:20 PM:- left message for Ms. Gaurin. 4:16 PM:- received message from Ms. Gaurin. she is preparing report and will submit by 09/16/10. she mentioned that contamination found in soil samples and free product found on water. 09/16/10-Hiralkumar Patel. 4:24 PM:- received investigation report from Ms. Gaurin. abstract: - GPR survey indicated another line along the previously excavated remote fill line, which was later found as cable line - installed 12 soil borings to depth of 10-15 ft bg - soil under the sidewalk was poorly graded sandy soil with very little gravel - soil samples were collected either at highest PID reading or deepest dry - one temporary well installed in proximity of the source area - found free product on water sample from temporary well - groundwater was encountered at approx. 15 ft bg - one soil sample was collected at 11 ft depth from boring TTB-1 (closer to source area) forensic fingerprint analysis (results will be submitted once available) - no contamination found in borings installed near the building foundation wall (south side), but contamination found towards the street curb (towards subway) (north side) - recommends further delineation in east and west direction soil analyticals: ----------TTB-1-------TTB-2-------TTB-5-------TTB-6------TTB-7 3-5 ft 3-5 ft 5-6 ft 6-7 ft 4-6 ft

COURT PLAZA (Continued) **S110309405**

Toluene----------4,990------16,600-------2,130
Ethylbenzene----------3,000------12,500-------2,160
Xylene----------20,400------85,600------13,300------17,
200-------6,560
Naphthalene----------14,200------13,700-------2,330------20,
900------10,800
----------TTB-8-------TTB-9-------TTB-10 4-6 ft 6-8
ft 5-6.5 ft Toluene----------5,490----------13,500
Ethylbenzene----------3,420----------11,300
Xylene----------32,100-------7,580-------66,700
Naphthalene----------16,300----------5,790
09/20/10-Hiralkumar Patel. after discussing with DEC Austin, case transferred to DEC Vadim due to groundwater contamination and impact to the MTA tunnel. **refer to spill # 1000435 also.** 11/8/10 - reassigned from Tibbe to JMOCONNE - sent email to TetraTech (Gaurin) asking for reports/work plans submitted but not reviewed (JOC)
01/14/11 - spoke with Sandra Gaurin, Tetratech. She will prepare and provide two separate documents: work plan for installing permanent well at location of former temp to allow removal of free product in the short term; separate work plan for delineation of contam soil and gw - to be written as dynamic work plan - will include some means to evaluate whether oil migrated down along outside front (north side) of building where fill line enters building; same along inside of wall (basement has soil floor); will include sensitive receptor survey; recognized that MTA approval is needed for all work due to proximity of subway (JOC)

Remarks: leaking fill line/repairs and clean up pending

Material:

Site ID:	431696
Operable Unit ID:	1183167
Operable Unit:	01
Material ID:	2177365
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	Not reported
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

K52 **CAB MANAGEMENT CORP** **UST** **1000551189**
NNE **27-34 JACKSON AVENUE** **HIST UST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.132 mi.
699 ft. **Site 1 of 2 in cluster K**

Relative:
Lower

Actual:
15 ft.

UST:

Facility Id:	2-017647
Region:	STATE
DEC Region:	2
Site Status:	Active
Program Type:	PBS
Expiration Date:	2012/10/23
UTM X:	589472.16082999995
UTM Y:	4511319.68095

Affiliation Records:

Site Id:	151
Affiliation Type:	Owner
Company Name:	CAB MANAGEMENT CORP
Contact Type:	PRESIDENT
Contact Name:	JAMES VASEY
Address1:	27-34 JACKSON AVE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 937-8668
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	11/26/2007

Site Id:	151
Affiliation Type:	Mail Contact
Company Name:	CAB MANAGEMENT CORP
Contact Type:	Not reported
Contact Name:	JAMES VASEY
Address1:	27-34 JACKSON AVENUE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 937-8668
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	9/30/2010

Site Id:	151
Affiliation Type:	On-Site Operator
Company Name:	CAB MANAGEMENT CORP
Contact Type:	Not reported
Contact Name:	CAB MANAGEMENT CORP
Address1:	Not reported
Address2:	Not reported

CAB MANAGEMENT CORP (Continued) **1000551189**

City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 937-8668
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: NRLOMBAR
Date Last Modified: 9/30/2010

Site Id: 151
Affiliation Type: Emergency Contact
Company Name: CAB MANAGEMENT CORP
Contact Type: Not reported
Contact Name: JAMES VASEY
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (914) 455-2380
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: NRLOMBAR
Date Last Modified: 9/30/2010

Equipment Records:

D02 - Pipe Type - Galvanized Steel
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
E00 - Piping Secondary Containment - None
C02 - Pipe Location - Underground/On-ground
I04 - Overfill - Product Level Gauge (A/G)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
G05 - Tank Secondary Containment - Synthetic Liner
K01 - Spill Prevention - Catch Basin
F00 - Pipe External Protection - None
B08 - Tank External Protection - Retrofitted Impressed Current
C00 - Pipe Location - No Piping
F08 - Pipe External Protection - Retrofitted Impressed Current
J02 - Dispenser - Suction
K00 - Spill Prevention - None
E00 - Piping Secondary Containment - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
H05 - Tank Leak Detection - In-Tank System (ATG)
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
I02 - Overfill - High Level Alarm
J00 - Dispenser - None
L00 - Piping Leak Detection - None

Tank Info:
Site ID: 151

CAB MANAGEMENT CORP (Continued) **1000551189**

Tank Number:	001
Tank ID:	27075
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	8/1/1983
Capacity Gallons:	4000
Tightness Test Method:	21
Next Test Date:	10/10/2012
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	10/10/2007
Register:	True
Modified By:	NRLOMBAR
Last Modified:	9/30/2010

HIST UST:

PBS Number:	2-017647
SPDES Number:	Not reported
Emergency Contact:	JAMES VASEY
Emergency Telephone:	(914) 238-3394
Operator:	CAB MANAGEMENT CORP
Operator Telephone:	(718) 937-8668
Owner Name:	CAB MANAGEMENT CORP
Owner Address:	27-34 JACKSON AVE
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 937-8668
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	CAB MANAGEMENT CORP
Mailing Address:	27-34 JACKSON AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	Not reported
Mailing Telephone:	(718) 937-8668
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	27034 JACKSON AVE
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	RETAIL GASOLINE SALES
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	10/01/1997
Expiration Date:	10/23/2002
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	4000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data

CAB MANAGEMENT CORP (Continued) **1000551189**

Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2
Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	19830801
Capacity (gals):	4000
Product Stored:	UNLEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Fiberglass Liner (FRP)
Tank External:	Impressed Current
Pipe Location:	Underground
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	None
Pipe External:	Impressed Current
Second Containment:	None
Leak Detection:	In-tank System
Overfill Prot:	High Level Alarm, Catch Basin
Dispenser:	Suction
Date Tested:	07/01/1997
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	USTest 2000
Deleted:	False
Updated:	True
Lat/long:	Not reported

K53 **KENT BRAGALINE INC** **RCRA-NonGen** **1001493668**
NE **27-45 JACKSON AVE** **FINDS** **NYR000075630**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.141 mi.
746 ft. **Site 2 of 2 in cluster K**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	KENT BRAGALINE INC
Facility address:	27-45 JACKSON AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000075630
Mailing address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact:	ALBERT TROY
Contact address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 784-2012
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

KENT BRAGALINE INC (Continued) **1001493668**

Owner/Operator Summary:
Owner/operator name: KENT BRAGALINE INC
Owner/operator address: 27-45 JACKSON AVE
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 784-2012
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: KENT BRAGALINE INC
Owner/operator address: 27-45 JACKSON AVE
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 784-2012
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: KENT BRAGALINE INC
Classification: Not a generator, verified

Date form received by agency: 08/19/1999
Facility name: KENT BRAGALINE INC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004555810

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

KENT BRAGALINE INC (Continued) **1001493668**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYR000075630
Country:	USA
Mailing Name:	KENT BRAGALINE
Mailing Contact:	KENT BRAGALINE
Mailing Address:	27-45 JACKSON AVE
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-274-3339

Document ID:	NYG1002078
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	09/13/1999
Trans1 Recv Date:	09/13/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/14/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000075630
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	PD1011NY
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	99

54
SSE
1/8-1/4
0.145 mi.
765 ft.

LIRR - HUNTERS POINT YARD
SKILLMAN AVE & 27TH ST
LONG ISLAND CITY, NY 11101

RCRA-CESQG **1008374549**
MANIFEST **NYR000132985**

Relative:
Lower

Actual:
14 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	LIRR - HUNTERS POINT YARD
Facility address:	SKILLMAN AVE & 27TH ST LONG ISLAND CITY, NY 11101
EPA ID:	NYR000132985
Mailing address:	183RD ST - DEPT 3147

LIRR - HUNTERS POINT YARD (Continued) **1008374549**

HOLLIS, NY 11423
Contact: LEWIS D WUNDERLICH
Contact address: 183RD ST - DEPT 3147
HOLLIS, NY 11423
Contact country: US
Contact telephone: (718) 558-3252
Contact email: LWUNDER@LIRR.ORG
EPA Region: 02
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: MTA LONG ISLAND RAILROAD
Owner/operator address: SUTPHIN BLVD
JAMAICA, NY 11435
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: 06/29/2005
Owner/Op end date: Not reported

Owner/operator name: NO NAME FOUND
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: State
Owner/Operator Type: Operator
Owner/Op start date: 06/29/2005
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No

LIRR - HUNTERS POINT YARD (Continued) **1008374549**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: LIRR - HUNTERS POINT YARD
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 06/30/2005
Facility name: LIRR - HUNTERS POINT YARD
Classification: Small Quantity Generator

Violation Status: No violations found

NY MANIFEST:
EPA ID: NYR000132985
Country: USA
Mailing Name: LONG ISLAND RAILROAD
Mailing Contact: ADAM MCCOOL
Mailing Address: 93-59 183RD ST
Mailing Address 2: Not reported
Mailing City: HOLLIS
Mailing State: NY
Mailing Zip: 11423
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-558-3359

Document ID: NYH1459854
Manifest Status: Not reported
Trans1 State ID: NYD986938645
Trans2 State ID: Not reported
Generator Ship Date: 09/20/2005
Trans1 Recv Date: 09/20/2005
Trans2 Recv Date: Not reported
TSD Site Recv Date: 09/27/2005
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000132985
Trans1 EPA ID: CFD1677NY
Trans2 EPA ID: Not reported
TSDF ID: NYD049836679
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00200
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: Not reported

Document ID: NYH1459854

LIRR - HUNTERS POINT YARD (Continued) **1008374549**

Manifest Status:	Not reported
Trans1 State ID:	NYD986938645
Trans2 State ID:	Not reported
Generator Ship Date:	09/20/2005
Trans1 Recv Date:	09/20/2005
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/27/2005
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000132985
Trans1 EPA ID:	CFD1677NY
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00200
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2005

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55 **42-64 HUNTER STREET** **LTANKS** **S102619659**
North **42-64 HUNTER STREET** **HIST LTANKS** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.148 mi.
783 ft.

Relative:
Lower

Actual:
15 ft.

LTANKS:

Site ID:	119063
Spill No:	9310213
Spill Date:	11/22/1993
Spill Cause:	Tank Failure
Spill Source:	Private Dwelling
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/22/1993
Facility Addr2:	Not reported
Cleanup Ceased:	11/22/1993
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	CAMMISA
Referred To:	Not reported
Reported to Dept:	11/22/1993
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	11/23/1993
Spill Record Last Update:	9/30/2004
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller County:	001

42-64 HUNTER STREET (Continued) **S102619659**

Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	103436
DEC Memo:	Not reported
Remarks:	CUST. REPORTED LEAK - SVC. MN. APPLIED MAGNA-OATCH - APPLIED SPEEDI DRY & P/U & DISPOSED WILL REPAIR TANK ROMORROW - ISLAND TANK CO. TO REPAIR.

Material:

Site ID:	119063
Operable Unit ID:	989155
Operable Unit:	01
Material ID:	392841
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	2
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

HIST LTANKS:

Region of Spill:	2
Spill Number:	9310213
Spill Date:	11/22/1993
Spill Time:	11:00
Spill Cause:	Tank Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/22/93
Cleanup Ceased:	11/22/93
Cleanup Meets Standard:	True
Investigator:	CAMMISA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported

42-64 HUNTER STREET (Continued) **S102619659**

Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 11/22/93
Reported to Department Time: 13:42
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: SAME
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Other
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 11/23/93
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 2
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: CUST. REPORTED LEAK - SVC. MN. APPLIED MAGNA-OATCH - APPLIED SPEEDI DRY P/U DISPOSED WILL REPAIR TANK ROMORROW - ISLAND TANK CO. TO REPAIR.

J56 **MTA NYCT - VENT PLANT 6406-7** **RCRA-SQG** **1012211711**
West **JACKSON AVE & 45TH AVE** **NYR000171181**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.149 mi.
786 ft. **Site 4 of 5 in cluster J**

Relative:
Lower

Actual:
16 ft.

RCRA-SQG:

Date form received by agency:	12/29/2009
Facility name:	MTA NYCT - VENT PLANT 6406-7
Facility address:	JACKSON AVE & 45TH AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000171181
Mailing address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Contact:	GERALD LEZEAU
Contact address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Contact country:	US
Contact telephone:	(646) 252-3535
Contact email:	GERALD.LEZEAU@NYCT.COM
EPA Region:	02
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MTA NYCT
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	03/01/1968
Owner/Op end date:	Not reported

Owner/operator name:	MTA NYCT
Owner/operator address:	BROADWAY 5TH FLOOR 503 NEW YORK, NY 10004
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	03/01/1968
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

MTA NYCT - VENT PLANT 6406-7 (Continued) **1012211711**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

J57 **NYCT - COURT SQUARE STA G LINE** **RCRA-NonGen** **1001203144**
West **JACKSON ST & COURT SQ** **FINDS** **NYR000045062**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.149 mi.
786 ft. **Site 5 of 5 in cluster J**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: NYCT - COURT SQUARE STA G LINE
Facility address: JACKSON ST & COURT SQ
LONG ISLAND CITY, NY 11101
EPA ID: NYR000045062
Mailing address: JAY ST ROOM 819
BROOKLYN, NY 11201
Contact: JAMES CRANDALL
Contact address: JAY ST ROOM 819
BROOKLYN, NY 11201
Contact country: US
Contact telephone: (718) 243-4581
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NEW YORK CITY TRANSIT
Owner/operator address: 370 JAY ST ROOM 819
BROOKLYN, NY 11201
Owner/operator country: Not reported
Owner/operator telephone: (718) 243-4581
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Owner/operator name: NEW YORK CITY TRANSIT
Owner/operator address: 370 JAY ST ROOM 819
BROOKLYN, NY 11201
Owner/operator country: US
Owner/operator telephone: (718) 243-4581
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2001
Owner/Op end date: Not reported

NYCT - COURT SQUARE STA G LINE (Continued) **1001203144**

Owner/operator name: NEW YORK CITY TRANSIT
Owner/operator address: 370 JAY ST ROOM 819
BROOKLYN, NY 11201
Owner/operator country: US
Owner/operator telephone: (718) 243-4581
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYCT - COURT SQUARE STA G LINE
Classification: Not a generator, verified

Date form received by agency: 06/11/2001
Facility name: NYCT - COURT SQUARE STA G LINE
Classification: Small Quantity Generator

Date form received by agency: 09/22/1997
Facility name: NYCT - COURT SQUARE STA G LINE
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D008
Waste name: LEAD

Violation Status: No violations found

FINDS:

Registry ID: 110007908078

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

NYCT - COURT SQUARE STA G LINE (Continued) **1001203144**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYR000045062
Country:	USA
Mailing Name:	NYCTA
Mailing Contact:	TOM ABDALLAH
Mailing Address:	COURT SQUARE 28 20 JACKSON AVE
Mailing Address 2:	Not reported
Mailing City:	NEW YORK
Mailing State:	NY
Mailing Zip:	10004
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	646-252-3500

Document ID:	NJA3292434
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	05/18/2001
Trans1 Recv Date:	05/18/2001
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/23/2001
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	S8424
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00300
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2001

Document ID:	NJA3204930
Manifest Status:	Not reported
Trans1 State ID:	NJD003812047
Trans2 State ID:	NJD003812047
Generator Ship Date:	06/21/2001
Trans1 Recv Date:	06/21/2001
Trans2 Recv Date:	06/27/2001
TSD Site Recv Date:	06/27/2001
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	NJD002200046

NYCT - COURT SQUARE STA G LINE (Continued) **1001203144**

Trans2 EPA ID: Not reported
TSDF ID: H10376
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00122
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00097
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2001

Document ID: NJA3266160
Manifest Status: Not reported
Trans1 State ID: NJD980772768
Trans2 State ID: Not reported
Generator Ship Date: 08/03/2001
Trans1 Recv Date: 08/03/2001
Trans2 Recv Date: Not reported
TSD Site Recv Date: 08/03/2001
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000045062
Trans1 EPA ID: NJD991291105
Trans2 EPA ID: Not reported
TSDF ID: 06993
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 01000
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2001

Document ID: NYB9515961
Manifest Status: Not reported
Trans1 State ID: NY0000291823
Trans2 State ID: Not reported
Generator Ship Date: 09/28/2001
Trans1 Recv Date: 09/28/2001
Trans2 Recv Date: Not reported
TSD Site Recv Date: 02/14/2002
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000045062
Trans1 EPA ID: NYD049836679
Trans2 EPA ID: Not reported
TSDF ID: 1A375

NYCT - COURT SQUARE STA G LINE (Continued) **1001203144**

Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00500
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2001

Document ID:	PAE8688374
Manifest Status:	Not reported
Trans1 State ID:	NJR000005124
Trans2 State ID:	Not reported
Generator Ship Date:	03/10/1998
Trans1 Recv Date:	03/10/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/08/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	PAD085690592
Trans2 EPA ID:	Not reported
TSDF ID:	PAAH0492
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00020
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	01.00
Year:	98

Document ID:	NJA4049894
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	07/31/2002
Trans1 Recv Date:	07/31/2002
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	07/31/2002
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	S8424
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00100
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2002

NYCT - COURT SQUARE STA G LINE (Continued) **1001203144**

Document ID:	NJA3174065
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	07/31/2000
Trans1 Recv Date:	07/31/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/08/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	S8424
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00600
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2000

Document ID:	NYG3192318
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	01/04/2002
Trans1 Recv Date:	01/04/2002
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	01/08/2002
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000045062
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	PD1010NY
Waste Code:	B007 - OTHER MISCELLANEOUS PCB WASTES
Quantity:	00580
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	2002

L58 **INTERNATIONAL DESIGN CENTER** **RCRA-NonGen** **1000446329**
ESE **29-10 THOMPSON AVE 9TH FL** **FINDS** **NYD986904100**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.151 mi.
795 ft. **Site 1 of 2 in cluster L**

Relative:
Higher

Actual:
24 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	INTERNATIONAL DESIGN CENTER
Facility address:	29-10 THOMPSON AVE 9TH FL LONG ISLAND CITY, NY 11101

INTERNATIONAL DESIGN CENTER (Continued) **1000446329**

EPA ID: NYD986904100
Mailing address: THOMPSON AVE 9TH FL
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: THOMPSON AVE 9TH FL
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: PERRY VELLA
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: PERRY VELLA
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: INTERNATIONAL DESIGN CENTER
Classification: Not a generator, verified

INTERNATIONAL DESIGN CENTER (Continued) **1000446329**

Date form received by agency: 07/08/1999
Facility name: INTERNATIONAL DESIGN CENTER
Classification: Not a generator, verified

Date form received by agency: 06/14/1990
Facility name: INTERNATIONAL DESIGN CENTER
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004448287

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD986904100
Country: USA
Mailing Name: INTERNATIONAL DESIGN CENTER
Mailing Contact: JOHN WRIGHT
Mailing Address: 29-10 THOMPSON AVENUE
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-729-2459

Document ID: NYB2066868
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: PB3606NY
Trans2 State ID: Not reported
Generator Ship Date: 900727
Trans1 Recv Date: 900727
Trans2 Recv Date: Not reported
TSD Site Recv Date: 900727
Part A Recv Date: 900824
Part B Recv Date: 900918
Generator EPA ID: NYD986904100
Trans1 EPA ID: NYD981185903
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 01600
Units: P - Pounds
Number of Containers: 004
Container Type: DM - Metal drums, barrels

INTERNATIONAL DESIGN CENTER (Continued) **1000446329**

Handling Method: L Landfill.
Specific Gravity: 100
Year: 90

L59 **NYSDOT G CAMPBELL PAINTING D253009** **RCRA-NonGen** **1000458443**
ESE **THOMPSON AVE BRIDGE** **FINDS** **NYD986943264**
1/8-1/4 **LONG ISLAND CITY, NY 11100**
0.153 mi.
805 ft. **Site 2 of 2 in cluster L**

Relative:
Higher

Actual:
22 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: NYSDOT G CAMPBELL PAINTING D253009
Facility address: THOMPSON AVE BRIDGE
LONG ISLAND CITY, NY 11100
EPA ID: NYD986943264
Mailing address: COLLEGE POINT BLVD
FLUSHING, NY 11354
Contact: GEORGE CAMPBELL
Contact address: COLLEGE POINT BLVD
FLUSHING, NY 11354
Contact country: US
Contact telephone: (718) 353-8330
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NYSDOT
Owner/operator address: BLD 5 HARRIMAN STATE CAMPUS
ALBANY, NY 12232
Owner/operator country: US
Owner/operator telephone: (518) 457-6195
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NYSDOT
Owner/operator address: BLD 5 HARRIMAN STATE CAMPUS
ALBANY, NY 12232
Owner/operator country: US
Owner/operator telephone: (518) 457-6195
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

NYSDOT G CAMPBELL PAINTING D253009 (Continued) **1000458443**

Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	01/01/2006
Facility name:	NYSDOT G CAMPBELL PAINTING D253009
Classification:	Not a generator, verified

Date form received by agency:	03/08/1991
Facility name:	NYSDOT G CAMPBELL PAINTING D253009
Classification:	Not a generator, verified

Violation Status: No violations found

FINDS:

Registry ID: 110008048175

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

M60 **45-17 PEARSON ST 45-18 CRT SQ** **UST** **U000406504**
SW **45-17 PEARSON ST (45-18 CRT SQ)** **HIST UST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.165 mi.
871 ft. **Site 1 of 8 in cluster M**

Relative:
Lower

Actual:
11 ft.

UST:

Facility Id:	2-207098
Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Program Type:	PBS
Expiration Date:	N/A
UTM X:	589099.14234999998
UTM Y:	4511079.4832199998

Affiliation Records:

Site Id:	7331
Affiliation Type:	Emergency Contact
Company Name:	RICHARD ZIRINSKY
Contact Type:	Not reported
Contact Name:	LONG ISLAND CITY REALTY CO
Address1:	Not reported
Address2:	Not reported
City:	Not reported

45-17 PEARSON ST 45-18 CRT SQ (Continued) **U000406504**

State: NN
Zip Code: Not reported
Country Code: 001
Phone: (212) 751-4627
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Site Id: 7331
Affiliation Type: On-Site Operator
Company Name: 45-17 PEARSON ST 45-18 CRT SQ
Contact Type: Not reported
Contact Name: LONG ISLAND CITY REALTY CO
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (212) 751-4627
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Site Id: 7331
Affiliation Type: Mail Contact
Company Name: RICHARD ZIRINSKY
Contact Type: Not reported
Contact Name: Not reported
Address1: 60 E 56TH ST 7TH FL
Address2: Not reported
City: NY
State: NY
Zip Code: 10022
Country Code: 001
Phone: (212) 751-4627
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: CGFREEDM
Date Last Modified: 12/14/2004

Site Id: 7331
Affiliation Type: Owner
Company Name: RICHARD ZIRINSKY
Contact Type: Not reported
Contact Name: Not reported
Address1: 60 E 56TH ST 7TH FL
Address2: Not reported
City: NY
State: NY
Zip Code: 10022
Country Code: 001

45-17 PEARSON ST 45-18 CRT SQ (Continued) **U000406504**

Phone:	(212) 751-4627
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	CGFREEDM
Date Last Modified:	12/14/2004

Equipment Records:

I04 - Overfill - Product Level Gauge (A/G)
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
C00 - Pipe Location - No Piping
B00 - Tank External Protection - None
J02 - Dispenser - Suction
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
H00 - Tank Leak Detection - None
C00 - Pipe Location - No Piping
H99 - Tank Leak Detection - Other

Tank Info:

Site ID:	7331
Tank Number:	001
Tank ID:	24945
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	6700
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/1990
Tank Location:	6
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	7331
Tank Number:	002
Tank ID:	24946
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	5000
Tightness Test Method:	NN

45-17 PEARSON ST 45-18 CRT SQ (Continued) **U000406504**

Next Test Date:	Not reported
Date Tank Closed:	8/1/1990
Tank Location:	6
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

HIST UST:

PBS Number:	2-207098
SPDES Number:	Not reported
Emergency Contact:	LONG ISLAND CITY REALTY CO
Emergency Telephone:	(212) 751-4627
Operator:	LONG ISLAND CITY REALTY CO
Operator Telephone:	(212) 751-4627
Owner Name:	RICHARD ZIRINSKY
Owner Address:	60 E 56TH ST 7TH FL
Owner City,St,Zip:	NY, NY 10022
Owner Telephone:	(212) 751-4627
Owner Type:	Not reported
Owner Subtype:	Not reported
Mailing Name:	RICHARD ZIRINSKY
Mailing Address:	60 E 56TH ST 7TH FL
Mailing Address 2:	Not reported
Mailing City,St,Zip:	NY, NY 10022
Mailing Contact:	Not reported
Mailing Telephone:	(212) 751-4627
Owner Mark:	First Owner
Facility Status:	2 - Unregulated by PBS (the total capacity is less than 1,101 gallons) and Subpart 360-14.
Facility Addr2:	45017 PEARSON ST
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	Not reported
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	01/07/1988
Expiration Date:	01/07/1993
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	0
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	0
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001

45-17 PEARSON ST 45-18 CRT SQ (Continued) **U000406504**

Tank Location:	UNDERGROUND, VAULTED, WITH ACCESS
Tank Status:	Closed-Removed
Install Date:	Not reported
Capacity (gals):	6700
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	Other
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1990
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	002
Tank Location:	UNDERGROUND, VAULTED, WITH ACCESS
Tank Status:	Closed-Removed
Install Date:	Not reported
Capacity (gals):	5000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1990
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

N61 **2415 44TH ROAD LLC** **AST** **U003395749**
NNW **43-32 CRESCENT STREET** **HIST AST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.165 mi.
873 ft. **Site 1 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-600777
Program Type:	PBS
UTM X:	589288.01636000001
UTM Y:	4511381.96435
Expiration Date:	2003/04/15

Affiliation Records:

Site Id:	22754
Affiliation Type:	On-Site Operator
Company Name:	2415 44TH ROAD LLC
Contact Type:	Not reported
Contact Name:	CHARLES SINGER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 937-1738
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22754
Affiliation Type:	Owner
Company Name:	2415 44 ROAD LLC
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	C/O ROCKROSE 309 EAST 45TH STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10017
Country Code:	001
Phone:	(212) 984-1741
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22754
Affiliation Type:	Mail Contact
Company Name:	2415 ROAD LLC
Contact Type:	Not reported
Contact Name:	SUPER FACILITY MANAGER
Address1:	C/O ROCKROSE
Address2:	309 EAST 45TH STREET

2415 44TH ROAD LLC (Continued) **U003395749**

City:	NEW YORK
State:	NY
Zip Code:	10017
Country Code:	001
Phone:	(212) 984-1741
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22754
Affiliation Type:	Emergency Contact
Company Name:	2415 44 ROAD LLC
Contact Type:	Not reported
Contact Name:	COASTAL COMBUSTION CORP
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 475-4263
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

D01 - Pipe Type - Steel/Carbon Steel/Iron
L09 - Piping Leak Detection - Exempt Suction Piping
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
G03 - Tank Secondary Containment - Vault (w/o access)
C01 - Pipe Location - Aboveground
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)

Tank Info:

Tank Number:	001
Tank Id:	43713
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	2500
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True

2415 44TH ROAD LLC (Continued) **U003395749**

Modified By:	TRANSLAT
Last Modified:	3/4/2004

HIST AST:

PBS Number:	2-600777
SWIS Code:	6301
Operator:	CHARLES SINGER
Facility Phone:	(718) 937-1738
Facility Addr2:	43032 CRESCENT STREET
Facility Type:	APARTMENT BUILDING
Emergency:	COASTAL COMBUSTION CORP
Emergency Tel:	(212) 475-4263
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	2415 44 ROAD LLC
Owner Address:	C/O ROCKROSE 309 EAST 45TH STREET
Owner City,St,Zip:	NEW YORK, NY 10017
Federal ID:	Not reported
Owner Tel:	(212) 984-1741
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	SUPER FACILITY MANAGER
Mailing Name:	2415 ROAD LLC
Mailing Address:	C/O ROCKROSE
Mailing Address 2:	309 EAST 45TH STREET
Mailing City,St,Zip:	NEW YORK, NY 10017
Mailing Telephone:	(212) 984-1741
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	04/21/1998
Expiration:	04/15/2003
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	2500
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	2500
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel

2415 44TH ROAD LLC (Continued) **U003395749**

Tank Internal:	0
Tank External:	00
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	00
Tank Containment:	Diking
Leak Detection:	00
Overfill Protection:	04
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

N62 **CONSTRUCTION SITE** **MANIFEST** **S108981768**
NNW **4329 CRESCENT STREET** **NY Spills** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.166 mi.
875 ft. **Site 2 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

NY MANIFEST:

EPA ID:	NYR000153924
Country:	USA
Mailing Name:	ROCKROSE CONSTRUCTION CORP
Mailing Contact:	ROCKROSE CONSTRUCTION CORP
Mailing Address:	290 PARK AVE SOUTH
Mailing Address 2:	14TH FL
Mailing City:	NEW YORK
Mailing State:	NY
Mailing Zip:	10010
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	212-984-1705

NY MANIFEST:

No Manifest Records Available

NY Spills:

Site ID:	391813
Facility Addr2:	43-29 CRESCENT ST
Facility ID:	0710509
Spill Number:	0710509
Facility Type:	ER
SWIS:	4101
Investigator:	rvketani
Referred To:	Not reported
Spill Date:	1/4/2008
Reported to Dept:	1/4/2008
CID:	444
Spill Cause:	Equipment Failure
Water Affected:	Not reported

CONSTRUCTION SITE (Continued) **S108981768**

Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/16/2009
Remediation Phase:	0
Date Entered In Computer:	1/4/2008
Spill Record Last Update:	11/16/2009
Spiller Name:	ANDREW RUDKO
Spiller Company:	CONSTRUCTION SITE
Spiller Address:	4329 CRESCENT STREET
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller Company:	999
Contact Name:	ANDREW RUDKO
Contact Phone:	(646) 388-9526
DEC Region:	2
DER Facility ID:	341415
DEC Memo:	I spoke with Andrew. The tank has been reoved and cont. soil has been stockpiled. This soil needs to be removed due to space limitations. He feels that they are not able to find clean endpoints. A gepprobe will be out on Fri 1/ 11/ 07- 1/9/08 - Raphael Ketani. An abandoned gasoline tank was discovered and contaminated soil beneath it on 1/4/08. The contact is Andrew Rudko of AKRF, Inc. (646) 388-9526. I spoke to Mr. Rudko about the site. The site is a small triangular area. He said that it used to be a car repair replace with one 550 gal. tank and one pump. He said the tank was abandoned in place with concrete. The great majority of the soil has been excavated, but the contractor is waiting to get a hauler for the gasoline contaminated soil. The site will be a temporary parking lot for the building and parking lot across the street. Groundwater is at about 14 feet - he has drilled nearby at another site and hit water there at that depth. I told Mr. Rudko that additional borings will be needed to see whether the contamination had migrated under the streets. He said he will do borings to the edge of the property, and if contamination is found, then he will get the permits and do borings further out. 2/7/08 - Raphael Ketani. I tried to contact Mr. Rudko, but could only leave a message. Mr. Rudko returned my call. He said that they had removed the gas tank and found lots of contamination. Initially, they excavated 9 truck loads of soil and shipped it out. Then, on 2/5/08, they excavated more soil until the site was jammed up with excavated soil. This was also shipped out. Mr. Rudko feels that the contamination extends all the way to the Hunter Street sidewalk and maybe under it. I told him that he needs to delineate the extent of the contamination. Mr. Rudko said that they will use ORC to remediate any soil that can not be removed. I told him that DEC wants all of the contaminated soil either removed or treated. 2/19/08 - Raphael Ketani. I had tried to make an unannounced site visit last thursday, but was unsuccessful. I could not find the site. I called up Mr. Rudko and he told me the site is at the intersection of Crescent Street, Hunter Street, and 44th Road. I will make another attempt at a site visit. I found the site. It consisted of a big water filled pit and a pile of slightly odoress artificial fill material. I met

CONSTRUCTION SITE (Continued) **S108981768**

Mark Accetturi, Environmental Specialist of AKRF (646) 388-9521, at the site. There was no sheen on the water. Mr. Accetturi told me that the pit had been dry until the recent rains. The water level was about 10 feet below grade. I told him that AKRF should get someone to suck out the water. He said that this will be done in the near future. There was a large pile of artificial fill (soil mixed with other material) with slight odor of gasoline. Mr. Accetturi told me that they had taken out the one tank from about the middle of the hole and two lifts from the Citicorp (southwest) side of the hole. A black pipe with a metal clamp was sticking out of the sidewall at the southwest side. It was not apparent where the pipe went to. The area around the hole had concrete pavement. I was told by the excavator operator that 12 trucks were scheduled to come today to take away the soil pile. I took 5 pictures. I noticed a 4 story building across the street with commercial space at the street level and residences above. A commercial building abutted the site property. There was nothing much else to see. So I left. 3/12/08 - Raphael Ketani. Today I received a progress report and remedial action plan dated 3/11/08 from Mr. Rudko, Senior Vice President of AKRF. The report and plan stated that a 550 gal. gasoline tank was discovered on site which was resting on soil. The soil beneath the tank was contaminated, though the tank appeared to be intact. Contaminated soil was removed from the site. Four borings were advanced to the groundwater to delineate the extent of soil contamination. Two sites of contamination were discovered. One to the east and extending from the tank and another separate one to the southwest (maybe related to a broken sewer pipe). Contaminated groundwater was pumped out and the excavation was backfilled after 2/20/08. AKRF will install 4 wells in order to monitor the groundwater conditions. Water and soil treatment will be proposed if the contamination persists. The analytical results were as follows: groundwater; SB-1=no VOCs, few low SVOC hits SB-2=VOC hits to 1394 ppb total xylenes, no SVOCs SB-3=no VOCs and no SVOCs SB-4=VOC hits to 2370 ppb total xylenes, no SVOCs SB-5=no VOCs and no SVOCs soil; EP-1=few low VOCs, combustion SVOCs in thousands of ppb EP-2=no VOCs, combustion SVOCs in high thousands of ppb to 713,300 ppb EP-4=1 significant VOC, naphthalene 6000 ppb, high SVOCs in high thousands to 62000 ppb EP-1S=no VOCs, no SVOCs WC-4=VOCs in tens of thousands ppb to 150,000 ppb with total xylenes at 640,000 ppb, SVOC hits but none significant EP-1B=many very low VOCs, no SVOCs EP-1N=many very low VOCs, no SVOCs EP-1W=many very low VOCs, no SVOCs EP-1E=11 VOCs to 83,100 ppb, 3600 ppb naphthalene, combustion SVOCs, but not significant I spoke to Mr. Rudko. He said that they are not sure how far the contaminated soil extends. So they are not done excavating. If it extends off site, then they will consider using ORC or another treatment solution to remediate the contamination. He said that he also needs to determine the direction of groundwater flow. He said that bedrock dips to the south and so he thinks that's the direction of groundwater flow, but he'll see. 4/1/08 - Raphael Ketani. I spoke to Mr. Rudko (646) 388-9526. He said that nothing is happening right now at the site. He is trying to line up a driller to install borings on all 3 sides of the site. He will take soil and groundwater samples. He will keep me posted. 8/19/08 - Raphael Ketani. I tried to reach Mr. Rudko, but could only leave a message regarding groundwater and soil sampling, and delineation of the extent of the contamination. 9/3/08 - Raphael Ketani. I tried to reach Mr. Rudko, but could only leave a message regarding groundwater and soil sampling, and delineation of the extent of the

CONSTRUCTION SITE (Continued) **S108981768**

contamination. As there has been no contact with Mr. Rudko in 5 months and he is not reachable, I sent a letter to Ivan Moskowitz, Esq. at Swidler Berlin LLP, 405 Lexington Avenue, NY, 10174. He is the lawyer representing the owners of the site, 4329 Crescent LLC, 399 Park Avenue, NY, 10022-4614. The block and lot are 4343 and 0001. The main address is 4319 Crescent Street. 9/11/08 - Raphael Ketani. The letter to 4329 Crescent LLC, c/o Swidler Berlin LLP came back NOT DELIVERABLE AS ADDRESSED. 9/15/08 - Raphael Ketani. I tried to reach Mr. Rudko, but could only leave a message regarding groundwater and soil sampling, and delineation of the extent of the contamination. Also, I sent the 9/3/08 letter to 4329 Crescent LLC at 399 Park Avenue, and to Swidler Berlin LLP the corrected zip code of 10017. 9/22/08 - Raphael Ketani. The letter to Swidler Berlin LLP came back with a Post Office indicating Not Deliverable As Addressed. I called up a phone number for Swidler Berlin (212) 891-9536 and was told that Swidler Berlin no longer exists. One of their offices merged with Bingam McCutchen (the same phone number as above). She said that Mr. Moskowitz works for Bingam McCutchen and that his direct number is (212) 705-7537. I called Mr. Moskowitz, but could only leave a message regarding the site. Mr. Moskowitz called me back. He said that he still represent 4329 Crescent LLC. He will contact them to see why there is no progress with the investigation. 9/25/08 - Raphael Ketani. Patricia Dunphy of Rockrose Development Corp. (212) 984-1795 called earlier this week regarding the site. I tried to return her call, but could only leave a voice mail. Later this morning, I received a call from Steven Eisner (212) 984-1705 of Rockrose. He said that the reason the sidewalk wells weren't installed is because they are doing foundation dewatering across the street to the west at 3000 Crescent Street. The building that was there was knocked down 3 weeks ago. He said that once the foundation is put in, then they will install the wells. I asked him whether they had found any contaminated water. He said no. He said he will let me know when the foundation dewatering is done in 6 to 8 weeks. 10/27/08 - Raphael Ketani. I tried to contact Mr. Eisner regarding the dewatering of the neighboring site, but could only leave a message. Mr. Eisner called me back. He said that the foundation wont be installed until February 2009. Then they will install 4 wells. 2/13/09 - Raphael Ketani. I spoke to Mr. Eisner. He said that the foundation construction and dewatering is still taking place. He said that the wells will probably be installed at the end of February and a report will be submitted to DEC by March 13. I said that would be alright. Mr. Eisner added that Mr. Rudko is no longer with AKRF and the case is now being handled by Kate Bruner of AKRF (646) 388-9525. 2/17/09 - Raphael Ketani. Kate Brunner called me to say that she will give me an update regarding the project at the end of February. 2/26/09 - Raphael Ketani. Ms. Brunner called. She said that the dewatering for the foundation should end in a week. The well installation will take place in mid-March with a 4" geoprobe. 3/16/09 - Raphael Ketani. Mr. Eisner (212) 984-1705 called to say that they are still working on the foundation for the building across the street. They expect to finish in May. Once they're finished, then they will install the wells. 4/23/09 - Raphael Ketani. I talked to Ms. Brunner (212) 696-0670. She said that the construction contractor had finished dewatering the site a couple of weeks ago. She added that applications had been submitted to the City for sidewalk permits. There is a tentative date of 5/4/09 for starting the boring work. 7/13/09 - Raphael Ketani. I spoke to Ms. Brunner. She said that

CONSTRUCTION SITE (Continued) **S108981768**

she had received the soil and groundwater analytical report. However, she was out. So the review couldn't take place until she had a chance to look at it. She said that the results looked very good. Right now, the report is undergoing internal review. Once AKRF is done with it, then the report will be forwarded to DEC. I told her to send the report as soon as possible. 9/11/09 - Raphael Ketani. I left a message for Ms. Brunner that the DEC never received the groundwater analytical report. 9/14/09 - Raphael Ketani. Ms. Brunner (212) 696-0670 called me today. She said that the groundwater survey didn't take place until July 2009 due to access problems. The developer they were working with as a client has split into two entities. One entity is responsible for pursuing the environmental evaluation and reporting. This is the client and this entity is still reviewing the environmental report. However, Ms. Brunner said that she expects to send the DEC the environmental report in two weeks. She added that the analyticals were all non-detect. 9/25/09 - Raphael Ketani. Today I received the Supplemental Subsurface Investigation dated 9/24/09 and submitted by AKRF. I began my review. 9/29/09 - Raphael Ketani. I finished my review. They recovered soil samples from only 2 of the 4 borings that were attempted on 5/11/09. They state that, for technical reasons, they could not recover soil samples from MW-1 and MW-3, but they don't explain what this means. Soil samples were submitted for MW-2 and MW-4. MW-2 is at the eastern corner of the site and MW-4 is at the southwest corner of the site. Groundwater flow is to the east. The soil samples were completely non-detect for VOCs. There were a number of SVOC hits, but they were all below TAGM, except for some benzo series hits which were just slightly above TAGM. Groundwater samples for the four wells were entirely non-detect for VOCs. Samples from wells MW-1 to MW-3 were completely non-detect for SVOCs. The groundwater sample from MW-4 had a number of SVOC hits, but they were below TAGM, except for five combustion product hits (mostly the benzo series) which were slightly above TAGM. From re-reviewing the 3/11/08 investigation report, it appears that there are a lot of ashes and cinders at the site. This was determined by the presence of high concentrations of the combustion product SVOC analytes in soil samples from various locations. From the end point sample results for EP-1N, EP-1S, EP-1W, and EP-1B, it appears that the contaminated soil was removed. However, the results for EP-1E showed several SVOC hits to 4300ppb, including naphthalene and 2-methylnaphthalene, and four other low level SVOCs, but all of the other SVOCs were non-detect. The VOCs were all non-detect, also. It seems as if they did a reasonable job of digging out the contamination. Though questions remain regarding the 03/11/08 report and the 9/24/09 report: 1) the 3/11/08 report lists boring locations SB-1, SB-2, and SB-4, but the data package shows EP-1, EP-2 , and EP-4. Are these the same borings? Also, what happened with the soil sample for SB-3? 2) why were no borings conducted between W SB-1 and MW-2? 3) what does the number "434" mean on Figure 2 from the 3/11/08 report? 4) there is no explanation as to why they couldn't recover soil samples from MW-1 and MW-3, except to say that "for technical reasons" they couldn't do it. What are the technical reasons? 5) a number of VOCs are listed as above TAGM on Figure 3 in the 9/24/09 report for the soil sample from EP-1E. However, these analytes are not in the analytical data report for the end point samples. Where did this information come from and how much above TAGM are the hits? Aside from answering these questions, the DEC requires that they perform one more soil borings. One halfway between W SB-1 and MW-2.

CONSTRUCTION SITE (Continued) **S108981768**

10/9/09 - Raphael Ketani. Ms. Brunner called me back. She answered the five questions: 1) SB-1, SB-2, and SB-4 are EP-1, EP-2, and EP-4. There was some confusion regarding the numbering of the samples due to the previous use of a different numbering system. 2) we agreed to have one more soil boring performed halfway between W SB-1 and MW-2 just to see what the contamination is, if any 3) number "434" is the block number from the block and lot tax maps 4) soil samples couldn't be recovered because they kept hitting refusal. The geoprobe wasn't strong enough to apply enough torque to get a sample and the sampling tool was thin so that a stronger machine would have broken the tool. They stepped out from these locations and sampled elsewhere with a heavier rig. 5) the analytes for EP-1E come from the 2008 report. Ms. Brunner just wanted to show what had been detected PRIOR to excavation of the site. 10/15/09 - Raphael Ketani. I received an e-mail today from Ms. Brunner regarding the location of the additional boring that DEC had requested (see E-docs). I sent a response e-mail in which I approved the location. 11/5/09 - Raphael Ketani. I tried to contact Ms. Brunner (212) 696-0670, but could only leave a voice mail. 11/6/09 - Raphael Ketani. I received the following e-mail from Ms. Brunner: The soil boring was completed at 43-29 Crescent Street as planned. We got the preliminary VOC and SVOC data back and all concentrations are less than TAGM RSCOs so we'll be requesting closure. We are preparing a revised report for submittal to DEC and we are still on-track to get you the report in mid-November. 11/16/09 - Raphael Ketani. Today I received the 11/12/09 Supplemental Subsurface Investigation report from Ms. Brunner at AKRF. I review the report for the soil analyses for SB-5. The results were completely non-detect for VOCs and SVOCs. Based upon the soil and groundwater analytical results in the case file, I have determined that there are minimal impacts to the environment and to people. Therefore, I am closing the spill case.

Remarks: FOUND BURIED GASOLINE TANK IN GROUND AND FOUND CONTAMINATED SOIL

Material:

Site ID:	391813
Operable Unit ID:	1148847
Operable Unit:	01
Material ID:	2139342
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported

CONSTRUCTION SITE (Continued) **S108981768**

Last Modified: Not reported
Test Method: Not reported

O63 **26-32 SKILLMAN AVE** **LTANKS** **S105999403**
South **26-32 SKILLMAN AVE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.166 mi.
875 ft. **Site 1 of 2 in cluster O**

Relative:
Lower

Actual:
14 ft.

LTANKS:

Site ID:	283736
Spill No:	0209560
Spill Date:	12/17/2002
Spill Cause:	Tank Test Failure
Spill Source:	Private Dwelling
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	2/17/2006
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	mxferoze
Referred To:	Not reported
Reported to Dept:	12/17/2002
CID:	198
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	12/17/2002
Spill Record Last Update:	2/17/2006
Spiller Name:	ERNEST
Spiller Company:	Not reported
Spiller Address:	26-32 SKILLMAN AVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	001
Spiller Contact:	ERNEST
Spiller Phone:	(718) 729-1552
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	228002
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TIPPLE" CALLED ERNEST TRENTO, CO-OWNER FOR THIS PROPERTY, WHO CONFIRMED THAT THE TANK FAILED TIGHTNESS TEST. TANK TEST FAILURE LETTER WILL BE SENT, VIA THE MAIL, TODAY. E.R. 1/14/04 TIPPLE Sent request for documentation. 12/19/05 Feroze. Spill is transferred from Ketani to Feroze. 02/01/06. Feroze . Phone No. 718- 729-1552 is not in service. PBS of this site is #2-349429. TTF is sent: Satt realty Corp. 26-32 Skillman Ave, Long Island City. NY 11101. 02/17/06. Feroze, According to PBS documents the tank is closed and removed from the place. There was a leak in dry portion of the tank. Consultation with DEc Jake the slill is closed.
Remarks:	CALLER AGENCY CALLED TO DO TANK TEST - TEST RESULTED IN DRY LEAKAGE.

26-32 SKILLMAN AVE (Continued) **S105999403**

Material:

Site ID:	283736
Operable Unit ID:	860830
Operable Unit:	01
Material ID:	512980
Material Code:	0003
Material Name:	#6 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	283736
Spill Tank Test:	1527845
Tank Number:	1
Tank Size:	6000
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Horner EZ Check I or II

Site ID:	280781
Spill No:	0303917
Spill Date:	7/14/2003
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	1/7/2004
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	CESAWYER
Referred To:	Not reported
Reported to Dept:	7/14/2003
CID:	405
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	7/14/2003
Spill Record Last Update:	1/7/2004
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	26-32 SKILLMAN AVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY 11101-

26-32 SKILLMAN AVE (Continued) **S105999403**

Spiller County:	001
Spiller Contact:	ANTIL ANTOINE
Spiller Phone:	(413) 246-2664
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	228002
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SAWYER" Tank test failure letter sent to: Mr. Ernie Trento c/o American Plume PO Box 566 Clarks Summit, PA 18411 9/17/03 TRANSFERRED FROM TIPPLE TO SAWYER 11/26/03 1042 Hrs - Sawyer - Received an extensive fax from the lawyer J. James Carriero for the tank closure that happened on 8/1/03. All disposal, removal and end point sample analysis is contained in this report. A "No Further Action" letter will be sent to Ernie Trento. Closed.
Remarks:	uncover - repair - retest

Material:

Site ID:	280781
Operable Unit ID:	872173
Operable Unit:	01
Material ID:	504775
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

O64 **SATT REALTY CORP.** **UST U001839678**
South **26-32 SKILLMAN AVENUE** **HIST UST N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.166 mi.
875 ft. **Site 2 of 2 in cluster O**

Relative:
Lower

Actual:
14 ft.

UST:

Facility Id:	2-349429
Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Program Type:	PBS
Expiration Date:	N/A

SATT REALTY CORP. (Continued) **U001839678**

UTM X: 589385.55319000001
UTM Y: 4510876.7618100001

Affiliation Records:

Site Id: 17202
Affiliation Type: Owner
Company Name: SATT REALTY CORP.
Contact Type: Not reported
Contact Name: Not reported
Address1: 26132 SKILLMAN AVE.
Address2: Not reported
City: LONG ISLAND CITY
State: NY
Zip Code: 11101
Country Code: 001
Phone: (800) 521-1132
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Site Id: 17202
Affiliation Type: Emergency Contact
Company Name: SATT REALTY CORP.
Contact Type: Not reported
Contact Name: ANTHONY TRENTO
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 729-1552
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Site Id: 17202
Affiliation Type: On-Site Operator
Company Name: SATT REALTY CORP.
Contact Type: Not reported
Contact Name: ANTHONY TRENTO
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 729-1552
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

SATT REALTY CORP. (Continued) **U001839678**

Site Id:	17202
Affiliation Type:	Mail Contact
Company Name:	AMERICAN PLUME
Contact Type:	Not reported
Contact Name:	ANTHONY TRENTO
Address1:	P.O. BOX 566
Address2:	Not reported
City:	CLARKS SUMMIT
State:	PA
Zip Code:	18411
Country Code:	001
Phone:	(800) 521-1132
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

J02 - Dispenser - Suction
C03 - Pipe Location - Aboveground/Underground Combination
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)

Tank Info:

Site ID:	17202
Tank Number:	001
Tank ID:	33501
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	6000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/2003
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

HIST UST:

PBS Number:	2-349429
SPDES Number:	Not reported
Emergency Contact:	ERNEST TRENTO
Emergency Telephone:	(516) 671-2766
Operator:	ANTHONY TRENTO % ERNEST TRENTO
Operator Telephone:	(718) 729-1552
Owner Name:	ERNEST TRENTO

SATT REALTY CORP. (Continued) **U001839678**

Owner Address:	15 MICHAEL F STREET
Owner City,St,Zip:	LOCUST VALLEY, NY 11560
Owner Telephone:	(516) 671-2766
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	SATT REALTY CORP.
Mailing Address:	26-32 SKILLMAN AVENUE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	Not reported
Mailing Telephone:	(718) 729-1552
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	26032 SKILLMAN AVE
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	MANUFACTURING
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	10/27/2000
Expiration Date:	10/26/2005
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	6000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2
Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (gals):	6000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Stainless steel alloy
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Aboveground/Underground Combination
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	Diking
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Gravity

SATT REALTY CORP. (Continued) **U001839678**

Date Tested:	Not reported
Next Test Date:	12/27/1987
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

N65 **ROCKROSE CONSTRUCTION CORP** **RCRA-LQG** **1010566745**
NNW **43-29 CRESCENT ST** **NYR000153924**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.167 mi.
882 ft. **Site 3 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

RCRA-LQG:

Date form received by agency:	01/24/2008
Facility name:	ROCKROSE CONSTRUCTION CORP
Facility address:	43-29 CRESCENT ST LONG ISLAND CITY, NY 11101
EPA ID:	NYR000153924
Mailing address:	PARK AVE SOUTH 14TH FLOOR NEW YORK, NY 10010
Contact:	STEPHEN A EISNER
Contact address:	PARK AVE SOUTH 14TH FLOOR NEW YORK, NY 10010
Contact country:	US
Contact telephone:	(212) 984-1705
Contact email:	STEVEE@ROCKROSE.COM
EPA Region:	02
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	ROCKROSE CONSTRUCTION CORP
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/31/2007
Owner/Op end date:	Not reported
Owner/operator name:	43-29 CRESCENT LLC
Owner/operator address:	PARK AVE SOUTH 14TH FLOOR

ROCKROSE CONSTRUCTION CORP (Continued) **1010566745**

NEW YORK, NY 10010
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 11/11/2006
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/23/2008
Facility name: ROCKROSE CONSTRUCTION CORP
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

N66 **KATT CORPORATION** **AST** **A100294658**
NNW **43-29 CRESCENT STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.167 mi.
882 ft. **Site 4 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

AST:
Region: STATE
DEC Region: 2
Site Status: Active
Facility Id: 2-609251
Program Type: PBS
UTM X: 589287.45632
UTM Y: 4511386.3985700002
Expiration Date: 2008/09/18

Affiliation Records:
Site Id: 31096
Affiliation Type: Emergency Contact
Company Name: KATT CORPORATION
Contact Type: Not reported
Contact Name: GAMALIEL RUIZ

KATT CORPORATION (Continued) **A100294658**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 937-4573
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	31096
Affiliation Type:	Mail Contact
Company Name:	KATT CORPORATION
Contact Type:	Not reported
Contact Name:	GAMALIEL RUIZ
Address1:	43-29 CRESCENT STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 937-4573
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	31096
Affiliation Type:	Owner
Company Name:	KATT CORPORATION
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	43-29 CRESCENT ST.
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 937-4573
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	31096
Affiliation Type:	On-Site Operator
Company Name:	KATT CORPORATION
Contact Type:	Not reported
Contact Name:	GAMALIEL RUIZ
Address1:	Not reported
Address2:	Not reported
City:	Not reported

KATT CORPORATION (Continued) **A100294658**

State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 937-4573
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Equipment Records:

I00 - Overfill - None
I00 - Overfill - None
B00 - Tank External Protection - None
J00 - Dispenser - None
C00 - Pipe Location - No Piping
D00 - Pipe Type - No Piping
J00 - Dispenser - None
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
C00 - Pipe Location - No Piping
D00 - Pipe Type - No Piping
A00 - Tank Internal Protection - None
G10 - Tank Secondary Containment - Impervious Underlayment
G10 - Tank Secondary Containment - Impervious Underlayment
A00 - Tank Internal Protection - None

Tank Info:

Tank Number: 001
Tank Id: 66943
Tank Location: 1
Tank Type: Stainless Steel Alloy
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 55
Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Tank Number: 002
Tank Id: 66944
Tank Location: 1
Tank Type: Stainless Steel Alloy
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported

KATT CORPORATION (Continued) **A100294658**

Install Date:	Not reported
Capacity Gallons:	55
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

P67 **46-20 27TH STREET LLC** **AST** **A100183492**
SSE **46-20 27TH STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.175 mi.
923 ft. **Site 1 of 2 in cluster P**

Relative:
Lower

Actual:
13 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Facility Id:	2-606925
Program Type:	PBS
UTM X:	589458.58097999997
UTM Y:	4510905.84301
Expiration Date:	N/A

Affiliation Records:

Site Id:	28780
Affiliation Type:	On-Site Operator
Company Name:	46-20 27TH STREET LLC
Contact Type:	Not reported
Contact Name:	SHAHRAM NASSI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 777-9131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	8/8/2007

Site Id:	28780
Affiliation Type:	Mail Contact
Company Name:	46-20 27TH STREET LLC
Contact Type:	Not reported
Contact Name:	SHAHRAM NASSI
Address1:	54 EAST 11TH STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10003
Country Code:	001
Phone:	(212) 777-9131
Phone Ext:	Not reported

46-20 27TH STREET LLC (Continued) **A100183492**

Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	8/8/2007

Site Id:	28780
Affiliation Type:	Emergency Contact
Company Name:	46-20 27TH STREET LLC % SHAHRAM NASSI
Contact Type:	Not reported
Contact Name:	SHAHRAM NASSI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(212) 777-9131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	8/8/2007

Site Id:	28780
Affiliation Type:	Owner
Company Name:	46-20 27TH STREET LLC % SHAHRAM NASSI
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	54 EAST 11TH STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10003
Country Code:	001
Phone:	(212) 777-9131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	8/8/2007

Equipment Records:

A00 - Tank Internal Protection - None
D00 - Pipe Type - No Piping
J00 - Dispenser - None
G10 - Tank Secondary Containment - Impervious Underlayment
B00 - Tank External Protection - None
I00 - Overfill - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
C00 - Pipe Location - No Piping

Tank Info:

Tank Number:	001
Tank Id:	62051
Tank Location:	3

46-20 27TH STREET LLC (Continued) **A100183492**

Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	250
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	1/1/2006
Register:	True
Modified By:	NRLOMBAR
Last Modified:	8/8/2007

N68 **AEROSOURCE INC** **RCRA-NonGen** **1000553955**
NNW **25-19 43RD AVE** **FINDS** **NYD986963932**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.175 mi.
923 ft. **Site 5 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	AEROSOURCE INC
Facility address:	25-19 43RD AVE LONG ISLAND CITY, NY 111014208
EPA ID:	NYD986963932
Mailing address:	43RD AVE LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	43RD AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	AEROSOURCE INC
Owner/operator address:	UNKNOWN UNKNOWN, NY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	AEROSOURCE INC
Owner/operator address:	UNKNOWN UNKNOWN, NY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator

AEROSOURCE INC (Continued) **1000553955**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: AEROSOURCE INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: AEROSOURCE INC
Classification: Not a generator, verified

Date form received by agency: 07/22/1991
Facility name: AEROSOURCE INC
Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/02/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004473258

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

AEROSOURCE INC (Continued) **1000553955**

NY MANIFEST:

EPA ID:	NYD986963932
Country:	USA
Mailing Name:	AEROSOURCE INCORPORATION
Mailing Contact:	MITCH SHULMAN
Mailing Address:	11 CAMPUS DR
Mailing Address 2:	Not reported
Mailing City:	SOMERSET
Mailing State:	NJ
Mailing Zip:	08873
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-392-5800

Document ID:	NJA1206298
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS869
Trans2 State ID:	Not reported
Generator Ship Date:	910913
Trans1 Recv Date:	910913
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910917
Part A Recv Date:	911007
Part B Recv Date:	911004
Generator EPA ID:	NYD986963932
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00212
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	NJA1214952
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJDEPS869
Trans2 State ID:	Not reported
Generator Ship Date:	910830
Trans1 Recv Date:	910830
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910906
Part A Recv Date:	910912
Part B Recv Date:	910926
Generator EPA ID:	NYD986963932
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00389
Units:	P - Pounds
Number of Containers:	001

AEROSOURCE INC (Continued) **1000553955**

Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	NJA1199083
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS869
Trans2 State ID:	Not reported
Generator Ship Date:	910802
Trans1 Recv Date:	910802
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910807
Part A Recv Date:	910815
Part B Recv Date:	910826
Generator EPA ID:	NYD986963932
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	02334
Units:	P - Pounds
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

69
South
1/8-1/4
0.178 mi.
941 ft.

CON EDISON MANHOLE 954
47TH ST & SKILLMAN AVE
LONG ISLAND CITY, NY 11101

RCRA-NonGen **1010326800**
MANIFEST **NYP004143129**

Relative:
Lower

Actual:
14 ft.

RCRA-NonGen:

Date form received by agency:	11/17/2006
Facility name:	CON EDISON MANHOLE 954
Facility address:	47TH ST & SKILLMAN AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYP004143129
Mailing address:	4 IRVING PL, RM 828 NEW YORK, NY 10003
Contact:	MICHAEL DAUGHTREY
Contact address:	4 IRVING PL, RM 828 NEW YORK, NY 10003
Contact country:	US
Contact telephone:	(212) 580-8383
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

CON EDISON MANHOLE 954 (Continued) **1010326800**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 11/16/2006
Facility name: CON EDISON MANHOLE 954
Site name: CON EDISON
Classification: Not a generator, verified

Date form received by agency: 11/15/2006
Facility name: CON EDISON MANHOLE 954
Site name: CON EDISON
Classification: Unverified

Violation Status: No violations found

NY MANIFEST:
EPA ID: NYP004143129
Country: USA
Mailing Name: CONSOLIDATAED EDISON
Mailing Contact: FRANKLIN MURRAY
Mailing Address: 4 IRVING PLACE RM 828
Mailing Address 2: Not reported
Mailing City: NEW YORK
Mailing State: NY
Mailing Zip: 10003
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-460-2808

Document ID: NYE1286631
Manifest Status: Not reported
Trans1 State ID: NYD006982359
Trans2 State ID: Not reported
Generator Ship Date: 06/24/2006
Trans1 Recv Date: 06/24/2006
Trans2 Recv Date: Not reported
TSD Site Recv Date: 06/26/2006
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYP004143129
Trans1 EPA ID: 12446JT
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: B007 - OTHER MISCELLANEOUS PCB WASTES
Quantity: 00168

CON EDISON MANHOLE 954 (Continued) **1010326800**

Units:	K - Kilograms (2.2 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	2006

N70 **FEDERAL PACIFIC ELECTRIC CO** **RCRA-NonGen** **1000212443**
NNW **4300 CRESCENT ST** **FINDS** **NYD001268325**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.179 mi.
943 ft. **Site 6 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	FEDERAL PACIFIC ELECTRIC CO
Facility address:	4300 CRESCENT ST LONG ISLAND CITY, NY 111014207
EPA ID:	NYD001268325
Mailing address:	CRESCENT ST LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	CRESCENT ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

FEDERAL PACIFIC ELECTRIC CO (Continued) **1000212443**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: FEDERAL PACIFIC ELECTRIC CO
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: FEDERAL PACIFIC ELECTRIC CO
Classification: Not a generator, verified

Date form received by agency: 09/26/1985
Facility name: FEDERAL PACIFIC ELECTRIC CO
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 01/11/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110001582537

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD001268325
Country: USA
Mailing Name: AMERICAN PROPERTIES CORPORATION
Mailing Contact: C/O TINICUM INVESTORS
Mailing Address: 85 2ND AVE
Mailing Address 2: Not reported
Mailing City: NEW YORK

FEDERAL PACIFIC ELECTRIC CO (Continued) **1000212443**

Mailing State:	NY
Mailing Zip:	10017
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-786-7300

Document ID:	NJA0334940
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	870918
Trans1 Recv Date:	870918
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870918
Part A Recv Date:	871006
Part B Recv Date:	870925
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	02500
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

Document ID:	NYA3544885
Manifest Status:	Completed copy
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	870603
Trans1 Recv Date:	870603
Trans2 Recv Date:	870608
TSD Site Recv Date:	870609
Part A Recv Date:	870609
Part B Recv Date:	870615
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	DCD981735244
Trans2 EPA ID:	DCD981735244
TSDF ID:	OHD083377010
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Quantity:	00020
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	132
Year:	87

Document ID:	NJA0403467
Manifest Status:	Completed copy

FEDERAL PACIFIC ELECTRIC CO (Continued) **1000212443**

Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	880411
Trans1 Recv Date:	880411
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	880411
Part A Recv Date:	880418
Part B Recv Date:	880419
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00495
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	009
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00165
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	88

FEDERAL PACIFIC ELECTRIC CO (Continued) **1000212443**

Document ID:	NJA0369424
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	871223
Trans1 Recv Date:	871223
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871223
Part A Recv Date:	871230
Part B Recv Date:	880105
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00165
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00550
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	010
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

Document ID:	NJA0403482
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	880414
Trans1 Recv Date:	880414
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	880414
Part A Recv Date:	880601
Part B Recv Date:	880420
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	NJD991291105

FEDERAL PACIFIC ELECTRIC CO (Continued) **1000212443**

Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00520
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	88

Document ID:	NJA0534650
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	881104
Trans1 Recv Date:	881104
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	881104
Part A Recv Date:	881122
Part B Recv Date:	881220
Generator EPA ID:	NYD001268325
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	88

N71 **43-00 CRESCENT ST.** **UST** **U001840988**
NNW **43-00 CRESCENT ST** **HIST UST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.179 mi.
946 ft. **Site 7 of 7 in cluster N**

Relative:
Lower

Actual:
14 ft.

UST:

Facility Id:	2-480606
Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Program Type:	PBS
Expiration Date:	N/A
UTM X:	589296.38959999999
UTM Y:	4511415.8164299997

Affiliation Records:

Site Id:	21452
Affiliation Type:	Owner
Company Name:	43-00 CRESCENT ST REALTY CORP.
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	309 E. 45 STREET

43-00 CRESCENT ST. (Continued) **U001840988**

Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10017
Country Code:	001
Phone:	(212) 697-4422
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	21452
Affiliation Type:	Mail Contact
Company Name:	43-00 CRESCENT ST REALTY CORP.
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	309 E. 45 STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10017
Country Code:	001
Phone:	(212) 697-4422
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	21452
Affiliation Type:	Emergency Contact
Company Name:	43-00 CRESCENT ST REALTY CORP.
Contact Type:	Not reported
Contact Name:	DAN HARDER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 628-6504
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	21452
Affiliation Type:	On-Site Operator
Company Name:	43-00 CRESCENT ST.
Contact Type:	Not reported
Contact Name:	ROCKROSE CONSTRUCTION CORP.
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN

43-00 CRESCENT ST. (Continued) **U001840988**

Zip Code:	Not reported
Country Code:	001
Phone:	(212) 697-4422
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
I00 - Overfill - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
C00 - Pipe Location - No Piping
J02 - Dispenser - Suction
I00 - Overfill - None
I00 - Overfill - None
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
C00 - Pipe Location - No Piping
G00 - Tank Secondary Containment - None
C00 - Pipe Location - No Piping
G00 - Tank Secondary Containment - None
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
I00 - Overfill - None
D00 - Pipe Type - No Piping
D00 - Pipe Type - No Piping
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction

Tank Info:

43-00 CRESCENT ST. (Continued) **U001840988**

Site ID:	21452
Tank Number:	001
Tank ID:	41093
Tank Status:	Closed Prior to Micro Conversion, 03/91
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	6000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	21452
Tank Number:	002
Tank ID:	41094
Tank Status:	Closed Prior to Micro Conversion, 03/91
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	5000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	21452
Tank Number:	003
Tank ID:	41095
Tank Status:	Closed Prior to Micro Conversion, 03/91
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	1000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

43-00 CRESCENT ST. (Continued) **U001840988**

Site ID: 21452

Tank Number: 004
Tank ID: 41096
Tank Status: Closed Prior to Micro Conversion, 03/91
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 5000
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

Site ID: 21452

Tank Number: 005
Tank ID: 41097
Tank Status: Closed Prior to Micro Conversion, 03/91
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 500
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

HIST UST:
PBS Number: 2-480606
SPDES Number: Not reported
Emergency Contact: DAN HARDER
Emergency Telephone: (212) 628-6504
Operator: ROCKROSE CONSTRUCTION CORP.
Operator Telephone: (212) 697-4422
Owner Name: 43-00 CRESCENT ST REALTY CORP.
Owner Address: 309 E. 45 STREET
Owner City,St,Zip: NEW YORK, NY 10017
Owner Telephone: (212) 697-4422
Owner Type: Not reported
Owner Subtype: Not reported
Mailing Name: 43-00 CRESCENT ST REALTY CORP.
Mailing Address: 309 E. 45 STREET
Mailing Address 2: Not reported
Mailing City,St,Zip: NEW YORK, NY 10017
Mailing Contact: Not reported
Mailing Telephone: (212) 697-4422

43-00 CRESCENT ST. (Continued) **U001840988**

Owner Mark:	Second Owner
Facility Status:	2 - Unregulated by PBS (the total capacity is less than 1,101 gallons) and Subpart 360-14.
Facility Addr2:	43000 CRESCENT ST
SWIS ID:	6301
Old PBS Number:	032085
Facility Type:	Not reported
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	Not reported
Expiration Date:	05/16/1995
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	0
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	Closed Before April 1, 1991
Install Date:	Not reported
Capacity (gals):	6000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Tank Id:	002
Tank Location:	UNDERGROUND

43-00 CRESCENT ST. (Continued) **U001840988**

Tank Status:	Closed Before April 1, 1991
Install Date:	Not reported
Capacity (gals):	5000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Tank Id:	003
Tank Location:	UNDERGROUND
Tank Status:	Closed Before April 1, 1991
Install Date:	Not reported
Capacity (gals):	1000
Product Stored:	UNKNOWN
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	Not reported
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Tank Id:	004
Tank Location:	UNDERGROUND
Tank Status:	Closed Before April 1, 1991
Install Date:	Not reported
Capacity (gals):	5000

43-00 CRESCENT ST. (Continued) **U001840988**

Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	Not reported
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Tank Id:	005
Tank Location:	UNDERGROUND
Tank Status:	Closed Before April 1, 1991
Install Date:	Not reported
Capacity (gals):	500
Product Stored:	UNKNOWN
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

M72 **MATSON MFG CO INC** **RCRA-NonGen** **1000384219**
WSW **45-17 PEARSON ST** **FINDS** **NYD088488598**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.179 mi.
947 ft. **Site 2 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	MATSON MFG CO INC
Facility address:	45-17 PEARSON ST LONG ISLAND CITY, NY 111014307
EPA ID:	NYD088488598
Mailing address:	PEARSON ST LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	PEARSON ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	INTERNATIONAL FASTENER RESEARCH CORP.
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	INTERNATIONAL FASTENER RESEARCH CORP.
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

MATSON MFG CO INC (Continued) **1000384219**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: MATSON MFG CO INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: MATSON MFG CO INC
Classification: Not a generator, verified

Date form received by agency: 08/07/1980
Facility name: MATSON MFG CO INC
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 04/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110009468931

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD088488598
Country: USA
Mailing Name: MATSON MFG CO INC
Mailing Contact: HARRY C. HAINES SUPERVIS
Mailing Address: 45-17 PEARSON ST
Mailing Address 2: Not reported
Mailing City: LONG IS CY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-786-1744

Document ID: NYO1546911

MATSON MFG CO INC (Continued) **1000384219**

Manifest Status:	Completed copy
Trans1 State ID:	NY2A029
Trans2 State ID:	Not reported
Generator Ship Date:	820611
Trans1 Recv Date:	820611
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	820611
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	F003 - UNKNOWN
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	82

Document ID:	NYO1145043
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	02A-029
Trans2 State ID:	Not reported
Generator Ship Date:	820225
Trans1 Recv Date:	820225
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	820225
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	F003 - UNKNOWN
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	82

Document ID:	NYO1603242
Manifest Status:	Generator copy
Trans1 State ID:	2A029
Trans2 State ID:	Not reported
Generator Ship Date:	810619
Trans1 Recv Date:	810619
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	Not reported
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported

MATSON MFG CO INC (Continued) **1000384219**

Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00220
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 004
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 80-81

Document ID: NYO1603251
Manifest Status: TSDF copy
Trans1 State ID: Not reported
Trans2 State ID: Not reported
Generator Ship Date: 810410
Trans1 Recv Date: Not reported
Trans2 Recv Date: Not reported
TSD Site Recv Date: 810313
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD088488598
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: Not reported
Waste Code: Not reported
Quantity: Not reported
Units: Not reported
Number of Containers: Not reported
Container Type: Not reported
Handling Method: Not reported
Specific Gravity: Not reported
Year: 80-81

Document ID: NYO1586826
Manifest Status: Completed copy
Trans1 State ID: 02A-029
Trans2 State ID: Not reported
Generator Ship Date: 811027
Trans1 Recv Date: 811027
Trans2 Recv Date: Not reported
TSD Site Recv Date: 811027
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F005 - UNKNOWN
Quantity: 00220
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 004
Container Type: DM - Metal drums, barrels

MATSON MFG CO INC (Continued) **1000384219**

Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 80-81

Document ID: NYO2721177
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 830909
Trans1 Recv Date: 830909
Trans2 Recv Date: Not reported
TSD Site Recv Date: 830909
Part A Recv Date: 030922
Part B Recv Date: 030922
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F001 - UNKNOWN
Quantity: 00165
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 83

Document ID: NYO2058264
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 821208
Trans1 Recv Date: 821208
Trans2 Recv Date: Not reported
TSD Site Recv Date: 821208
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00165
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Waste Code: Not reported
Quantity: 00110
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100

MATSON MFG CO INC (Continued) **1000384219**

Year: 82

Document ID: NYO2446218
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 820910
Trans1 Recv Date: 820910
Trans2 Recv Date: Not reported
TSD Site Recv Date: 820910
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00325
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 005
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 82

Document ID: NYO2841102
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 830304
Trans1 Recv Date: 830304
Trans2 Recv Date: Not reported
TSD Site Recv Date: 830304
Part A Recv Date: 030322
Part B Recv Date: 030322
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00165
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 83

Document ID: NYO3018465
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 830606
Trans1 Recv Date: 830606

MATSON MFG CO INC (Continued) **1000384219**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830605
Part A Recv Date:	030628
Part B Recv Date:	030628
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	F003 - UNKNOWN
Quantity:	00220
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	83

Document ID:	NYO2736774
Manifest Status:	Completed copy
Trans1 State ID:	NY2A029
Trans2 State ID:	Not reported
Generator Ship Date:	831215
Trans1 Recv Date:	831215
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	831215
Part A Recv Date:	031227
Part B Recv Date:	031227
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	F003 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	83

Document ID:	NYO2736207
Manifest Status:	Completed copy
Trans1 State ID:	NY2A029
Trans2 State ID:	Not reported
Generator Ship Date:	831128
Trans1 Recv Date:	831128
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	831128

MATSON MFG CO INC (Continued) **1000384219**

Part A Recv Date: 031207
Part B Recv Date: 031207
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00220
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 004
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 83

Document ID: NYA1446264
Manifest Status: Completed copy
Trans1 State ID: XB72HPNJ
Trans2 State ID: Not reported
Generator Ship Date: 841218
Trans1 Recv Date: 841218
Trans2 Recv Date: Not reported
TSD Site Recv Date: 841218
Part A Recv Date: 841220
Part B Recv Date: 841227
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 01155
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 84

Document ID: NYO4111677
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 840608
Trans1 Recv Date: 840608
Trans2 Recv Date: Not reported
TSD Site Recv Date: 840608
Part A Recv Date: 840613
Part B Recv Date: 840620
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00110
Units: G - Gallons (liquids only)* (8.3 pounds)

MATSON MFG CO INC (Continued) **1000384219**

Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 84

Document ID: NYO3705408
Manifest Status: Completed copy
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 840828
Trans1 Recv Date: 840828
Trans2 Recv Date: Not reported
TSD Site Recv Date: 840828
Part A Recv Date: 840831
Part B Recv Date: 840910
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 01155
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 84

Document ID: NYO3144636
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NY2A029
Trans2 State ID: Not reported
Generator Ship Date: 840327
Trans1 Recv Date: 840327
Trans2 Recv Date: Not reported
TSD Site Recv Date: 840327
Part A Recv Date: 840530
Part B Recv Date: 840409
Generator EPA ID: NYD088488598
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: F003 - UNKNOWN
Quantity: 00330
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 006
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 84

Document ID: CTA0078430
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

MATSON MFG CO INC (Continued) **1000384219**

Trans1 State ID:	6691JWNY
Trans2 State ID:	X612XBNJ
Generator Ship Date:	860115
Trans1 Recv Date:	860115
Trans2 Recv Date:	860123
TSD Site Recv Date:	860117
Part A Recv Date:	860219
Part B Recv Date:	860131
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	CTD981069099
Trans2 EPA ID:	CTD981069099
TSDF ID:	CTD018656819
Waste Code:	F007 - PLATING BATH SOL FM ELECTROPLATING OPER
Quantity:	00570
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	86

Document ID:	NYA3812488
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	860626
Trans1 Recv Date:	860626
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	860626
Part A Recv Date:	860813
Part B Recv Date:	860630
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Quantity:	00002
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00005
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	86

Document ID:	NYA3812477
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	97763GT
Trans2 State ID:	Not reported

MATSON MFG CO INC (Continued) **1000384219**

Generator Ship Date:	860626
Trans1 Recv Date:	860626
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	860626
Part A Recv Date:	860813
Part B Recv Date:	860630
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	011
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00165
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00090
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00022
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	86

Document ID:	NYA3128646
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	18946GL
Trans2 State ID:	Not reported
Generator Ship Date:	860725
Trans1 Recv Date:	860725
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	860725
Part A Recv Date:	860903
Part B Recv Date:	860801
Generator EPA ID:	NYD088488598
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	P106 - SODIUM CYANIDE
Quantity:	00500

MATSON MFG CO INC (Continued) **1000384219**

Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	86

Click this hyperlink while viewing on your computer to access
1 additional NY_MANIFEST: record(s) in the EDR Site Report.

M73 **STERNBERGER MOTOR - G A P REALTY** **RCRA-NonGen** **1000789790**
SW **45-55 PEARSON ST APT UNKNOWN** **FINDS** **NYD987012549**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.181 mi.
958 ft. **Site 3 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	STERNBERGER MOTOR - G A P REALTY
Facility address:	45-55 PEARSON ST APT UNKNOWN MULTIPLE UNITS ON THE SITE LONG ISLAND CITY, NY 11101
EPA ID:	NYD987012549
Mailing address:	PEARSON ST LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	PEARSON ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MICHAEL GLUCK
Owner/operator address:	45-55 PEARSON ST LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 361-2121
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MICHAEL GLUCK
Owner/operator address:	45-55 PEARSON ST LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 361-2121
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

STERNBERGER MOTOR - G A P REALTY (Continued) **1000789790**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: STERNBERGER MOTOR - G A P REALTY
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: STERNBERGER MOTOR - G A P REALTY
Classification: Not a generator, verified

Date form received by agency: 08/18/1992
Facility name: STERNBERGER MOTOR - G A P REALTY
Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 07/23/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

FINDS:

Registry ID: 110004494128

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD987012549
Country: USA
Mailing Name: STERNBERGER MOTOR

STERNBERGER MOTOR - G A P REALTY (Continued) **1000789790**

Mailing Contact:	STERNBERGER MOTOR
Mailing Address:	44-55 PEARSON STREET
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	Not reported
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-361-2121

Document ID:	NYB4124376
Manifest Status:	Completed copy
Trans1 State ID:	DEC1A036
Trans2 State ID:	Not reported
Generator Ship Date:	920922
Trans1 Recv Date:	920922
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	920925
Part A Recv Date:	Not reported
Part B Recv Date:	921005
Generator EPA ID:	NYD987012549
Trans1 EPA ID:	NYD980592570
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	01200
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	92

M74 **STERNBERGER WAREHOUSE** **MANIFEST** **1009231834**
SW **45-55 PEARSON ST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.181 mi.
958 ft. **Site 4 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

NY MANIFEST:

EPA ID:	NYP000789529
Country:	USA
Mailing Name:	STERNBERGER WAREHOUSE
Mailing Contact:	STERNBERGER WAREHOUSE
Mailing Address:	45-55 PEARSON ST
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-482-0300

Document ID:	NYA2204865
Manifest Status:	Completed copy
Trans1 State ID:	NY64503GJ

STERNBERGER WAREHOUSE (Continued) **1009231834**

Trans2 State ID:	Not reported
Generator Ship Date:	860317
Trans1 Recv Date:	860317
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	860317
Part A Recv Date:	860321
Part B Recv Date:	860325
Generator EPA ID:	NYP000789529
Trans1 EPA ID:	NYD049178296
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049178296
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00042
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00107
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00100
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	86

M75 **MARKETING INDUSTRIES GROUP LTD.** **HIST UST** **U000394454**
SW **45-55 PEARSON STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.181 mi.
958 ft. **Site 5 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

HIST UST:

PBS Number:	2-081566
SPDES Number:	Not reported
Emergency Contact:	RICHARD VESPI
Emergency Telephone:	(718) 482-0300
Operator:	CITYWIDE SELF STORAGE
Operator Telephone:	(718) 482-0300
Owner Name:	MARKETING INDUSTRIES GROUP LTD.
Owner Address:	45-55 PEARSON STREET
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 482-7022
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	MARKETING INDUSTRIES GROUP LTD.
Mailing Address:	45-55 PEARSON STREET
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, N.Y. 11101
Mailing Contact:	RON REGAN

MARKETING INDUSTRIES GROUP LTD. (Continued) **U000394454**

Mailing Telephone:	(718) 482-7022
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	45-55 PEARSON ST
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	OTHER
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	11/16/2001
Expiration Date:	11/05/2006
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	10000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	Closed-Removed
Install Date:	19671201
Capacity (gals):	550
Product Stored:	DIESEL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	06/01/1992
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

MARKETING INDUSTRIES GROUP LTD. (Continued) **U000394454**

Tank Id:	002
Tank Location:	UNDERGROUND
Tank Status:	Closed-Removed
Install Date:	19671201
Capacity (gals):	550
Product Stored:	LEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	06/01/1992
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	003
Tank Location:	UNDERGROUND
Tank Status:	Closed-Removed
Install Date:	19671201
Capacity (gals):	550
Product Stored:	LEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	06/01/1992
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	004
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place

MARKETING INDUSTRIES GROUP LTD. (Continued) **U000394454**

Install Date:	19751201
Capacity (gals):	550
Product Stored:	UNKNOWN
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	005
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	19751201
Capacity (gals):	550
Product Stored:	UNKNOWN
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

M76 **CITYWIDE SELF STORAGE** **AST** **A100193870**
SW **45-55 PEARSON STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.181 mi.
958 ft. **Site 6 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-081566
Program Type:	PBS
UTM X:	589133.75289
UTM Y:	4511017.0601700004
Expiration Date:	2010/01/03

Affiliation Records:

Site Id:	1707
Affiliation Type:	Mail Contact
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	Not reported
Contact Name:	EDDIE VAN PELT
Address1:	11766 WILSHIRE BLVD
Address2:	SUITE 1450
City:	LOS ANGELES
State:	CA
Zip Code:	90025
Country Code:	001
Phone:	(310) 268-8344
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	JMKRIMGO
Date Last Modified:	10/31/2006

Site Id:	1707
Affiliation Type:	Emergency Contact
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	Not reported
Contact Name:	RICHARD VESPI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 482-0300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Site Id:	1707
Affiliation Type:	On-Site Operator
Company Name:	CITYWIDE SELF STORAGE
Contact Type:	Not reported
Contact Name:	DANA OBERFEST
Address1:	Not reported
Address2:	Not reported

CITYWIDE SELF STORAGE (Continued) **A100193870**

City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-0300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Site Id:	1707
Affiliation Type:	Owner
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	EXECUTIVE VICE PRESIDENT
Contact Name:	RICHARD PAPALIAN
Address1:	11766 WILSHIRE BLVD #1450
Address2:	Not reported
City:	LOS ANGELES
State:	CA
Zip Code:	90025
Country Code:	001
Phone:	(310) 268-8344
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Equipment Records:

F04 - Pipe External Protection - Fiberglass
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
E09 - Piping Secondary Containment - Modified Double-Walled (Aboveground)
B00 - Tank External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
C01 - Pipe Location - Aboveground
H00 - Tank Leak Detection - None
I01 - Overfill - Float Vent Valve
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
G00 - Tank Secondary Containment - None
I00 - Overfill - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
A01 - Tank Internal Protection - Epoxy Liner
I00 - Overfill - None
G00 - Tank Secondary Containment - None

CITYWIDE SELF STORAGE (Continued) **A100193870**

H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
B01 - Tank External Protection - Painted/Asphalt Coating
G00 - Tank Secondary Containment - None
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
I00 - Overfill - None
F00 - Pipe External Protection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
D02 - Pipe Type - Galvanized Steel
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
D02 - Pipe Type - Galvanized Steel
L09 - Piping Leak Detection - Exempt Suction Piping
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
G01 - Tank Secondary Containment - Diking (Aboveground)

Tank Info:

Tank Number:	006
Tank Id:	62393
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	10000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	KXTANG
Last Modified:	1/3/2005

M77 **CITYWIDE SELF STORAGE** **UST** **U004081629**
SW **45-55 PEARSON STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.181 mi.
958 ft. **Site 7 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

UST:

Facility Id:	2-081566
Region:	STATE
DEC Region:	2
Site Status:	Active
Program Type:	PBS
Expiration Date:	2010/01/03
UTM X:	589133.75289
UTM Y:	4511017.0601700004

Affiliation Records:

Site Id:	1707
Affiliation Type:	Mail Contact
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	Not reported
Contact Name:	EDDIE VAN PELT
Address1:	11766 WILSHIRE BLVD
Address2:	SUITE 1450
City:	LOS ANGELES
State:	CA
Zip Code:	90025
Country Code:	001
Phone:	(310) 268-8344
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	JMKRIMGO
Date Last Modified:	10/31/2006

Site Id:	1707
Affiliation Type:	Emergency Contact
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	Not reported
Contact Name:	RICHARD VESPI
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 482-0300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Site Id:	1707
Affiliation Type:	On-Site Operator
Company Name:	CITYWIDE SELF STORAGE
Contact Type:	Not reported
Contact Name:	DANA OBERFEST
Address1:	Not reported
Address2:	Not reported

CITYWIDE SELF STORAGE (Continued) **U004081629**

City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-0300
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Site Id:	1707
Affiliation Type:	Owner
Company Name:	JRK NEW YORK STORAGE I LLC
Contact Type:	EXECUTIVE VICE PRESIDENT
Contact Name:	RICHARD PAPALIAN
Address1:	11766 WILSHIRE BLVD #1450
Address2:	Not reported
City:	LOS ANGELES
State:	CA
Zip Code:	90025
Country Code:	001
Phone:	(310) 268-8344
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	1/3/2005

Equipment Records:

F04 - Pipe External Protection - Fiberglass
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
E09 - Piping Secondary Containment - Modified Double-Walled (Aboveground)
B00 - Tank External Protection - None
B00 - Tank External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
C01 - Pipe Location - Aboveground
H00 - Tank Leak Detection - None
I01 - Overfill - Float Vent Valve
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
G00 - Tank Secondary Containment - None
I00 - Overfill - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
A01 - Tank Internal Protection - Epoxy Liner
I00 - Overfill - None
G00 - Tank Secondary Containment - None

CITYWIDE SELF STORAGE (Continued) **U004081629**

H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
B01 - Tank External Protection - Painted/Asphalt Coating
G00 - Tank Secondary Containment - None
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
I00 - Overfill - None
F00 - Pipe External Protection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
D02 - Pipe Type - Galvanized Steel
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D02 - Pipe Type - Galvanized Steel
D02 - Pipe Type - Galvanized Steel
L09 - Piping Leak Detection - Exempt Suction Piping
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
G01 - Tank Secondary Containment - Diking (Aboveground)

Tank Info:

Site ID:	1707
Tank Number:	001
Tank ID:	2915
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	12/1/1967
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	6/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	1707
Tank Number:	002
Tank ID:	2916
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported

CITYWIDE SELF STORAGE (Continued) **U004081629**

Install Date:	12/1/1967
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	6/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	1707
Tank Number:	003
Tank ID:	2917
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	12/1/1967
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	6/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	1707
Tank Number:	004
Tank ID:	2918
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	12/1/1975
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	1707
Tank Number:	005
Tank ID:	2919
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported

CITYWIDE SELF STORAGE (Continued) **U004081629**

Install Date:	12/1/1975
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

M78 **GAP REALTY CO** **UST U000724472**
SW **45-56 PEARSON ST** **HIST UST N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.182 mi.
958 ft. **Site 8 of 8 in cluster M**

Relative:
Lower

Actual:
10 ft.

UST:

Facility Id:	2-600746
Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Program Type:	PBS
Expiration Date:	N/A
UTM X:	589134.61719000002
UTM Y:	4511015.4052200001

Affiliation Records:

Site Id:	22724
Affiliation Type:	On-Site Operator
Company Name:	GAP REALTY CO
Contact Type:	Not reported
Contact Name:	DOUG BEHRMANN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 745-9682
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22724
Affiliation Type:	Owner
Company Name:	MICHAEL GLUCK-GEN. PARTNER
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	45-55 PEARSON ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001

GAP REALTY CO (Continued) **U000724472**

Phone:	(718) 361-2121
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22724
Affiliation Type:	Mail Contact
Company Name:	GAP REALTY CO
Contact Type:	Not reported
Contact Name:	DOUG BEHRMANN
Address1:	45-55 PEARSON ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 361-2121
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	22724
Affiliation Type:	Emergency Contact
Company Name:	MICHAEL GLUCK-GEN. PARTNER
Contact Type:	Not reported
Contact Name:	DOUG BEHRMANN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 745-9682
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
B00 - Tank External Protection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
C02 - Pipe Location - Underground/On-ground
C02 - Pipe Location - Underground/On-ground
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction

GAP REALTY CO (Continued) **U000724472**

I00 - Overfill - None
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
C02 - Pipe Location - Underground/On-ground
B00 - Tank External Protection - None
I00 - Overfill - None

Tank Info:

Site ID:	22724
Tank Number:	D1
Tank ID:	43537
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	5/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	22724
Tank Number:	G1
Tank ID:	43535
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	5/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	22724
Tank Number:	G2
Tank ID:	43536

GAP REALTY CO (Continued) **U000724472**

Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	5/1/1992
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

HIST UST:

PBS Number:	2-600746
SPDES Number:	Not reported
Emergency Contact:	DOUG BEHRMANN
Emergency Telephone:	(718) 745-9682
Operator:	DOUG BEHRMANN
Operator Telephone:	(718) 745-9682
Owner Name:	MICHAEL GLUCK-GEN. PARTNER
Owner Address:	45-55 PEARSON ST
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 361-2121
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	GAP REALTY CO
Mailing Address:	45-55 PEARSON ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	DOUG BEHRMANN
Mailing Telephone:	(718) 361-2121
Owner Mark:	First Owner
Facility Status:	2 - Unregulated by PBS (the total capacity is less than 1,101 gallons) and Subpart 360-14.
Facility Addr2:	45056 PEARSON ST
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	TRUCKING/TRANSPORTATION
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	Not reported
Expiration Date:	05/08/1997
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	0
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	0
Dead Letter:	False
CBS Number:	Not reported

GAP REALTY CO (Continued) **U000724472**

Town or City: NEW YORK CITY
County Code: 63
Town or City: 01
Region: 2

Tank Id: D1
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: Not reported
Capacity (gals): 550
Product Stored: DIESEL
Tank Type: Steel/carbon steel
Tank Internal: None
Tank External: None
Pipe Location: Underground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: None
Second Containment: None
Leak Detection: None
Overfill Prot: None
Dispenser: Suction
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: 05/01/1992
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

Tank Id: G1
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: Not reported
Capacity (gals): 550
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel
Tank Internal: None
Tank External: None
Pipe Location: Underground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: None
Second Containment: None
Leak Detection: None
Overfill Prot: None
Dispenser: Suction
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: No Missing Data
Date Closed: 05/01/1992
Test Method: Not reported
Deleted: False
Updated: True
Lat/long: Not reported

GAP REALTY CO (Continued) **U000724472**

Tank Id:	G2
Tank Location:	UNDERGROUND
Tank Status:	Closed-Removed
Install Date:	Not reported
Capacity (gals):	550
Product Stored:	UNLEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	None
Tank External:	None
Pipe Location:	Underground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	None
Second Containment:	None
Leak Detection:	None
Overfill Prot:	None
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	05/01/1992
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

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79 **2415 44TH ROAD LLC** **AST** **A100300808**
NW **24-15 44TH ROAD** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.182 mi.
959 ft.

Relative:
Lower

Actual:
15 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Facility Id:	2-600776
Program Type:	PBS
UTM X:	589177.33453999995
UTM Y:	4511345.8810299998
Expiration Date:	N/A

Affiliation Records:

Site Id:	22753
Affiliation Type:	Owner
Company Name:	ROCKROSE DEVELOPMENT CORPORATION
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	290 PARK AVENUE SOUTH
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10010
Country Code:	001
Phone:	(212) 375-1155
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported

2415 44TH ROAD LLC (Continued) **A100300808**

Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	22753
Affiliation Type:	Mail Contact
Company Name:	COASTAL COMBUSTION CORPORATION
Contact Type:	Not reported
Contact Name:	SERV. DEPT.
Address1:	1310 JERICHO TURNPIKE
Address2:	P.O. BOX 23
City:	NEW HYDE PARK
State:	NY
Zip Code:	11040
Country Code:	001
Phone:	(800) 734-4328
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	22753
Affiliation Type:	Emergency Contact
Company Name:	ROCKROSE DEVELOPMENT CORPORATION
Contact Type:	Not reported
Contact Name:	COASTAL COMBUSTION
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(800) 734-4328
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	22753
Affiliation Type:	On-Site Operator
Company Name:	2415 44TH ROAD LLC
Contact Type:	Not reported
Contact Name:	ISHMAL
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 784-9303
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

2415 44TH ROAD LLC (Continued) **A100300808**

Equipment Records:

J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)
C01 - Pipe Location - Aboveground
B00 - Tank External Protection - None
G03 - Tank Secondary Containment - Vault (w/o access)

Tank Info:

Tank Number:	001
Tank Id:	43712
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	2020
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

Q80 **RML CO.** **AST** **U003396594**
West **24-20 JACKSON AVENUE** **HIST AST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.184 mi.
972 ft. **Site 1 of 3 in cluster Q**

Relative:
Lower

Actual:
16 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-602342
Program Type:	PBS
UTM X:	589102.41793999996
UTM Y:	4511116.0493200002
Expiration Date:	2012/10/26

Affiliation Records:

Site Id:	24299
Affiliation Type:	Mail Contact
Company Name:	RML II, LLC
Contact Type:	MANAGER
Contact Name:	DAVID MORSE
Address1:	57 JUDSON AVE
Address2:	Not reported
City:	DOBBS FERRY
State:	NY
Zip Code:	10522
Country Code:	001

RML CO. (Continued) **U003396594**

Phone:	(914) 674-0063
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	CGFREEDM
Date Last Modified:	6/3/2010

Site Id:	24299
Affiliation Type:	Owner
Company Name:	RML II, LLC
Contact Type:	MANAGER
Contact Name:	DAVID MORSE
Address1:	57 JUDSON AVE
Address2:	Not reported
City:	DOBBS FERRY
State:	NY
Zip Code:	10522
Country Code:	001
Phone:	(914) 674-0063
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	CGFREEDM
Date Last Modified:	6/3/2010

Site Id:	24299
Affiliation Type:	On-Site Operator
Company Name:	RML CO.
Contact Type:	Not reported
Contact Name:	DAVID MORSE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 674-0063
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	24299
Affiliation Type:	Emergency Contact
Company Name:	RML CO.
Contact Type:	Not reported
Contact Name:	DAVID MORSE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 674-0063
Phone Ext:	Not reported
Email:	Not reported

RML CO. (Continued) **U003396594**

Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Equipment Records:

E00 - Piping Secondary Containment - None
C01 - Pipe Location - Aboveground
D01 - Pipe Type - Steel/Carbon Steel/Iron
L09 - Piping Leak Detection - Exempt Suction Piping
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
K00 - Spill Prevention - None
G99 - Tank Secondary Containment - Other
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
H00 - Tank Leak Detection - None
B01 - Tank External Protection - Painted/Asphalt Coating

Tank Info:

Tank Number: 001
Tank Id: 49828
Tank Location: 1
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 4/30/1968
Capacity Gallons: 1500
Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: CGFREEDM
Last Modified: 6/3/2010

HIST AST:

PBS Number: 2-602342
SWIS Code: 6301
Operator: DAVID MORSE
Facility Phone: (914) 674-0063
Facility Addr2: Not reported
Facility Type: Not reported
Emergency: DAVID MORSE
Emergency Tel: (914) 674-0063
Old PBSNO: Not reported
Date Inspected: Not reported
Inspector: Not reported
Result of Inspection: Not reported
Owner Name: RML CO.
Owner Address: 57 JUDSON AVENUE
Owner City,St,Zip: DOBBS FERRY, NY 10522
Federal ID: Not reported
Owner Tel: (914) 674-0063
Owner Type: Corporate/Commercial
Owner Subtype: Not reported

RML CO. (Continued) **U003396594**

Mailing Contact:	DAVID MORSE
Mailing Name:	RML CO.
Mailing Address:	57 JUDSON AVENUE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	DOBBS FERRY, NY 10522
Mailing Telephone:	(914) 674-0063
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	06/21/2000
Expiration:	07/17/2005
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	1500
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	1500
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	0
Tank External:	01
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	00
Tank Containment:	Double-Walled
Leak Detection:	00
Overfill Protection:	04
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

R81 **E ZAPPI DERMATOPATHOLOGY LAB INC** **RCRA-NonGen** **1001197237**
WNW **21-51 44TH DR** **FINDS** **NYR000036426**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.189 mi.
998 ft. **Site 1 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	E ZAPPI DERMATOPATHOLOGY LAB INC
Facility address:	21-51 44TH DR DBA RECYCLING SYSTEMS LONG ISLAND CITY, NY 11101
EPA ID:	NYR000036426
Mailing address:	44TH DR DBA RECYCLING SYSTEMS LONG ISLAND CITY, NY 11101
Contact:	JEROLD GIBBS
Contact address:	44TH DR DBA RECYCLING SYSTEMS LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 458-9078
Contact email:	Not reported
EPA Region:	02
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DAWNMARK REALTY
Owner/operator address:	23-01 44TH DR LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 786-0403
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DAWNMARK REALTY
Owner/operator address:	23-01 44TH DR LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 786-0403
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No

E ZAPPI DERMATOPATHOLOGY LAB INC (Continued) **1001197237**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: E ZAPPI DERMATOPATHOLOGY LAB INC
Classification: Not a generator, verified

Date form received by agency: 03/07/1997
Facility name: E ZAPPI DERMATOPATHOLOGY LAB INC
Classification: Conditionally Exempt Small Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/04/1997
Date achieved compliance: 07/02/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/04/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/04/1997
Date achieved compliance: 07/02/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/04/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 01/22/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/02/1997
Evaluation lead agency: State

Evaluation date: 01/22/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 07/02/1997

E ZAPPI DERMATOPATHOLOGY LAB INC (Continued) **1001197237**

Evaluation lead agency: State

FINDS:

Registry ID: 110004532881

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

R82 **JAGUAR GOLD PRODUCT** **RCRA-NonGen** **1000446330**
WNW **21-30 44TH DR** **FINDS** **NYD986912392**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.189 mi.
998 ft. **Site 2 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	JAGUAR GOLD PRODUCT
Facility address:	21-30 44TH DR LONG ISLAND CITY, NY 111014710
EPA ID:	NYD986912392
Mailing address:	44TH DR LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	44TH DR LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JAGUAR GOLD PRODUCT
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JAGUAR GOLD PRODUCT
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

JAGUAR GOLD PRODUCT (Continued) **1000446330**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: JAGUAR GOLD PRODUCT
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: JAGUAR GOLD PRODUCT
Classification: Not a generator, verified

Date form received by agency: 09/10/1990
Facility name: JAGUAR GOLD PRODUCT
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110009479171

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD986912392
Country: USA
Mailing Name: JAGUAR GOLD PRODUCTS
Mailing Contact: JAGUAR GOLD PRODUCTS
Mailing Address: 21-30 44TH DRIVE
Mailing Address 2: Not reported
Mailing City: QUEENS
Mailing State: NY

JAGUAR GOLD PRODUCT (Continued) **1000446330**

Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-784-7840

Document ID: NJA1622645
Manifest Status: Completed copy
Trans1 State ID: NJDEPE086
Trans2 State ID: Not reported
Generator Ship Date: 940519
Trans1 Recv Date: 940519
Trans2 Recv Date: Not reported
TSD Site Recv Date: 940524
Part A Recv Date: 940601
Part B Recv Date: 940607
Generator EPA ID: NYD986912392
Trans1 EPA ID: ILD984908202
Trans2 EPA ID: Not reported
TSDF ID: NJD002182897
Waste Code: F001 - UNKNOWN
Quantity: 00245
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 94

Document ID: NJA1206312
Manifest Status: Completed copy
Trans1 State ID: NJDEPS869
Trans2 State ID: NJDEPS869
Generator Ship Date: 911001
Trans1 Recv Date: 911001
Trans2 Recv Date: 911003
TSD Site Recv Date: 911003
Part A Recv Date: 911009
Part B Recv Date: 911016
Generator EPA ID: NYD986912392
Trans1 EPA ID: ILD051060408
Trans2 EPA ID: ILD051060408
TSDF ID: NJD002182897
Waste Code: F001 - UNKNOWN
Quantity: 00245
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 91

Document ID: NYC1481163
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJDEPS869

JAGUAR GOLD PRODUCT (Continued) **1000446330**

Trans2 State ID:	10219PNY
Generator Ship Date:	920414
Trans1 Recv Date:	920414
Trans2 Recv Date:	920423
TSD Site Recv Date:	920428
Part A Recv Date:	920423
Part B Recv Date:	920529
Generator EPA ID:	NYD986912392
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	NYD980769947
TSDF ID:	KYD053348108
Waste Code:	F001 - UNKNOWN
Quantity:	00050
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	92

Document ID:	NJA1359603
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS869
Trans2 State ID:	Not reported
Generator Ship Date:	930512
Trans1 Recv Date:	930512
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	930513
Part A Recv Date:	930525
Part B Recv Date:	930602
Generator EPA ID:	NYD986912392
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	F001 - UNKNOWN
Quantity:	00448
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	93

Document ID:	NJA0802614
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	S8690
Trans2 State ID:	S8690
Generator Ship Date:	901019
Trans1 Recv Date:	901019
Trans2 Recv Date:	901024
TSD Site Recv Date:	901025
Part A Recv Date:	901226
Part B Recv Date:	901108
Generator EPA ID:	NYD986912392
Trans1 EPA ID:	ILD051060408

JAGUAR GOLD PRODUCT (Continued) **1000446330**

Trans2 EPA ID:	ILD051060408
TSDF ID:	NJD002182897
Waste Code:	F001 - UNKNOWN
Quantity:	00540
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	90

R83 **ROSS WATCH CASE CORP** **RCRA-NonGen** **1000376253**
WNW **21-30-42 44TH DR** **FINDS** **NYD053175196**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.189 mi.
998 ft. **Site 3 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	ROSS WATCH CASE CORP
Facility address:	21-30-42 44TH DR LONG ISLAND CITY, NY 111014710
EPA ID:	NYD053175196
Mailing address:	44TH DR LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	44TH DR LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROSS WATCH CASE CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ROSS WATCH CASE CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

ROSS WATCH CASE CORP (Continued) **1000376253**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: ROSS WATCH CASE CORP
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: ROSS WATCH CASE CORP
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: ROSS WATCH CASE CORP
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110008002874

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

R84 **DENTSPLY TRU-BYTE** **RCRA-NonGen** **1009399910**
WNW **10-39 44TH DR** **NYR000138743**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.189 mi.
998 ft. **Site 4 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: DENTSPLY TRU-BYTE
Facility address: 10-39 44TH DR
LONG ISLAND CITY, NY 111017013
EPA ID: NYR000138743

DENTSPLY TRU-BYTE (Continued) **1009399910**

Mailing address: W COLLEGE AVE
YORK, PA 174050872
Contact: WAYNE BOLLINGER
Contact address: W COLLEGE AVE
YORK, PA 174050872
Contact country: US
Contact telephone: (717) 849-4240
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: DENTSPLY TRU-BYTE
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/23/2006
Owner/Op end date: Not reported

Owner/operator name: WAYNE BOLLINGER
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/23/2006
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/27/2006
Facility name: DENTSPLY TRU-BYTE
Classification: Large Quantity Generator

Date form received by agency: 03/26/2006

DENTSPLY TRU-BYTE (Continued) **1009399910**

Facility name: DENTSPLY TRU-BYTE
Classification: Large Quantity Generator

Violation Status: No violations found

R85 **CLEANCO INDUSTRIAL SERVICES OF NY INC** **RCRA-NonGen** **1000151535**
WNW **10-39 44TH DR** **FINDS** **NYD066969700**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.189 mi.
998 ft. **Site 5 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: CLEANCO INDUSTRIAL SERVICES OF NY INC
Facility address: 10-39 44TH DR
LONG ISLAND CITY, NY 11101
EPA ID: NYD066969700
Mailing address: 44TH DR
LONG ISLAND CITY, NY 11101
Contact: KEVIN MCDERMOTT
Contact address: 44TH DR
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: (718) 784-8311
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CLEANCO INDUSTRIAL SERVICES OF NY INC
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CLEANCO INDUSTRIAL SERVICES OF NY INC
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

CLEANCO INDUSTRIAL SERVICES OF NY INC (Continued) **1000151535**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: CLEANCO INDUSTRIAL SERVICES OF NY INC
Classification: Not a generator, verified

Date form received by agency: 07/10/1981
Facility name: CLEANCO INDUSTRIAL SERVICES OF NY INC
Classification: Unverified

Violation Status: No violations found

FINDS:

Registry ID: 110004365240

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

R86 **21-45 44TH DRIVE** **UST** **U004122104**
WNW **21-45 44TH DRIVE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.189 mi.
998 ft. **Site 6 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

UST:
Facility Id: 2-610851
Region: STATE
DEC Region: 2
Site Status: Unregulated
Program Type: PBS
Expiration Date: N/A
UTM X: 588181.06611000001
UTM Y: 4511490.1296499996

Affiliation Records:
Site Id: 398441
Affiliation Type: Owner
Company Name: 21-45 44TH DRIVE LLC
Contact Type: MEMBER
Contact Name: STUART SUNA
Address1: 42-22 22ND STREET
Address2: Not reported
City: LONG ISLAND CITY

21-45 44TH DRIVE (Continued) **U004122104**

State: NY
Zip Code: 11101
Country Code: 001
Phone: (718) 906-2198
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: dxliving
Date Last Modified: 5/30/2008

Site Id: 398441
Affiliation Type: Mail Contact
Company Name: LANGAN ENGINEERING & ENVIRONMENTAL SERVICES
Contact Type: Not reported
Contact Name: JOEL LANDES
Address1: 21 PENN PLAZA
Address2: 360 WEST 31ST STREET, 8TH FLOOR
City: NEW YORK
State: NY
Zip Code: 10001
Country Code: 001
Phone: (212) 479-5400
Phone Ext: Not reported
Email: KMERRILL@LANGAN.COM
Fax Number: Not reported
Modified By: CGFREEDM
Date Last Modified: 12/2/2010

Site Id: 398441
Affiliation Type: Emergency Contact
Company Name: 21-45 44TH DRIVE LLC
Contact Type: Not reported
Contact Name: MARK GOLD
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 906-2191
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: dxliving
Date Last Modified: 5/30/2008

Site Id: 398441
Affiliation Type: On-Site Operator
Company Name: 21-45 44TH DRIVE
Contact Type: Not reported
Contact Name: MARK GOLD
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001

21-45 44TH DRIVE (Continued) **U004122104**

Phone: (718) 906-2191
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: dxliving
Date Last Modified: 5/30/2008

Equipment Records:

F00 - Pipe External Protection - None
J00 - Dispenser - None
G00 - Tank Secondary Containment - None
E00 - Piping Secondary Containment - None
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
I00 - Overfill - None
C02 - Pipe Location - Underground/On-ground
H00 - Tank Leak Detection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
K00 - Spill Prevention - None
L00 - Piping Leak Detection - None

Tank Info:
Site ID: 398441

Tank Number: 1
Tank ID: 223364
Tank Status: Closed - Removed
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 1/1/1946
Capacity Gallons: 2000
Tightness Test Method: 00
Next Test Date: Not reported
Date Tank Closed: 7/31/2008
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: CGFREEDM
Last Modified: 12/2/2010

87
NNE
1/8-1/4
0.190 mi.
1003 ft.

J BROTHERS AUTO BODY INC **RCRA-NonGen** **1004760310**
28-20 42ND RD **FINDS** **NYR000039644**
LONG ISLAND CITY, NY 11101 **MANIFEST**

Relative:
Equal

Actual:
19 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: J BROTHERS AUTO BODY INC
Facility address: 28-20 42ND RD
LONG ISLAND CITY, NY 11101
EPA ID: NYR000039644
Mailing address: 42ND RD
LONG ISLAND CITY, NY 11101
Contact: PATRICK JACKMAN
Contact address: 42ND RD
LONG ISLAND CITY, NY 11101

J BROTHERS AUTO BODY INC (Continued) **1004760310**

Contact country: US
Contact telephone: (718) 784-2888
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: J BROTHERS AUTO BODY INC
Owner/operator address: 28-20 42ND RD
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 784-2888
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: J BROTHERS AUTO BODY INC
Owner/operator address: 28-20 42ND RD
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 784-2888
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: J BROTHERS AUTO BODY INC
Classification: Not a generator, verified

Date form received by agency: 05/22/1997
Facility name: J BROTHERS AUTO BODY INC
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

J BROTHERS AUTO BODY INC (Continued) **1004760310**

FINDS:

Registry ID: 110004534549

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYR000039644
Country:	USA
Mailing Name:	JACKMAN BROTHERS AUTO BODY
Mailing Contact:	DARICK JACKMAN
Mailing Address:	28-20 42ND ROAD
Mailing Address 2:	Not reported
Mailing City:	LIC
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-784-2888

Document ID:	NJA2963795
Manifest Status:	Not reported
Trans1 State ID:	NJD080631369
Trans2 State ID:	Not reported
Generator Ship Date:	06/30/1998
Trans1 Recv Date:	06/30/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	07/08/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000039644
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID:	50160
Waste Code:	F003 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	98

Document ID:	NJA3069086
Manifest Status:	Not reported
Trans1 State ID:	NJD080631369
Trans2 State ID:	Not reported

J BROTHERS AUTO BODY INC (Continued) **1004760310**

Generator Ship Date:	10/07/1999
Trans1 Recv Date:	10/07/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/11/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000039644
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID:	50160
Waste Code:	F003 - UNKNOWN
Quantity:	00045
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00
Year:	99

88
SSE
1/8-1/4
0.191 mi.
1007 ft.

SUBACCHI FURNITURE
46-24 28TH ST
LONG ISLAND CITY, NY 11101

RCRA-CESQG **1000144031**
FINDS **NYD045440997**
MANIFEST

Relative:
Lower

Actual:
15 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	SUBACCHI FURNITURE
Facility address:	46-24 28TH ST LONG ISLAND CITY, NY 11101
EPA ID:	NYD045440997
Mailing address:	28TH ST LONG ISLAND CITY, NY 11101
Contact:	STEPHEN VOLPE
Contact address:	28TH ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 361-0551
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

SUBACCHI FURNITURE (Continued) **1000144031**

Owner/Operator Summary:
- Owner/operator name: STEPHEN VOLPE
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: (212) 555-1212
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: STEPHEN VOLPE
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: (212) 555-1212
- Legal status: Private
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Historical Generators:
- Date form received by agency: 01/01/2006
- Facility name: SUBACCHI FURNITURE
- Classification: Conditionally Exempt Small Quantity Generator

- Date form received by agency: 06/02/1986
- Facility name: SUBACCHI FURNITURE
- Classification: Small Quantity Generator

- Violation Status: No violations found

Evaluation Action Summary:
- Evaluation date: 07/23/1998
- Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
- Area of violation: Not reported
- Date achieved compliance: Not reported
- Evaluation lead agency: EPA

SUBACCHI FURNITURE (Continued) **1000144031**

FINDS:

Registry ID: 110012644193

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYD045440997
Country:	USA
Mailing Name:	SUBACCHI FURNITURE
Mailing Contact:	SUBACCHI FURNITURE
Mailing Address:	46-24 28TH STREET
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-361-0551

Document ID:	NJA0298336
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS-10
Trans2 State ID:	Not reported
Generator Ship Date:	870824
Trans1 Recv Date:	870824
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	870825
Part A Recv Date:	870826
Part B Recv Date:	870903
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002454544
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00120

SUBACCHI FURNITURE (Continued) **1000144031**

Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 87

Document ID: NJA0298594
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJDEPS-10
Trans2 State ID: Not reported
Generator Ship Date: 871013
Trans1 Recv Date: 871013
Trans2 Recv Date: Not reported
TSD Site Recv Date: 871013
Part A Recv Date: 871015
Part B Recv Date: 871201
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD980787147
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00150
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 87

Document ID: NJA0386125
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJDEPS-10
Trans2 State ID: Not reported
Generator Ship Date: 880329
Trans1 Recv Date: 880329
Trans2 Recv Date: Not reported
TSD Site Recv Date: 880329
Part A Recv Date: 880505
Part B Recv Date: 880405
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD980787147
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: F005 - UNKNOWN
Quantity: 00130
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 88

Document ID: NJA1106623

SUBACCHI FURNITURE (Continued) **1000144031**

Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS103
Trans2 State ID:	Not reported
Generator Ship Date:	910401
Trans1 Recv Date:	910401
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910402
Part A Recv Date:	910409
Part B Recv Date:	910412
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002454544
Waste Code:	F003 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	91

Document ID:	NYG0099198
Manifest Status:	Completed copy
Trans1 State ID:	XR4643
Trans2 State ID:	Not reported
Generator Ship Date:	970624
Trans1 Recv Date:	970624
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	970624
Part A Recv Date:	970721
Part B Recv Date:	970718
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NYD082785429
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	F005 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	97

Document ID:	NYG0395235
Manifest Status:	Completed copy
Trans1 State ID:	PX3640
Trans2 State ID:	Not reported
Generator Ship Date:	971106
Trans1 Recv Date:	971106
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	971106
Part A Recv Date:	971120
Part B Recv Date:	971124

SUBACCHI FURNITURE (Continued) **1000144031**

Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: F005 - UNKNOWN
Quantity: 00110
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 97

Document ID: NJA0381442
Manifest Status: Completed copy
Trans1 State ID: NJDEPS-10
Trans2 State ID: Not reported
Generator Ship Date: 880106
Trans1 Recv Date: 880106
Trans2 Recv Date: Not reported
TSD Site Recv Date: 880106
Part A Recv Date: 880115
Part B Recv Date: 880114
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD980787147
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: F005 - UNKNOWN
Quantity: 00135
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 88

Document ID: NJA0977216
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJDEPS103
Trans2 State ID: Not reported
Generator Ship Date: 910115
Trans1 Recv Date: 910115
Trans2 Recv Date: Not reported
TSD Site Recv Date: 910115
Part A Recv Date: 910131
Part B Recv Date: 910212
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD980787147
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: F003 - UNKNOWN
Quantity: 00085
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks

SUBACCHI FURNITURE (Continued) **1000144031**

Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 91

Document ID: NYH0127674
Manifest Status: Not reported
Trans1 State ID: NYD082785429
Trans2 State ID: Not reported
Generator Ship Date: 07/13/2000
Trans1 Recv Date: 07/13/2000
Trans2 Recv Date: Not reported
TSD Site Recv Date: 07/13/2000
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: PW8913
Waste Code: F003 - UNKNOWN
Quantity: 00055
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2000

Document ID: NYH0153108
Manifest Status: Not reported
Trans1 State ID: NYD082785429
Trans2 State ID: Not reported
Generator Ship Date: 10/26/2000
Trans1 Recv Date: 10/26/2000
Trans2 Recv Date: Not reported
TSD Site Recv Date: 10/26/2000
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: PX3640
Waste Code: F003 - UNKNOWN
Quantity: 00055
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2000

Document ID: NYH0152127
Manifest Status: Not reported
Trans1 State ID: NYD082785429
Trans2 State ID: Not reported

SUBACCHI FURNITURE (Continued) **1000144031**

Generator Ship Date:	10/19/2000
Trans1 Recv Date:	10/19/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/19/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NYD082785429
Trans2 EPA ID:	Not reported
TSDF ID:	PX3640
Waste Code:	F003 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	2000

Document ID:	NJA0271998
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS-10
Trans2 State ID:	Not reported
Generator Ship Date:	880620
Trans1 Recv Date:	880620
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	880621
Part A Recv Date:	880628
Part B Recv Date:	880701
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002454544
Waste Code:	F005 - UNKNOWN
Quantity:	00120
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	88

Document ID:	NJA0297475
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS-10
Trans2 State ID:	Not reported
Generator Ship Date:	880907
Trans1 Recv Date:	880907
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	880907
Part A Recv Date:	880913
Part B Recv Date:	880913
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported

SUBACCHI FURNITURE (Continued) **1000144031**

TSDF ID: NJD002454544
Waste Code: F005 - UNKNOWN
Quantity: 00105
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 88

Document ID: NYG0359217
Manifest Status: Not reported
Trans1 State ID: NYD082785429
Trans2 State ID: Not reported
Generator Ship Date: 03/04/1998
Trans1 Recv Date: 03/04/1998
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/04/1998
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: PX3640
Waste Code: F005 - UNKNOWN
Quantity: 00110
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 98

Document ID: NYH0371439
Manifest Status: Not reported
Trans1 State ID: 62096PA
Trans2 State ID: Not reported
Generator Ship Date: 07/12/2004
Trans1 Recv Date: 07/12/2004
Trans2 Recv Date: Not reported
TSD Site Recv Date: 07/12/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: NYD082785
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00055
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2004

SUBACCHI FURNITURE (Continued) **1000144031**

Document ID:	NYH0479835
Manifest Status:	Not reported
Trans1 State ID:	NYD082785429
Trans2 State ID:	Not reported
Generator Ship Date:	01/11/2005
Trans1 Recv Date:	01/11/2005
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	01/11/2005
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	70600JR
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	F003 - UNKNOWN
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	Not reported

Document ID:	NJA0550632
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS103
Trans2 State ID:	Not reported
Generator Ship Date:	881220
Trans1 Recv Date:	881220
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	881220
Part A Recv Date:	881223
Part B Recv Date:	881229
Generator EPA ID:	NYD045440997
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002454544
Waste Code:	F005 - UNKNOWN
Quantity:	00150
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	88

Document ID:	NJA0619602
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS103
Trans2 State ID:	Not reported
Generator Ship Date:	890314
Trans1 Recv Date:	890314
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	890314
Part A Recv Date:	890317

SUBACCHI FURNITURE (Continued) **1000144031**

Part B Recv Date: 890320
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD980787147
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: F005 - UNKNOWN
Quantity: 00180
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 89

Document ID: NJA1317541
Manifest Status: Completed copy
Trans1 State ID: NJDEPS103
Trans2 State ID: Not reported
Generator Ship Date: 920218
Trans1 Recv Date: 920218
Trans2 Recv Date: Not reported
TSD Site Recv Date: 920219
Part A Recv Date: 920226
Part B Recv Date: 920302
Generator EPA ID: NYD045440997
Trans1 EPA ID: NJD986608941
Trans2 EPA ID: Not reported
TSDF ID: NJD002454544
Waste Code: F003 - UNKNOWN
Quantity: 00025
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 92

Document ID: NYB7349382
Manifest Status: Completed copy
Trans1 State ID: PD9938
Trans2 State ID: Not reported
Generator Ship Date: 951207
Trans1 Recv Date: 951207
Trans2 Recv Date: Not reported
TSD Site Recv Date: 951207
Part A Recv Date: 951220
Part B Recv Date: 951219
Generator EPA ID: NYD045440997
Trans1 EPA ID: NYD082785429
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: F005 - UNKNOWN
Quantity: 00055
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001

SUBACCHI FURNITURE (Continued) **1000144031**

Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	089
Year:	95

Click this hyperlink while viewing on your computer to access
24 additional NY_MANIFEST: record(s) in the EDR Site Report.

Q89 **CONSOLIDATED EDISON** **MANIFEST** **1009239522**
West **PEARSON ST & JACKSON AVE** **N/A**
1/8-1/4 **QUEENS, NY 11101**
0.194 mi.
1023 ft. **Site 2 of 3 in cluster Q**

Relative:
Lower

Actual:
16 ft.

NY MANIFEST:

EPA ID:	NYP004062386
Country:	USA
Mailing Name:	CONSOLIDATED EDISON
Mailing Contact:	FRANKLIN MURRAY
Mailing Address:	4 IRVING PLACE RM 828
Mailing Address 2:	Not reported
Mailing City:	NEW YORK
Mailing State:	NY
Mailing Zip:	10003
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	212-460-2808

Document ID:	NYE0671445
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	09/12/2000
Trans1 Recv Date:	09/12/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/14/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYP004062386
Trans1 EPA ID:	NYD980593636
Trans2 EPA ID:	Not reported
TSDF ID:	GX3213
Waste Code:	B002 - PETROLEUM OIL WITH 50 BUT < 500 PPM PCB
Quantity:	01093
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2000

P90 **MICHELANGELO SCULPTURE** **RCRA-NonGen** **1004761796**
SSE **27-01 47TH AVE** **FINDS** **NYR000090498**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.194 mi.
1025 ft. **Site 2 of 2 in cluster P**

Relative:
Lower

Actual:
12 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	MICHELANGELO SCULPTURE
Facility address:	27-01 47TH AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000090498
Mailing address:	PRINCE ST NEW YORK, NY 11012
Contact:	DOMENICO RANIERI
Contact address:	PRINCE ST NEW YORK, NY 11012
Contact country:	US
Contact telephone:	(212) 982-5150
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DOMENICO RANIERI
Owner/operator address:	55 PRINCE ST NEW YORK, NY 11012
Owner/operator country:	US
Owner/operator telephone:	(212) 982-5150
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/2001
Owner/Op end date:	Not reported

Owner/operator name:	DOMENICO RANIERI
Owner/operator address:	55 PRINCE ST NEW YORK, NY 11012
Owner/operator country:	US
Owner/operator telephone:	(212) 982-5150
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/2001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

MICHELANGELO SCULPTURE (Continued) **1004761796**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: MICHELANGELO SCULPTURE
Classification: Not a generator, verified

Date form received by agency: 10/13/2000
Facility name: MICHELANGELO SCULPTURE
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004565015

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYR000090498
Country: USA
Mailing Name: MICHELANGELO SCULPTURE
Mailing Contact: DOMENICO KANIERI
Mailing Address: 27-01 47TH AVE
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-982-5150

Document ID: NYG1812807
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 10/20/2000
Trans1 Recv Date: 10/20/2000
Trans2 Recv Date: Not reported
TSD Site Recv Date: 10/23/2000
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000090498
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: Not reported

MICHELANGELO SCULPTURE (Continued) **1004761796**

Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00450
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	080
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00100
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	2000

S91 **QUEENS PLAZA RESIDENTIAL DEVELOPMENT** **BROWNFIELDS** **S108524793**
NE **28-10 JACKSON AVENUE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.195 mi.
1029 ft. **Site 1 of 2 in cluster S**

Relative:
Lower

Actual:
18 ft.

BROWNFIELDS:

Program:	BCP
Site Code:	379475
Site Description:	Location: This Brownfield site is approximately 0.5 acres in size and is a portion of the Outlet City VCP site(#V00081) located at 28-10 Jackson Avenue, Long Island City. The site is located in Queens County, on Jackson Ave between Orchard Street to the east, Queens Blvd. to the west and Long Island Railroad yard to the south. The G-Train runs underneath Jackson Avenue bordering the site to the north. The nearest residential structure is located approximately 100ft to the west across Orchard street. Site Features: This 0.5 acre site is an empty lot in a congested commercial/industrial area of Queens County. Current Zoning/Uses(s): The current zoning at the site is Industrial and Retail. The surrounding area is zoned Special Long Island City Mixed Use District (LIC) and is a longstanding mix of residential, commercial, industrial and cultural uses at varying densities. Historical Uses: The site had formerly been used for chemical manufacturing. From 1901-1978, West Chemical Co. owned the property and manufactured commercial and disinfectant products such as disinfectants, insecticides, soaps, floor wax, and paper products dispensing machines. Manufacturing operations employed various chemical substances including creosote, coal and acids, cresylic acids, degreasing solvents, iodine, and assorted oils and pesticides. Metal plating and gasoline filling operations were also conducted at the property. Intended use for this site is to build a multi-tenant high-rise residential apartment building with ground floor commercial space and a basement. The Remedial Work Plan was publicly noticed in June/July 2007 and was approved by the state on August 16,2007. The remedial action has not yet been done (Sept. 2011). Site Geology and Hydrogeology: Site geology consists of mostly sand at varying depths due to presence of shallow bedrock. Groundwater is approximately 8 -10ft below grade.
Env Problem:	The release of approximately 5000 gallons of creosote caused extensive soil and groundwater contamination that includes the presence of LNAPL and residual DNAPL. This site is considered a significant threat to the environment. Contaminants in soil which

QUEENS PLAZA RESIDENTIAL DEVELOPMENT (Continued) **S108524793**

exceed soil cleanup objectives primarily include: Naphthalene, 2-Methylnaphthalene, Acenaphtene, Dibenzofuran, Flourene, Benzene, Ethylbenzene, and total Xylenes. Contaminants in groundwater which exceed groundwater standards primarily include: 2-methylphenol, phenol, Napthalene, 2-methylnaphthalene, benzene, Toluene, Ethylbenzene, and total xylenes.

Health Problem: The remedial investigation documented that subsurface soils and groundwater are contaminated with volatile organic compounds, semi volatile organic compounds, and chlorinated solvents. Exposures via drinking water are not expected because this mixed industrial/residential neighborhood is served by public water. The new building proposed for the site will include a vapor barrier and sub-slab depressurization system to prevent exposures via vapor intrusion. Additionally, the site will be capped with asphalt and managed through the site management plan which minimizes the potential for direct contact with residual soil contamination.

R92 **PERENNIALLY GREEN INC** **RCRA-NonGen** **1000871666**
WNW **23-13 44TH DR** **FINDS** **NY0000082826**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.199 mi.
1052 ft. **Site 7 of 7 in cluster R**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	PERENNIALLY GREEN INC
Facility address:	23-13 44TH DR LONG ISLAND CITY, NY 111014711
EPA ID:	NY0000082826
Mailing address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	JACKSON AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	PERENNIALLY GREEN INC
Owner/operator address:	153 E 53RD ST NEW YORK, NY 10022
Owner/operator country:	US
Owner/operator telephone:	(212) 559-2421
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	PERENNIALLY GREEN INC
Owner/operator address:	153 E 53RD ST NEW YORK, NY 10022
Owner/operator country:	US
Owner/operator telephone:	(212) 559-2421

PERENNIALLY GREEN INC (Continued) **1000871666**

Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: PERENNIALLY GREEN INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: PERENNIALLY GREEN INC
Classification: Not a generator, verified

Date form received by agency: 12/21/1993
Facility name: PERENNIALLY GREEN INC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004310576

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NY0000082826
Country: USA
Mailing Name: CUSHMAN & WAKEFIELD
Mailing Contact: FRED VARONE
Mailing Address: 250 JACKSON AVE

PERENNIALLY GREEN INC (Continued) **1000871666**

Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-248-2000

Document ID: NJA1740672
Manifest Status: Completed copy
Trans1 State ID: NJDEPE086
Trans2 State ID: Not reported
Generator Ship Date: 940223
Trans1 Recv Date: 940223
Trans2 Recv Date: Not reported
TSD Site Recv Date: 940225
Part A Recv Date: 940307
Part B Recv Date: 940311
Generator EPA ID: NY0000082826
Trans1 EPA ID: ILD984908202
Trans2 EPA ID: Not reported
TSDF ID: NJD002182897
Waste Code: D002 - NON-LISTED CORROSIVE WASTES
Quantity: 00476
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Waste Code: Not reported
Quantity: 00476
Units: P - Pounds
Number of Containers: 001
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 94

Document ID: NJA1808044
Manifest Status: Completed copy
Trans1 State ID: DL8600869
Trans2 State ID: 08690
Generator Ship Date: 940303
Trans1 Recv Date: 940303
Trans2 Recv Date: 940307
TSD Site Recv Date: 940308
Part A Recv Date: 940311
Part B Recv Date: 940318
Generator EPA ID: NY0000082826
Trans1 EPA ID: ILD984908202
Trans2 EPA ID: ILD984908202
TSDF ID: NJD002182897
Waste Code: D002 - NON-LISTED CORROSIVE WASTES
Quantity: 00476
Units: P - Pounds

PERENNIALLY GREEN INC (Continued) **1000871666**

Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 94

Q93 **NYCTA - 11TH STREET SUBSTATION** **RCRA-NonGen** **1000789619**
West **JACKSON AVE & 45TH RD** **FINDS** **NYD987010808**
1/8-1/4 **LONG ISLAND CITY, NY 11104**
0.203 mi.
1071 ft. **Site 3 of 3 in cluster Q**

Relative:
Lower

Actual:
15 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: NYCTA - 11TH STREET SUBSTATION
Facility address: JACKSON AVE & 45TH RD
QUEENS, NY 11104
EPA ID: NYD987010808
Mailing address: JAY ST ROOM 809
BROOKLYN, NY 11201
Contact: Not reported
Contact address: JAY ST ROOM 809
BROOKLYN, NY 11201
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NEW YORK CITY TRANSIT AUTHORITY
Owner/operator address: 370 JAY ST ROOM 809
BROOKLYN, NY 11201
Owner/operator country: US
Owner/operator telephone: (718) 330-4581
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NEW YORK CITY TRANSIT AUTHORITY
Owner/operator address: 370 JAY ST ROOM 809
BROOKLYN, NY 11201
Owner/operator country: US
Owner/operator telephone: (718) 330-4581
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No

NYCTA - 11TH STREET SUBSTATION (Continued) **1000789619**

Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYCTA - 11TH STREET SUBSTATION
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: NYCTA - 11TH STREET SUBSTATION
Classification: Not a generator, verified

Date form received by agency: 08/03/1992
Facility name: NYCTA - 11TH STREET SUBSTATION
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110008077776

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

T94 **LAGUARDIA COMMUNITY COLLEGE** **AST** **A100294736**
ESE **29-10 THOMSON AVENUE** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.205 mi.
1082 ft. **Site 1 of 4 in cluster T**

Relative:
Higher

Actual:
30 ft.

AST:
Region: STATE
DEC Region: 2
Site Status: Active
Facility Id: 2-609660
Program Type: PBS
UTM X: 589698.54067999998
UTM Y: 4511012.1067199996
Expiration Date: 2015/04/13

Affiliation Records:
Site Id: 59011
Affiliation Type: Emergency Contact

LAGUARDIA COMMUNITY COLLEGE (Continued) **A100294736**

Company Name:	CITY UNIVERSITY OF NEW YORK
Contact Type:	Not reported
Contact Name:	SHAHIR ERFAN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 482-5580
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	4/22/2010

Site Id:	59011
Affiliation Type:	Owner
Company Name:	CITY UNIVERSITY OF NEW YORK
Contact Type:	DIR OF BLDG OPERATIONS-LAGUARDIA CC
Contact Name:	SHAHIR ERFAN
Address1:	585 EAST 80TH STREET
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10021
Country Code:	001
Phone:	(212) 794-5571
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	4/13/2005

Site Id:	59011
Affiliation Type:	On-Site Operator
Company Name:	LAGUARDIA COMMUNITY COLLEGE
Contact Type:	Not reported
Contact Name:	YURY FASTOVSKY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 482-5580
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	4/22/2010

Site Id:	59011
Affiliation Type:	Mail Contact
Company Name:	LAGUARDIA COMMUNITY COLLEGE
Contact Type:	Not reported
Contact Name:	PETER JAYASEKARA

LAGUARDIA COMMUNITY COLLEGE (Continued) **A100294736**

Address1:	31-10 THOMSON AVENUE
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 482-5507
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	4/22/2010

Equipment Records:

E00 - Piping Secondary Containment - None
B02 - Tank External Protection - Original Sacrificial Anode
I02 - Overfill - High Level Alarm
A00 - Tank Internal Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
G02 - Tank Secondary Containment - Vault (w/access)
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)
K00 - Spill Prevention - None
J00 - Dispenser - None
C01 - Pipe Location - Aboveground
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
J02 - Dispenser - Suction
G02 - Tank Secondary Containment - Vault (w/access)
D01 - Pipe Type - Steel/Carbon Steel/Iron
D01 - Pipe Type - Steel/Carbon Steel/Iron
G01 - Tank Secondary Containment - Diking (Aboveground)
H00 - Tank Leak Detection - None
C01 - Pipe Location - Aboveground
C01 - Pipe Location - Aboveground
H00 - Tank Leak Detection - None
E00 - Piping Secondary Containment - None
E00 - Piping Secondary Containment - None
J00 - Dispenser - None
K00 - Spill Prevention - None
I04 - Overfill - Product Level Gauge (A/G)
B01 - Tank External Protection - Painted/Asphalt Coating
I02 - Overfill - High Level Alarm
I02 - Overfill - High Level Alarm
I04 - Overfill - Product Level Gauge (A/G)
K00 - Spill Prevention - None
F00 - Pipe External Protection - None
B02 - Tank External Protection - Original Sacrificial Anode
I00 - Overfill - None
F00 - Pipe External Protection - None
B02 - Tank External Protection - Original Sacrificial Anode
E00 - Piping Secondary Containment - None
K00 - Spill Prevention - None
F00 - Pipe External Protection - None

LAGUARDIA COMMUNITY COLLEGE (Continued) **A100294736**

J00 - Dispenser - None
C01 - Pipe Location - Aboveground
H00 - Tank Leak Detection - None
G02 - Tank Secondary Containment - Vault (w/access)
L09 - Piping Leak Detection - Exempt Suction Piping
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
L00 - Piping Leak Detection - None

Tank Info:

Tank Number:	C1
Tank Id:	179577
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1972
Capacity Gallons:	20000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	MSBAPTIS
Last Modified:	4/22/2010

Tank Number:	C2
Tank Id:	179578
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1972
Capacity Gallons:	15000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	MSBAPTIS
Last Modified:	4/22/2010

Tank Number:	C3
Tank Id:	179579
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1992
Capacity Gallons:	2000
Tightness Test Method:	NN
Date Test:	Not reported

LAGUARDIA COMMUNITY COLLEGE (Continued) **A100294736**

Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	KXTANG
Last Modified:	4/13/2005

Tank Number:	C4
Tank Id:	179603
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	1/1/1992
Capacity Gallons:	100
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	KXTANG
Last Modified:	4/13/2005

T95 **NYC LAGUARDIA COMMUNITY COLLEGE** **RCRA-NonGen** **1001090143**
ESE **29-10 THOMSON AVE - BLDG C** **FINDS** **NYR000019760**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.205 mi.
1082 ft. **Site 2 of 4 in cluster T**

Relative:
Higher

Actual:
30 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	NYC LAGUARDIA COMMUNITY COLLEGE
Facility address:	29-10 THOMSON AVE - BLDG C LONG ISLAND CITY, NY 11101
EPA ID:	NYR000019760
Mailing address:	THOMSON AVE - BLDG C LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	THOMSON AVE - BLDG C LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Municipal
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NEW YORK CITY
Owner/operator address:	1 CENTRE ST NEW YORK, NY 10007
Owner/operator country:	US
Owner/operator telephone:	(212) 669-8709
Legal status:	Municipal
Owner/Operator Type:	Owner

NYC LAGUARDIA COMMUNITY COLLEGE (Continued) **1001090143**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NEW YORK CITY
Owner/operator address: 1 CENTRE ST
NEW YORK, NY 10007
Owner/operator country: US
Owner/operator telephone: (212) 669-8709
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYC LAGUARDIA COMMUNITY COLLEGE
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: NYC LAGUARDIA COMMUNITY COLLEGE
Classification: Not a generator, verified

Date form received by agency: 02/14/1996
Facility name: NYC LAGUARDIA COMMUNITY COLLEGE
Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 08/10/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

FINDS:

Registry ID: 110009484959

NYC LAGUARDIA COMMUNITY COLLEGE (Continued) **1001090143**

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYR000019760
Country:	USA
Mailing Name:	LAGUARDIA COMMUNITY COLLEGE BLDG C
Mailing Contact:	JOHN BLAKE
Mailing Address:	29-10 THOMSONAVENUE
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	914-681-6384

Document ID:	NYG2530881
Manifest Status:	Not reported
Trans1 State ID:	WID988566543
Trans2 State ID:	Not reported
Generator Ship Date:	09/19/2000
Trans1 Recv Date:	09/19/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/25/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000019760
Trans1 EPA ID:	AZ0000337360
Trans2 EPA ID:	Not reported
TSDF ID:	WI010
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	00545
Units:	P - Pounds
Number of Containers:	007
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	00424
Units:	P - Pounds
Number of Containers:	015
Container Type:	CF - Fiber or plastic boxes, cartons
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00
Year:	2000

Document ID:	NYB7597926
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC

NYC LAGUARDIA COMMUNITY COLLEGE (Continued) **1001090143**

Trans1 State ID: PTH7945
Trans2 State ID: Not reported
Generator Ship Date: 960321
Trans1 Recv Date: 960321
Trans2 Recv Date: Not reported
TSD Site Recv Date: 960325
Part A Recv Date: 960401
Part B Recv Date: 960417
Generator EPA ID: NYR000019760
Trans1 EPA ID: MA5000002394
Trans2 EPA ID: Not reported
TSDF ID: AZ0000337360
Waste Code: D009 - MERCURY 0.2 MG/L TCLP
Quantity: 03600
Units: P - Pounds
Number of Containers: 036
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 96

Document ID: NYB7595055
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: 7946
Trans2 State ID: Not reported
Generator Ship Date: 960515
Trans1 Recv Date: 960515
Trans2 Recv Date: Not reported
TSD Site Recv Date: 960520
Part A Recv Date: 960528
Part B Recv Date: 960614
Generator EPA ID: NYR000019760
Trans1 EPA ID: MA5000002394
Trans2 EPA ID: Not reported
TSDF ID: AZ0000337360
Waste Code: D009 - MERCURY 0.2 MG/L TCLP
Quantity: 03100
Units: P - Pounds
Number of Containers: 031
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 96

Document ID: NYB7595883
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: PTH7945MN
Trans2 State ID: Not reported
Generator Ship Date: 960417
Trans1 Recv Date: 960417
Trans2 Recv Date: Not reported
TSD Site Recv Date: 960422
Part A Recv Date: 960503
Part B Recv Date: 960523
Generator EPA ID: NYR000019760

NYC LAGUARDIA COMMUNITY COLLEGE (Continued) **1001090143**

Trans1 EPA ID:	MA5000002394
Trans2 EPA ID:	Not reported
TSDF ID:	AZ0000337360
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	02944
Units:	P - Pounds
Number of Containers:	031
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00030
Units:	P - Pounds
Number of Containers:	001
Container Type:	CF - Fiber or plastic boxes, cartons
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	96

Document ID:	NYB7214283
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	PTH7945
Trans2 State ID:	Not reported
Generator Ship Date:	960619
Trans1 Recv Date:	960619
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	960621
Part A Recv Date:	960703
Part B Recv Date:	960725
Generator EPA ID:	NYR000019760
Trans1 EPA ID:	MA5000002394
Trans2 EPA ID:	Not reported
TSDF ID:	AZ0000337360
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	00100
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00180
Units:	P - Pounds
Number of Containers:	006
Container Type:	CF - Fiber or plastic boxes, cartons
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	96

T96 **BURNHAM PRODUCTS CORP** **RCRA-NonGen** **1000315395**
ESE **42-24 ORCHARD ST** **FINDS** **NYD001726496**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.205 mi.
1082 ft. **Site 3 of 4 in cluster T**

Relative:
Higher

Actual:
30 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	BURNHAM PRODUCTS CORP
Facility address:	42-24 ORCHARD ST LONG ISLAND CITY, NY 11101
EPA ID:	NYD001726496
Mailing address:	ORCHARD ST LONG ISLAND CITY, NY 11101
Contact:	MURRAY BORENSTEIN
Contact address:	ORCHARD ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 784-7191
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	SCRIPTO INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	SCRIPTO INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

BURNHAM PRODUCTS CORP (Continued) **1000315395**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: BURNHAM PRODUCTS CORP
Classification: Not a generator, verified

Date form received by agency: 03/12/1981
Facility name: BURNHAM PRODUCTS CORP
Classification: Not a generator, verified

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 06/16/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/27/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110009464409

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD001726496
Country: USA
Mailing Name: SCRIPTO EVERGLIDE INCORPORATED
Mailing Contact: STANLEY KLEIN
Mailing Address: 29-10 THOMSON AVENUE
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-784-7191

BURNHAM PRODUCTS CORP (Continued) **1000315395**

Document ID:	NJO0056251
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	S2841AY
Trans2 State ID:	Not reported
Generator Ship Date:	821117
Trans1 Recv Date:	821117
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	821117
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001726496
Trans1 EPA ID:	NJD002200046
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	U210 - TETRACHLOROETHYLENE
Quantity:	00150
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	82

Document ID:	NJO0206049
Manifest Status:	Completed copy
Trans1 State ID:	2841AY
Trans2 State ID:	Not reported
Generator Ship Date:	840822
Trans1 Recv Date:	840822
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840822
Part A Recv Date:	840830
Part B Recv Date:	840907
Generator EPA ID:	NYD001726496
Trans1 EPA ID:	NJD002200046
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	U210 - TETRACHLOROETHYLENE
Quantity:	00150
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	84

Document ID:	NJO0194740
Manifest Status:	Completed copy
Trans1 State ID:	S2841AY
Trans2 State ID:	Not reported
Generator Ship Date:	840214
Trans1 Recv Date:	840214
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840214
Part A Recv Date:	840305

BURNHAM PRODUCTS CORP (Continued) **1000315395**

Part B Recv Date: 840227
Generator EPA ID: NYD001726496
Trans1 EPA ID: NJD002200046
Trans2 EPA ID: Not reported
TSDF ID: NJD002200046
Waste Code: U210 - TETRACHLOROETHYLENE
Quantity: 00240
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 008
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 84

Document ID: NJA0086701
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJSWAS284
Trans2 State ID: Not reported
Generator Ship Date: 850624
Trans1 Recv Date: 850624
Trans2 Recv Date: Not reported
TSD Site Recv Date: 850624
Part A Recv Date: 851030
Part B Recv Date: 850709
Generator EPA ID: NYD001726496
Trans1 EPA ID: NJD002200046
Trans2 EPA ID: Not reported
TSDF ID: NJD002200046
Waste Code: F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Quantity: 00210
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 007
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 85

Document ID: NJA0179999
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJSWAS-58
Trans2 State ID: Not reported
Generator Ship Date: 860829
Trans1 Recv Date: 860829
Trans2 Recv Date: Not reported
TSD Site Recv Date: 860829
Part A Recv Date: 861002
Part B Recv Date: 860910
Generator EPA ID: NYD001726496
Trans1 EPA ID: NJD085634335
Trans2 EPA ID: Not reported
TSDF ID: NJD002200046
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00455
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 020

BURNHAM PRODUCTS CORP (Continued) **1000315395**

Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00040
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00060
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00175
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	86

T97 **SCRIPTO EVERGLIDE** **RCRA-NonGen** **1000260925**
ESE **29-10 THOMSON AVE** **FINDS** **NYD981086416**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.205 mi.
1082 ft. **Site 4 of 4 in cluster T**

Relative:
Higher

Actual:
30 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	SCRIPTO EVERGLIDE
Facility address:	29-10 THOMSON AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYD981086416
Mailing address:	THOMSON AVE LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	THOMSON AVE LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212

SCRIPTO EVERGLIDE (Continued) **1000260925**

Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: SCRIPTO EVERGLIDE
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: SCRIPTO EVERGLIDE
Classification: Not a generator, verified

Date form received by agency: 05/30/1985
Facility name: SCRIPTO EVERGLIDE
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 06/27/1984
Date achieved compliance: 05/29/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

SCRIPTO EVERGLIDE (Continued) **1000260925**

Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 09/17/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/27/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/29/1985
Evaluation lead agency: State

FINDS:

Registry ID: 110009471687

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

98
NNW
1/8-1/4
0.206 mi.
1086 ft.

Relative:
Lower

Actual:
15 ft.

EAGLE ELECTRIC MFG CO INC **AST U003393332**
43-35 24TH STREET **HIST AST N/A**
LIC, NY 11101

AST:
Region: STATE
DEC Region: 2
Site Status: Active
Facility Id: 2-017388
Program Type: PBS
UTM X: 589213.47773000004
UTM Y: 4511415.5948200002
Expiration Date: 2008/02/21

Affiliation Records:
Site Id: 130
Affiliation Type: Owner
Company Name: ELECTRIC REALTY LLC
Contact Type: Not reported
Contact Name: Not reported
Address1: 457 KNICKERBOCKER AVENUE
Address2: Not reported
City: BROOKLYN
State: NY
Zip Code: 11237
Country Code: 001

EAGLE ELECTRIC MFG CO INC (Continued) **U003393332**

Phone:	(718) 919-0824
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	CGFREEDM
Date Last Modified:	10/28/2004

Site Id:	130
Affiliation Type:	Mail Contact
Company Name:	ELECTRIC REALTY
Contact Type:	Not reported
Contact Name:	AL PIZZUTO
Address1:	457 KNICKERBOCKER AVENUE
Address2:	Not reported
City:	BROOKLYN
State:	NY
Zip Code:	11237
Country Code:	001
Phone:	(718) 919-0824
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	CGFREEDM
Date Last Modified:	10/28/2004

Site Id:	130
Affiliation Type:	On-Site Operator
Company Name:	BENFEILD ELECTRIC
Contact Type:	Not reported
Contact Name:	BENFEILD
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 706-8600
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	130
Affiliation Type:	Emergency Contact
Company Name:	ELECTRIC REALTY LLC
Contact Type:	Not reported
Contact Name:	TED LACHMAN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 919-0824
Phone Ext:	Not reported
Email:	Not reported

EAGLE ELECTRIC MFG CO INC (Continued) **U003393332**

Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 3/4/2004

Equipment Records:

H00 - Tank Leak Detection - None
I05 - Overfill - Vent Whistle
D00 - Pipe Type - No Piping
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
C00 - Pipe Location - No Piping
F04 - Pipe External Protection - Fiberglass
J02 - Dispenser - Suction
L09 - Piping Leak Detection - Exempt Suction Piping
I04 - Overfill - Product Level Gauge (A/G)
G03 - Tank Secondary Containment - Vault (w/o access)

Tank Info:

Tank Number: 001
Tank Id: 27003
Tank Location: 1
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 4000
Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

HIST AST:

PBS Number: 2-017388
SWIS Code: 6301
Operator: EAGLE ELECTRIC MFG CO INC
Facility Phone: (718) 937-8000
Facility Addr2: 43035 24TH STREET
Facility Type: Not reported
Emergency: ALFRED PIZZUTO
Emergency Tel: (914) 962-6467
Old PBSNO: Not reported
Date Inspected: Not reported
Inspector: Not reported
Result of Inspection: Not reported
Owner Name: EAGLE ELECTRIC MFG CO INC
Owner Address: 45-31 COURT SQ
Owner City,St,Zip: LIC, NY 11101
Federal ID: Not reported
Owner Tel: (718) 937-8000
Owner Type: Corporate/Commercial
Owner Subtype: Not reported
Mailing Contact: AL PIZZUTO

EAGLE ELECTRIC MFG CO INC (Continued) **U003393332**

Mailing Name:	EAGLE ELECTRIC MFG CO INC
Mailing Address:	45-31 COURT SQ
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LIC, NY 11101
Mailing Telephone:	(718) 937-8000
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	09/30/1999
Expiration:	10/23/2002
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	4000
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	Minor Data Missing
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	4000
Product Stored:	NOS 5 OR 6 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	01
Pipe Location:	None
Pipe Type:	NONE
Pipe Internal:	None
Pipe External:	04
Tank Containment:	Diking
Leak Detection:	00
Overfill Protection:	46
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

S99 **MTA NYCT - JACKSON & WEST SUBSTA SS 26** **RCRA-CESQG** **1001818289**
NE **28-20 JACKSON AVE** **FINDS** **NYR000078238**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.209 mi. **MANIFEST**
1106 ft. **Site 2 of 2 in cluster S**

Relative:
Lower

Actual:
18 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	MTA NYCT - JACKSON & WEST SUBSTA SS 26
Facility address:	28-20 JACKSON AVE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000078238
Mailing address:	BROADWAY 3RD FLOOR NEW YORK, NY 10004
Contact:	WILLIAM JEHLE
Contact address:	BROADWAY 3RD FLOOR NEW YORK, NY 10004
Contact country:	US
Contact telephone:	(646) 252-3500
Contact email:	Not reported
EPA Region:	02
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	MTA NEW YORK CITY TRANSIT
Owner/operator address:	2 BROADWAY 3RD FLOOR NEW YORK, NY 10019
Owner/operator country:	US
Owner/operator telephone:	(646) 252-3500
Legal status:	Municipal
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MTA NEW YORK CITY TRANSIT
Owner/operator address:	2 BROADWAY 3RD FLOOR NEW YORK, NY 10019
Owner/operator country:	US
Owner/operator telephone:	(646) 252-3500
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

MTA NYCT - JACKSON & WEST SUBSTA SS 26 (Continued) **1001818289**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: MTA NYCT - JACKSON & WEST SUBSTA SS 26
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 02/22/2000
Facility name: MTA NYCT - JACKSON & WEST SUBSTA SS 26
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004557391

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NJ MANIFEST:
Manifest Code: NJA5028151
EPA ID: NYR000078238
Date Shipped: 20040913
TSDF EPA ID: NJD991291105
Transporter EPA ID: NYD046765574
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 040913

MTA NYCT - JACKSON & WEST SUBSTA SS 26 (Continued) **1001818289**

Date Trans2 Transported Waste:	000000
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	040913
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	12170422
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

NY MANIFEST:

EPA ID:	NYR000078238
Country:	USA
Mailing Name:	NYCTA
Mailing Contact:	EVA MOUSSA
Mailing Address:	2 BROADWAY 2ND FL
Mailing Address 2:	Not reported
Mailing City:	NEW YORK
Mailing State:	NY
Mailing Zip:	10004
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	646-252-3789

Document ID:	NYB6716025
Manifest Status:	Not reported
Trans1 State ID:	57994JL
Trans2 State ID:	Not reported
Generator Ship Date:	08/19/2004
Trans1 Recv Date:	08/19/2004
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/20/2004
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000078238
Trans1 EPA ID:	NY0000148163
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00300
Units:	P - Pounds
Number of Containers:	003

MTA NYCT - JACKSON & WEST SUBSTA SS 26 (Continued) **1001818289**

Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2004

Document ID:	NJA5028151
Manifest Status:	Not reported
Trans1 State ID:	S8424
Trans2 State ID:	Not reported
Generator Ship Date:	09/13/2004
Trans1 Recv Date:	09/13/2004
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/13/2004
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000078238
Trans1 EPA ID:	NYD046765574
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	01200
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2004

U100 **ANOCA PLATING SERVICE CORP** **RCRA-NonGen** **1000166062**
North **27-04 42ND RD** **FINDS** **NYD041565748**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.211 mi.
1112 ft. **Site 1 of 4 in cluster U**

Relative:
Lower

Actual:
18 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	ANOCA PLATING SERVICE CORP
Facility address:	27-04 42ND RD LONG ISLAND CITY, NY 111014112
EPA ID:	NYD041565748
Mailing address:	42ND RD LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	42ND RD LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	SAMUEL HUREWITZ
Owner/operator address:	NOT REQUIRED

ANOCA PLATING SERVICE CORP (Continued) **1000166062**

NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SAMUEL HUREWITZ
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: ANOCA PLATING SERVICE CORP
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: ANOCA PLATING SERVICE CORP
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: ANOCA PLATING SERVICE CORP
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/25/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

ANOCA PLATING SERVICE CORP (Continued) **1000166062**

FINDS:

Registry ID: 110004354341

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

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101 **STAR JOURNAL BUILDING** **AST** **A100296154**
NNE **42-26 28TH STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.211 mi.
1116 ft.

Relative:
Higher

Actual:
20 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-607562
Program Type:	PBS
UTM X:	589547.09658000001
UTM Y:	4511504.8855699999
Expiration Date:	2007/04/03

Affiliation Records:

Site Id:	29414
Affiliation Type:	Mail Contact
Company Name:	CREATIVE ESTATES INC
Contact Type:	Not reported
Contact Name:	CHARLES M. FERTITTA
Address1:	42-26 28TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 729-5131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	29414
Affiliation Type:	Owner
Company Name:	CREATIVE ESTATES INC
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	42--46 28TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101

STAR JOURNAL BUILDING (Continued) **A100296154**

Country Code:	001
Phone:	(718) 729-5131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	29414
Affiliation Type:	Emergency Contact
Company Name:	CREATIVE ESTATES INC
Contact Type:	Not reported
Contact Name:	ROBERT FERTITTA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(516) 746-2726
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	29414
Affiliation Type:	On-Site Operator
Company Name:	STAR JOURNAL BUILDING
Contact Type:	Not reported
Contact Name:	RYES PYLON
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 729-5131
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

B00 - Tank External Protection - None
I05 - Overfill - Vent Whistle
D01 - Pipe Type - Steel/Carbon Steel/Iron
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction
C01 - Pipe Location - Aboveground
G03 - Tank Secondary Containment - Vault (w/o access)

Tank Info:

STAR JOURNAL BUILDING (Continued) **A100296154**

Tank Number:	001
Tank Id:	63193
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	2500
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

102
NNW
1/8-1/4
0.214 mi.
1131 ft.

MORBECK CORP **AST U003389869**
24-15 43 AVE **HIST AST N/A**
LONG ISLAND CITY, NY 11101

Relative:
Lower

Actual:
15 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-309052
Program Type:	PBS
UTM X:	589254.16087999998
UTM Y:	4511458.8288599998
Expiration Date:	2013/07/10

Affiliation Records:

Site Id:	14071
Affiliation Type:	On-Site Operator
Company Name:	AB MARBEC REALTY CORP
Contact Type:	Not reported
Contact Name:	CALVIN COOKS
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 706-6420
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	14071
Affiliation Type:	Emergency Contact
Company Name:	AB MARBEC REALTY CORP
Contact Type:	Not reported
Contact Name:	AVROHOM BECKER
Address1:	Not reported

MORBECK CORP (Continued) **U003389869**

Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 633-2236
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	5/14/2008

Site Id:	14071
Affiliation Type:	Owner
Company Name:	AB MARBEC REALTY CORP
Contact Type:	PRESIDENT
Contact Name:	AVROHOM BECKER
Address1:	1684 59TH ST
Address2:	Not reported
City:	BROOKLYN
State:	NY
Zip Code:	11204
Country Code:	001
Phone:	(718) 633-2236
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	5/14/2008

Site Id:	14071
Affiliation Type:	Mail Contact
Company Name:	AB MARBEC REALTY CORP
Contact Type:	Not reported
Contact Name:	AVROHOM BECKER
Address1:	1684 59TH STREET
Address2:	Not reported
City:	BROOKLYN
State:	NY
Zip Code:	11204
Country Code:	001
Phone:	(718) 633-2236
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	kakyer
Date Last Modified:	5/14/2008

Equipment Records:

L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping
L09 - Piping Leak Detection - Exempt Suction Piping
J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
G01 - Tank Secondary Containment - Diking (Aboveground)
G01 - Tank Secondary Containment - Diking (Aboveground)
G01 - Tank Secondary Containment - Diking (Aboveground)

MORBECK CORP (Continued) **U003389869**

J02 - Dispenser - Suction
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
D01 - Pipe Type - Steel/Carbon Steel/Iron
C03 - Pipe Location - Aboveground/Underground Combination
C03 - Pipe Location - Aboveground/Underground Combination
I05 - Overfill - Vent Whistle
I05 - Overfill - Vent Whistle
B01 - Tank External Protection - Painted/Asphalt Coating
B01 - Tank External Protection - Painted/Asphalt Coating
B01 - Tank External Protection - Painted/Asphalt Coating
F01 - Pipe External Protection - Painted/Asphalt Coating
F01 - Pipe External Protection - Painted/Asphalt Coating
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
F01 - Pipe External Protection - Painted/Asphalt Coating
C03 - Pipe Location - Aboveground/Underground Combination
I05 - Overfill - Vent Whistle

Tank Info:

Tank Number:	00A
Tank Id:	17769
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	9/10/1960
Capacity Gallons:	3000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	kakyer
Last Modified:	5/14/2008

Tank Number:	00B
Tank Id:	17770
Tank Location:	1
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	9/10/1960
Capacity Gallons:	3000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	kakyer

MORBECK CORP (Continued) **U003389869**

Last Modified: 5/14/2008

Tank Number: 00C
Tank Id: 17771
Tank Location: 1
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 9/10/1960
Capacity Gallons: 3000
Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: kakyer
Last Modified: 5/14/2008

HIST AST:
PBS Number: 2-309052
SWIS Code: 6301
Operator: MORBECK REALTY
Facility Phone: (718) 392-7096
Facility Addr2: 24015 43 AVE
Facility Type: Not reported
Emergency: MORRIS BECKER
Emergency Tel: (718) 633-2236
Old PBSNO: Not reported
Date Inspected: Not reported
Inspector: Not reported
Result of Inspection: Not reported
Owner Name: MORBECK CORP
Owner Address: 24-15 43 AVE
Owner City,St,Zip: LONG ISLAND CITY, NY 11101
Federal ID: Not reported
Owner Tel: (718) 392-7096
Owner Type: Not reported
Owner Subtype: Not reported
Mailing Contact: Not reported
Mailing Name: MORBECK CORP
Mailing Address: 24-15 43 AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: LONG ISLAND CITY, NY 11101
Mailing Telephone: (718) 392-7096
Owner Mark: First Owner
Facility Status: 1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag: False
Certification Date: 07/20/1987
Expiration: 07/20/1992
Renew Flag: False
Renew Date: Not reported
Total Capacity: 9000
FAMT: True

MORBECK CORP (Continued) **U003389869**

Facility Screen: Minor Data Missing
Owner Screen: Minor Data Missing
Tank Screen: Minor Data Missing
Dead Letter: True
CBS Number: Not reported
Town or City: NEW YORK CITY
County Code: 63
Town or City Code: 01
Region: 2

Tank ID: 00A
Tank Location: ABOVEGROUND
Tank Status: In Service
Install Date: Not reported
Capacity (Gal): 3000
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: STEEL/IRON
Pipe Internal: Not reported
Pipe External: Not reported
Tank Containment: None
Leak Detection: 0
Overfill Protection: 4
Dispenser Method: Suction
Date Tested: Not reported
Next Test Date: Not reported
Missing Data for Tank: Minor Data Missing
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: False
SPDES Number: Not reported
Lat/Long: Not reported

Tank ID: 00B
Tank Location: ABOVEGROUND
Tank Status: In Service
Install Date: Not reported
Capacity (Gal): 3000
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: STEEL/IRON
Pipe Internal: Not reported
Pipe External: Not reported
Tank Containment: None
Leak Detection: 0
Overfill Protection: 4
Dispenser Method: Suction
Date Tested: Not reported
Next Test Date: Not reported

MORBECK CORP (Continued) **U003389869**

Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
SPDES Number:	Not reported
Lat/Long:	Not reported

Tank ID:	00C
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	3000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Tank Containment:	None
Leak Detection:	0
Overfill Protection:	4
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
SPDES Number:	Not reported
Lat/Long:	Not reported

V103 **BAGWIN BROTHERS SERVICE CENTER, INC.** **UST** **U004046068**
North **42-37 CRESCENT STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.219 mi.
1156 ft. **Site 1 of 2 in cluster V**

Relative:
Lower

Actual:
17 ft.

UST:

Facility Id:	2-609460
Region:	STATE
DEC Region:	2
Site Status:	Active
Program Type:	PBS
Expiration Date:	2009/02/18
UTM X:	589390.39372000005
UTM Y:	4511532.4145799996

Affiliation Records:

Site Id:	31304
Affiliation Type:	On-Site Operator
Company Name:	BAGWIN BROTHERS SERVICE CENTER, INC.
Contact Type:	Not reported
Contact Name:	MICHAEL BAGWIN

BAGWIN BROTHERS SERVICE CENTER, INC. (Continued) **U004046068**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 786-5656
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	2/24/2009

Site Id:	31304
Affiliation Type:	Owner
Company Name:	BAGWIN BROTHERS SERVICE CENTER, INC.
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	42-37 CRESCENT STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 786-5656
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	2/24/2009

Site Id:	31304
Affiliation Type:	Mail Contact
Company Name:	BAGWIN BROTHERS SERVICE CENTER INC
Contact Type:	Not reported
Contact Name:	MICHAEL BAGWIN
Address1:	42-37 CHESCENT STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 786-5656
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	31304
Affiliation Type:	Emergency Contact
Company Name:	BAGWIN BROTHERS SERVICE CENTER, INC.
Contact Type:	Not reported
Contact Name:	MICHAEL BAGWIN
Address1:	Not reported
Address2:	Not reported
City:	Not reported

BAGWIN BROTHERS SERVICE CENTER, INC. (Continued) **U004046068**

State: NN
Zip Code: Not reported
Country Code: 999
Phone: (718) 786-5656
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: NRLOMBAR
Date Last Modified: 2/24/2009

Equipment Records:

C03 - Pipe Location - Aboveground/Underground Combination
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
L09 - Piping Leak Detection - Exempt Suction Piping
I00 - Overfill - None

Tank Info:

Site ID: 31304

Tank Number: 001
Tank ID: 67522
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 200
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: Not reported
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

V104 **EPPY PLATING** **RCRA-NonGen** **1000440607**
North **42-40 CRESCENT ST** **FINDS** **NYD078517307**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.220 mi.
1161 ft. **Site 2 of 2 in cluster V**

Relative:
Lower

Actual:
17 ft.

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: EPPY PLATING
Facility address: 42-40 CRESCENT ST
LONG ISLAND CITY, NY 11101
EPA ID: NYD078517307
Mailing address: CRESCENT ST
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: CRESCENT ST

EPPY PLATING (Continued) **1000440607**

LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: EPPY PLATING
Classification: Not a generator, verified

Date form received by agency: 12/31/1979
Facility name: EPPY PLATING
Classification: Not a generator, verified

EPPY PLATING (Continued) **1000440607**

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 04/09/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004370190

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

W105 **FORDHAM ROAD CONCRETE** **UST** **U004118669**
South **47-17 27TH STREET** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.222 mi.
1170 ft. **Site 1 of 3 in cluster W**

Relative:
Lower

Actual:
11 ft.

UST:
Facility Id: 2-610744
Region: STATE
DEC Region: 2
Site Status: Active
Program Type: PBS
Expiration Date: 2013/02/01
UTM X: 589308.28916000004
UTM Y: 4510560.0018600002

Affiliation Records:
Site Id: 391815
Affiliation Type: On-Site Operator
Company Name: FORDHAM ROAD CONCRETE
Contact Type: Not reported
Contact Name: GEORGE REIS
Address1: Not reported
Address2: Not reported
City: Not reported
State: NY
Zip Code: Not reported
Country Code: 001
Phone: (718) 433-0111
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: bkfalvey
Date Last Modified: 11/6/2008

Site Id: 391815

FORDHAM ROAD CONCRETE (Continued) **U004118669**

Affiliation Type:	Owner
Company Name:	FORDHAM ROAD CONCRETE CORP.
Contact Type:	PRESIDENT
Contact Name:	ARTHUR GEORGE REIS
Address1:	47-17 27TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 433-0111
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	bkfalvey
Date Last Modified:	11/6/2008

Site Id:	391815
Affiliation Type:	Mail Contact
Company Name:	FORDHAM ROAD CONCRETE CORP.
Contact Type:	Not reported
Contact Name:	GEORGE REIS
Address1:	47-17 27TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 433-0111
Phone Ext:	Not reported
Email:	NYCONREADYMIX@AOL.COM
Fax Number:	Not reported
Modified By:	dxliving
Date Last Modified:	1/4/2008

Site Id:	391815
Affiliation Type:	Emergency Contact
Company Name:	FORDHAM ROAD CONCRETE CORP.
Contact Type:	Not reported
Contact Name:	GEORGE REIS
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(917) 417-9474
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	bkfalvey
Date Last Modified:	11/6/2008

Equipment Records:

C02 - Pipe Location - Underground/On-ground
I02 - Overfill - High Level Alarm
K01 - Spill Prevention - Catch Basin

FORDHAM ROAD CONCRETE (Continued) **U004118669**

G04 - Tank Secondary Containment - Double-Walled (Underground)
J02 - Dispenser - Suction
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
F04 - Pipe External Protection - Fiberglass
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
H05 - Tank Leak Detection - In-Tank System (ATG)
D11 - Pipe Type - Flexible Piping
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
B04 - Tank External Protection - Fiberglass
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I02 - Overfill - High Level Alarm
D11 - Pipe Type - Flexible Piping
F04 - Pipe External Protection - Fiberglass
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
C02 - Pipe Location - Underground/On-ground
J02 - Dispenser - Suction
E04 - Piping Secondary Containment - Double-Walled (Underground)
G04 - Tank Secondary Containment - Double-Walled (Underground)
H05 - Tank Leak Detection - In-Tank System (ATG)
L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
E04 - Piping Secondary Containment - Double-Walled (Underground)

Tank Info:

Site ID:	391815
Tank Number:	001
Tank ID:	221027
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	2/1/1998
Capacity Gallons:	4000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Equivalent technology
Date Test:	Not reported
Register:	True
Modified By:	dxliving
Last Modified:	1/15/2008
Site ID:	391815
Tank Number:	002
Tank ID:	221028
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	2/1/1998
Capacity Gallons:	3000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Equivalent technology

FORDHAM ROAD CONCRETE (Continued) **U004118669**

Date Test: Not reported
Register: True
Modified By: dxliving
Last Modified: 1/15/2008

W106 **ANTHONY CONCRETE** **CBS AST** **S102639396**
South **47-17 27TH ST** **CBS** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.222 mi.
1170 ft. **Site 2 of 3 in cluster W**

Relative:
Lower

Actual:
11 ft.

CBS AST:
CBS Number: 2-000181
Region: STATE
ICS Number: 2-700754
PBS Number: Not reported
MOSF Number: Not reported
Telephone: (718) 729-4351
Facility Town: NEW YORK CITY
Operator: LEE PRINCIPE
Emrgncy Contact: CHARLES LUGINBILL
Emrgncy Phone: (201) 933-8800
Expiration Date: 09/22/1997
Owner Name: SIKA CORPORATION
Owner Address: 201 POLITO AVE.
Owner City,St,Zip: LYNDHURST, NJ 07071
Owner Telephone: (201) 933-8800
Owner type: Corporate/Commercial
Facility Type: MANUFACTURING
Mail Name: SIKA CORPORATION
Mail Contact Addr: 201 POLITO AVE.
Mail Contact Addr2: Not reported
Mail Contact Contact: CHARLES LUGINBILL
Mail Contact City,St,Zip: LYNDHURST, NJ 07071
Mail Phone: (201) 933-8800
SPDES Number: Not reported
Facility Status: ACTIVE FACILITY
Owner Sub Type: Not reported

Tank Id: 18011
Date Entered: 09/22/1989
Capacity (Gal): 275
Chemical: Sodium hydroxide
Tank Closed: 00/00
Tank Status: 0
Tank Type: Fiberglass reinforced plastic [FRP]
Install Date: 04/85
Certified Date: 08/31/1995
CAS Number: 1310732
Substance: Single Hazardous Substance on DEC List
Tank Location: ABOVEGROUND
Intrnl Protection: None
Extrnl Protection: None
Pipe Location: Aboveground
Pipe Type: OTHER
Pipe Internal: None
Pipe External: 0
Pipe Containment: None

ANTHONY CONCRETE (Continued) **S102639396**

Tank Containment:	None
Leak Detection:	None
Overfill Protection:	None
Haz Percent:	2
Total Tanks:	0
Tank Secret:	False
Last Test:	Not reported
Due Date:	Not reported
Tank Error Status:	No Missing Data
SWIS Code:	6301
Lat/Long:	Not reported
Pipe Flag:	False
Federal ID:	Not reported
Is Updated:	F
Renew Date:	06/07/93
Is it There:	F
Deliquent:	F
Date Expired:	09/22/95
Owner Mark:	1
Certificate Needs to be Printed:	False
Fiscal Amt for Registration Fee Correct:	True
Renewal Has Been Printed for Facility:	True
Pre-Printed Renewal App Last Printed:	06/06/1997
Total Capacity of All Active Tanks(gal):	0

Tank Id:	18012
Date Entered:	09/22/1989
Capacity (Gal):	275
Chemical:	Sodium hydroxide
Tank Closed:	00/00
Tank Status:	0
Tank Type:	Fiberglass reinforced plastic [FRP]
Install Date:	04/85
Certified Date:	08/31/1995
CAS Number:	1310732
Substance:	Single Hazardous Substance on DEC List
Tank Location:	ABOVEGROUND
Intrnl Protection:	None
Extrnl Protection:	None
Pipe Location:	Aboveground
Pipe Type:	OTHER
Pipe Internal:	None
Pipe External:	0
Pipe Containment:	None
Tank Containment:	None
Leak Detection:	None
Overfill Protection:	None
Haz Percent:	2
Total Tanks:	0
Tank Secret:	False
Last Test:	Not reported
Due Date:	Not reported
Tank Error Status:	No Missing Data
SWIS Code:	6301
Lat/Long:	Not reported
Pipe Flag:	False

ANTHONY CONCRETE (Continued) **S102639396**

Federal ID: Not reported
Is Updated: F
Renew Date: 06/07/93
Is it There: F
Deliquent: F
Date Expired: 09/22/95
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 06/06/1997
Total Capacity of All Active Tanks(gal): 0

CBS:
CBS Number: 2-000181
Program Type: CBS
Dec Region: 2
Expiration Date: N/A
Facility Status: Unregulated
UTMX: 589308.28916000
UTMY: 4510560.0018600

107
NW
1/8-1/4
0.227 mi.
1198 ft.

PARKING LOT **UST** **U001831742**
23-14 44TH ROAD **HIST UST** **N/A**
LONG ISLAND CITY, NY 11101

Relative:
Lower

Actual:
17 ft.

UST:
Facility Id: 2-064319
Region: STATE
DEC Region: 2
Site Status: Unregulated
Program Type: PBS
Expiration Date: N/A
UTM X: 589101.66958999995
UTM Y: 4511360.8470999999

Affiliation Records:
Site Id: 1335
Affiliation Type: Mail Contact
Company Name: PERENNIALLY GREEN, INC.
Contact Type: Not reported
Contact Name: Not reported
Address1: C/O ALONSO ANDALKAR & KAHN
Address2: 920 BROADWAY, 16TH FLOOR
City: NEW YORK
State: NY
Zip Code: 10010
Country Code: 001
Phone: (212) 598-5900
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: KXTANG
Date Last Modified: 9/20/2005

Site Id: 1335

PARKING LOT (Continued) **U001831742**

Affiliation Type:	On-Site Operator
Company Name:	PARKING LOT
Contact Type:	Not reported
Contact Name:	PERENIALLY GREEN, INC.
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 615-8027
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	9/20/2005

Site Id:	1335
Affiliation Type:	Emergency Contact
Company Name:	PERENNIALLY GREEN, INC.
Contact Type:	Not reported
Contact Name:	KEITH OWEN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 248-4939
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	9/20/2005

Site Id:	1335
Affiliation Type:	Owner
Company Name:	PERENNIALLY GREEN, INC.
Contact Type:	VICE PRESIDENT
Contact Name:	BRAIN M. MACDONALD
Address1:	23-14, 44TH RD
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(212) 615-8027
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	KXTANG
Date Last Modified:	9/20/2005

Equipment Records:

D01 - Pipe Type - Steel/Carbon Steel/Iron
I00 - Overfill - None
A00 - Tank Internal Protection - None

PARKING LOT (Continued) **U001831742**

L09 - Piping Leak Detection - Exempt Suction Piping
F00 - Pipe External Protection - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
C00 - Pipe Location - No Piping
G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
J02 - Dispenser - Suction
L09 - Piping Leak Detection - Exempt Suction Piping
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
H00 - Tank Leak Detection - None
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
C00 - Pipe Location - No Piping

Tank Info:

Site ID:	1335
Tank Number:	001
Tank ID:	2371
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	1500
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	1/1/1988
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	KXTANG
Last Modified:	9/20/2005
Site ID:	1335
Tank Number:	002
Tank ID:	2372
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	1500
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	1/1/1988

PARKING LOT (Continued) **U001831742**

Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: KXTANG
Last Modified: 9/20/2005

Site ID: 1335

Tank Number: 003
Tank ID: 2373
Tank Status: Closed - Removed
Tank Model: Not reported
Pipe Model: Not reported
Install Date: Not reported
Capacity Gallons: 1500
Tightness Test Method: NN
Next Test Date: Not reported
Date Tank Closed: 1/1/1988
Tank Location: 5
Tank Type: Steel/carbon steel
Date Test: Not reported
Register: True
Modified By: KXTANG
Last Modified: 9/20/2005

HIST UST:
PBS Number: 2-064319
SPDES Number: Not reported
Emergency Contact: ROBERT OUMANO
Emergency Telephone: (718) 784-1035
Operator: FRANCO-AMERICAN NOVELTY CO INC
Operator Telephone: (718) 784-1035
Owner Name: ROBERT OUMANO
Owner Address: 23-14 44TH ROAD
Owner City,St,Zip: LONG ISLAND CITY, NY 11101
Owner Telephone: (718) 784-1035
Owner Type: Not reported
Owner Subtype: Not reported
Mailing Name: CITICORP
Mailing Address: 23-14 44TH ROAD
Mailing Address 2: Not reported
Mailing City,St,Zip: LON ISLAND CITY, NY 11101
Mailing Contact: Not reported
Mailing Telephone: (718) 784-1035
Owner Mark: First Owner
Facility Status: 1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2: 23014 44TH ROAD
SWIS ID: 6301
Old PBS Number: Not reported
Facility Type: Not reported
Inspected Date: Not reported
Inspector: Not reported
Inspection Result: Not reported
Federal ID: Not reported

PARKING LOT (Continued) **U001831742**

Certification Flag: False
Certification Date: 01/14/1987
Expiration Date: 01/14/1992
Renew Flag: False
Renewal Date: Not reported
Total Capacity: 4500
FAMT: True
Facility Screen: Minor Data Missing
Owner Screen: Minor Data Missing
Tank Screen: Minor Data Missing
Dead Letter: True
CBS Number: Not reported
Town or City: NEW YORK CITY
County Code: 63
Town or City: 01
Region: 2

Tank Id: 001
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: Not reported
Capacity (gals): 1500
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: STEEL/IRON
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: None
Leak Detection: None
Overfill Prot: Not reported
Dispenser: Gravity
Date Tested: Not reported
Next Test Date: 12/27/1987
Missing Data for Tank: Minor Data Missing
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: False
Lat/long: Not reported

Tank Id: 002
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: Not reported
Capacity (gals): 1500
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: STEEL/IRON
Pipe Internal: Not reported
Pipe External: Not reported

PARKING LOT (Continued) **U001831742**

Second Containment: None
Leak Detection: None
Overfill Prot: Product Level Gauge
Dispenser: Suction
Date Tested: Not reported
Next Test Date: 12/27/1987
Missing Data for Tank: Minor Data Missing
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: False
Lat/long: Not reported

Tank Id: 003
Tank Location: UNDERGROUND
Tank Status: In Service
Install Date: Not reported
Capacity (gals): 1500
Product Stored: NOS 1,2, OR 4 FUEL OIL
Tank Type: Steel/carbon steel
Tank Internal: Not reported
Tank External: Not reported
Pipe Location: Not reported
Pipe Type: STEEL/IRON
Pipe Internal: Not reported
Pipe External: Not reported
Second Containment: None
Leak Detection: None
Overfill Prot: Product Level Gauge
Dispenser: Suction
Date Tested: Not reported
Next Test Date: 12/27/1987
Missing Data for Tank: Minor Data Missing
Date Closed: Not reported
Test Method: Not reported
Deleted: False
Updated: False
Lat/long: Not reported

X108 **OUTLET CITY INCORPORATED** **RCRA-CESQG 1000546989**
NE **42-16 WEST STREET** **FINDS NYD053174041**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **HIST LTANKS**
0.227 mi. **MANIFEST**
1201 ft. **Site 1 of 2 in cluster X** **NY Spills**

Relative:
Lower

Actual:
16 ft.

RCRA-CESQG:
Date form received by agency: 01/01/2007
Facility name: OUTLET CITY INC
Facility address: 42-16 WEST ST
LONG ISLAND CITY, NY 11101
EPA ID: NYD053174041
Mailing address: WEST ST
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: WEST ST
LONG ISLAND CITY, NY 11101
Contact country: US

OUTLET CITY INCORPORATED (Continued) **1000546989**

Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Private
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: OUTLET CITY INC
Owner/operator address: 42-16 WEST ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 786-4500
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: OUTLET CITY INC
Owner/operator address: 42-16 WEST ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 786-4500
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No

OUTLET CITY INCORPORATED (Continued) **1000546989**

Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: OUTLET CITY INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 01/01/2001
Facility name: OUTLET CITY INC
Site name: AKRF-MODELL'S OUTLET CITY, INC.
Classification: Large Quantity Generator

Date form received by agency: 07/14/1999
Facility name: OUTLET CITY INC
Classification: Small Quantity Generator

Date form received by agency: 07/16/1997
Facility name: OUTLET CITY INC
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Records/Reporting
Date violation determined: 07/19/2000
Date achieved compliance: 10/16/2000
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/19/2000
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 03/01/2000
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - Records/Reporting
Date achieved compliance: 10/16/2000
Evaluation lead agency: State

FINDS:

Registry ID: 110009467166

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OUTLET CITY INCORPORATED (Continued) **1000546989**

HIST LTANKS:

Region of Spill:	2
Spill Number:	9813882
Spill Date:	10/01/1998
Spill Time:	09:00
Spill Cause:	Tank Overfill
Resource Affectd:	Groundwater
Water Affected:	Not reported
Spill Source:	Non Major Facility > 1,100 gallons
Spill Class:	Known release that creates a file or hazard. DEC Response. Unknown Responsible Party. Corrective action taken. (ISR)
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	SIGONA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	02/16/99
Reported to Department Time:	11:44
SWIS:	63
Spiller Contact:	MARCUS SIMMONS
Spiller Phone:	(212) 696-0670
Spiller Extention:	Not reported
Spiller Name:	OUTLET CITY
Spiller Address:	42-16 WEST ST
Spiller City,St,Zip:	LONG ISLAND CITY, NY 11101-
Spiller Cleanup Date:	/ /
Facility Contact:	DAVID A ROTH
Facility Phone:	(201) 621-5761
Facility Extention:	Not reported
Spill Notifier:	DEC
PBS Number:	2-237981
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	02/16/99
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	04/14/00
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate Failed Tank:	Not reported

OUTLET CITY INCORPORATED (Continued) **1000546989**

Gross Leak Rate: Not reported

Material:
Material Class Type: Nonpetroleum/Nonhazardous
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: CARBOLIC ACID
Class Type: CARBOLIC ACID
Times Material Entry In File: 0
CAS Number: 00108952
Last Date: Not reported
Material: PHENOL
Class Type: PHENOL
Times Material Entry In File: 65
CAS Number: 00108952
Last Date: Not reported
Material Class Type: Hazardous Material
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: PAINT THINNERS
Class Type: PAINT THINNERS
Times Material Entry In File: 124
CAS Number: Not reported
Last Date: 19940728
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: TAR
Class Type: TAR
Times Material Entry In File: 141
CAS Number: Not reported
Last Date: 19940728
Material Class Type: Hazardous Material
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: PESTICIDES
Class Type: PESTICIDES
Times Material Entry In File: 236
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: Spill cleanup being supervised under voluntary cleanup agreement. IRM is under review. Proposed work plan to enhance IRM submitted to DEC on March 28, 2000. The site was inspected by NYSDOH, and DEC to address elevated levels of VOAs. There is presence of ben ene in soils and groundwater, and seepage into basement level. There is significant amt of free product from historical spill of creosote solvent previously stored at site. DEC Ha Waste and DEC Spills

OUTLET CITY INCORPORATED (Continued) **1000546989**

working on remediation project.Also see spill no. 9600688 for further information.

Spill Cause: CALLER REPORTING THAT DURING SITE INVESTIGATION, MULTIPLE TYPES OF HAZARDOUS MATERIALS WERE FOUND IN SOIL SAMPLES. REQ DEC FOLLOW UP.

NY MANIFEST:

EPA ID:	NYD053174041
Country:	USA
Mailing Name:	OUTLET CITY INC
Mailing Contact:	SHARON
Mailing Address:	42-16 WEST STREET
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-786-4500

Document ID:	NYG0827694
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	31124MA
Trans2 State ID:	0027402
Generator Ship Date:	971217
Trans1 Recv Date:	971217
Trans2 Recv Date:	971219
TSD Site Recv Date:	971229
Part A Recv Date:	980108
Part B Recv Date:	980127
Generator EPA ID:	NYD053174041
Trans1 EPA ID:	CTD982191942
Trans2 EPA ID:	CTD982191942
TSDF ID:	OHD980681571
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	120
Year:	97

Document ID:	NJA1471371
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS699
Trans2 State ID:	Not reported
Generator Ship Date:	920618
Trans1 Recv Date:	920618
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	920618
Part A Recv Date:	Not reported
Part B Recv Date:	920703
Generator EPA ID:	NYD053174041
Trans1 EPA ID:	NJD980772768
Trans2 EPA ID:	Not reported

OUTLET CITY INCORPORATED (Continued) **1000546989**

TSDF ID:	NJD991291105
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00200
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	03300
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	92

Document ID:	NJA3128296
Manifest Status:	Not reported
Trans1 State ID:	NJD980772768
Trans2 State ID:	Not reported
Generator Ship Date:	06/07/1999
Trans1 Recv Date:	06/07/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	06/07/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD053174041
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	S6993
Waste Code:	U051 - CREOSOTE
Quantity:	00020
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	99

Document ID:	NJA2758094
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJDEPES58
Trans2 State ID:	Not reported
Generator Ship Date:	970627
Trans1 Recv Date:	970627
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	970627
Part A Recv Date:	980317
Part B Recv Date:	980414
Generator EPA ID:	NYD053174041
Trans1 EPA ID:	NJ0000027193
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	D026 - CRESOL 200.0 MG/L TCLP

OUTLET CITY INCORPORATED (Continued) **1000546989**

Quantity:	00025
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	97

Document ID:	NYB7496208
Manifest Status:	Not reported
Trans1 State ID:	NYD980592570
Trans2 State ID:	NJD054126164
Generator Ship Date:	09/28/2000
Trans1 Recv Date:	09/28/2000
Trans2 Recv Date:	10/04/2000
TSD Site Recv Date:	10/10/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD053174041
Trans1 EPA ID:	OHD066060609
Trans2 EPA ID:	Not reported
TSDF ID:	14887AD
Waste Code:	D026 - CRESOL 200.0 MG/L TCLP
Quantity:	00200
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.10
Year:	2000

NY Spills:

Site ID:	308118
Facility Addr2:	Not reported
Facility ID:	9813882
Spill Number:	9813882
Facility Type:	ER
SWIS:	4101
Investigator:	EXHAMPST
Referred To:	Not reported
Spill Date:	10/1/1998
Reported to Dept:	2/16/1999
CID:	366
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Non Major Facility > 1,100 gal
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates a file or hazard. DEC Response. Unknown Responsible Party. Corrective action taken. (ISR)
Spill Closed Dt:	7/22/2005
Remediation Phase:	0

OUTLET CITY INCORPORATED (Continued) **1000546989**

Date Entered In Computer: 2/16/1999
Spill Record Last Update: 7/22/2005
Spiller Name: DAVID A ROTH
Spiller Company: OUTLET CITY
Spiller Address: 42-16 WEST ST
Spiller City,St,Zip: LONG ISLAND CITY, NY 11101-
Spiller Company: 001
Contact Name: MARCUS SIMMONS
Contact Phone: (212) 696-0670
DEC Region: 2
DER Facility ID: 208621
DEC Memo: 7/22/05, Hampston: See also 9600688, 0301857. Site under VCA V00081 and listed as P site (2-41-020). UST removal as part of VCA in 2003. Site investigation/assessment continuing under VCA.
Remarks: CALLER REPORTING THAT DURING SITE INVESTIGATION, MULTIPLE TYPES OF HAZARDOUS MATERIALS WERE FOUND IN SOIL SAMPLES. REQ DEC FOLLOW UP.

Material:
Site ID: 308118
Operable Unit ID: 1074608
Operable Unit: 01
Material ID: 310593
Material Code: 0056A
Material Name: PAINT THINNERS
Case No.: Not reported
Material FA: Other
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False
Site ID: 308118
Operable Unit ID: 1074608
Operable Unit: 01
Material ID: 310594
Material Code: 0057A
Material Name: PESTICIDES
Case No.: Not reported
Material FA: Other
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False
Site ID: 308118
Operable Unit ID: 1074608
Operable Unit: 01
Material ID: 310590
Material Code: 0018A
Material Name: TAR
Case No.: Not reported
Material FA: Other
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False
Site ID: 308118

OUTLET CITY INCORPORATED (Continued) **1000546989**

Operable Unit ID: 1074608
Operable Unit: 01
Material ID: 310592
Material Code: 0036B
Material Name: CARBOLIC ACID
Case No.: 00108952
Material FA: Hazardous Material
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

X109 **OUTLET CITY INC** **UST U001836097**
NE **42-16 WEST ST** **HIST UST N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.227 mi.
1201 ft. **Site 2 of 2 in cluster X**

Relative:
Lower

Actual:
16 ft.

UST:
Facility Id: 2-237981
Region: STATE
DEC Region: 2
Site Status: Unregulated
Program Type: PBS
Expiration Date: N/A
UTM X: 589662.85900000005
UTM Y: 4511385.9358099997

Affiliation Records:
Site Id: 8894
Affiliation Type: On-Site Operator
Company Name: OUTLET CITY INC
Contact Type: Not reported
Contact Name: NINO TASSI
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (728) 786-4580
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported

OUTLET CITY INC (Continued) **U001836097**

Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	8894
Affiliation Type:	Owner
Company Name:	OUTLET CITY INC
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	42-16 WEST ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(728) 786-4580
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	8894
Affiliation Type:	Emergency Contact
Company Name:	OUTLET CITY INC
Contact Type:	Not reported
Contact Name:	JOSEPH CONLEY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 286-4588
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004
Site Id:	8894
Affiliation Type:	Mail Contact
Company Name:	OUTLET CITY INC
Contact Type:	Not reported
Contact Name:	JOSEPH CONLEY
Address1:	42-16 WEST ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 786-4500
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

OUTLET CITY INC (Continued) **U001836097**

Equipment Records:

B00 - Tank External Protection - None
F00 - Pipe External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
D01 - Pipe Type - Steel/Carbon Steel/Iron
B00 - Tank External Protection - None
G00 - Tank Secondary Containment - None
C00 - Pipe Location - No Piping
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
F00 - Pipe External Protection - None
J02 - Dispenser - Suction
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
G00 - Tank Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
D01 - Pipe Type - Steel/Carbon Steel/Iron
I04 - Overfill - Product Level Gauge (A/G)
H00 - Tank Leak Detection - None
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
I04 - Overfill - Product Level Gauge (A/G)
C00 - Pipe Location - No Piping
H00 - Tank Leak Detection - None
A00 - Tank Internal Protection - None
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
J02 - Dispenser - Suction
C00 - Pipe Location - No Piping
D01 - Pipe Type - Steel/Carbon Steel/Iron
F00 - Pipe External Protection - None
C00 - Pipe Location - No Piping
B00 - Tank External Protection - None

Tank Info:

Site ID:	8894
Tank Number:	001
Tank ID:	17346
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	7500
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/1989
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

OUTLET CITY INC (Continued) **U001836097**

Site ID:	8894
Tank Number:	002
Tank ID:	17347
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	7500
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/1989
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	8894
Tank Number:	003
Tank ID:	17348
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	10000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/1989
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004
Site ID:	8894
Tank Number:	004
Tank ID:	17349
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	Not reported
Capacity Gallons:	10000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	8/1/1989
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	TRANSLAT
Last Modified:	3/4/2004

OUTLET CITY INC (Continued) **U001836097**

HIST UST:

PBS Number:	2-237981
SPDES Number:	Not reported
Emergency Contact:	JOSEPH CONLEY
Emergency Telephone:	(718) 286-4588
Operator:	NINO TASSI
Operator Telephone:	(728) 786-4580
Owner Name:	OUTLET CITY INC
Owner Address:	42-16 WEST ST
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(728) 786-4580
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	OUTLET CITY INC
Mailing Address:	42-16 WEST ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	JOSEPH CONLEY
Mailing Telephone:	(718) 786-4500
Owner Mark:	First Owner
Facility Status:	2 - Unregulated by PBS (the total capacity is less than 1,101 gallons) and Subpart 360-14.
Facility Addr2:	42016 WEST ST
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	Not reported
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	07/20/1987
Expiration Date:	07/20/1992
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	0
FAMT:	True
Facility Screen:	Minor Data Missing
Owner Screen:	No Missing Data
Tank Screen:	0
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	Not reported
Capacity (gals):	7500
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported

OUTLET CITY INC (Continued) **U001836097**

Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1989
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	002
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	Not reported
Capacity (gals):	7500
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1989
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	003
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	Not reported
Capacity (gals):	10000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported

OUTLET CITY INC (Continued) **U001836097**

Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1989
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	004
Tank Location:	UNDERGROUND
Tank Status:	Closed-In Place
Install Date:	Not reported
Capacity (gals):	10000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Product Level Gauge
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	08/01/1989
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

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110 **CITY SPORTS & GRAPHIC** **RCRA-NonGen** **1000990064**
WSW **45-12 DAVIS ST** **FINDS** **NYR000000232**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.228 mi.
1202 ft.

Relative:
Lower

Actual:
9 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	CITY SPORTS & GRAPHIC
Facility address:	45-12 DAVIS ST LONG ISLAND CITY, NY 111014306
EPA ID:	NYR000000232
Mailing address:	DAVIS ST LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	DAVIS ST LONG ISLAND CITY, NY 11101
Contact country:	US

CITY SPORTS & GRAPHIC (Continued) **1000990064**

Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: HYUNG HO KIM
Owner/operator address: 45-12 DAVIS ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 361-5240
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: HYUNG HO KIM
Owner/operator address: 45-12 DAVIS ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 361-5240
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: CITY SPORTS & GRAPHIC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: CITY SPORTS & GRAPHIC
Classification: Not a generator, verified

Date form received by agency: 02/22/1995
Facility name: CITY SPORTS & GRAPHIC

CITY SPORTS & GRAPHIC (Continued) **1000990064**

Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 11/19/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004511252

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

U111 **KOREA NEWS** **MANIFEST** **S109785732**
NNE **42-22 27TH ST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.230 mi.
1213 ft. **Site 2 of 4 in cluster U**

Relative: Equal

Actual: 19 ft.

CT MANIFEST:

Waste:
Manifest No: CTF0502011
Waste Occurence: 1
UNNA: 3082
Hazard Class: 9
US Dot Description: RQ HAZARDOUS WASTE, LIQUID, N.O.S.
No of Containers: 001
Container Type: DF
Quantity: 458
Weight/Volume: P
Additional Description: Not reported
Handling Code: Not reported
Date Record Was Last Modified: 4/26/2004
DEO Who Last Modified Record: IG

Waste CD:
Manifest No: CTF0502011
Waste Occurence: 1
EPA Waste Code: D011
Recycled Waste?: F
Date Record Was Last Modified: 4/26/2004
DEO Who Last Modified Record: IG

Detail:
Year: 1997

KOREA NEWS (Continued) **S109785732**

Manifest ID:	CTF0502011
TSDF EPA ID:	CTD001156009
TSDF Name:	SAFETY-KLEEN CORP.
TSDF Address:	39 COMMUNITY AVE EXT.
TSDF City,St,Zip:	PLAINFIELD, CT 06374
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	2/20/1997
Transporter EPA ID:	ILD984908202
Transporter Name:	SAFETY-KLEEN CORP.
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
EPA ID:	NYD987005857
Generator Phone:	7184821111
Generator Mailing Addr:	42-22 27TH ST
Generator Mailing Town:	LONG ISLAND CIT
Generator Mailing State:	NY
Generator Mailing Zip:	11101
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	2/20/1997
Date Received:	3/3/1997
Last modified date:	4/26/2004
Last modified by:	IG
Comments:	Not reported

Waste:

Manifest No:	CTF0481784
Waste Occurence:	1
UNNA:	3082
Hazard Class:	9
US Dot Description:	RQ HAZARDOUS WASTE, LIQUID, N.O.S.
No of Containers:	002
Container Type:	DF
Quantity:	990
Weight/Volume:	P
Additional Description:	Not reported
Handling Code:	Not reported
Date Record Was Last Modified:	4/26/2004
DEO Who Last Modified Record:	IG

Waste CD:

Manifest No:	CTF0481784
Waste Occurence:	1
EPA Waste Code:	D011
Recycled Waste?:	F
Date Record Was Last Modified:	4/26/2004

KOREA NEWS (Continued) **S109785732**

DEO Who Last Modified Record: IG

Detail:

Year:	1996
Manifest ID:	CTF0481784
TSDF EPA ID:	CTD001156009
TSDF Name:	SAFETY-KLEEN SYSTEMS, INC.
TSDF Address:	39 COMMUNITY AVE EXT.
TSDF City,St,Zip:	PLAINFIELD, CT 06374
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	9/6/1996
Transporter EPA ID:	ILD984908202
Transporter Name:	SAFETY-KLEEN SYSTEMS, INC.
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
EPA ID:	NYD987005857
Generator Phone:	2125551212
Generator Mailing Addr:	42-22 27TH ST
Generator Mailing Town:	LONG ISLAND CIT
Generator Mailing State:	NY
Generator Mailing Zip:	11101
Generator Mailing Country:	USA
Special Handling:	Not reported
Discrepancies:	Not reported
Date Shipped:	9/6/1996
Date Received:	9/12/1996
Last modified date:	4/26/2004
Last modified by:	IG
Comments:	Not reported

U112 **KOREA NEWS** **MANIFEST** **S109533774**
NNE **42-22 27TH ST** **N/A**
1/8-1/4 **LONG ISLAND, NY 11101**
0.230 mi.
1213 ft. **Site 3 of 4 in cluster U**

Relative:
Equal

Actual:
19 ft.

NJ MANIFEST:

Manifest Code:	000124881SKS
EPA ID:	NYD987005857
Date Shipped:	9/10/2008
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	TXR000050930
Transporter 2 EPA ID:	NJD071629976
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported

KOREA NEWS (Continued) **S109533774**

Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	9/10/2008
Date Trans2 Transported Waste:	9/16/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	9/16/2008
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	Not reported
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	D001
Manifest Year:	2008 New Jersey Manifest Data
Quantity:	900
Unit:	P
Hand Code:	H061

Manifest Code:	000124880SKS
EPA ID:	NYD987005857
Date Shipped:	3/21/2008
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	TXR000050930
Transporter 2 EPA ID:	NJD071629976
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	3/21/2008
Date Trans2 Transported Waste:	4/4/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	4/9/2008
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	Not reported
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported

KOREA NEWS (Continued) **S109533774**

Waste Code: D001
Manifest Year: 2008 New Jersey Manifest Data
Quantity: 400
Unit: P
Hand Code: H061

U113 **KOREA NEWS** **RCRA-SQG 1000694281**
NNE **42-22 27TH ST** **FINDS NYD987005857**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.230 mi.
1213 ft. **Site 4 of 4 in cluster U**

Relative:
Equal

Actual:
19 ft.

RCRA-SQG:
Date form received by agency: 01/01/2007
Facility name: KOREA NEWS
Facility address: 42-22 27TH ST
LONG ISLAND CITY, NY 11101
EPA ID: NYD987005857
Mailing address: 27TH ST
LONG ISLAND CITY, NY 11101
Contact: LEE KYUNG
Contact address: 27TH ST
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: (212) 555-1212
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: KOREA NEWS
Owner/operator address: 42-22 27TH ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 482-1111
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: KOREA NEWS
Owner/operator address: 42-22 27TH ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 482-1111
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

KOREA NEWS (Continued) **1000694281**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: KOREA NEWS
Classification: Small Quantity Generator

Date form received by agency: 06/12/1992
Facility name: KOREA NEWS
Classification: Small Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/30/2010
Date achieved compliance: 08/16/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 07/30/2010
Date achieved compliance: 08/13/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported

KOREA NEWS (Continued) **1000694281**

Area of violation: Generators - Pre-transport
Date violation determined: 07/30/2010
Date achieved compliance: 08/16/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Preparedness and Prevention
Date violation determined: 07/30/2010
Date achieved compliance: 08/13/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 07/30/2010
Date achieved compliance: 07/30/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 07/30/2010
Date achieved compliance: 08/16/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/16/2010
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 09/16/2010
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 07/30/2010

KOREA NEWS (Continued) **1000694281**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Preparedness and Prevention
Date achieved compliance: 08/13/2010
Evaluation lead agency: State

Evaluation date: 07/30/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 08/16/2010
Evaluation lead agency: State

Evaluation date: 07/30/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Container Use and Management
Date achieved compliance: 08/13/2010
Evaluation lead agency: State

Evaluation date: 07/30/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: 08/16/2010
Evaluation lead agency: State

Evaluation date: 07/30/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 08/16/2010
Evaluation lead agency: State

Evaluation date: 07/30/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Container Use and Management
Date achieved compliance: 07/30/2010
Evaluation lead agency: State

FINDS:

Registry ID: 110004491292

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD987005857
Country: USA
Mailing Name: KOREA NEWS
Mailing Contact: KOREA NEWS
Mailing Address: 42-22 27TH ST
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY

KOREA NEWS (Continued) **1000694281**

Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-482-1111

Document ID:	NJA1828460
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	Not reported
Generator Ship Date:	940519
Trans1 Recv Date:	940519
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	940524
Part A Recv Date:	Not reported
Part B Recv Date:	940609
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00989
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	94

Document ID:	NJA1960698
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	08690
Generator Ship Date:	940610
Trans1 Recv Date:	940610
Trans2 Recv Date:	940613
TSD Site Recv Date:	940613
Part A Recv Date:	Not reported
Part B Recv Date:	940624
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	ILD984908202
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00989
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	94

Document ID:	CTF0502023
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	ILLP24639

KOREA NEWS (Continued) **1000694281**

Trans2 State ID:	Not reported
Generator Ship Date:	970815
Trans1 Recv Date:	970815
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	970825
Part A Recv Date:	970828
Part B Recv Date:	970912
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	CTD001156009
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00165
Units:	P - Pounds
Number of Containers:	003
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	97

Document ID:	NJA1828461
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	Not reported
Generator Ship Date:	940701
Trans1 Recv Date:	940701
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	940706
Part A Recv Date:	Not reported
Part B Recv Date:	940715
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00988
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	94

Document ID:	NJA2055469
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	Not reported
Generator Ship Date:	950209
Trans1 Recv Date:	950209
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	950209
Part A Recv Date:	Not reported
Part B Recv Date:	950222
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202

KOREA NEWS (Continued) **1000694281**

Trans2 EPA ID: Not reported
TSDF ID: NJD002182897
Waste Code: D011 - SILVER 5.0 MG/L TCLP
Quantity: 00988
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 95

Document ID: NYC7197210
Manifest Status: Not reported
Trans1 State ID: NY83381JN
Trans2 State ID: NJ044T465
Generator Ship Date: 02/19/2004
Trans1 Recv Date: 02/19/2004
Trans2 Recv Date: 02/24/2004
TSD Site Recv Date: 03/01/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD987005857
Trans1 EPA ID: TXR000050930
Trans2 EPA ID: Not reported
TSDF ID: KYD053348
Waste Code: D011 - SILVER 5.0 MG/L TCLP
Quantity: 00400
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2004

Document ID: NYC7212148
Manifest Status: Not reported
Trans1 State ID: NY83318JN
Trans2 State ID: Not reported
Generator Ship Date: 04/19/2004
Trans1 Recv Date: 04/19/2004
Trans2 Recv Date: 04/23/2004
TSD Site Recv Date: 04/29/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD987005857
Trans1 EPA ID: TXR000050930
Trans2 EPA ID: Not reported
TSDF ID: KYD053348
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00700
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00

KOREA NEWS (Continued) **1000694281**

Year: 2004

Document ID: NYC7247035
Manifest Status: Not reported
Trans1 State ID: NY55817L
Trans2 State ID: T465GLNJ
Generator Ship Date: 08/16/2004
Trans1 Recv Date: 08/16/2004
Trans2 Recv Date: 08/20/2004
TSD Site Recv Date: 08/30/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD987005857
Trans1 EPA ID: TXR000050930
Trans2 EPA ID: Not reported
TSDF ID: KYD053348
Waste Code: D011 - SILVER 5.0 MG/L TCLP
Quantity: 00800
Units: P - Pounds
Number of Containers: 007
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2004

Document ID: NYC7248126
Manifest Status: Not reported
Trans1 State ID: NYAT8305
Trans2 State ID: NJT16L8D
Generator Ship Date: 10/25/2004
Trans1 Recv Date: 10/25/2004
Trans2 Recv Date: 10/29/2004
TSD Site Recv Date: 11/07/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD987005857
Trans1 EPA ID: TXR000050930
Trans2 EPA ID: Not reported
TSDF ID: KYD053348
Waste Code: D003 - NON-LISTED REACTIVE WASTES
Quantity: 00800
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2004

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: TXR000050930
Trans2 State ID: NJD071629976
Generator Ship Date: 2008-02-27
Trans1 Recv Date: 2008-02-27

KOREA NEWS (Continued) **1000694281**

Trans2 Recv Date:	2008-02-28
TSD Site Recv Date:	2008-03-01
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	KYD053348108
Waste Code:	Not reported
Quantity:	1200.0
Units:	P - Pounds
Number of Containers:	3.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	000083187SKS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	TXR000050930
Trans2 State ID:	NJD071629976
Generator Ship Date:	2008-09-10
Trans1 Recv Date:	2008-09-10
Trans2 Recv Date:	2008-09-16
TSD Site Recv Date:	2008-09-16
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	Not reported
Quantity:	900.0
Units:	P - Pounds
Number of Containers:	3.0
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	000124881SKS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N

KOREA NEWS (Continued) **1000694281**

Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H061

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	TXR000050930
Trans2 State ID:	NJD071629976
Generator Ship Date:	2008-03-21
Trans1 Recv Date:	2008-03-21
Trans2 Recv Date:	2008-04-04
TSD Site Recv Date:	2008-04-04
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	Not reported
Quantity:	400.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	000124880SKS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H061

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	TXR000050930
Trans2 State ID:	NJD071629976
Generator Ship Date:	2008-06-20
Trans1 Recv Date:	2008-06-20
Trans2 Recv Date:	2008-06-26
TSD Site Recv Date:	2008-07-08
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	Not reported

KOREA NEWS (Continued) **1000694281**

Trans2 EPA ID:	Not reported
TSDF ID:	KYD053348108
Waste Code:	Not reported
Quantity:	1600.0
Units:	P - Pounds
Number of Containers:	4.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	001253079SKS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	Y
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H061

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	TXR000050930
Trans2 State ID:	OKD981588791
Generator Ship Date:	2008-11-05
Trans1 Recv Date:	2008-11-05
Trans2 Recv Date:	2008-11-12
TSD Site Recv Date:	2008-11-14
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	KYD053348108
Waste Code:	Not reported
Quantity:	600.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	000124888SKS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	Y
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported

KOREA NEWS (Continued) **1000694281**

Mgmt Method Type Code: H141

Document ID: NJA2113558
Manifest Status: Completed copy
Trans1 State ID: NJDEPE086
Trans2 State ID: 08690
Generator Ship Date: 950324
Trans1 Recv Date: 950324
Trans2 Recv Date: 950327
TSD Site Recv Date: 950328
Part A Recv Date: Not reported
Part B Recv Date: 950417
Generator EPA ID: NYD987005857
Trans1 EPA ID: ILD984908202
Trans2 EPA ID: ILD984908202
TSDF ID: NJD002182897
Waste Code: D011 - SILVER 5.0 MG/L TCLP
Quantity: 00988
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 95

Document ID: NJA1926067
Manifest Status: Completed copy
Trans1 State ID: DL8162
Trans2 State ID: Not reported
Generator Ship Date: 941208
Trans1 Recv Date: 941208
Trans2 Recv Date: Not reported
TSD Site Recv Date: 941212
Part A Recv Date: Not reported
Part B Recv Date: 941223
Generator EPA ID: NYD987005857
Trans1 EPA ID: ILD984908202
Trans2 EPA ID: Not reported
TSDF ID: NJD002182897
Waste Code: D011 - SILVER 5.0 MG/L TCLP
Quantity: 01484
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 94

Document ID: NJA1956135
Manifest Status: Completed copy
Trans1 State ID: NJDEPE086
Trans2 State ID: Not reported
Generator Ship Date: 941012
Trans1 Recv Date: 941012

KOREA NEWS (Continued) **1000694281**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	941014
Part A Recv Date:	Not reported
Part B Recv Date:	941031
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00494
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	94

Document ID:	NJA1933881
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	Not reported
Generator Ship Date:	941109
Trans1 Recv Date:	941109
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	941111
Part A Recv Date:	Not reported
Part B Recv Date:	941123
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00495
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	94

Document ID:	NJA1963047
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	08690
Generator Ship Date:	940916
Trans1 Recv Date:	940916
Trans2 Recv Date:	940919
TSD Site Recv Date:	940920
Part A Recv Date:	Not reported
Part B Recv Date:	941003
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	ILD984908202
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP

KOREA NEWS (Continued) **1000694281**

Quantity:	01484
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	94

Document ID:	NJA1940039
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPE086
Trans2 State ID:	Not reported
Generator Ship Date:	940724
Trans1 Recv Date:	940724
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	940725
Part A Recv Date:	Not reported
Part B Recv Date:	940810
Generator EPA ID:	NYD987005857
Trans1 EPA ID:	ILD984908202
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002182897
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Quantity:	00675
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	94

Click this hyperlink while viewing on your computer to access
67 additional NY_MANIFEST: record(s) in the EDR Site Report.

Y114 **NYCT - FLUSHING AVENUE LINE (#7 LINE)** **RCRA-CESQG** **1005417217**
West **DAVIS & 23RD ST** **FINDS** **NYR000103416**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.235 mi.
1243 ft. **Site 1 of 2 in cluster Y**

Relative:
Lower

Actual:
12 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	NYCT - FLUSHING AVENUE LINE (#7 LINE)
Facility address:	DAVIS & 23RD ST LONG ISLAND CITY, NY 11101
EPA ID:	NYR000103416
Mailing address:	370 JAY STREET, ROOM 819 BROOKLYN, NY 11201
Contact:	JOSEPHINE F BROWN
Contact address:	370 JAY STREET, ROOM 819 BROOKLYN, NY 11201
Contact country:	US
Contact telephone:	(718) 243-4581
Contact email:	JOBROWN4@NYCT.COM
EPA Region:	02
Land type:	State
Classification:	Conditionally Exempt Small Quantity Generator

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	NO NAME FOUND
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	06/01/1953
Owner/Op end date:	Not reported

Owner/operator name:	MTA NEW YORK CITY TRANSIT
Owner/operator address:	2 BROADWAY 3RD FL
	NEW YORK, NY 10004
Owner/operator country:	US
Owner/operator telephone:	(646) 252-3500
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/2001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	01/01/2006
Facility name:	NYCT - FLUSHING AVENUE LINE (#7 LINE)

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Classification: Small Quantity Generator

Date form received by agency: 02/09/2004
Facility name: NYCT - FLUSHING AVENUE LINE (#7 LINE)
Classification: Large Quantity Generator

Date form received by agency: 01/17/2002
Facility name: NYCT - FLUSHING AVENUE LINE (#7 LINE)
Site name: MTA NYCT - FLUSHING LINE #7
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: SR - 371.1(f)(7)
Area of violation: Listing - General
Date violation determined: 01/24/2005
Date achieved compliance: 05/23/2005
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/15/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 01/24/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Listing - General
Date achieved compliance: 05/23/2005
Evaluation lead agency: State

FINDS:

Registry ID: 110012193205

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYR000103416
Country: USA
Mailing Name: NYC TR AUTHORITY CPM ENG
Mailing Contact: ROY PARDEE JR.
Mailing Address: 130 LIVINGSTON ST RM 8007
Mailing Address 2: Not reported
Mailing City: BROOKLYN
Mailing State: NY
Mailing Zip: 11201

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 718-694-1448

Document ID: NYG3949353
Manifest Status: Not reported
Trans1 State ID: MAD985286988
Trans2 State ID: Not reported
Generator Ship Date: 09/09/2003
Trans1 Recv Date: 09/09/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 09/10/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: MA43218
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 05500
Units: P - Pounds
Number of Containers: 008
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG3946536
Manifest Status: Not reported
Trans1 State ID: MAD985286988
Trans2 State ID: Not reported
Generator Ship Date: 10/01/2003
Trans1 Recv Date: 10/01/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 10/02/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: MA58529
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 04800
Units: P - Pounds
Number of Containers: 006
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG3938994
Manifest Status: Not reported
Trans1 State ID: MAD985286988
Trans2 State ID: Not reported

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Generator Ship Date:	12/31/2003
Trans1 Recv Date:	12/31/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	01/06/2004
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	MAJ68855
Waste Code:	F003 - UNKNOWN
Quantity:	00250
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG3939138
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	11/12/2003
Trans1 Recv Date:	11/12/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	11/19/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	MA58500
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	01000
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG3941811
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	09/29/2003
Trans1 Recv Date:	09/29/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/01/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

TSDF ID: MA58529
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 04800
Units: P - Pounds
Number of Containers: 008
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00200
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG3948309
Manifest Status: Not reported
Trans1 State ID: MAD985286988
Trans2 State ID: Not reported
Generator Ship Date: 09/18/2003
Trans1 Recv Date: 09/18/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 09/22/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: MA58529
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 07000
Units: P - Pounds
Number of Containers: 008
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG2894418
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 06/09/2003
Trans1 Recv Date: 06/09/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 06/10/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40580PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Quantity:	05500
Units:	P - Pounds
Number of Containers:	014
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG2894607
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	04/28/2003
Trans1 Recv Date:	04/28/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/30/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	40580PANY
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	03000
Units:	P - Pounds
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG2892735
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	04/17/2003
Trans1 Recv Date:	04/17/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/21/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	40579PANY
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	04000
Units:	P - Pounds
Number of Containers:	007
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2003

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Document ID:	NYG2895084
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	05/13/2003
Trans1 Recv Date:	05/13/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/14/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	40580PANY
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	04000
Units:	P - Pounds
Number of Containers:	008
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG2895273
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	05/16/2003
Trans1 Recv Date:	05/16/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/19/2003
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	40580PANY
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	02000
Units:	P - Pounds
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2003

Document ID:	NYG3567672
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	02/04/2003
Trans1 Recv Date:	02/04/2003
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/05/2003
Part A Recv Date:	Not reported

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40579PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 01000
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG2894049
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 05/30/2003
Trans1 Recv Date: 05/30/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 06/02/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40579PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 06400
Units: P - Pounds
Number of Containers: 008
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG2895651
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 05/06/2003
Trans1 Recv Date: 05/06/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 05/14/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40580PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 02440
Units: P - Pounds
Number of Containers: 005

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG2892402
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 04/15/2003
Trans1 Recv Date: 04/15/2003
Trans2 Recv Date: Not reported
TSD Site Recv Date: 04/16/2003
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40579PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 03000
Units: P - Pounds
Number of Containers: 005
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00050
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2003

Document ID: NYG4283352
Manifest Status: Not reported
Trans1 State ID: MA58500
Trans2 State ID: Not reported
Generator Ship Date: 03/18/2004
Trans1 Recv Date: 03/18/2004
Trans2 Recv Date: Not reported
TSD Site Recv Date: 03/18/2004
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: MAD985286988
Trans2 EPA ID: Not reported
TSDF ID: NYD077444
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00325
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Specific Gravity: 01.00
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00400
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2004

Document ID: NYG3330648
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 05/17/2001
Trans1 Recv Date: 05/17/2001
Trans2 Recv Date: Not reported
TSD Site Recv Date: 05/22/2002
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYPD1010
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 02000
Units: P - Pounds
Number of Containers: 005
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 01.00
Year: 2001

Document ID: NYG3567303
Manifest Status: Not reported
Trans1 State ID: NYD077444263
Trans2 State ID: Not reported
Generator Ship Date: 12/24/2002
Trans1 Recv Date: 12/24/2002
Trans2 Recv Date: Not reported
TSD Site Recv Date: 12/24/2002
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000103416
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: 40579PANY
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 00030
Units: P - Pounds
Number of Containers: 002
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 01.00
Waste Code: D008 - LEAD 5.0 MG/L TCLP

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Quantity:	04000
Units:	P - Pounds
Number of Containers:	008
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2002

Document ID:	NYG3329955
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	05/03/2002
Trans1 Recv Date:	05/03/2002
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/07/2002
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	NYPD1010
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	01250
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2002

Document ID:	NYG3330009
Manifest Status:	Not reported
Trans1 State ID:	NYD077444263
Trans2 State ID:	Not reported
Generator Ship Date:	05/08/2002
Trans1 Recv Date:	05/08/2002
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/10/2002
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000103416
Trans1 EPA ID:	NYD077444263
Trans2 EPA ID:	Not reported
TSDF ID:	PD1011NY
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	03000
Units:	P - Pounds
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2002

NYCT - FLUSHING AVENUE LINE (#7 LINE) (Continued) **1005417217**

Click this hyperlink while viewing on your computer to access
74 additional NY_MANIFEST: record(s) in the EDR Site Report.

Y115 **MTA NYCT - COURT HOUSE SQ STA 45TH ROAD** **RCRA-NonGen** **1004762726**
West **JACKSON AVE & 23RD ST** **FINDS** **NYR000099846**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.235 mi.
1243 ft. **Site 2 of 2 in cluster Y**

Relative:
Lower

Actual:
12 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	MTA NYCT - COURT HOUSE SQ STA 45TH ROAD
Facility address:	JACKSON AVE & 23RD ST 7 LINE LONG ISLAND CITY, NY 11101
EPA ID:	NYR000099846
Mailing address:	BROADWAY 2ND FL NEW YORK, NY 10004
Contact:	WILLIAM JEHLE
Contact address:	BROADWAY 2ND FL NEW YORK, NY 10004
Contact country:	US
Contact telephone:	(646) 252-3500
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MTA NEW YORK CITY TRANSIT
Owner/operator address:	2 BROADWAY 2ND FL NEW YORK, NY 10004
Owner/operator country:	US
Owner/operator telephone:	(646) 252-3500
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/2001
Owner/Op end date:	Not reported

Owner/operator name:	MTA NEW YORK CITY TRANSIT
Owner/operator address:	2 BROADWAY 2ND FL NEW YORK, NY 10004
Owner/operator country:	US
Owner/operator telephone:	(646) 252-3500
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/2001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: MTA NYCT - COURT HOUSE SQ STA 45TH ROAD
Classification: Not a generator, verified

Date form received by agency: 08/13/2001
Facility name: MTA NYCT - COURT HOUSE SQ STA 45TH ROAD
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110012235401

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYR000099846
Country: USA
Mailing Name: NEW YORK CITY TRANSIT
Mailing Contact: DERRICK MILLS
Mailing Address: 2 BROADWAY
Mailing Address 2: ROOM A27.64
Mailing City: NEW YORK
Mailing State: NY
Mailing Zip: 10004
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 646-252-3500

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NYD046765574
Trans2 State ID: Not reported
Generator Ship Date: 2008-10-10
Trans1 Recv Date: 2008-10-10
Trans2 Recv Date: Not reported
TSD Site Recv Date: 2008-10-10

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	Not reported
Quantity:	1200.0
Units:	P - Pounds
Number of Containers:	6.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	000196588WAS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2010-02-05
Trans1 Recv Date:	2010-02-05
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-02-12
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	Not reported
Quantity:	500.0
Units:	P - Pounds
Number of Containers:	5.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003404900JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H132

Document ID:	NYG2972979
Manifest Status:	Not reported
Trans1 State ID:	NJD054126164
Trans2 State ID:	Not reported
Generator Ship Date:	09/28/2001
Trans1 Recv Date:	09/28/2001
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/18/2001
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	NYD049836679
Trans2 EPA ID:	Not reported
TSDF ID:	0440465ME
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00800
Units:	P - Pounds
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2001

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	2010-11-30
Trans1 Recv Date:	2010-11-30
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-11-30
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	Not reported
Quantity:	900.0
Units:	P - Pounds
Number of Containers:	3.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000201878WAS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H111

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	NYD986908085
Generator Ship Date:	2010-04-13
Trans1 Recv Date:	2010-04-13
Trans2 Recv Date:	2010-04-21
TSD Site Recv Date:	2010-04-22
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	Not reported
Quantity:	125.0
Units:	P - Pounds
Number of Containers:	6.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003404361JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H132

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2010-02-05
Trans1 Recv Date:	2010-02-05
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-02-12
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	Not reported
Quantity:	500.0
Units:	P - Pounds
Number of Containers:	5.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003404900JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H132

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	2009-09-23
Trans1 Recv Date:	2009-09-23
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2009-09-23
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000099846
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	Not reported
Quantity:	400.0
Units:	P - Pounds
Number of Containers:	4.0
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	000195120WAS
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported

MTA NYCT - COURT HOUSE SQ STA 45TH ROAD (Continued) **1004762726**

Alt Fac Sign Date: Not reported
Mgmt Method Type Code: H111

116
NW
1/8-1/4
0.242 mi.
1280 ft.

BRANCO LEATHER INC **AST U003384065**
44-02 23RD ST **HIST AST N/A**
LONG ISLAND CITY, NY 11101

Relative:
Lower

Actual:
17 ft.

AST:
Region: STATE
DEC Region: 2
Site Status: Active
Facility Id: 2-081345
Program Type: PBS
UTM X: 589109.69863
UTM Y: 4511409.3499100003
Expiration Date: 2012/03/24

Affiliation Records:
Site Id: 1694
Affiliation Type: Mail Contact
Company Name: BRANCO LEATHER INC.
Contact Type: Not reported
Contact Name: BERNARDO DRUKER
Address1: 4402 23RD ST
Address2: STUDIO #18 5TH FLOOR
City: LONG ISLAND CITY
State: NY
Zip Code: 11101
Country Code: 001
Phone: (718) 361-1401
Phone Ext: Not reported
Email: LICARTCENTER@AOL.COM
Fax Number: Not reported
Modified By: DXLIVING
Date Last Modified: 2/20/2007

Site Id: 1694
Affiliation Type: On-Site Operator
Company Name: BRANCO LEATHER INC
Contact Type: Not reported
Contact Name: EDGAR PEREZ
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (718) 361-1401
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: DXLIVING
Date Last Modified: 2/20/2007

Site Id: 1694
Affiliation Type: Emergency Contact

BRANCO LEATHER INC (Continued) **U003384065**

Company Name:	BERNARDO DRUKER
Contact Type:	Not reported
Contact Name:	EDGAR PEREZ
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 361-1401
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	DXLIVING
Date Last Modified:	2/20/2007

Site Id:	1694
Affiliation Type:	Owner
Company Name:	BERNARDO DRUKER
Contact Type:	PRESIDENT
Contact Name:	BERNARDO DRUKER
Address1:	44-02 23RD ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 361-1401
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	DXLIVING
Date Last Modified:	2/20/2007

Equipment Records:

E00 - Piping Secondary Containment - None
H00 - Tank Leak Detection - None
F02 - Pipe External Protection - Original Sacrificial Anode
B01 - Tank External Protection - Painted/Asphalt Coating
I04 - Overfill - Product Level Gauge (A/G)
C00 - Pipe Location - No Piping
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction
F06 - Pipe External Protection - Wrapped
A00 - Tank Internal Protection - None

Tank Info:

Tank Number:	001
Tank Id:	2905
Tank Location:	1
Tank Type:	Steel Tank in Concrete
Tank Status:	In Service
Tank Model:	202

BRANCO LEATHER INC (Continued) **U003384065**

Pipe Model:	Not reported
Install Date:	7/15/1981
Capacity Gallons:	7500
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	DXLIVING
Last Modified:	2/20/2007

HIST AST:

PBS Number:	2-081345
SWIS Code:	6301
Operator:	EDGAR PEREZ
Facility Phone:	(718) 361-1114
Facility Addr2:	44002 23RD ST
Facility Type:	MANUFACTURING
Emergency:	EDGAR PEREZ
Emergency Tel:	(718) 361-1114
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	BERNARDO DRUKER
Owner Address:	44-02 23RD ST
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Federal ID:	Not reported
Owner Tel:	(718) 361-1114
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	Not reported
Mailing Name:	BERNARDO DRUKER
Mailing Address:	44-02 23RD ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Telephone:	(718) 361-1114
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	12/28/2001
Expiration:	03/24/2007
Renew Flag:	False
Renew Date:	20011113
Total Capacity:	7500
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

BRANCO LEATHER INC (Continued) **U003384065**

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	7500
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Tank Containment:	None
Leak Detection:	0
Overfill Protection:	4
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
SPDES Number:	Not reported
Lat/Long:	Not reported

W117 **METRO MACHINING & FABRICATING INCORPORATED** **RCRA-NonGen** **1000282562**
South **47-24 27TH STREET** **FINDS** **NYD001504695**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **AST**
0.242 mi. **HIST AST**
1280 ft. **Site 3 of 3 in cluster W**

Relative:
Lower

Actual:
11 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	METRO MACHINING & FABRICATING INC
Facility address:	47-24 27TH ST LONG ISLAND CITY, NY 11101
EPA ID:	NYD001504695
Mailing address:	27TH ST LONG ISLAND CITY, NY 11101
Contact:	JOE DORAZIO
Contact address:	27TH ST LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	(718) 937-9240
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	LOCAL 1 REALTY CORP
Owner/operator address:	47-24 27TH ST LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	(718) 707-9450

METRO MACHINING & FABRICATING INCORPORATED (Continued) **1000282562**

Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2001
Owner/Op end date: Not reported

Owner/operator name: LOCAL 1 REALTY CORP
Owner/operator address: 47-24 27TH ST
LONG ISLAND CITY, NY 11101
Owner/operator country: US
Owner/operator telephone: (718) 707-9450
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: METRO MACHINING & FABRICATING INC
Classification: Not a generator, verified

Date form received by agency: 10/22/2001
Facility name: METRO MACHINING & FABRICATING INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 08/27/1998
Facility name: METRO MACHINING & FABRICATING INC
Classification: Not a generator, verified

Date form received by agency: 08/13/1987
Facility name: METRO MACHINING & FABRICATING INC
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004335041

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource

METRO MACHINING & FABRICATING INCORPORATED (Continued) **1000282562**

Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-601903
Program Type:	PBS
UTM X:	589441.26217999996
UTM Y:	4510794.6103999997
Expiration Date:	2015/02/09

Affiliation Records:

Site Id:	23865
Affiliation Type:	Owner
Company Name:	LOCAL 1 REALTY CORP
Contact Type:	SUPER
Contact Name:	MICHAEL RIEGGER
Address1:	47-24 27TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 767-7004
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	12/3/2009

Site Id:	23865
Affiliation Type:	On-Site Operator
Company Name:	LOCAL 1 REALTY CORP.
Contact Type:	Not reported
Contact Name:	DENNIS ONEILL
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 767-7004
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	12/3/2009

Site Id:	23865
Affiliation Type:	Mail Contact
Company Name:	LOCAL 1 REALTY CORP

METRO MACHINING & FABRICATING INCORPORATED (Continued) **1000282562**

Contact Type:	SUPER
Contact Name:	MICHAEL RIEGGER
Address1:	47-24 27TH STREET
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 767-7004
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	12/3/2009

Site Id:	23865
Affiliation Type:	Emergency Contact
Company Name:	LOCAL 1 REALTY CORP
Contact Type:	Not reported
Contact Name:	MICHAEL RIEGGER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 233-9719
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	MSBAPTIS
Date Last Modified:	12/3/2009

Equipment Records:

D01 - Pipe Type - Steel/Carbon Steel/Iron
G02 - Tank Secondary Containment - Vault (w/access)
K00 - Spill Prevention - None
J02 - Dispenser - Suction
H00 - Tank Leak Detection - None
F01 - Pipe External Protection - Painted/Asphalt Coating
C01 - Pipe Location - Aboveground
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
E02 - Piping Secondary Containment - Vault (with Access)
L00 - Piping Leak Detection - None

Tank Info:

Tank Number:	001
Tank Id:	48245
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	9/10/1956

METRO MACHINING & FABRICATING INCORPORATED (Continued) **1000282562**

Capacity Gallons:	5000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	MSBAPTIS
Last Modified:	12/3/2009

HIST AST:

PBS Number:	2-601903
SWIS Code:	6301
Operator:	ALBERT PARISI
Facility Phone:	(718) 786-4300
Facility Addr2:	Not reported
Facility Type:	MANUFACTURING
Emergency:	KEVIN LEO
Emergency Tel:	(718) 786-4300
Old PBSNO:	Not reported
Date Inspected:	Not reported
Inspector:	Not reported
Result of Inspection:	Not reported
Owner Name:	STALEY ELEVATOR CO., INC.
Owner Address:	47-24 27TH ST.
Owner City,St,Zip:	L.I.C., NY 11101
Federal ID:	Not reported
Owner Tel:	(718) 786-4300
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	ALBERT PARISI
Mailing Name:	STALEY ELEVATOR CO., INC.
Mailing Address:	47-24 27TH ST.
Mailing Address 2:	Not reported
Mailing City,St,Zip:	L.I.C., NY 11101
Mailing Telephone:	(718) 786-4300
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	06/25/1999
Expiration:	06/20/2004
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	5000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001

METRO MACHINING & FABRICATING INCORPORATED (Continued) **1000282562**

Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE
Tank Status:	In Service
Install Date:	Not reported
Capacity (Gal):	5000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	0
Tank External:	00
Pipe Location:	Aboveground
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	00
Tank Containment:	Diking
Leak Detection:	00
Overfill Protection:	04
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

Z118 **MANHEIMER J INC** **RCRA-NonGen** **1000152546**
SSW **47-22 PEARSON PL** **FINDS** **NYD012132437**
1/8-1/4 **LONG ISLAND CITY, NY 11101** **MANIFEST**
0.243 mi.
1284 ft. **Site 1 of 5 in cluster Z**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	J MANHEIMER
Facility address:	47-22 PEARSON PL LONG ISLAND CITY, NY 111014404
EPA ID:	NYD012132437
Mailing address:	PEARSON PL LONG ISLAND CITY, NY 11101
Contact:	Not reported
Contact address:	PEARSON PL LONG ISLAND CITY, NY 11101
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	Not reported
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	(212) 555-1212
Legal status:	Private

MANHEIMER J INC (Continued) **1000152546**

Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: J MANHEIMER
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: J MANHEIMER
Classification: Not a generator, verified

Date form received by agency: 10/16/1995
Facility name: J MANHEIMER
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110000808975

Environmental Interest/Information System
NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

MANHEIMER J INC (Continued) **1000152546**

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID:	NYD012132437
Country:	USA
Mailing Name:	NYC POLICE DEPT/PROPERTY CLERK
Mailing Contact:	SPIROS GAZGALIS
Mailing Address:	4707 PEARSON PLACE
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11201
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-361-0410

Document ID:	NJA2210329
Manifest Status:	Completed copy
Trans1 State ID:	S5811
Trans2 State ID:	Not reported
Generator Ship Date:	951206
Trans1 Recv Date:	951206
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	951206
Part A Recv Date:	Not reported
Part B Recv Date:	951218
Generator EPA ID:	NYD012132437
Trans1 EPA ID:	NJ0000027193
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	02000
Units:	P - Pounds
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	95

Z119 **NYC POLICE DEPT - PROPERTY CLERK** **RCRA-NonGen** **1001079794**
SSW **47-07 PEARSON PL** **FINDS** **NYR000015016**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.244 mi.
1289 ft. **Site 2 of 5 in cluster Z**

Relative:
Lower

Actual:
16 ft.

RCRA-NonGen:

Date form received by agency:	01/01/2007
Facility name:	NYC POLICE DEPT - PROPERTY CLERK
Facility address:	47-07 PEARSON PL LONG ISLAND CITY, NY 111014403
EPA ID:	NYR000015016
Mailing address:	POLICE PLZ ROOM 800 NEW YORK, NY 10007
Contact:	Not reported
Contact address:	POLICE PLZ ROOM 800 NEW YORK, NY 10007
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NYC POLICE DEPT
Owner/operator address:	1 POLICE PLZ NEW YORK, NY 10007
Owner/operator country:	US
Owner/operator telephone:	(212) 374-7650
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NYC POLICE DEPT
Owner/operator address:	1 POLICE PLZ NEW YORK, NY 10007
Owner/operator country:	US
Owner/operator telephone:	(212) 374-7650
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

NYC POLICE DEPT - PROPERTY CLERK (Continued) **1001079794**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: NYC POLICE DEPT - PROPERTY CLERK
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: NYC POLICE DEPT - PROPERTY CLERK
Classification: Not a generator, verified

Date form received by agency: 10/16/1995
Facility name: NYC POLICE DEPT - PROPERTY CLERK
Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 08/13/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

FINDS:

Registry ID: 110004519432

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

AA120 **MID TOWN OPERATING COMPANY TTF** **LTANKS** **S110140580**
NNW **42-50 24TH ST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.246 mi.
1297 ft. **Site 1 of 2 in cluster AA**

Relative:
Lower

Actual:
16 ft.

LTANKS:
Site ID: 424084
Spill No: 0911288
Spill Date: 1/20/2010
Spill Cause: Tank Test Failure
Spill Source: Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 1/21/2010
Facility Addr2: Not reported
Cleanup Ceased: Not reported

MID TOWN OPERATING COMPANY TTF (Continued) **S110140580**

Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	JMKRIMGO
Referred To:	Not reported
Reported to Dept:	1/20/2010
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1/20/2010
Spill Record Last Update:	1/21/2010
Spiller Name:	RON SHERMAN
Spiller Company:	MID TOWN OPERATING COMPANY
Spiller Address:	42-50 24TH ST
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	999
Spiller Contact:	SHAWN KERRIGAN
Spiller Phone:	(610) 278-7203
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	373035
DEC Memo:	1/21/2010 Sangesland spoke to Shawn at Crompco. He said the tank failed a test yesterday and a spill report was called in. Today they isolated the tank and retested. He said the tank passed, but the "suction line inside the tank" failed. Sangesland asked Shawn to call back and talk directly to Jake Krimgold to determine if this can be closed out. 1/21/10. J.Krimgold spoke to Shawn from Crompco. Agreed that the failure of the suction line inside the tank could not lead to a release. Case closed.
Remarks:	TANK TEST FAILURE ON A 4000 GALLON UST

Material:

Site ID:	424084
Operable Unit ID:	1179879
Operable Unit:	01
Material ID:	2173702
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	Not reported
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported

MID TOWN OPERATING COMPANY TTF (Continued) **S110140580**

Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

AA121 **MIDTOWN OPERATING CORP** **UST U001835096**
NNW **42-50 24TH STREET** **HIST UST N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.246 mi.
1297 ft. **Site 2 of 2 in cluster AA**

Relative:
Lower

Actual:
16 ft.

UST:
Facility Id: 2-269336
Region: STATE
DEC Region: 2
Site Status: Active
Program Type: PBS
Expiration Date: 2012/07/10
UTM X: 589289.82622000005
UTM Y: 4511554.0727500003

Affiliation Records:
Site Id: 11264
Affiliation Type: Owner
Company Name: MIDTOWN OPERATING CORP
Contact Type: PRESIDENT
Contact Name: RONALD SHERMAN
Address1: 42-50 24TH ST
Address2: Not reported
City: LONG ISLAND CITY
State: NY
Zip Code: 11101
Country Code: 001
Phone: (718) 937-2080
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: NRLOMBAR
Date Last Modified: 1/16/2008

Site Id: 11264
Affiliation Type: Emergency Contact
Company Name: MIDTOWN OPERATING CORP
Contact Type: Not reported
Contact Name: MR HUGH MCKEAN
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (718) 937-2080
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: NRLOMBAR
Date Last Modified: 1/16/2008

MIDTOWN OPERATING CORP (Continued) **U001835096**

Site Id:	11264
Affiliation Type:	Mail Contact
Company Name:	MIDTOWN OPERATING CORP
Contact Type:	Not reported
Contact Name:	MR. RONALD SHERMAN
Address1:	42-50 24TH ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 937-2080
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	11264
Affiliation Type:	On-Site Operator
Company Name:	MIDTOWN OPERATING CORP
Contact Type:	Not reported
Contact Name:	RON SHERMAN
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(718) 937-2080
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	NRLOMBAR
Date Last Modified:	1/10/2011

Equipment Records:

K01 - Spill Prevention - Catch Basin
K01 - Spill Prevention - Catch Basin
F00 - Pipe External Protection - None
H05 - Tank Leak Detection - In-Tank System (ATG)
I00 - Overfill - None
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
I00 - Overfill - None
J02 - Dispenser - Suction
F08 - Pipe External Protection - Retrofitted Impressed Current
G00 - Tank Secondary Containment - None
H05 - Tank Leak Detection - In-Tank System (ATG)
F08 - Pipe External Protection - Retrofitted Impressed Current
G00 - Tank Secondary Containment - None
B08 - Tank External Protection - Retrofitted Impressed Current
D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None

MIDTOWN OPERATING CORP (Continued) **U001835096**

D01 - Pipe Type - Steel/Carbon Steel/Iron
J02 - Dispenser - Suction
C00 - Pipe Location - No Piping
I00 - Overfill - None
B08 - Tank External Protection - Retrofitted Impressed Current
B00 - Tank External Protection - None
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
C00 - Pipe Location - No Piping
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
C02 - Pipe Location - Underground/On-ground

Tank Info:

Site ID:	11264
Tank Number:	001
Tank ID:	13604
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	4/1/1972
Capacity Gallons:	4000
Tightness Test Method:	21
Next Test Date:	3/24/2016
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	3/24/2011
Register:	True
Modified By:	BKFALVEY
Last Modified:	4/11/2011
Site ID:	11264
Tank Number:	002
Tank ID:	13605
Tank Status:	In Service
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	7/1/1977
Capacity Gallons:	4000
Tightness Test Method:	21
Next Test Date:	3/24/2016
Date Tank Closed:	Not reported
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	3/24/2011
Register:	True
Modified By:	BKFALVEY
Last Modified:	4/11/2011
Site ID:	11264

MIDTOWN OPERATING CORP (Continued) **U001835096**

Tank Number:	003
Tank ID:	13606
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	11/1/1961
Capacity Gallons:	550
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	1/24/2008
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	NRLOMBAR
Last Modified:	2/22/2008
Site ID:	11264
Tank Number:	004
Tank ID:	13607
Tank Status:	Closed - In Place
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	11/1/1961
Capacity Gallons:	1080
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	1/24/2008
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True
Modified By:	NRLOMBAR
Last Modified:	2/22/2008

HIST UST:

PBS Number:	2-269336
SPDES Number:	Not reported
Emergency Contact:	MR HUGH MCKEAN
Emergency Telephone:	(718) 937-2080
Operator:	RON SHERMAN
Operator Telephone:	(718) 937-2080
Owner Name:	MIDTOWN OPERATING CORP
Owner Address:	42-50 24TH ST
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 937-2080
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Name:	MIDTOWN OPERATING CORP
Mailing Address:	42-50 24TH ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG ISLAND CITY, NY 11101
Mailing Contact:	MR. RONALD SHERMAN
Mailing Telephone:	(718) 937-2080
Owner Mark:	First Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is

MIDTOWN OPERATING CORP (Continued) **U001835096**

	greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Facility Addr2:	42050 24TH STREET
SWIS ID:	6301
Old PBS Number:	Not reported
Facility Type:	OTHER
Inspected Date:	Not reported
Inspector:	Not reported
Inspection Result:	Not reported
Federal ID:	Not reported
Certification Flag:	False
Certification Date:	02/19/1999
Expiration Date:	07/10/2002
Renew Flag:	False
Renewal Date:	Not reported
Total Capacity:	9630
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	No Missing Data
Tank Screen:	Minor Data Missing
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City:	01
Region:	2

Tank Id:	001
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	19720401
Capacity (gals):	4000
Product Stored:	UNLEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Fiberglass Liner (FRP)
Tank External:	Impressed Current
Pipe Location:	Underground
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Impressed Current
Second Containment:	None
Leak Detection:	40
Overfill Prot:	Catch Basin
Dispenser:	Suction
Date Tested:	08/01/1994
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Petro-Tite
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	002
Tank Location:	UNDERGROUND
Tank Status:	In Service

MIDTOWN OPERATING CORP (Continued) **U001835096**

Install Date:	19770701
Capacity (gals):	4000
Product Stored:	UNLEADED GASOLINE
Tank Type:	Steel/carbon steel
Tank Internal:	Fiberglass Liner (FRP)
Tank External:	Impressed Current
Pipe Location:	Underground
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Impressed Current
Second Containment:	None
Leak Detection:	40
Overfill Prot:	Catch Basin
Dispenser:	Suction
Date Tested:	08/01/1994
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Petro-Tite
Deleted:	False
Updated:	True
Lat/long:	Not reported

Tank Id:	003
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	19611101
Capacity (gals):	550
Product Stored:	UNKNOWN
Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Gravity
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Tank Id:	004
Tank Location:	UNDERGROUND
Tank Status:	In Service
Install Date:	19611101
Capacity (gals):	1080
Product Stored:	UNKNOWN

MIDTOWN OPERATING CORP (Continued) **U001835096**

Tank Type:	Steel/carbon steel
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Gravity
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	False
Lat/long:	Not reported

Z122 **ON SIDEWALK** **LTANKS** **S105995094**
SSW **47-15 PEARSON PL** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY**
0.248 mi.
1308 ft. **Site 3 of 5 in cluster Z**

Relative:
Lower

Actual:
16 ft.

LTANKS:

Site ID:	287873
Spill No:	0110585
Spill Date:	2/5/2002
Spill Cause:	Tank Overfill
Spill Source:	Tank Truck
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	7/31/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	MXTIPPLE
Referred To:	Not reported
Reported to Dept:	2/5/2002
CID:	397
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2/5/2002
Spill Record Last Update:	7/31/2003
Spiller Name:	CALLER
Spiller Company:	BRIDGE TRANSPORTATION
Spiller Address:	176 27TH ST
Spiller City,St,Zip:	BROOKLYN, NY
Spiller County:	001
Spiller Contact:	CALLER
Spiller Phone:	Not reported

ON SIDEWALK (Continued) **S105995094**

Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	233188
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TIPPLE" 7/31/2003 tipple updating//sidewalk has been cleaned.//nfa
Remarks:	DRIVER OVERFILLED THE TANK

Material:

Site ID:	287873
Operable Unit ID:	849053
Operable Unit:	01
Material ID:	528206
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	12
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

Z123 **PROPERTY CLERK WAREHOUSE** **AST** **U003393755**
SSW **47-15 PEARSON PLACE** **HIST AST** **N/A**
1/8-1/4 **LONG ISLAND CITY, NY 11101**
0.248 mi.
1308 ft. **Site 4 of 5 in cluster Z**

Relative:
Lower

Actual:
16 ft.

AST:

Region:	STATE
DEC Region:	2
Site Status:	Active
Facility Id:	2-343420
Program Type:	PBS
UTM X:	589271.86014
UTM Y:	4510760.5930500003
Expiration Date:	2009/04/21

Affiliation Records:

Site Id:	16674
Affiliation Type:	On-Site Operator
Company Name:	PROPERTY CLERK WAREHOUSE
Contact Type:	Not reported
Contact Name:	N.Y.C.P.D.

PROPERTY CLERK WAREHOUSE (Continued) **U003393755**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 374-4933
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	16674
Affiliation Type:	Owner
Company Name:	DUPONT ASSOCIATES, INC.
Contact Type:	COMMERCIAL DEPT.
Contact Name:	MICHAEL ZIRIN
Address1:	52 VANDERBILT AVE.
Address2:	Not reported
City:	NEW YORK
State:	NY
Zip Code:	10017
Country Code:	001
Phone:	(212) 476-7524
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	cgfreedm
Date Last Modified:	7/8/2004

Site Id:	16674
Affiliation Type:	Emergency Contact
Company Name:	DUPONT ASSOCIATES, INC.
Contact Type:	Not reported
Contact Name:	N.Y.C.P.D.
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(212) 476-7524
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	16674
Affiliation Type:	Mail Contact
Company Name:	WEMBLY MANAGEMENT COMP.
Contact Type:	Not reported
Contact Name:	MR. ZIRIN
Address1:	52 VANDERBILT AVE.
Address2:	Not reported
City:	NEW YORK

PROPERTY CLERK WAREHOUSE (Continued) **U003393755**

State: NY
Zip Code: 10017
Country Code: 001
Phone: (212) 264-4334
Phone Ext: Not reported
Email: Not reported
Fax Number: Not reported
Modified By: cgfreedm
Date Last Modified: 7/8/2004

Equipment Records:

G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
J02 - Dispenser - Suction
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
L09 - Piping Leak Detection - Exempt Suction Piping
I04 - Overfill - Product Level Gauge (A/G)
H00 - Tank Leak Detection - None

Tank Info:

Tank Number: 001
Tank Id: 32317
Tank Location: 1
Tank Type: Steel/Carbon Steel/Iron
Tank Status: In Service
Tank Model: Not reported
Pipe Model: Not reported
Install Date: 3/1/1956
Capacity Gallons: 5000
Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Date Tank Closed: Not reported
Register: True
Modified By: TRANSLAT
Last Modified: 3/4/2004

HIST AST:

PBS Number: 2-343420
SWIS Code: 6301
Operator: N.Y.C.P.D.
Facility Phone: (212) 374-4933
Facility Addr2: Not reported
Facility Type: OTHER
Emergency: N.Y.C.P.D.
Emergency Tel: (212) 476-7524
Old PBSNO: Not reported
Date Inspected: Not reported
Inspector: Not reported
Result of Inspection: Not reported
Owner Name: DUPONT ASSOCIATES, INC.
Owner Address: 52 VANDERBILT AVE.
Owner City,St,Zip: NEW YORK, NY 10017

PROPERTY CLERK WAREHOUSE (Continued) **U003393755**

Federal ID:	Not reported
Owner Tel:	(212) 476-7524
Owner Type:	Corporate/Commercial
Owner Subtype:	Not reported
Mailing Contact:	MR. NICHOLAS
Mailing Name:	WEMBLY MANAGEMENT COMP.
Mailing Address:	52 VANDERBILT AVE.
Mailing Address 2:	Not reported
Mailing City,St,Zip:	NEW YORK, NY 10017
Mailing Telephone:	Not reported
Owner Mark:	Second Owner
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.
Certification Flag:	False
Certification Date:	04/30/1999
Expiration:	04/21/2004
Renew Flag:	False
Renew Date:	Not reported
Total Capacity:	5000
FAMT:	True
Facility Screen:	No Missing Data
Owner Screen:	Minor Data Missing
Tank Screen:	No Missing Data
Dead Letter:	False
CBS Number:	Not reported
Town or City:	NEW YORK CITY
County Code:	63
Town or City Code:	01
Region:	2

Tank ID:	001
Tank Location:	ABOVEGROUND
Tank Status:	In Service
Install Date:	19560301
Capacity (Gal):	5000
Product Stored:	NOS 1,2, OR 4 FUEL OIL
Tank Type:	Steel/carbon steel
Tank Internal:	0
Tank External:	00
Pipe Location:	None
Pipe Type:	STEEL/IRON
Pipe Internal:	None
Pipe External:	00
Tank Containment:	None
Leak Detection:	00
Overfill Protection:	04
Dispenser Method:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	No Missing Data
Date Closed:	Not reported
Test Method:	Not reported
Deleted:	False
Updated:	True
SPDES Number:	Not reported
Lat/Long:	Not reported

124
North
1/8-1/4
0.249 mi.
1316 ft.

KRK EXPEDITING CO INC
42-21 CRESCENT ST
LONG ISLAND CITY, NY 11101

UST **U000401652**
HIST UST **N/A**

Relative:
Equal

Actual:
19 ft.

UST:

Facility Id:	2-303690
Region:	STATE
DEC Region:	2
Site Status:	Unregulated
Program Type:	PBS
Expiration Date:	N/A
UTM X:	589406.43241999997
UTM Y:	4511553.7025699997

Affiliation Records:

Site Id:	13811
Affiliation Type:	Mail Contact
Company Name:	KRK EXPEDITING CO INC
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	42-21 CRESCENT ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 729-7588
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	13811
Affiliation Type:	Owner
Company Name:	KRK EXPEDITING CO INC
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	42-21 CRESCENT ST
Address2:	Not reported
City:	LONG ISLAND CITY
State:	NY
Zip Code:	11101
Country Code:	001
Phone:	(718) 729-7588
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	13811
Affiliation Type:	Emergency Contact
Company Name:	KRK EXPEDITING CO INC
Contact Type:	Not reported
Contact Name:	MR JOSEPH MCCARTHY
Address1:	Not reported
Address2:	Not reported

KRK EXPEDITING CO INC (Continued) **U000401652**

City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 729-7588
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Site Id:	13811
Affiliation Type:	On-Site Operator
Company Name:	KRK EXPEDITING CO INC
Contact Type:	Not reported
Contact Name:	KRK EXPEDITING CO INC
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(718) 729-7588
Phone Ext:	Not reported
Email:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	3/4/2004

Equipment Records:

A00 - Tank Internal Protection - None
D02 - Pipe Type - Galvanized Steel
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction
I00 - Overfill - None
B00 - Tank External Protection - None
H00 - Tank Leak Detection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None

Tank Info:

Site ID:	13811

Tank Number:	001
Tank ID:	16224
Tank Status:	Closed - Removed
Tank Model:	Not reported
Pipe Model:	Not reported
Install Date:	3/1/1980
Capacity Gallons:	4000
Tightness Test Method:	NN
Next Test Date:	Not reported
Date Tank Closed:	9/1/1991
Tank Location:	5
Tank Type:	Steel/carbon steel
Date Test:	Not reported
Register:	True

KRK EXPEDITING CO INC (Continued) **U000401652**

Modified By: TRANSLAT
Last Modified: 3/4/2004

HIST UST:
PBS Number: 2-303690
SPDES Number: Not reported
Emergency Contact: MR JOSEPH MCCARTHY
Emergency Telephone: (718) 729-7588
Operator: KRK EXPEDITING CO INC
Operator Telephone: (718) 729-7588
Owner Name: KRK EXPEDITING CO INC
Owner Address: 42-21 CRESCENT ST
Owner City,St,Zip: LONG ISLAND CITY, NY 11101
Owner Telephone: (718) 729-7588
Owner Type: Not reported
Owner Subtype: Not reported
Mailing Name: KRK EXPEDITING CO INC
Mailing Address: 42-21 CRESCENT ST
Mailing Address 2: Not reported
Mailing City,St,Zip: LONG ISLAND CITY, NY 11101
Mailing Contact: Not reported
Mailing Telephone: (718) 729-7588
Owner Mark: First Owner
Facility Status: 2 - Unregulated by PBS (the total capacity is less than 1,101 gallons) and Subpart 360-14.
Facility Addr2: 42021 CRESCENT ST
SWIS ID: 6301
Old PBS Number: Not reported
Facility Type: Not reported
Inspected Date: Not reported
Inspector: Not reported
Inspection Result: Not reported
Federal ID: Not reported
Certification Flag: False
Certification Date: 07/14/1987
Expiration Date: 07/14/1992
Renew Flag: False
Renewal Date: Not reported
Total Capacity: 0
FAMT: True
Facility Screen: Minor Data Missing
Owner Screen: Minor Data Missing
Tank Screen: 0
Dead Letter: False
CBS Number: Not reported
Town or City: NEW YORK CITY
County Code: 63
Town or City: 01
Region: 2

Tank Id: 001
Tank Location: UNDERGROUND
Tank Status: Closed-Removed
Install Date: 19800301
Capacity (gals): 4000
Product Stored: UNLEADED GASOLINE
Tank Type: Steel/carbon steel

KRK EXPEDITING CO INC (Continued) **U000401652**

Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Type:	GALVANIZED STEEL
Pipe Internal:	Not reported
Pipe External:	Not reported
Second Containment:	None
Leak Detection:	None
Overfill Prot:	Not reported
Dispenser:	Suction
Date Tested:	Not reported
Next Test Date:	Not reported
Missing Data for Tank:	Minor Data Missing
Date Closed:	09/01/1991
Test Method:	Not reported
Deleted:	False
Updated:	True
Lat/long:	Not reported

Z125 **47-22 PEARSON PLACE** **LTANKS** **S102659880**
SSW **47-22 PEARSON PLACE** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY** **NY Spills**
0.255 mi. **NY Hist Spills**
1346 ft. **Site 5 of 5 in cluster Z**

Relative:
Lower

Actual:
16 ft.

LTANKS:

Site ID:	174994
Spill No:	9206718
Spill Date:	9/10/1992
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	7/29/1993
Facility Addr2:	Not reported
Cleanup Ceased:	7/29/1993
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	BATTISTA
Referred To:	Not reported
Reported to Dept:	9/10/1992
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	9/14/1992
Spill Record Last Update:	7/29/1993
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	***Update***, ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported

47-22 PEARSON PLACE (Continued) **S102659880**

DEC Region: 2
DER Facility ID: 147125
DEC Memo: Prior to Sept, 2004 data translation this spill Lead_DEC Field was "BATTSTA" 07/29/93: AIR TEST PASSED PRECISION RETEST WITH WATER PASSED CLOSED IN PLACE WITH FOAM SEE K ODOWDS LETTER 4722P.
Remarks: TO PUMP TANK OUT & INVEST POLL AIR POCKET.

Material:
Site ID: 174994
Operable Unit ID: 970511
Operable Unit: 01
Material ID: 407415
Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: -1
Units: Not reported
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 174994
Spill Tank Test: 1540542
Tank Number: Not reported
Tank Size: 0
Test Method: 00
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Unknown

HIST LTANKS:
Region of Spill: 2
Spill Number: 9206718
Spill Date: 09/10/1992
Spill Time: 12:00
Spill Cause: Tank Test Failure
Resource Affectd: Groundwater
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 07/29/93
Cleanup Ceased: 07/29/93
Cleanup Meets Standard: True
Investigator: BATTSTA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported

47-22 PEARSON PLACE (Continued) **S102659880**

Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 09/10/92
Reported to Department Time: 13:30
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 09/14/92
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 07/29/93
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: 07/29/93: AIR TEST PASSED PRECISION RETEST WITH WATER PASSED CLOSED IN PLACE WITH FOAM SEE K ODOWDS LETTER 4722P.
Spill Cause: TO PUMP TANK OUT INVEST POLL AIR POCKET.

NY Spills:
Site ID: 174993
Facility Addr2: Not reported
Facility ID: 8900343

47-22 PEARSON PLACE (Continued) **S102659880**

Spill Number:	8900343
Facility Type:	ER
SWIS:	4101
Investigator:	SIGONA
Referred To:	Not reported
Spill Date:	4/12/1989
Reported to Dept:	4/12/1989
CID:	Not reported
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	4/26/1989
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Not reported
Spill Closed Dt:	4/26/1989
Remediation Phase:	0
Date Entered In Computer:	5/22/1989
Spill Record Last Update:	5/27/2003
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	***Update***, ZZ
Spiller Company:	001
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	147125
DEC Memo:	Not reported
Remarks:	VALVE ACCIDENTLY OPENED, SPILL INITIALLY ON CONCRETE FLOOR, THEN RAN TO GROUND OUTSIDE.

Material:

Site ID:	174993
Operable Unit ID:	926745
Operable Unit:	01
Material ID:	451684
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	250
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported

47-22 PEARSON PLACE (Continued) **S102659880**

Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

NY Hist Spills:
Region of Spill: 2
Spill Number: 8900343
Investigator: SIGONA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 04/12/1989 08:00
Reported to Dept Date/Time: 04/12/89 11:13
SWIS: 63
Spiller Name: Not reported
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spill Cause: Equipment Failure
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 01
Spill Notifier: Responsible Party
PBS Number: Not reported
Cleanup Ceased: 04/26/89
Cleanup Meets Std: True
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Not reported
Spill Closed Dt: 04/26/89
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 05/22/89
Date Spill Entered In Computer Data File: Not reported
Update Date: 06/02/89
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 250

47-22 PEARSON PLACE (Continued) **S102659880**

Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: 04/26/89: SPEEDY DRY PUT DOWN CONTAINED IN DRUMS TRANSPORTED BY S W WASTE INC, NYCPD, NYCFD NYCDEP ON SCENE.
Remark: VALVE ACCIDENTLY OPENED, SPILL INITIALLY ON CONCRETE FLOOR, THEN RAN TO GROUND OUTSIDE.

126
NE
1/4-1/2
0.268 mi.
1417 ft.

OUTLET CITY, QUEENS BLVD. & JACKSON AVE. **VCP S105684691**
QUEENS BLVD. & JACKSON AVE., L.I.C. **N/A**
LONG ISLAND CITY, NY 11101

Relative:
Higher

Actual:
22 ft.

VCP:
Program Type: VCP
Site Code: 58261
HW Code: V00081
Site Class: A
SWIS: 4101
Region: 2
Town: New York City
Acres: 2.500
Date Record Added: 11/30/2000 4:06:00 PM
Date Record Updated: 8/24/2011 11:05:00 AM
Updated By: SXDEWES
Site Description: Location: The site is located in Queens County, on Jackson Ave between Orchard Street to the east, Queens Blvd. to the west and Long Island Railroad yard to the south. The G-Train runs underneath Jackson Avenue bordering the site to the north. The nearest residential structure is located approximately 100ft to the west across Orchard street. Site Features: This 2.5 acre site consists of 12 multi-story buildings and associated parking area located in a congested commercial/industrial area of Queens County. The only occupied structure on-site is a NYC Transit Authority building. Current Zoning/Uses(s): The current zoning at the site is Industrial and Retail. The surrounding area is zoned Special Long Island City Mixed Use District (LIC) and is a longstanding mix of residential, commercial, industrial and cultural uses at varying densities. Historical Uses: The site had formerly been used for chemical manufacturing. From 1901-1978, West Chemical Co. owned the property and manufactured commercial and disinfectant products such as disinfectants, insecticides, soaps, floor wax, and paper products dispensing machines. Manufacturing operations employed various chemical substances including creosote, coal and acids, cresylic acids, degreasing solvents, iodine, and assorted oils and pesticides. Metal plating and gasoline filling operations were also conducted at the property. In 11/78, Outlet City acquired title to the property from West Chemical. During Outlet City's ownership, a flea market and various vendor operations have been conducted at the property. The site is being investigated under the Voluntary Cleanup Program (VCP) under a 1997 agreement. Previous investigations in the late 1980's

OUTLET CITY, QUEENS BLVD. & JACKSON AVE. (Continued) **S105684691**

and early 1990's led to the property entering the VCP. Site Geology and Hydrogeology: Site geology consists of mostly sand at varying depths due to presence of shallow bedrock. Groundwater is approximately 8 -10ft below grade

Env Problem: Nature and Extent of Contamination: The site is contaminated with creosote, petroleum, and solvents. Both soil and groundwater are affected. The majority of the contamination is located in Areas D and E where Creosote in the form of both LNAPL (Light Non-Aqueous Phase Liquid) and DNAPL (Dense Non-Aqueous Phase Liquid) is present. Total on-site VOC s (Volatile Organic Compounds) including both chlorinated hydrocarbons and petroleum constituents are present in groundwater from non-detect - 25,000ppb. Total on-site SVOC s (Semi-Volatile Organic Compounds) are present in groundwater from non-detect to over 100,000ppb. An off-site investigation has not been completed at this site. A ventilation IRM is in place in the basement of building No. 4, where creosote LNAPL enters the basement during large rain events. The ventilation system was designed and installed in 2004. The ventilation system was started up on June 8, 2004. The final engineering report for this IRM was approved in September 2006. Bi-annual air testing is collected to evaluate the effectiveness of the ventilation IRM.

Health Problem: Exposures to contaminated groundwater is not expected because the area is served by public water. Soils contaminated with etrachloroethene are beneath the site, however, exposure to this soil is not expected because the site is capped with asphalt. Indoor air samples collected in a portion of the on-site building contained levels of tetrachloroethene that exceeded the New York State Department of Health Guideline for tetrachloroethene in Indoor Air. NYSDOH and NYSDEC will evaluate the need for additional investigations to determine the potential for soil vapor intrusion into structures near the site.

AB127 **47-20 30TH ST** **LTANKS** **S100167498**
SE **47-20 30TH ST** **HIST LTANKS** **N/A**
1/4-1/2 **NEW YORK CITY, NY**
0.301 mi.
1588 ft. **Site 1 of 2 in cluster AB**

Relative: **Lower**

Actual: **11 ft.**

LTANKS:

Site ID:	153441
Spill No:	8708435
Spill Date:	12/31/1987
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/2/1992
Facility Addr2:	Not reported
Cleanup Ceased:	11/2/1992
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	BATTISTA
Referred To:	Not reported
Reported to Dept:	12/31/1987
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported

47-20 30TH ST (Continued) **S100167498**

Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2/1/1988
Spill Record Last Update:	5/12/1994
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	279923
DEC Memo:	Not reported
Remarks:	5K TANK CANNOT MAINTAIN LEVEL IN STANDPIPE, PRODUCT LEVEL BELOW TANK TOP, POSSIBLE PIPE PROBLEM.

Material:

Site ID:	153441
Operable Unit ID:	913049
Operable Unit:	01
Material ID:	463825
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Not reported
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	153441
Spill Tank Test:	1532879
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Unknown

HIST LTANKS:

Region of Spill:	2
Spill Number:	8708435
Spill Date:	12/31/1987
Spill Time:	12:30
Spill Cause:	Tank Test Failure
Resource Affectd:	Groundwater
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial

47-20 30TH ST (Continued) **S100167498**

Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/02/92
Cleanup Ceased:	11/02/92
Cleanup Meets Standard:	False
Investigator:	BATTISTA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	12/31/87
Reported to Department Time:	13:41
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Tank Tester
PBS Number:	2-303658
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	02/01/88
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	05/12/94
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	0
Test Method:	Not reported
Leak Rate Failed Tank:	0.00
Gross Leak Rate:	Not reported

Material:

Material Class Type:	Petroleum
Quantity Spilled:	-1
Unkonwn Quantity Spilled:	False
Units:	Not reported
Quantity Recovered:	0
Unkonwn Quantity Recovered:	False
Material:	#2 FUEL OIL

47-20 30TH ST (Continued) **S100167498**

Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: / / : 311 2 0 0 4 2 N.T.R2 2-065153 0014100/00+ @ 31 0 0 2 12/872 2-065188 0014103/74+ @ 21 2 0 0 4 212/8712/922 .
Spill Cause: 5K TANK CANNOT MAINTAIN LEVEL IN STANDPIPE, PRODUCT LEVEL BELOW TANK TOP, POSSIBLE PIPE PROBLEM.

AB128 **JOMEIRA REALITY** **LTANKS** **S105995090**
SE **47-20 30TH ST** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.301 mi.
1590 ft. **Site 2 of 2 in cluster AB**

Relative:
Lower

Actual:
11 ft.

LTANKS:
Site ID: 153440
Spill No: 0110569
Spill Date: 1/30/2002
Spill Cause: Tank Test Failure
Spill Source: Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 3/1/2002
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: JBVOUGHT
Referred To: Not reported
Reported to Dept: 2/4/2002
CID: 396
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 2/4/2002
Spill Record Last Update: 3/1/2002
Spiller Name: Not reported
Spiller Company: SAME
Spiller Address: Not reported
Spiller City,St,Zip: NY
Spiller County: 001
Spiller Contact: LARRY
Spiller Phone: (718) 729-5700
Spiller Extention: Not reported
DEC Region: 2
DER Facility ID: 130179
DEC Memo: Prior to Sept, 2004 data translation this spill Lead_DEC Field was "VOUGHT" 3/1/2002-VOUGHT-Initial tank test performed by ProTest Laboratories. Second and third tank test performed by Federal Electrical Supply Corporation (718-729-5700). The reason for spill report was initial tank test failure. As a result of failure vent line, fill line, suction line and return line were replaced by Petroleum Tank Cleaners. Tank was tested again on 2-6-2002 and failed again because testers failed to close off return line to day tank.

JOMEIRA REALITY (Continued) **S105995090**

Tank and system was tested for third time and passed on 2-14-2002. Isaac Mungra and Anthony (PTC) confirmed that there was no soil or groundwater contamination. Tank tests and repair invoices were provided. Spill closed by Vought.

Remarks: Not reported

Material:

Site ID:	153440
Operable Unit ID:	847652
Operable Unit:	01
Material ID:	528190
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	153440
Spill Tank Test:	1526857
Tank Number:	1
Tank Size:	4500
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Horner EZ Check I or II

129
WNW
1/4-1/2
0.302 mi.
1594 ft.

Relative:
Lower

Actual:
16 ft.

CONDEA SUPPLY CORP **LTANKS** **S106000081**
21-21 44TH RD **N/A**
LONG ISLAND CITY, NY

LTANKS:

Site ID:	59951
Spill No:	0306979
Spill Date:	10/2/2003
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	6/21/2006
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	HRPATEL
Referred To:	Not reported
Reported to Dept:	10/2/2003
CID:	257

CONDEA SUPPLY CORP (Continued) **S106000081**

Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	10/2/2003
Spill Record Last Update:	6/21/2006
Spiller Name:	MICHAEL MIAO
Spiller Company:	CONDEA SUPPLY CORP
Spiller Address:	21-21 44TH RD
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	001
Spiller Contact:	MICHAEL MIAO
Spiller Phone:	(718) 392-3232
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	58600
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SANGESLAND" Sent TTF letter 05/22/06-Hiralkumar Patel. Left message for Jim at Protest. 06/21/06-Hiralkumar Patel. Visited site. manager gave me tank test result. test done on 11/11/2003 and whole system passed test. loose manhole cover was reason behind failure first time. based on available information, case is closed.
Remarks:	Not reported

Material:

Site ID:	59951
Operable Unit ID:	875736
Operable Unit:	01
Material ID:	500576
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

130
ESE
1/4-1/2
0.330 mi.
1743 ft.

LAGUARDIA COMM COLLEGE
31-10 THOMSON AVE
LONG ISLAND CITY, NY

LTANKS **S105995066**
N/A

Relative:
Higher

Actual:
24 ft.

LTANKS:

Site ID:	89365
Spill No:	0110443
Spill Date:	1/31/2002
Spill Cause:	Tank Overfill
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	1/31/2002
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	MXTIPPLE
Referred To:	Not reported
Reported to Dept:	1/31/2002
CID:	211
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1/31/2002
Spill Record Last Update:	9/19/2003
Spiller Name:	KAREN MCCORMACK
Spiller Company:	LAGUARDIA COMM COLLEGE
Spiller Address:	31-10 THOMSON AV
Spiller City,St,Zip:	LONG ISLAND CITY, ZZ
Spiller County:	001
Spiller Contact:	KAREN MCCORMACK
Spiller Phone:	(718) 482-5580
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	81624
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TIPPLE" 01/31/2002 SPILL TO SIDEWALK ONLY, NO IMPACT TO SOILS,SEWERS ETC. OIL COMPANY CONTAINED AND CLEANED IMMEDIATELY. SUPERINTENDANT ERFAN VERIFIED CLEANUP COMPLETE.
Remarks:	SCHOOL ORDERED TOO MUCH PRODUCT LEADING TO OVERFILL - CLEAN UP CREW ON THE WAY

Material:

Site ID:	89365
Operable Unit ID:	847549
Operable Unit:	01
Material ID:	528067
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	7
Units:	Gallons

LAGUARDIA COMM COLLEGE (Continued) **S105995066**

Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

AC131 **21-16 44TH ROAD , LIC** **ENG CONTROLS** **S109416414**
WNW **21-16 44TH ROAD** **INST CONTROL** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY 11101** **VCP**
0.343 mi.
1812 ft. **Site 1 of 2 in cluster AC**

Relative:
Lower

Actual:
18 ft.

ENG CONTROLS:
Site Code: 58239
HW Code: V00366
Control Code: 12
Control Type: ENG
Date Record Added: 12/12/2008 9:02:00 AM
Date Rec Updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

21-16 44TH ROAD , LIC (Continued) **S109416414**

Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
HW Code: V00366
Control Code: 13
Control Type: ENG
Date Record Added: 12/12/2008 9:02:00 AM
Date Rec Updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths

21-16 44TH ROAD , LIC (Continued) **S109416414**

were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
HW Code: V00366
Control Code: 15
Control Type: ENG
Date Record Added: 12/12/2008 9:02:00 AM
Date Rec Updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court

21-16 44TH ROAD , LIC (Continued) **S109416414**

yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
HW Code: V00366
Control Code: 18

21-16 44TH ROAD , LIC (Continued) **S109416414**

Control Type: ENG
Date Record Added: 12/12/2008 9:02:00 AM
Date Rec Updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.
Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.
Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via

21-16 44TH ROAD , LIC (Continued) **S109416414**

soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

INST CONTROL:
Site Code: 58239
Control Name: Building Use Restriction
HW Code: V00366
Control Code: 26
Control Type: INST
Dt record added: 12/12/2008 9:02:00 AM
Dt rec updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Code: 58239
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.
Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to

21-16 44TH ROAD , LIC (Continued) **S109416414**

80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
Control Name: Landuse Restriction
HW Code: V00366
Control Code: 25
Control Type: INST
Dt record added: 12/12/2008 9:02:00 AM
Dt rec updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Code: 58239

Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the

21-16 44TH ROAD , LIC (Continued) **S109416414**

contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
Control Name: Ground Water Use Restriction
HW Code: V00366
Control Code: 08
Control Type: INST
Dt record added: 12/12/2008 9:02:00 AM
Dt rec updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Code: 58239
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths

21-16 44TH ROAD , LIC (Continued) **S109416414**

were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239
Control Name: Soil Management Plan
HW Code: V00366
Control Code: 14
Control Type: INST
Dt record added: 12/12/2008 9:02:00 AM
Dt rec updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Code: 58239
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban

21-16 44TH ROAD , LIC (Continued) **S109416414**

area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.

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Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

Site Code: 58239

21-16 44TH ROAD , LIC (Continued) **S109416414**

Control Name: Legacy Restriction
HW Code: V00366
Control Code: A
Control Type: INST
Dt record added: 12/12/2008 9:02:00 AM
Dt rec updated: 8/16/2011 10:12:47 AM
Updated By: IXMUNTEA
Site Code: 58239
Site Description: Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.
Env Problem: Nature and Extent of Contamination: a) contaminants: Prior to remediation the Phase I and Phase II Investigation identified the contaminants of concern as chlorinated volatile organic compounds (CVOCs), particularly PCE and its breakdown products in soil, groundwater, and soil vapor; metals in the dry well sediments; and lead-contaminated soil in the parking lot. The site contamination was related to the previous manufacturing industries which operated in the former warehouse building. b) areal/depth extent: The plating factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.
Health Problem: The Site was a former warehouse and has been redeveloped as an Information and Technology High School. Contaminated soils beneath the building have been removed and disposed of off-site. Human

21-16 44TH ROAD , LIC (Continued) **S109416414**

exposures to residual contaminated soil is unlikely as the site is covered by the on-site building and pavement. Ingestion of groundwater as a potable drinking water source is not expected since the area is served by public water supply. Potential exposures via soil vapor intrusion into the school have been mitigated by the installation and operation of sub-slab depressurization system, a vapor barrier, a eight-inch thick competent concrete slab, and the building's positive-pressure heating and ventilation system. Monthly sampling of soil vapor and quarterly sampling of groundwater will ensure that remedial systems are working properly.

VCP:

Program Type:	VCP
Site Code:	58239
HW Code:	V00366
Site Class:	C
SWIS:	4101
Region:	2
Town:	New York City
Acres:	.800
Date Record Added:	11/30/2000 4:06:00 PM
Date Record Updated:	9/12/2011 3:21:00 PM
Updated By:	JHOCONNE
Site Description:	Location: The site is located at 21-16 44th Road, LIC, NY 11101 (Tax Block 438, Lot 26). The site occupies the northweastern portion of the block bounded by 44th Rd. to the north, 44th Dr. to the south, 21st St. to the west and 23rd St. to the east. The site is in urban area. The property is approximately 1/2 mile from the East River. Site Features: The Information Technology HS building and its court yard occupy the site. Current Zonning/Use(s): The site is used as a High School. The surrounding area is zoned M3-1 Heavy Manufacturing. The adjacent parcels are currently used for a combination of commercial, manufacturing and residential. Historical Use(s): The site was formerly occupied by a four story, 30,000 square foot warehouse and its court yard. It was historically operated as a cloth manufacturing factory, a metal plating factory, and a 5,000 square foot parking lot. The plating factory had one dry well on the first floor, one in the courtyard, and two in the basement. During the plating processes the waste from the metal cleaning and plating baths were disposed of through these dry wells. Following implementation of remedial actions, the building was renovated and is currently occupied by the Information Technology High School. The remedial systems are operating under a NYSDEC-approved Site Management Plan which has provisions for frequent system monitoring, maintenance, and periodic reporting. Site Geology and Hydrogeology: The site is underlain by 2 to 5 feet of urban fill materials. Below this there are interbeded layers of sand, clay and marl of Cretaceous and Pleistocene age. The bed rock is 17 to 27 feet below grade. The groundwater is 7 to 9 feet below grade and flows generally south.
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21-16 44TH ROAD , LIC (Continued) **S109416414**

factory occupied the first floor and the basement of the building and it had drum storage areas inside and in the court yard adjacent to the building. The sources of contamination under the building in soil and groundwater were determined to be four dry wells and a drum storage area in the court yard. c) concentrations: PCE in soil ranged from 0 to 300 ppm; in groundwater 5 ppb to 36,000 ppb; and 5 ppbv to 80,0000 ppbv in soil gas. Post-Remediation: A Subslab Depressurization system (SSDS), and a groundwater pump and treatment systems are currently operating under a NYSDEC-approved Site Management Plan (SMP). The SMP has provisions for frequent system monitoring and maintenance, and for periodic reporting to NYSDEC. There are Deed Restrictions recorded against the site.

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AD132 **C&H SAND AND STONE; CORP.** **SWF/LF** **S105841940**
WSW **21-16 JACKSON AVENUE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY 11101**
0.352 mi.
1860 ft. **Site 1 of 2 in cluster AD**

Relative:
Lower

Actual:
13 ft.

SWF/LF:

Flag:	INACTIVE
Region Code:	2
Phone Number:	7189372979
Owner Name:	Not reported
Owner Type:	Not reported
Owner Address:	Not reported
Owner Addr2:	Not reported
Owner City,St,Zip:	Not reported
Owner Email:	Not reported
Owner Phone:	Not reported
Contact Name:	HUGH FLAHERTY
Contact Address:	21-16 Jackson Avenue
Contact Addr2:	Not reported
Contact City,St,Zip:	Long Island City, NY 11101
Contact Email:	Not reported
Contact Phone:	7189372979
Activity Desc:	C&D processing - registered
Activity Number:	[41W87]
Active:	No
East Coordinate:	588784
North Coordinate:	4510969
Accuracy Code:	Not reported
Regulatory Status:	Not reported
Waste Type:	Not reported
Authorization #:	None

C&H SAND AND STONE; CORP. (Continued) **S105841940**

Authorization Date: Not reported
Expiration Date: Not reported

Flag: INACTIVE
Region Code: 2
Phone Number: 5165377525
Owner Name: Not reported
Owner Type: Not reported
Owner Address: Not reported
Owner Addr2: Not reported
Owner City,St,Zip: Not reported
Owner Email: Not reported
Owner Phone: Not reported
Contact Name: JOHN CLAUSE
Contact Address: Not reported
Contact Addr2: Not reported
Contact City,St,Zip: Not reported
Contact Email: Not reported
Contact Phone: Not reported
Activity Desc: C&D processing - registered
Activity Number: [41W89]
Active: No
East Coordinate: 588784
North Coordinate: 4510969
Accuracy Code: Not reported
Regulatory Status: Not reported
Waste Type: Not reported
Authorization #: None
Authorization Date: Not reported
Expiration Date: Not reported

AD133 **UNITED WASTE REMOVAL;INC.** **SWF/LF** **S105841795**
WSW **2116 JACKSON AVENUE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY 11101**
0.353 mi.
1863 ft. **Site 2 of 2 in cluster AD**

Relative:
Lower

Actual:
13 ft.

SWF/LF:
Flag: INACTIVE
Region Code: 2
Phone Number: 7187846611
Owner Name: Not reported
Owner Type: Not reported
Owner Address: Not reported
Owner Addr2: Not reported
Owner City,St,Zip: Not reported
Owner Email: Not reported
Owner Phone: Not reported
Contact Name: LIRR
Contact Address: Not reported
Contact Addr2: Not reported
Contact City,St,Zip: Not reported
Contact Email: Not reported
Contact Phone: Not reported
Activity Desc: Transfer station - regulated
Activity Number: [41T67]
Active: No
East Coordinate: Not reported

UNITED WASTE REMOVAL;INC. (Continued) **S105841795**

North Coordinate: Not reported
Accuracy Code: Not reported
Regulatory Status: Not reported
Waste Type: Not reported
Authorization #: None
Authorization Date: Not reported
Expiration Date: Not reported

AC134 **LTANKS S104950592**
WNW **21ST ST/44TH RD** **HIST LTANKS N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.353 mi.
1865 ft. **Site 2 of 2 in cluster AC**

Relative:
Lower

Actual:
17 ft.

LTANKS:

Site ID:	297242
Spill No:	0012047
Spill Date:	2/9/2001
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	10/30/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	JMKRIMGO
Referred To:	Not reported
Reported to Dept:	2/9/2001
CID:	396
Water Affected:	Not reported
Spill Notifier:	Citizen
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2/9/2001
Spill Record Last Update:	10/30/2003
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller City,St,Zip:	NY
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	240507
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "KRIMGOLD"
Remarks:	caller states that there is fuel oil all over the road and getting in to storm sewers....believes that it is from a tank over fill...spill is on the east side of 21st.nfd.

Material:

Site ID:	Not reported

(Continued) **S104950592**

Operable Unit ID: Not reported
Operable Unit: Not reported
Material ID: Not reported
Material Code: Not reported
Material Name: Not reported
Case No.: Not reported
Material FA: Not reported
Quantity: Not reported
Units: Not reported
Recovered: Not reported
Resource Affected: Not reported
Oxygenate: Not reported

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

HIST LTANKS:
Region of Spill: 2
Spill Number: 0012047
Spill Date: 02/09/2001
Spill Time: 08:50
Spill Cause: Tank Overfill
Resource Affectd: In Sewer
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: Not reported
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 02/09/01
Reported to Department Time: 08:55
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: UNKNOWN

(Continued) **S104950592**

Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: ( ) -
Facility Extention: Not reported
Spill Notifier: Citizen
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 02/09/01
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 05/22/01
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Not reported
Quantity Spilled: Not reported
Unkonwn Quantity Spilled: Not reported
Units: Not reported
Quantity Recovered: Not reported
Unkonwn Quantity Recovered: Not reported
Material: Not reported
Class Type: Not reported
Times Material Entry In File: Not reported
CAS Number: Not reported
Last Date: Not reported
DEC Remarks: Not reported
Spill Cause: caller states that there is fuel oil all over the road and getting in to storm sewers....believes that it is from a tank over fill...spill is on the east side of 21st.nfd.

135
West
1/4-1/2
0.355 mi.
1876 ft.

ST. FRANCIS OF ASSISI
45-02 21ST AVE.
NEW YORK CITY, NY

LTANKS **S100167428**
HIST LTANKS **N/A**

Relative:
Lower

Actual:
13 ft.

LTANKS:
Site ID: 242102
Spill No: 8704696
Spill Date: 9/4/1987
Spill Cause: Tank Test Failure
Spill Source: Institutional, Educational, Gov., Other
Spill Class: c4

ST. FRANCIS OF ASSISI (Continued) **S100167428**

Spill Closed Dt:	1/25/1989
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	TOMASELLO
Referred To:	Not reported
Reported to Dept:	9/4/1987
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	9/11/1987
Spill Record Last Update:	8/19/2004
Spiller Name:	Not reported
Spiller Company:	ST. FRANCIS OF ASSISI
Spiller Address:	Not reported
Spiller City,St,Zip:	ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	198980
DEC Memo:	Not reported
Remarks:	SYSTEM FAILURE- WILL CONTACT CHURCH AND OFFER TO EXCAVATE AND RETEST. CONTACT- JOE FITZPATRICK (718 726-7568)./RETESTED-06/30/88 BY NAT MOSER 3,000 GAL TANK ISOLATED TANK-LEAKING AT -0.142 GPH.

Material:

Site ID:	242102
Operable Unit ID:	911172
Operable Unit:	01
Material ID:	467320
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Pounds
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	242102
Spill Tank Test:	1531564
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills

ST. FRANCIS OF ASSISI (Continued) **S100167428**

Last Modified: 10/1/2004
Test Method: Unknown

HIST LTANKS:
Region of Spill: 2
Spill Number: 8704696
Spill Date: 09/04/1987
Spill Time: 18:30
Spill Cause: Tank Test Failure
Resource Affectd: Groundwater
Water Affected: Not reported
Spill Source: Other Non Commercial/Industrial
Spill Class: c4
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: SULLIVAN
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 09/04/87
Reported to Department Time: 18:31
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: ST. FRANCIS OF ASSISI
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: (718) 726-7568
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: 2-296163
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 09/11/87
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 07/03/95
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported

ST. FRANCIS OF ASSISI (Continued) **S100167428**

Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: SYSTEM FAILURE- WILL CONTACT CHURCH AND OFFER TO EXCAVATE AND RETEST. CONTACT-JOE FITZPATRICK 718 726-7568)./RETESTED-06/30/88 BY NAT MOSER 3,000 GAL TANK ISOLATED TANK-LEAKING AT -0.142 GPH.

136
NW
1/4-1/2
0.356 mi.
1880 ft.

21-03 44TH AVENUE **SHWS** **S109209070**
21-03 44TH AVENUE **N/A**
LONG ISLAND CITY, NY 11101

Relative:
Equal

Actual:
19 ft.

SHWS:
Program: HW
Site Code: 394315
Classification: SIGNIFICANT THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT - ACTION REQUIRED.
Region: 2
Acres: .010
HW Code: 241107
Record Add: 3/3/2008 2:49:00 PM
Record Upd: 10/4/2010 1:08:00 PM
Updated By: JAQUINN
Site Description: The site is located in an urban area of Queens County, NY. The site includes the sidewalk/street area immediately above and in the vicinity of a broken sewer line near the location of three groundwater monitoring points placed on the sidewalk in front of the building at 21-03, along 44th Avenue. The immediate surrounding uses are commercial and industrial. The building at 21-03 44th Avenue is currently in use as commercial office space and as a taxi leasing business, and prior uses of the building include metal plating. A New York City high school is located approximately three hundred fifty feet to the south of the site. There are a few isolated residential properties located approximately five hundred feet to both the southeast and southwest along 44th Drive, and the closest primarily residential block is approximately seven hundred feet to the south along 45th Avenue. Contamination appears to have entered the environment from a broken sewer pipe that connects the building at 21-03 44th Avenue and the main sewer line in the street. The site was listed on the NYS Registry of Inactive Hazardous Waste Sites in August of 2008, and an Interim Remedial Measure to address contaminated groundwater is being developed.

21-03 44TH AVENUE (Continued) **S109209070**

Env Problem:	Investigations conducted during a 2008 site characterization indicated a plume of chlorinated VOCs (primarily PCE) extending from the vicinity of the property at 21-03 44th Avenue to the northern edge of the Technology High School one block to the south, and possibly beyond. Exceedances of standards, criteria, and guidance include PCE at 36,000 ug/l vs. a standard of 5 ug/l and chromium as high as 1,500 ug/l vs. a standard of 50 ug/l. Trichloroethylene, cis-1,2 - dichloroethene and vinyl chloride also exceeded standards, however to a lesser degree. Contamination presents a significant threat to the environment as demonstrated by the magnitude and aerial extent of groundwater impacts. An IRM has been designed to mitigate the impacts to groundwater from the source area believed present in the vicinity of the 21-03 44th Avenue property. An RI/FS is planned.
Health Problem:	On- and off-site groundwater is contaminated with lead, chromium, hexavalent chromium and volatile organic compounds, primarily tetrachloroethene (PCE) and its breakdown products. The area is served by public water, thus exposure via ingestion of contaminated groundwater is not expected. Insufficient data exists for complete evaluation of potential exposures to other site-related contamination.
	Not reported
Dump:	False
Structure:	False
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	Not reported
Disp Term:	Not reported
Lat/Long:	Not reported
Dell:	Not reported
Record Add:	5/20/2008 3:31:00 PM
Record Upd:	2/5/2010 4:04:00 PM
Updated By:	MOBARRIE
Own Op:	Owner
Sub Type:	C01
Owner Name:	City of New York - Corporate Counsel
Owner Company:	City of New York - Corporate Counsel
Owner Address:	100 Church Street
Owner Addr2:	Not reported
Owner City,St,Zip:	New York, NY 10015
Owner Country:	United States of America
HW Code:	241107
Waste Type:	TETRACHLOROETHYLENE (PCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241107
Waste Type:	CHROMIUM
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
Crossref ID:	241112
Cross Ref Type Code:	02
Cross Ref Type:	HW Site ID
Record Added Date:	3/3/2008 3:08:00 PM
Record Updated:	3/3/2008 3:08:00 PM
Updated By:	MOBARRIE

137
NE
1/4-1/2
0.359 mi.
1893 ft.

NYC TRANSIT AUTHORITY
29-50 NORTHERN BLVD
LONG ISLAND CITY, NY

LTANKS **S106703537**
HIST LTANKS **N/A**

Relative:
Higher

Actual:
26 ft.

LTANKS:

Site ID:	292496
Spill No:	9100729
Spill Date:	4/18/1991
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	11/30/2000
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	MCTIBBE
Referred To:	Not reported
Reported to Dept:	4/18/1991
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	4/23/1991
Spill Record Last Update:	12/30/2002
Spiller Name:	Not reported
Spiller Company:	URS CONSULTANTS
Spiller Address:	282 DELAWARE AVE
Spiller City,St,Zip:	BUFFALO, NY 14202
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	236777
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TIBBE" SEE ALSO 94-08603. sEE FILE Transfered from Hale to Tibbe.
Remarks:	5K TANK FAILED PETRO TITE WITH A GROSS LEAK, TANK OUT OF SERVICE FOR 12YRS, NO ACTION YET DETERMINED, TANK TEST WAS DONE WITH WATER.

Material:

Site ID:	292496
Operable Unit ID:	954268
Operable Unit:	01
Material ID:	426913
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Pounds
Recovered:	No
Resource Affected:	Not reported

NYC TRANSIT AUTHORITY (Continued) **S106703537**

Oxygenate: False

Tank Test:
Site ID: 292496
Spill Tank Test: 1538471
Tank Number: Not reported
Tank Size: 0
Test Method: 00
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Unknown

HIST LTANKS:
Region of Spill: 2
Spill Number: 9100729
Spill Date: 04/18/1991
Spill Time: 14:00
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Non Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 11/30/00
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: TIBBE
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 04/18/91
Reported to Department Time: 14:10
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: URS CONSULTANTS
Spiller Address: 282 DELAWARE AVE
Spiller City,St,Zip: BUFFALO, NY 14202
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: (716) 856-5636
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /

NYC TRANSIT AUTHORITY (Continued) **S106703537**

Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 04/23/91
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 12/27/00
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Pounds
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #4 FUEL OIL
Class Type: #4 FUEL OIL
Times Material Entry In File: 1751
CAS Number: Not reported
Last Date: 19941205
DEC Remarks: SEE ALSO 94-08603. sEE FILE Transfered from Hale to Tibbe.
Spill Cause: 5K TANK FAILED PETRO TITE WITH A GROSS LEAK, TANK OUT OF SERVICE FOR 12YRS, NO ACTION YET DETERMINED, TANK TEST WAS DONE WITH WATER.

AE138 **GETTY S/S #344 - GETTY PROPERTIES** **LTANKS** **S107416894**
East **31-05 QUEENS BLVD** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.361 mi.
1906 ft. **Site 1 of 3 in cluster AE**

Relative:
Higher

Actual:
43 ft.

LTANKS:
Site ID: 298004
Spill No: 0009849
Spill Date: 11/30/2000
Spill Cause: Tank Failure
Spill Source: Gasoline Station
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 1/5/2007
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: WXSUN
Referred To: Not reported
Reported to Dept: 11/30/2000
CID: 389
Water Affected: Not reported
Spill Notifier: Other

GETTY S/S #344 - GETTY PROPERTIES (Continued) **S107416894**

Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	11/30/2000
Spill Record Last Update:	1/5/2007
Spiller Name:	Not reported
Spiller Company:	GETTY GAS STATION
Spiller Address:	31-05 QUEENS BLVD
Spiller City,St,Zip:	LONG ISLAND CITY, NY -
Spiller County:	001
Spiller Contact:	ERIC EWALD
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	241103
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "VOUGHT" 3/14/03 REASSIGNED FROM ROMMEL TO VOUGHT. 08/31/2005 - Feng - Transferred from Vought to Feng. 10/18/2005 - Feng - Spill#: 04-10119 has been consolidated into this spill#. 10/27/2005 - Feng - Quarterly Monitoring Report, 8/2005 - 10/2005. 4 monitoring wells onsite. and there are 4 proposed SVE wells located in north and south side of former 10 (550-gallon) USTs. groundwater flows to north at depth of 24.79' to 27.07' bg. W-1, BTEX below MDL most of the time, MTBE, decreasing, 83ppb this quarter. W-2, below MDL. W-3, both decreasing, 181 BTEX and MTBE below MDL. W-4, below MDL all the time. 2/27/2006 - Feng - Quarterly Monitoring Report, 11/2005 - 1/2006. The site is an active Getty gasoline retail station. Groundwater flows to norht at the depth of 24.71' to 27.58' bg. 4 monitoring wells onsite. W-1, MDL BTEX, decreased and 25 ppb MTBE. W-2, MDL both. W-3, decreased and 118 ppb BTEX, increased and 20 ppb MTBE. W-4, MDL both. (RJF) 08/21/2006-Sun-Quarterly Monitoring Report, April 2006 - July, 2006. The site is an active Getty gasoline retail station. Groundwater flows to norht at the depth of 24.61' to 25.49' bg. 4 monitoring wells onsite. W-1, MDL BTEX, 26.4 ppb MTBE. W-2, MDL both. W-3, dry, and W-4, MDL both. (Sun) 01/05/07: Based on the Quarterly Report dated 10/16/06, BTEX concentrations are non-detect and MTBE concentrations ranged from non-detect to 15 ppb. Spill is closed and NFA letter will be issued. (Sun)
Remarks:	CALLER REPORTING A SPILL OF PETROLEUM FOUND TO BE INPACTED SOIL LIKELY FROM A TANK FAILURE. NO CLEAN UP AS OF YET AND NO CALLBACK NECESSARY

Material:

Site ID:	298004
Operable Unit ID:	830828
Operable Unit:	01
Material ID:	543782
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

GETTY S/S #344 - GETTY PROPERTIES (Continued) **S107416894**

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

AE139 **GETTY #344** **LTANKS** **S104278677**
East **31-05 QUEENS BLVD** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY** **NY Spills**
0.361 mi.
1906 ft. **Site 2 of 3 in cluster AE**

Relative:
Higher

Actual:
43 ft.

LTANKS:

Site ID:	298006
Spill No:	9909630
Spill Date:	11/8/1999
Spill Cause:	Tank Test Failure
Spill Source:	Gasoline Station
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	12/2/2004
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	JBVOUGHT
Referred To:	Not reported
Reported to Dept:	11/8/1999
CID:	233
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	11/8/1999
Spill Record Last Update:	12/2/2004
Spiller Name:	Not reported
Spiller Company:	GETTY #344
Spiller Address:	31-05 QUEENS BLVD
Spiller City,St,Zip:	LONG ISLAND CITY, ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	241103
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "VOUGHT" 04/12/04 TRANSFERRED FROM ODOWD TO VOGUHT 12/2/04-Vought-This spill closed and referred to open spill #0009849.

GETTY #344 (Continued) **S104278677**

Remarks: u/g tank failed test tyree to make repair retest to be schedule

Material:
Site ID: 298006
Operable Unit ID: 1084383
Operable Unit: 01
Material ID: 298706
Material Code: 0009
Material Name: Gasoline
Case No.: Not reported
Material FA: Petroleum
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 298006
Spill Tank Test: 1547824
Tank Number: Not reported
Tank Size: 4000
Test Method: 20
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: USTest 2000/P/LL plus USTest 2000/U

HIST LTANKS:
Region of Spill: 2
Spill Number: 9909630
Spill Date: 11/08/1999
Spill Time: 15:00
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Gas Station
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: O'DOWD
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 11/08/99
Reported to Department Time: 16:25
SWIS: 63

GETTY #344 (Continued) **S104278677**

Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: GETTY #344
Spiller Address: 31-05 QUEENS BLVD
Spiller City,St,Zip: LONG ISLAND CITY
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: 2-145688
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: True
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 11/08/99
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 11/09/99
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: 4000
Test Method: USTest 2000
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: u/g tank failed test tyree to make repair retest to be schedule

NY Spills:
Site ID: 414198
Facility Addr2: Not reported
Facility ID: 0902163
Spill Number: 0902163
Facility Type: ER
SWIS: 4101
Investigator: vszhune
Referred To: Not reported
Spill Date: 5/22/2009

GETTY #344 (Continued) **S104278677**

Reported to Dept:	5/22/2009
CID:	Not reported
Spill Cause:	Other
Water Affected:	Not reported
Spill Source:	Gasoline Station
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Not reported
Spill Closed Dt:	9/24/2009
Remediation Phase:	0
Date Entered In Computer:	5/22/2009
Spill Record Last Update:	9/29/2009
Spiller Name:	MATT BOECKEL
Spiller Company:	GETTY 344
Spiller Address:	31-05 QUEENS BLVD
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller Company:	999
Contact Name:	MATT BOECKEL
Contact Phone:	(631) 249-3150
DEC Region:	2
DER Facility ID:	241103
DEC Memo:	05/22/09 CSL was sent to Getty Petroleum Marketing 1500 Hempstead Turnpike East Meadow, NY 11554 Attn: Scott Hanley 08/31/09- Tyree sent the Subsurface Investigation Report dated June/22/09. The report stated that the piping and the four(4) product dispensers were removed in May 2009. The USTs has been drain of all fuel and are scheduled to be abondoned. On May 22,2009 the subsurface investigation activities were initiated , Based upon recent analytical datas it appears that the source of the soil and groundwater contamination is located in the area of the USTs and pump island. A total of seven (7)soil/groundwater borings were installed as part of the investigation. Soil samples were collested from ground surface to depths ranging from thirty-five(35) feet to forty (40) feet below grade. Groundwater was encountered at (27) feet below grade. The analytical results for soil samples indicate No VOCs exceeding the RSCOs. Some SVOC'S were slighly exceding the RSCOs for the samples ND-W, ND-E, WD-N, WD-S and B-TFE(13-14 ft). The analytical results for grounswater indicate Methyl-tert Butyl Ether and Benzene slighly exceeding the RSCOs. SVOC"s ara not exceding the RSCOs. As per Scott Hanley Getty Marketing (516) 542-5023 and Kevin Shean Getty Realty Corporation (516) 478-5400 there is no plan for developing the site until 20015. The site is going to be used for vehicle repair inside and for storage of vehicle outside. Getty Marketing leased the property. Getty Realty Corporation owns the property. Spill Closed
Remarks:	CALLER STATES THAT THEY GOT TEST RESULTS BACK FROM A PHASE 2 SHOWING SOIL CONTAMINATION CLEAN UP IS PENDING.

Material:

Site ID:	414198
Operable Unit ID:	1170588
Operable Unit:	01
Material ID:	2162324
Material Code:	0009

GETTY #344 (Continued) **S104278677**

Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	Not reported
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

Site ID:	335029
Facility Addr2:	Not reported
Facility ID:	0410119
Spill Number:	0410119
Facility Type:	ER
SWIS:	4101
Investigator:	rjfeng
Referred To:	Not reported
Spill Date:	12/11/2004
Reported to Dept:	12/11/2004
CID:	27
Spill Cause:	Traffic Accident
Water Affected:	Not reported
Spill Source:	Gasoline Station
Spill Notifier:	Local Agency
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	10/18/2005
Remediation Phase:	0
Date Entered In Computer:	12/13/2004
Spill Record Last Update:	10/18/2005
Spiller Name:	Not reported
Spiller Company:	GETTY #344
Spiller Address:	31-05 QUEENS BLVD
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller Company:	001
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	241103

GETTY #344 (Continued) **S104278677**

DEC Memo: 08/31/2005 - Feng - Transferred from Vought to Feng. 10/18/2005 - Feng - spill consolidated with spill #: 00-09849 in same location.
Remarks: Caller reports a car backed into a gas pump. Spill is contained in the dispencer sump and it has been cleaned up. Callers cell number is 518.369.7822.

Material:
Site ID: 335029
Operable Unit ID: 1097138
Operable Unit: 01
Material ID: 577091
Material Code: 0009
Material Name: Gasoline
Case No.: Not reported
Material FA: Petroleum
Quantity: 2
Units: Gallons
Recovered: 2
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

Click this hyperlink while viewing on your computer to access additional NY_SPILL: detail in the EDR Site Report.

AE140 **LUK OIL** **LTANKS** **S108467684**
East **3105 QUEENS BLVD** **N/A**
1/4-1/2 **LONG ISLAND, NY**
0.361 mi.
1906 ft. **Site 3 of 3 in cluster AE**

Relative:
Higher

Actual:
43 ft.

LTANKS:
Site ID: 377088
Spill No: 0612273
Spill Date: 2/8/2007
Spill Cause: Tank Overfill
Spill Source: Gasoline Station
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 2/8/2007
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: SFRAHMAN
Referred To: Not reported

LUK OIL (Continued) **S108467684**

Reported to Dept:	2/8/2007
CID:	444
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	2/8/2007
Spill Record Last Update:	2/8/2007
Spiller Name:	MIKE CARR
Spiller Company:	LUK OIL
Spiller Address:	3105 QUEENS BLVD
Spiller City,St,Zip:	LONG ISLAND, NY
Spiller County:	001
Spiller Contact:	MIKE CARR
Spiller Phone:	(518) 369-7822
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	309823
DEC Memo:	All cleaned up.Sharif stopped by the site.
Remarks:	DELIVERY OVERFILL AND IS ALL CLEANED UP: FDNY RESPONDED AND TYREE AND ABSORBANT USED AND LETTER REPORT TO BE FORWARDED TO DEC:

Material:

Site ID:	377088
Operable Unit ID:	1134643
Operable Unit:	01
Material ID:	2124520
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	40
Units:	Gallons
Recovered:	40
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

AF141 **COMMERCIA PROPERTY** **LTANKS** **S107789272**
South **29-10 HUNTERS POINT AVE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.393 mi.
2076 ft. **Site 1 of 2 in cluster AF**

Relative:
Lower

Actual:
10 ft.

LTANKS:

Site ID:	363256
Spill No:	0601095
Spill Date:	4/28/2006
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	5/15/2006
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	HRPATEL
Referred To:	Not reported
Reported to Dept:	4/28/2006
CID:	444
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	4/28/2006
Spill Record Last Update:	5/15/2006
Spiller Name:	KENNY
Spiller Company:	COMMERCIA PROPERTY
Spiller Address:	29-10 HUNTERS POINT AVE
Spiller City,St,Zip:	LONG ISLAND, NY
Spiller County:	001
Spiller Contact:	KENNY
Spiller Phone:	(718) 847-1800
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	313446
DEC Memo:	04/28/06-Hiralkumar Patel. Left message for David (Cell: 516-695-6303). PBS#: 2-311774 Owner's information on PBS record: 29-10 Hunters Point Avenue Co. LLC 60 East 56th STreet 7th Floor Long Island City, NY Ph. (718) 786-0300 Tried number on PBS record and operator gave me Mr. Scotty's number, who may know about owner/manager of property. Left message for Mr. Scotty (516-699-4000). 05/02/06-Hiralkumar Patel. Received message from Keith Khouri. Spoke to Mr. Khouri, GM of property. he is also working for property at Union, NJ. as per Mr. Khouri, the company named Midcounty Mechanical is working to find out leak in UST system. and he will give me contact name and number of this company. Department can send letter to following address to Mr. Khouri Keith Khouri 400 Clermoont Terrace Union, NJ 07083 Cell: (908) 230-0819 Off.: (718) 316-9261 FAX : (908) 353-8423 TTF sent out to Mr. Khouri. FAxed to Mr. Khouri. Received call from Mr. Khouri's office. contact at Midcount Mechanical is Kenny PH. (718) 847-1800 (O) (347) 386-2891 (C) 05/10/06-Hiralkumar Patel. Left message for Kenny. 05/11/06-Hiralkumar Patel. Spoke to operator at Midcounty. she gave

COMMERCIA PROPERTY (Continued) **S107789272**

message to Kenny, but Kenny is out in field and will call back tomorrow morning. Received message from Kenny. they are going to do tank test again on Saturday May 13, 2006. 05/15/06-Hiralkumar Patel. Received call from Mr. Khouri. as per him, they found problem with fill line and after repair they did test again and system passed the test. asked him to send me letter report stating cause of problem and observations. Mr. Kasper from Midcounty Mechanical came to office to drop off tank test results and letter. as per letter, they have escavated the top of the tank and performed a test and found a leak on the vent line where it passes through the foundation wall to the outside of the building. replaced vent line and tested again and system passed the test. based on tank test results, case is closed. NFA sent out to Mr. Khouri.

Remarks: PBS No: 2-31174 -PBS No. not found in UIS, may be invalid. REMOVING LINES AND DOING PRESSURE TEST

Material:

Site ID:	363256
Operable Unit ID:	1121319
Operable Unit:	01
Material ID:	2110813
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	363256
Spill Tank Test:	1549931
Tank Number:	001
Tank Size:	20000
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Watchdog
Last Modified:	4/28/2006
Test Method:	Horner EZ Check I or II

AF142 **NY ENVELOPE** **LTANKS** **S103592540**
South **2910 HUNTERS POINT AV** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.394 mi.
2082 ft. **Site 2 of 2 in cluster AF**

Relative:
Lower

Actual:
10 ft.

LTANKS:

Site ID:	313258
Spill No:	0102148
Spill Date:	5/25/2001
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response.

NY ENVELOPE (Continued) **S103592540**

	Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	6/17/2005
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	GWHEITZM
Referred To:	Not reported
Reported to Dept:	5/25/2001
CID:	211
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	5/25/2001
Spill Record Last Update:	6/20/2005
Spiller Name:	KEN CASPER
Spiller Company:	NY ENVELOPE
Spiller Address:	2910 HUNTERS POINT AV
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	001
Spiller Contact:	KEN CASPER
Spiller Phone:	(718) 847-1800
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	252585
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SANGESLAND" 6/16/05 Heitzman: See PBS #2-311774. 20,000-gallon tank is still in service, and was re-tested on 6/11/01. PBS permit was issued and tank is due to be re-tested by 6/11/06. Close spill.
Remarks:	tank will be excavated and will isolate

Material:

Site ID:	313258
Operable Unit ID:	840969
Operable Unit:	01
Material ID:	534271
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	313258
Spill Tank Test:	1526332
Tank Number:	1
Tank Size:	20000
Test Method:	03
Leak Rate:	0

NY ENVELOPE (Continued) **S103592540**

Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Horner EZ Check I or II

HIST LTANKS:
Region of Spill: 2
Spill Number: 0102148
Spill Date: 05/25/2001
Spill Time: 13:00
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: SANGESLAND
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 05/25/01
Reported to Department Time: 14:47
SWIS: 63
Spiller Contact: KEN CASPER
Spiller Phone: (718) 847-1800
Spiller Extention: Not reported
Spiller Name: NY ENVELOPE
Spiller Address: 2910 HUNTERS POINT AV
Spiller City,St,Zip: LONG ISLAND CITY, NY
Spiller Cleanup Date: / /
Facility Contact: KEN CASPER
Facility Phone: (718) 847-1800
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: 2-311774
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 05/25/01
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 05/29/01
Is Updated: False

NY ENVELOPE (Continued) **S103592540**

Tank:
PBS Number: Not reported
Tank Number: 1
Tank Size: 20000
Test Method: Horner EZ Check
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: tank will be excavated and will isolate

AG143 **LOVOUR HOME** **LTANKS** **S108639404**
NNE **2512 41ST AVE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.414 mi.
2187 ft. **Site 1 of 2 in cluster AG**

Relative:
Higher

Actual:
34 ft.

LTANKS:
Site ID: 380071
Spill No: 0700688
Spill Date: 4/18/2007
Spill Cause: Tank Test Failure
Spill Source: Tank Truck
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 2/17/2010
Facility Addr2: 25-12 41ST AVE
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: bkfalvey
Referred To: Not reported
Reported to Dept: 4/18/2007
CID: 444
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 4/18/2007
Spill Record Last Update: 2/17/2010
Spiller Name: ERIC LOVOUR
Spiller Company: LOVOUR HOME
Spiller Address: 2512 41ST AVE
Spiller City,St,Zip: LONG ISLAND CITY, NY

LOVOUR HOME (Continued) **S108639404**

Spiller County:	001
Spiller Contact:	ERIC LOVOUR
Spiller Phone:	(718) 392-2123
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	329555
DEC Memo:	4/25/07 bf: sent ttf letter to: Eric Levor Queens Plaza Realty Corp. 25-12 41 Avenue Long Island City, NY 11101-3882 5/25/07 received passing tightness test results by fax from Eric Lovor. Tried calling him at number on fax:(718)392-2123. No answer. To close this spill, he needs to submit a response to ttf letter. bf 5/29/07 Called E. Levor again and there was no answer. Called Emergency Contact # from PBS facility info (718)263-2418 and left message to call me back. bf 6/4/07 Called E. Levor at (718)392-2123. The number is no longer in service. I then left a message at (718)263-2418. bf 6/5/07 Received 2 messages from Edith Levor to call back. (718)392-2123. Called her at 3:45 Pm and she said that the tank failed the test because there were two sets of vent pipes. The old vent pipe was never disconnected. She said she will call Advanced Tank after she hangs up with me and have them prepare a response to the ttf letter. bf 11/8/07 Called E. Levor. Left message that i still have not received letter from Advanced Tank and to call me back. Called Vinnie the Tank Doctor (718)727-0666. He said that there was an open line from a hot water heater and he plugged the line. No contaminated soil was found. He faxed paperwork to E. Levor. He was not in his office and requested I call him Monday. He will check to see if he still has the fax. bf 11/26/07 Received message from E. Levor. Called her back and left message on her machine. bf 1/22/10 Inspected site and issued NOV for expired registration, failure to monitor unmetered tank for leaks, and failure to contain/reomve petroleum discharge. Administrative settlement conference is scheduled for 2/17/10 at 10:30 AM. bf 2/17/10 PBS Settlement Conference held today. Attended by Edith and Eric levor. Provided 6/7/07 letter from Tank Doctor Inc. stating that 2 unused lines from top of tank were disconnected in building. Removed lines and tank retested and passed. NFA. bf
Remarks:	PBS No: 2-607688

Material:

Site ID:	380071
Operable Unit ID:	1137562
Operable Unit:	01
Material ID:	2127510
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	380071
Spill Tank Test:	1550766
Tank Number:	1

LOVOUR HOME (Continued) **S108639404**

Tank Size:	1500
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Watchdog
Last Modified:	4/18/2007
Test Method:	Horner EZ Check I or II

AG144 **MAMM REALTY** **HIST LTANKS** **S104073632**
NNE **25-11 41ST AVE** **NY Spills** **N/A**
1/4-1/2 **LONG ISLAND, NY**
0.415 mi.
2191 ft. **Site 2 of 2 in cluster AG**

Relative:
Higher

Actual:
34 ft.

HIST LTANKS:

Region of Spill:	2
Spill Number:	9803835
Spill Date:	06/25/1998
Spill Time:	14:00
Spill Cause:	Tank Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	SIGONA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	06/25/98
Reported to Department Time:	16:05
SWIS:	63
Spiller Contact:	MICHAEL LEVINE
Spiller Phone:	(718) 392-3013
Spiller Extention:	Not reported
Spiller Name:	MAMM REALTY, INC.
Spiller Address:	22-09 QUEENS PLAZA NORTH
Spiller City,St,Zip:	LONG ISLAND CITY, NY 11101-
Spiller Cleanup Date:	/ /
Facility Contact:	MICHAEL LEVINE
Facility Phone:	(718) 392-3013
Facility Extention:	Not reported
Spill Notifier:	Other
PBS Number:	2-603539
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	True

MAMM REALTY (Continued) **S104073632**

Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 06/25/98
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 06/29/98
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: DEC SIGONA CALLED MICHAEL ALLETTO AT YELLOWSTONE ON 6/26/98. YELLOWSTONE INDICATED THAT THEY REMOVED ALL THE CONTAMINATED SOILS AND COLLECTED ENDPOINT SAMPLES WHICH ARE BEING TESTED. THE RESULTS WILL BE SUBMITTED TO DEC SIGONA) WHEN THEY BECOME AVAILABLE.
Spill Cause: discovered contaminated soil during tank removal contaminated soil was excavated and stock piled caller is contracter for new owner

NY Spills:
Site ID: 85226
Facility Addr2: Not reported
Facility ID: 9803835
Spill Number: 9803835
Facility Type: ER
SWIS: 4101
Investigator: vszhune
Referred To: Not reported
Spill Date: 6/25/1998
Reported to Dept: 6/25/1998
CID: 383
Spill Cause: Equipment Failure
Water Affected: Not reported
Spill Source: Commercial/Industrial
Spill Notifier: Other
Cleanup Ceased: Not reported
Cleanup Meets Std: False
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Trust: True
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.

MAMM REALTY (Continued) **S104073632**

Spill Closed Dt:	Not Closed
Remediation Phase:	1
Date Entered In Computer:	6/25/1998
Spill Record Last Update:	10/2/2009
Spiller Name:	MICHAEL LEVINE
Spiller Company:	MAMM REALTY, INC.
Spiller Address:	22-09 QUEENS PLAZA NORTH
Spiller City,St,Zip:	LONG ISLAND CITY, NY 11101-
Spiller Company:	001
Contact Name:	MICHAEL LEVINE
Contact Phone:	(718) 392-3013
DEC Region:	2
DER Facility ID:	78307
DEC Memo:	2/5/07 - Haggerty - Located and reviewed UST Closure and Site Restoration Report dated Sept 16, 1998. Report also states additional UST's could be on-site. 1 unknown UST and piping were discovered during remedial activities. Spill to remain open. 9/12/05 - Cozzy - Spoke to current operator of facility (Auto Dynamics-PBS facility # 2-603539). They have operated this facility since 2000, and have no records of previous cleanup. Spill to remain open. 8/2/05 Mike H. spoke with Michael Levine of Mamm Realty, said spill was properly remediated but has no record of it. Emailed Todd McIndoo of Yellowstone requesting info <tmcindoo@optonline.net>, but never got response. Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ROMMEL" This gasoline spill case has been reassigned from DEC (Sigona) to Rommel on January 7, 2004. DEC SIGONA CALLED MICHAEL ALLETTO AT YELLOWSTONE ON 6/26/98. YELLOWSTONE INDICATED THAT THEY REMOVED ALL THE CONTAMINATED SOILS AND COLLECTED ENDPOINT SAMPLES WHICH ARE BEING TESTED. THE RESULTS WILL BE SUBMITTED TO DEC (SIGONA) WHEN THEY BECOME AVAILABLE. 10/2/09 - Austin - Spill transferred from Albany staff to Zhune, for further investigation - end
Remarks:	Discovered contaminated soil during tank removal contaminated soil was excavated and stock piled caller is contracter for new owner

Material:

Site ID:	85226
Operable Unit ID:	1064591
Operable Unit:	01
Material ID:	322153
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	True
Site ID:	85226
Operable Unit ID:	1064591
Operable Unit:	01
Material ID:	573849
Material Code:	1213A
Material Name:	MTBE (METHYL-TERT-BUTYL ETHER)
Case No.:	01634044
Material FA:	Hazardous Material
Quantity:	Not reported
Units:	Not reported

MAMM REALTY (Continued) **S104073632**

Recovered: Not reported
Resource Affected: Not reported
Oxygenate: True

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

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145 **32-32 QUEENS BLVD/SUNOCO** **LTANKS** **S100145562**
ESE **32032 QUEENS BLVD** **HIST LTANKS** **N/A**
1/4-1/2 **NEW YORK CITY, NY**
0.431 mi.
2275 ft.

Relative:
Higher

Actual:
31 ft.

LTANKS:
Site ID: 310058
Spill No: 8905358
Spill Date: 8/30/1989
Spill Cause: Tank Test Failure
Spill Source: Gasoline Station
Spill Class: Known release that creates a file or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: Not reported
Facility Addr2: Not reported
Cleanup Ceased: 4/9/2004
Cleanup Meets Standard: False
SWIS: 4101
Investigator: AAOBLIGA
Referred To: INVESTIGATION REPORT 6/30/11
Reported to Dept: 8/30/1989
CID: Not reported
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: True
Remediation Phase: 1
Date Entered In Computer: 8/31/1989
Spill Record Last Update: 3/30/2011
Spiller Name: Not reported
Spiller Company: SUNOCO AA
Spiller Address: Not reported
Spiller City,St,Zip: ZZ
Spiller County: 001
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
DEC Region: 2

32-32 QUEENS BLVD/SUNOCO (Continued) **S100145562**

DER Facility ID: 250287
DEC Memo: 3/94: MW-4 had a sheen of product. MW-1 had 7500 ppb, MW-2 had 9600 ppb and MW-3 had 350 ppb of benzene. 8/94: Installed MW-5,6 & 7. MW-4 had 0.19 ft of LPH. Depth to water 13 ft. The SVE system is operable and manifolded to MW-2,3 & 4. MW-1 had 3000 ppb, MW-2 had 5200 ppb, MW-3 had 360 ppb, MW-5 had 1400 ppb, MW-6 had 590 ppb and MW-7 had 24 ppb benzene. Sunoco will investigate and submit current tank test results. 12/10/2003 Reassigned from Tipple to Sun. 02/03/2004-Sun-File Update by Sun: Quarterly Monitoring and Sampling Report (October through December 2003), by EnviroTrac (Anthony Fiorentine, 631-471-1500): On 11/08/2003, liquid phase hydrocarbons (LPH) were detected in MW-4 at a thickness of 0.20 feet (ft.). The depth to water ranged from 22.78 ft. (MW-6) to 26.00 ft. (MW-4) below the surface on 11/8/2003. Six (6) wells (MW-1,2, 3, 5, 6 & 7) were sampled on 11/8/2003. BTEX concentrations ranged from not detected (ND) in 3 of the 7 wells to 58,000 micrograms per liter (ug/l) (MW-2).MTBE concentrations ranged from ND (MW-3) to 3,800 ug/l (MW-7). On 11/8/2003 and 12/21/2003, a three percent Biosolve surfactant and water solution was injected into MW-4. MW-4 was then han surged with a surge block and groundwater was removed from a down-gradient well (MW-7) with a submersible pump. LPH was not detected during the December 2003 short term remediation event (STRE). 03/11/2004-Sun-File Update by Sun: On 03/10/2004, Sun sent a letter and Stipulation Agreement to Russell Hammond of Sunoco requiring complete delineation of soil and groundwater contamination, submittal of an Investigation Summary Report followed by a Remedial Action Plan. The Department set a deadline of March 31, 2004 for signing the Stipulation Agreement by the Respondent. 10/31/05: Project reassigned from Sun to Andersen. Enhanced fluid recovery and Biosolve application are being utilized in two hotspots, MW2 and MW4. 12/8/05: December 8 meeting between Sunoco, DEC, and EnviroTrac. Biosolve remediation is not very successful. EnviroTrac and Sunoco think that source may be present and plan to do soil borings to identify source. Soil is likely very heterogenous. Site is now a pay commuter parking lot, so work can only be done on weekends. 1/4/06: Reviewed the quarterly report dated January 2006. Six wells sampled on November 20, 2005. Trace amounts of LPH in MW-4. Max BTEX 28,300 (MW-2) and 560 ppb (MW-2). Biosolve last used in August 2005. 5/3/06: Reviewed the first quarterly 2006 report. Wells sampled on 1/21/06. LPH is present in MW 4 at a depth of 0.25 ft. Max BTEX 22,900 in MW2. Max MTBE 91 ppb in MW7. Sent RAP required letter, due 7/3/06. 8/18/06: Meeting on 8/17/06 with Sunoco, EAR, and NYSDEC. RAP submitted. Regenox will be used. Three monthly Regenox installations will be completed. Regenox will be injected into twelve temporary borings, with injection span the vertical interval 15 to 35 feet below grade. Monitoring wells will be gauged and sampled monthly during Regenox application. RAP approved. 10/20/06: First mobilization to drill borings for Regenox application will occur on 10/21/06 8am-4pm. 11/9/06: Second mobilization for Regenox application will occur on 11/11/06. 12/18/06: Sent email to Jamie Brown of EAR to followup on status of next quarterly report. Received email from Jamie Brown:"The next report will be completed and submitted to you mid - January 2007. Please let me know if you have any other questions." 2/13/07: Emailed Jamie Brown to followup on the status of the next quarterly report. 2/20/07: Reviewed update report. Regenox in use. Wells sampled on 12/23/06. Max BTEX 58,900 ppb (MW4), max MTBE 220 ppb (MW7). LPH in MW2 at depth of 0.48 ppb. 3/23/07:

32-32 QUEENS BLVD/SUNOCO (Continued) **S100145562**

Meeting on 3/22/07 with Sunoco, NYSDEC, and EnviroTrac. LPH appeared last quarter because the Regenox mobilized contaminants. The second phase of Regenox application may be scheduled for April 2007. 4/13/07: Regenox application scheduled for 4/14/07. 6/11/07: Received update report. Wells sampled on 3/24/07. Max BTEX 37,400 ppb (MW4), max MTBE 120 ppb (MW7). LPH in MW2 at a depth of 0.29 ft. Product recovered from MW2 and an absorbent sock put in well. Overall decrease in contaminant concentration. 10/12/07: Emailed Russell Hammond regarding overdue report. 10/16/07: Received email from Russell Hammond. Report will be submitted by the end of this week. 3/18/08: Reviewed October 2007 - December 2007 Project Status Report. Max BTEX 47,100 ppb (MW4). Max MTBE 140 ppb (MW2). When will the next phase of Regenox application occur? 3/19/08: Received email from Karen Waryas (Waryas@ENVIRO-ASMNT.COM):"Phase 2 of the Regenox application at SUN-LIC32-32 occurred in April and May of 2007. It was mentioned in the June 2007 PSR, but regretfully was not put into the site history section of the September or December 2007 PSRs. I apologize for this oversight, and it will be remedied for future submissions. I put in an inquiry with my supervisor today as to when the third phase is expected to occur and will let you know as soon as I hear any information." 5/15/08 - Carlson: Reviewed January - March 2008 Project Status Report. Wells sampled on 3/22/08. Maximum BTEX concentration 23,600 ppb (MW2). Maximum MTBE concentration 74 ppb (MW2). Geochemical parameters are being monitored to evaluate progress of Regenox. When will third phase of Regenox occur? 9/4/08 - Carlson: Reviewed April - June 2008 Project Status Report. Wells sampled on 6/28/08. Maximum BTEX concentration 31,800 ppb (MW2). Maximum MTBE concentration 110 ppb (MW7). General increase in contaminant concentrations. When will third phase on Regenox application occur? 10/8/08 - Carlson: Meeting with Russell Hammond of Sunoco and Karen Waryas of EAR. Regenox won't be used again. Workplan for soil borings due by 10/30/08. A new RAP will be required afterwards. 11/5/08 - Carlson: Received email with Subsurface Summary letter. Email stated that a workplan will be submitted in two weeks. 12/22/08 - Carlson: Reviewed July 2008 - September 2008 Project Status Report. Wells sampled on 9/20/08. Maximum BTEX concentration 29,700 ppb (MW2). No mention of overdue workplan in report. Emailed Karen to followup on workplan submittal. 12/29/08 - Carlson: Received email from Karen. Workplan will be submitted when Russell Hammond gets back from vacation. 1/8/09 - Carlson: Approved investigation workplan for installation of three soil borings. 1/28/09 - Carlson: Reviewed September 2008 - December 2008 Update Report. Wells sampled on 12/20/08. Maximum BTEX concentration 37,620 ppb (MW4). On-site borings will be completed. 1/29/09 - Carlson: Meeting with Sunoco and Envirotrac. 4/5/09 - Carlson: Received investigation letter-report dated April 8, 2009. Three soil borings installed. High soil impact in all borings. A workplan for additional soil delineation will be submitted by may 8th. 5/22/09 - Carlson: Reviewed update report. Wells sampled on 3/28/09. Maximum BTEX concentration 37,700 ppb (MW4). Maximum MTBE concentration 64 ppb (MW2). Workplan for additional delineation overdue. 6/1/09 - Carlson: Meeting held with Sunoco and EAR. 6/5/09 - Carlson: Reviewed work plan dated 5/29/09. Five soil borings proposed. Sent email requiring revision workplan with 1) deeper minimum boring depth to account for smear zone and 2) continuous sampling of entire boring for all on-site borings except SB1. Revised work plan due in 30 days. 8/6/09 - Carlson: Approved revised work plan. Investigation Report due in 90 days. 10/6/09 -

32-32 QUEENS BLVD/SUNOCO (Continued) **S100145562**

Carlson: Reviewed update report. Wells sampled on June 27, 2009. High dissolved concentrations in MW2 and MW4. No update on work plan implementation provided. 12/3/09 - Carlson: Reviewed update report. Wells sampled on 9/19/09. Trace LNAPL in MW1. Maximum BTEX concentration 27,800 ppb (MW2). Investigation report overdue. 12/8/2009 - Carlson: Meeting with Sunoco. Upgradient source?, access issue on upgradient property. 3/18/2010 - Carlson: Received notification. Field work scheduled for 3/20/2010. 3/19/2010 - Carlson: Reviewed October 2009 - December 2009 Quarterly Update Report. LNAPL sheen in MW1 in October 2009. However, low dissolved concentrations in MW1 in December 2009. Field work cancelled, will probably be rescheduled for next Saturday. 4/7/2010 - Carlson: Received notification - field work scheduled for 4/7 and 4/10. 7/2/2010 - Carlson: Reviewed January - March 2010 update report and RIR. SB4 - SB 6 installed. Soil and gw impact in SB4. Three more borings will be installed, as per 7/17/09 work plan. 9/9/2010 - Carlson: Reviewed April - June 2010 Quarterly Report. SB- 7 - 9 installed. Soil impact in SB- 4, 7, 8, 9. Issued letter requiring work plan for installation of three monitoring wells at SB-4, SB-7, and to the south of SB-9, and one soil boring adjacent to MW1. Due 10/11/2010. 1/31/11 - Obligado - I reviewed an investigation workplan. The workplan didn't propose a well at SB7. I emailed a letter to Jaime Brown and Russel hammond requiring revised work plan with well at SB7. Due within 15 days. 3/30/11 - Obligado - I reviewed a revised work plan which incorporated the changes I requested. Sent approval letter.

Remarks: (5) 550 GALLON TANKS FAILED PETRO TITE WITH A LEAK RATE OF 0.737GPH, WILL EXCAVATE & TEST (5) MORE TANKS ON 8/31/89.

Material:

Site ID:	310058
Operable Unit ID:	930572
Operable Unit:	01
Material ID:	445794
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Pounds
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	310058
Spill Tank Test:	1535939
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Unknown

32-32 QUEENS BLVD/SUNOCO (Continued) **S100145562**

HIST LTANKS:

Region of Spill:	2
Spill Number:	8905358
Spill Date:	08/30/1989
Spill Time:	15:15
Spill Cause:	Tank Test Failure
Resource Affectd:	Groundwater
Water Affected:	Not reported
Spill Source:	Gas Station
Spill Class:	Known release that creates a file or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	SULLIVAN
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	08/30/89
Reported to Department Time:	16:28
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	SUNOCO AA
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Tank Tester
PBS Number:	2-339741
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	True
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	08/31/89
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	07/03/95
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	0
Test Method:	Not reported
Leak Rate Failed Tank:	0.00

32-32 QUEENS BLVD/SUNOCO (Continued) **S100145562**

Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: 5) 550 GALLON TANKS FAILED PETRO TITE WITH A LEAK RATE OF 0.737GPH, WILL EXCAVATE TEST 5) MORE TANKS ON 8/31/89.

146
North
1/4-1/2
0.435 mi.
2295 ft.

APRT **LTANKS** **S108983070**
2403 41ST AVE **N/A**
QUEENS, NY

Relative:
Higher

Actual:
28 ft.

LTANKS:
Site ID: 393128
Spill No: 0711618
Spill Date: 2/4/2008
Spill Cause: Tank Test Failure
Spill Source: Commercial/Industrial
Spill Class: Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 4/2/2008
Facility Addr2: 24-03 41ST AVE
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: bkfalvey
Referred To: Not reported
Reported to Dept: 2/4/2008
CID: 444
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 2/4/2008
Spill Record Last Update: 3/30/2009
Spiller Name: MARLIN JOSEPH
Spiller Company: APRT
Spiller Address: 2403 41ST AVE
Spiller City,St,Zip: QUEENS, NY
Spiller County: 001
Spiller Contact: MARLIN JOSEPH
Spiller Phone: (718) 624-4842
Spiller Extention: 112

APRT (Continued) **S108983070**

DEC Region:	2
DER Facility ID:	342746
DEC Memo:	2/21/08 Called Dominic Casamento (718)278-0806. left message to call me back. Sent ttf letter to: Dominic Casamento 2403 41st LLC 14-38 31st Drive Long Island City, NY 11106 Mr. Casamento called back later in the day. He said Petroleum Tank Cleaners will be coming back on Monday to make necessary repairs. He said they told him it was a dry leak. I confirmed the above address as his mailing address. He is on vacation and will be returning Monday. bf 4/2/08 received fax from M. Salamack of PTC. Tank was emptied and lines and tank were isolated. vent line was hit by a vehicle as tank is under a driveway area. Vent line was replaced to a different area to prevent future accidents. Tank was retesed 3/10/08 and passed. Test results attached. NFA. bf
Remarks:	DRY PORTION LEAK

Material:

Site ID:	393128
Operable Unit ID:	1150101
Operable Unit:	01
Material ID:	2140683
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	393128
Spill Tank Test:	2384605
Tank Number:	Not reported
Tank Size:	1500
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Watchdog
Last Modified:	2/4/2008
Test Method:	Horner EZ Check I or II

AH147 **CLOSED-LACKOF RECENT INFO** **LTANKS** **S100494133**
East **32-00 SKILLMAN AVE** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.436 mi.
2302 ft. **Site 1 of 3 in cluster AH**

Relative:
Higher

Actual:
34 ft.

LTANKS:

Site ID:	221004
Spill No:	9207976
Spill Date:	10/9/1992
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.

CLOSED-LACKOF RECENT INFO (Continued) **S100494133**

Spill Closed Dt:	3/6/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	ADMIN. CLOSED
Referred To:	Not reported
Reported to Dept:	10/9/1992
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	10/16/1992
Spill Record Last Update:	3/6/2003
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	***Update***, ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	307503
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ADMIN.CLOSED" 03/06/2003- Closed Due To The Nature / Extent Of The Spill Report
Remarks:	SUSPECT PLUMBING LEAKS,EIR.CLOSED DUE TO LACK OF ANY RECENT INFO-DOES NOT MEET ANY CLEAN UP REQUIREMENTS.

Material:

Site ID:	221004
Operable Unit ID:	971614
Operable Unit:	01
Material ID:	408582
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	221004
Spill Tank Test:	1540694
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported

CLOSED-LACKOF RECENT INFO (Continued) **S100494133**

Modified By: Spills
Last Modified: 10/1/2004
Test Method: Unknown

HIST LTANKS:
Region of Spill: 2
Spill Number: 9207976
Spill Date: 10/09/1992
Spill Time: 10:30
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: BATTISTA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 10/09/92
Reported to Department Time: 15:41
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 10/16/92
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: / /
Is Updated: False

Tank:

CLOSED-LACKOF RECENT INFO (Continued) **S100494133**

PBS Number: Not reported
Tank Number: Not reported
Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: SUSPECT PLUMBING LEAKS,EIR

AH148 **FORMERLY ACCO BRANDS, INC.** **VCP** **S104825350**
East **32-00 SKILLMAN AVENUE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY 11101**
0.436 mi.
2302 ft. **Site 2 of 3 in cluster AH**

Relative:
Higher

Actual:
34 ft.

VCP:
Program Type: VCP
Site Code: 57579
HW Code: V00331
Site Class: A
SWIS: 4101
Region: 2
Town: New York City
Acres: 1.800
Date Record Added: 11/30/2000 4:06:00 PM
Date Record Updated: 8/2/2011 3:54:00 PM
Updated By: JHOCONNE
Site Description: Location: The Site is located in an urban area of Long Island City, Queens at 32-00 Skillman Avenue and is surrounded by mixed commercial, industrial and residential uses. The former ACCO Brands, Inc. (ACCO) facility is bounded by Skillman Avenue and the Sunnyside Rail Yard to the north; 32nd Place to the east; Queens Blvd. to the south; and Van Dam Street to the west. Surrounding land uses include multi-family residential properties, community and educational institutions, and various commercial, industrial, and retail uses.
Site Features: The Site is approximately 1.8 acres in size and the former ACCO facility occupies the entire city block. Current Zoning/Use(s): The site was formerly owned by ACCO Brands Inc., which was a subsidiary of Fortune Brands, Inc. The site is located in an industrial zoned area. The upper floors of the Site are currently used for commercial and light industrial purposes, the basement is unoccupied, and a penthouse which houses a private racquet club, fitness center, spa and restaurant occupies the rooftop of the Site.
Historical Use(s): The facility was constructed in 1950 and ACCO (or its predecessor corporations) occupied the facility from 1952. The

FORMERLY ACCO BRANDS, INC. (Continued) **S104825350**

site was reportedly occupied by several automotive service centers and gasoline stations prior to 1950. During their occupancy of the facility, ACCO manufactured staplers and stapler components. Paints, thinners, solvents and cleaners were used as part of the manufacturing process and may have led to site contamination. Wastes generated included paint filters, sludge, rags, and paint. Operable Units: The Site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination." Operable unit 1 (OU-1) is the on-Site source area which included the basement of the building. Operable unit 2 (OU-2) consists of the off-Site dissolved groundwater plume and associated soil vapor issues. Site Geology and Hydrogeology: The site is underlain by silty sand with varying amounts of gravel, silts and clays. Soil borings indicate a laterally pervasive low permeability layer beneath the entire footprint of and to the west of the Site. Parts of the low permeability layer, which dips to the south-southeast, are compromised by a layer of organic peat. TCE has been detected in the shallow, intermediate and deep aquifer zones at the Site. Depth to groundwater in the shallow aquifer is approximately 10 grade with a flow to the northwest. Depth to groundwater in the intermediate aquifer is 35 below grade with a flow to the west-northwest. Depth to groundwater in the deep aquifer is 60 below grade with a flow to the north-northwest.

Env Problem: Nature and Extent of Contamination: OU-1 Soil - Based upon investigations conducted to date, the primary contaminants of concern for OU-1 soils include trichloroethene (TCE) and its breakdown products that were noted in an unlined pit in the basement of the facility. The extent of impacted soils is confined to the western half of the footprint of the basement. Concentrations of TCE found in soils on site ranged from 79 ppm to 256 ppm, which exceeds the Soil Cleanup Objectives (SCO) for the protection of groundwater (0.47 ppm). Maximum concentrations were noted at a depth of 16-16.5 feet below the basement floor. OU-1 Groundwater - TCE and its breakdown products were encountered in both shallow groundwater samples collected at approximately 15 below grade and deep groundwater samples collected at approximately 49 below grade. Concentrations of TCE in shallow groundwater on site ranged from 108 ppb to 129,000 ppb, which exceeds the Groundwater Standard of 5 ppb. Concentrations of TCE found in deep groundwater on site ranged from 700 ppb to 1280 ppb. Maximum groundwater contaminant concentrations are encountered in the western half of the Site. OU-1 Soil Vapor - The maximum sub-slab soil vapor concentration of TCE found in samples collected beneath the on-site building were 160,000 ug/m3 in the eastern portion of the basement and 260,000 ug/m3 in the northern portion of the basement. OU-2 Groundwater TCE and its breakdown products were encountered in shallow, intermediate and deep groundwater samples. Depth to groundwater is approximately 10 below ground surface (bgs) in the shallow aquifer, approximately 35 bgs in the intermediate aquifer, and approximately 60 bgs in the deep aquifer. Maximum concentrations of TCE found in shallow off-site groundwater samples were 140,000 ppb. Maximum concentrations of TCE found in intermediate off-site groundwater samples were 45,800 ppb. Maximum concentrations of TCE found in deep off-site groundwater samples were 65 ppb. Approximate plume length is 500 down gradient from the site. OU 2

FORMERLY ACCO BRANDS, INC. (Continued) **S104825350**

Soil Vapor - Off-site studies of soil vapor intrusion were conducted at the several locations. Concentrations of TCE in sub-slab and indoor air samples collected in two off-site locations during the Remedial Investigation exceeded the recommended action levels as established by NYSDOH. Vapor mitigation systems have been installed in these buildings.

Health Problem: Direct contact with contaminants in the soil is unlikely because the site is covered with a building and pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the area is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for people to inhale site contaminants in the indoor air due to vapor intrusion in the on-site building. A soil vapor extraction system was installed beneath the on-site building, which prevents vapors beneath the slab from entering the building. Sub-slab depressurization systems (systems that ventilate/remove the air beneath the building) have been installed in off-site buildings to prevent inhalation of site contaminants in indoor air due to soil vapor intrusion.

AH149 **32-00 SKILLMAN AVE** **LTANKS** **S105999143**
East **32-00 SKILLMAN AVE** **N/A**
1/4-1/2 **QUEENS, NY**
0.436 mi.
2302 ft. **Site 3 of 3 in cluster AH**

Relative:
Higher

Actual:
34 ft.

LTANKS:

Site ID:	72446
Spill No:	0302379
Spill Date:	6/5/2003
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	7/29/2005
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	LNKLAAS
Referred To:	Not reported
Reported to Dept:	6/5/2003
CID:	405
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	6/5/2003
Spill Record Last Update:	7/29/2005
Spiller Name:	EVILEN
Spiller Company:	Not reported

32-00 SKILLMAN AVE (Continued) **S105999143**

Spiller Address:	32-00 SKILLMAN AVE
Spiller City,St,Zip:	QUEENS, NY
Spiller County:	001
Spiller Contact:	EVILEN
Spiller Phone:	(212) 843-3751
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	68380
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "TIPPLE" June 29,04 letter sent by Tipple 07/28/05 Tank was cleaned, retested, and passed 09/25/03. No sign of release. Closed. LNK.
Remarks:	tank will be cleaned and then retest the lines

Material:

Site ID:	72446
Operable Unit ID:	869214
Operable Unit:	01
Material ID:	506858
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

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150 NNE 1/4-1/2 0.441 mi. 2330 ft.

Relative: Higher

Actual: 36 ft.

CLOSED-LACKOF RECENT INFO **LTANKS** **S100153363**
40-40 CRESCENT ST **HIST LTANKS** **N/A**
LONG ISLAND CITY, NY

LTANKS:

Site ID:	271352
Spill No:	9105613
Spill Date:	8/23/1991
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	3/14/2003
Facility Addr2:	Not reported

CLOSED-LACKOF RECENT INFO (Continued) **S100153363**

Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	ADMIN. CLOSED
Referred To:	Not reported
Reported to Dept:	8/23/1991
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	9/17/1991
Spill Record Last Update:	10/24/2003
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	***Update***, ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	220855
DEC Memo:	Not reported
Remarks:	THREE 2K TANKS SIPHONED. PETROTITE. CLOSED DUE TO LACK OF ANY RECENT INFO - DOES NOT MEET ANY CLEANUP REQUIREMENTS.

Material:

Site ID:	271352
Operable Unit ID:	956119
Operable Unit:	01
Material ID:	421399
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	271352
Spill Tank Test:	1538951
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Unknown

CLOSED-LACKOF RECENT INFO (Continued) **S100153363**

HIST LTANKS:

Region of Spill:	2
Spill Number:	9105613
Spill Date:	08/23/1991
Spill Time:	14:00
Spill Cause:	Tank Test Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	BATTISTA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	08/23/91
Reported to Department Time:	15:28
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	Not reported
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Tank Tester
PBS Number:	Not reported
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	09/17/91
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	07/03/95
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	0
Test Method:	Not reported
Leak Rate Failed Tank:	0.00

CLOSED-LACKOF RECENT INFO (Continued) **S100153363**

Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: THREE 2K TANKS SIPHONED. PETROTITE.

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151 **LTANKS** **S105997319**
SW **23-30 50TH AVE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.444 mi.
2347 ft.

Relative:
Lower

Actual:
9 ft.

LTANKS:
Site ID: 268804
Spill No: 0208486
Spill Date: 11/15/2002
Spill Cause: Tank Test Failure
Spill Source: Commercial/Industrial
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 11/17/2003
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: JBVOUGHT
Referred To: Not reported
Reported to Dept: 11/15/2002
CID: 322
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 11/15/2002
Spill Record Last Update: 11/17/2003
Spiller Name: ANTHONY VERDERAM
Spiller Company: Not reported
Spiller Address: 23-30 50TH AVE
Spiller City,St,Zip: LONG ISLAND CITY, NY
Spiller County: 001
Spiller Contact: ANTHONY VERDERAM
Spiller Phone: (718) 786-1100
Spiller Extention: Not reported
DEC Region: 2
DER Facility ID: 218966

(Continued) **S105997319**

DEC Memo: Prior to Sept, 2004 data translation this spill Lead_DEC Field was "VOUGHT" Sent tank test failure letter to Varderame. 11/15/2002 ARS 11/14/2003-Vought-Reviewed report dated 6/26/03 from Verderame Realty (Bruce Bauer 718-786-1100). Site will no longer be using oil and will be converting to gas. Closure of a 2000-gallon #2 fuel oil UST and collection of post excavatin endpoint samples by Bluestone Environmental (Andrew Cozzi 732-469-5188). "The UST excavation base was at approximately 8 to 8.5 feet below the concrete floor". "The soil in the excavation was a fill that consisted of dark brown sand with construction debris such as bricks and pieces of concrete". Five soil samples were submitted for analyses for 8260/8270. Soil analyticals show two 1,3,5-trimethylbenzene exceedances up to 9110ppb, benzo(a)anthracene up to 1010ppb, benzo(a)pyrene up to 631ppb, benzo(b)fluoranthene up to 1110ppb, benzo(k)fluoranthene up to 579ppb, and chrysene up to 1210ppb. These exceedances are attributable to fill material. Spill closed by Vought after conference with DEC Rommel.
Remarks: tank test failure - it will be cleaned and retested next week

Material:
Site ID: 268804
Operable Unit ID: 859901
Operable Unit: 01
Material ID: 565791
Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 268804
Spill Tank Test: 1527719
Tank Number: 1
Tank Size: 2500
Test Method: 03
Leak Rate: 0
Gross Fail: F
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Horner EZ Check I or II

152 West 1/4-1/2 0.447 mi. 2362 ft.

ANDREA ELECTRONICS
11-40 45TH DRIVE
LONG ISLAND CITY, NY

LTANKS S102959964
HIST LTANKS N/A

Relative: Lower

Actual: 13 ft.

LTANKS:

Site ID:	179039
Spill No:	9709895
Spill Date:	11/25/1997
Spill Cause:	Tank Test Failure
Spill Source:	Non Major Facility > 1,100 gal
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	12/17/2002
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	SIGONA
Referred To:	Not reported
Reported to Dept:	11/25/1997
CID:	282
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	11/25/1997
Spill Record Last Update:	3/4/2003
Spiller Name:	ANDREW FALINO
Spiller Company:	ANDREA ELECTRONICS
Spiller Address:	11-40 45TH DRIVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY 11101-
Spiller County:	001
Spiller Contact:	ANDREW FALINO
Spiller Phone:	(718) 729-8500
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	150284
DEC Memo:	Not reported
Remarks:	Anthony Sigona from DEC was on the scene also. tank failed the test he did not get the name of the electrical manufacturing factory PBS number is 2-195383

Material:

Site ID:	179039
Operable Unit ID:	1052939
Operable Unit:	01
Material ID:	328224
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported

ANDREA ELECTRONICS (Continued) **S102959964**

Oxygenate: False

Tank Test:
Site ID: 179039
Spill Tank Test: 1545485
Tank Number: 1
Tank Size: 10000
Test Method: 03
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Horner EZ Check I or II

HIST LTANKS:
Region of Spill: 2
Spill Number: 9709895
Spill Date: 11/25/1997
Spill Time: 15:00
Spill Cause: Tank Test Failure
Resource Affectd: Groundwater
Water Affected: Not reported
Spill Source: Non Major Facility > 1,100 gallons
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: SIGONA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 11/25/97
Reported to Department Time: 15:35
SWIS: 63
Spiller Contact: ANDREW FALINO
Spiller Phone: (718) 729-8500
Spiller Extention: Not reported
Spiller Name: ANDREA ELECTRONICS
Spiller Address: 11-40 45TH DRIVE
Spiller City,St,Zip: LONG ISLAND CITY, NY 11101-
Spiller Cleanup Date: / /
Facility Contact: ANDREW FALINO
Facility Phone: (718) 729-8500
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: 2-195383
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /

ANDREA ELECTRONICS (Continued) **S102959964**

Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 11/25/97
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 02/13/98
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: 1
Tank Size: 10000
Test Method: Horner EZ Check
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: DEC Sigona) met on site 12:00 - 2:00 P.M. on 11/25/97 with Andrew Falino Andrea) and Phil Fa in Crown Leak Detection) to Horner E y-Check III test 10,000 gallon underground 2 fuel oil tank. The test removed 110 inches Hg or 4 PSI of pressure from the tank. The gw depth was at least 8 feet below grade. The pressure dropped under static conditions to less than 45 inches Hg, or 2 PSI. The tank system failed. Investigation of piping revealed two sets of suction and return lines to the tank. One of the suction lines was capped indicating there may have been historic leaks in the tank system. Mr. Felino said he would have ABC tank cleaners remove the 9,000 gallons of fuel from the tank. The hotline was notified which generated this report. On 12/4/97, Sigona spoke to Mark Salamack at ABC Tank. ABC installed temporary 2-275 gallon tanks. They would empty the 10K tank and pressure test the lines. They thought there may be problem with gauge or assembly inside tank. Andrea hada work sheet that indicted there had been a lining in the tank, but ABC did not install the lining. On 1/5/98, Phil Fra in tested the 10K tank tight using Horner E y-Chek III. The leaking suction line had been isolated from the operating sytem tankand piping in-service. On 2/5/98, DEC Sigona) met with Andrew Felino Timothy L. Douthit, Land Tech Remedial, Inc. They proposed to investigate the pipeline for the 2 fuel oil UST. This including sampling the wells on the adjoining property for the Professional Building 45-28 21st Street) and the Beam Supply co. 45-40 21st Street). The free product sample was collected from the two wells containing product see spill No. 9708482 - discovery of free product by Fenely Nicol follow-up to spill no. 8900125). On 2/12/98 Tim Douthit, Land Tech Remedial, Inc. was advancing one boring SB-1 3 feet below grade basement floor) at 5 feet south of boiler room along possible pathway of abandoned leaking suction line at Adrea Electronics buildingand discovered free product. DEC Sigona) discussed the required de-lineation of the free product. Also, I requested comparison to free producted sampled in

ANDREA ELECTRONICS (Continued) **S102959964**

wells between 45-40 45-28 21st Street. According to Tim the first test of the wells indicated the presence of kerosene in the wells.

Spill Cause: anthony sagona from dec was on the scene also. tank failed the test he did not get the name of the electrical manufacturing factory pbs number is 2-195383

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153 **12-12 43RD AVE** **LTANKS** **S103824757**
NW **12-12 23RD AVE** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.450 mi.
2378 ft.

Relative:
Lower

Actual:
18 ft.

LTANKS:

Site ID:	164528
Spill No:	9814023
Spill Date:	7/7/1998
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	Not reported
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	JAKOLLEE
Referred To:	PRODUCT RECOV & QTRLY GW SMPLING CONTINUES
Reported to Dept:	2/19/1999
CID:	205
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	True
Remediation Phase:	5
Date Entered In Computer:	2/19/1999
Spill Record Last Update:	8/23/2011
Spiller Name:	Not reported
Spiller Company:	1212 43RD AVE
Spiller Address:	1212 23RD AVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	138718
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ROMMEL" 4/12/04-Vought-Spill transferred from Tomasello to Rommel as per Rommel. 04/11/06 - DER rem Bureau E staff sent out RFI letter to site owner (Rwz LLc). Department gave owner until 4/28/06 to respond. 04/20/06 - Staff received call from Liam Horgan (212.785-0266 liam@art-corp.net), Assessment Resources & Technologies, Inc. (hired by owner), indicated he would send site data to Department. ORC remediation of groundwater is ongoing. 07/19/06 - Staff received remedial summary report from Assessment Resources & Technologies, Inc. (A.R.T., Inc.). Report indicates site has been treated with ORC using injection field of wells since October 2003. The reports indicates that the ORC Injection Field is effectively remediating the

12-12 43RD AVE (Continued) **S103824757**

groundwater contamination. Additional monitoring well sampling is planned for August 2006. 08/14/06 - DER, Bureau E staff received call from Bob Corroon (representing RWZ LLC)requesting status of site closure by Department. Staff indicated project transferred back down to region 2. It is anticipated that they willl review data gathered in August and make a determination as to whether or not site can be closed. 05/29/07 - DER, Bureau E staff received call from Bob Corroon (representing RWZ LLC)(rcorroon@ix.netcom.com and (212)751-4620, ext 103) requesting status of site closure by Dept and an interest to close spill. Evidently, property is up for sale. Staff indicated project transferred back down to Region 2. Staff to provide Mr. Corroon with Regional project contact. Staff provided information to Mr. Corroon, via email, in P.M. on May 29. 10/24/07-Zhune discussed with Randy and based on the data he asked me to transfer this case to the remediation group. 02/20/08 - Debra Shapiro, consultant for the current site owner called and asked about the report prepared by ART company to make further recommendations of investigation, remedy or closure. Debra stated ART's report was prepared by ART for the previous site owner and she does not have it. I asked Zhune to locate report if available. 6/4/2008 Mimi from ELM (212-581-8023 ext 3) called to ask about the status of the report. She sent another copy of her companies plan in early May 2008. After the call Sangesland tracked the report to Vadim's office. Mimi will contact Vadim to set up a new case manager and a file review by DEC. 6/4/08 DEC Case Manager transferred from V. Brevdo to J.A. Maisonave. - JAM 6/26/08 Telephone conversation with Mimi R. from ELM. We discussed rpt dated May 5, 2008. Conceptual remedy is to excavate two areas of soil contamination. Latest GW results are from July 2007, and suggest no adverse impacts to GW. DEC suggests that an up to date round of GW samples be collected to verify. We will schedule a meeting when GW sample results are available. Rpt is uploaded to eDocs as three different files. - JAM 7/18/08 Received a memo today via email from ELM summarizing groundwater sampling results for the July 7, 2008 sampling event. Minor concentrations of VOCs were detected in the wells downgradient of the former tank field (Benzene detected at 363ug/L and total VOCs at 571ug/L in well MW-1(ART)). Memo uploaded to eDocs. - JAM 7/23/08 Meeting held at Region 2 offices on July 22, 2008. Attendence: Joseph Maisonave, NYSDEC Jonathan Kolleeny, NYSDEC Mimi Raygorodetsky, ELM Dik Glass, RLIC Realty Michael DelCioppo, RLIC Realty Meeting was held to discuss future remedial plans for site. ELM's first proposal was to excavate two areas of site; northwest corner and north central areas have soil contamination. Issues: 1) The northwest corner of the site, location of the two former USTs, has residual soil (from 10'-18') and groundwater contamination (Benzene and MTBE detected in July 2008 sampling event). ELM will excavate the area but requests leaving a 1:1 slope on the sidewall adjacent to the sidewalk to eliminate the requirement to shore and stabilize the sidewalk. The NYSDEC does not suggest leaving a 1:1 slope because the most contaminated soil (based on boring logs and analytical sampling) will be left in place. The NYSDEC requests a proposal to fully address soil contamination in the northwest corner. 2) The north-central area of the site contains 2 oil/water separators and petroleum impacts were observed in the field, however, laboratory data were returned with no exceedences for VOCs. ELM requests leaving that soil in place after removing the oil water separators. The NYSDEC requests that two groundwater monitoring wells be installed directly downgradient from the oil water

12-12 43RD AVE (Continued) **S103824757**

separators and sampled to be sure that groundwater is not impacted. Grossly contaminated soil should be removed when removing the oil/water separators and end-point soil samples should be collected. I expect a summary report for the installation of the two wells with groundwater analytical results and a remedial action proposal for the soil in the northwest corner of the site. - JAM 8/25/08 Spoke to Mimi R. today. The current structure foundation was removed as well as two oil water separators and 1 UST. No end-point samples were collected. ELM is proposing doing GPR to locate more potential USTs and installing the 2 downgradiet monitoring wells that the DEC requested in the last meeting. - JAM 9/18/08 Reviewed the Spill Investigation and Remediation Work Plan dated Sept. 3, 2008 submitted by ELM. The work plam proposes the following: 1. Use ground-penetrating radar to conduct a geophysical survey and to determine whether there are any remaining underground tanks. 2. Advance a minimum of 3 soil borings, one in each location of two oil/water separators and one UST, which were removed during deconstruction of the former building. 3. Install two monitoring wells in the northeast portion of the site. 4. Inject RegenOx in the area of the former USTs in the norhtwest portion of the site. I sent an approval letter today with one requirment. Confirmatory soil sampling must be performed subsequent to the RegenOx injections. Soil borings should be advanced as close as possible to former "T" boring locations to collect confirmatory samples. ELM also plans to install a vapor barrier and a passive venting system beneath the foundation of the new structure, which will be built on the northern portion of the site. The rest of the site will be capped with either asphalt, concrete of clean fill. The work plan and the approval letter are uploaded to eDocs. - JAM 9/22/08 ELM notified Dennis McChesney at the EPA about the RegenOx injection, as per EPA UIC Program regulations. EPA will review and respond. - JAM 10/03/08 Visited the site today. ELM advanced 5 soil borings yesterday and installed the two monitoring wells along 43rd Ave today. Visibly contaminated soil and odors were observed in each soil boring, however PID readings were relatively low (max reading was around 200ppm). Soil samples were taken at each boring from the interval with the highest PID reading, which was directly above the water table at each boring location. The RegenOx injection will occur when EPA UIC Program approval is given. - JAM 10/20/08 Spoke with Rich Kampf at ELM. ELM proposes to expand the RegenOx injection area to include the "D-boring" area. I verbally approved this proposal and asked for a formal addendum to the remedial work plan. I requested that ELM submit the supporting calculations for the amount of RegenOx to be injected. I also requested the Investigation Summary Report from work performed in early October 2008 be submitted as well. - JAM 10/29/08 Reviewed the Addendum to Spill Investigation and Remediation Work Plan submitted by ELM dated October 29, 2008. This addendum summarizes investigations performed on October 2 and 3, 2008 as per the approved work plan date September 3, 2008. ELM advanced 5 soil borings (SB-1 through SB-5) and installed 2 monitoring wells at locations SB-4 and SB-5. Evidence of soil contamination was found near the water table (interval 10-15 feet) in all soil borings. Compounds detected were Ethylbenzene, Xylenes and Naphthalene. Groundwater contamination was observed in both wells MW-4 and MW-5. Compounds detected were Benzene, Ethylbenzene, Xylene and Naphthalene. Please see table in report for concentrations. ELM proposes expanding RegenOx injections to address contamination observed in this area (D-boring area). ELM will inject 200lbs of

12-12 43RD AVE (Continued) **S103824757**

RegenOx in each of 23 injection points. A total of 4,200 lbs of RegenOx will be injected at the D-boring area. Rpt is uploaded to eDocs. I sent a letter today approving this work plan. Confirmatory soil and groundwater sampling must be conducted quarterly beginning one month after the RegenOx injections to evaluate its effectiveness. Approval letter uploaded to eDocs. - JAM 10/30/08 RegenOx injections commenced in the T-boring area today. I visited the site to witness the first injection point. ELM estimates the injections will take 8 days for both the T-boring and D-boring areas. - JAM 12/10/08 Received call from Mimi Raygorodetsky and follow-up email was received from Nicole Gorelick. ELM will perform confirmatory soil & GW sampling at site on 12/11/08 and 12/12/08 to evaluate effectiveness of RegenOx injections. Email is uploaded to eDocs. - JAM 12/15/08 Received a call from Nicole Gorelick at ELM. Soil borings were advanced in the T-boring area and the D-boring area on Friday, 12/12/08 to evaluate the effectiveness of the RegenOx injections. When trying to sample wells ELMMW-5 and MW-1 (ART), they appeared to be damaged from construction activities on-site and could not be sampled. Ms. Gorelick said she will be back at the site tomorrow to sample wells MW-2 (ART), MW-3 (ART) and ERMMW-5. A summary report will be submitted when results are available. - JAM 12/16/08 Visited site today. I walked site with Mimi Raygorodetsky and Nicole Gorelick from ELM and saw 5 wells, two of which were damaged by construction activities (MW-1 ART and ELMMW-4). I said that these monitoring wells may need to be reinstalled based on results from other 3 monitoring wells, which were sampled today. A rpt summarizing soil samples collected last week and GW samples collected today will be submitted. - JAM 1/12/09 Received an email report today from ELM titled Post-Injection Effectiveness Monitoring. ELM completed the in-situ chemical oxidation using RegenOx from October 30 through November 12, 2008. The effectiveness monitoring consisted of collecting soil samples from five soil borings and groundwater samples from accessible wells on- and off-site. Monitoring wells ELM MW-4, MW-2(ART) and MW-3(ART) were sampled on December 16, 2008. MW-1 (ART) and ELM MW-5 were not sampled because they were destroyed by construction activities on-site. Groundwater quality improved significantly in well ELM MW-4, however, groundwater quality in MW-2 (ART) showed increases for Benzene and MTBE. VOC concentrations in MW-3(ART) remained non-detect. Soil samples showed some improvement post-injection, however there were also increases in some conpounds that ELM attributes to sample variability and intervals between separate sample events were not exactly duplicated. Since the overall soil and groundwater conditions improved, ELM proposes that no additional injection rounds be performed in the T and D boring areas. ELM says that ELM MW-1 will be replaced within the next two weeks and groundwater monitoring events will continue. Email report uploaded to eDocs. - JAM 1/14/09 Emailed Mimi Raygorodetsky at ELM and said that DEC would like to see GW results from replacement well MW-1 before determining if future injections are not necessary. - JAM 1/15/09 Received a call from Nicole Gorelick at ELM. They will be reinstalling well MW-1 tomorrow morning and sampling the well next Friday. - JAM 2/3/09 Received an email from Mimi Raygorodetsky at ELM on 2/2/09. Monitoring well ELM MW-1R was installed on January 16, 2009 to replace the previously destroyed well ART-MW-1. ELM MW-1R was installed out of the building footprint and approximately 10 feet away from the previous well (see figure). The well was sampled on January 23, 2009 and while purging, petroleum

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odors and a sheen were observed. Groundwater sample results showed eight VOCs detected above TOGS. Most notable was Benzene at 267ug/L. Since sediments was noted in well ELM MW-4 during the last sampling event, ELM attempted to purge the well on January 19. 2009. While purging, petroleum odors and a sheen was observed. I spoke with Mimi today and sent a follow-up email which stated: "I have reviewed the data you have provided in the last two emails. The DEC will not require additional remediation at this time; however, quarterly groundwater monitoring should continue for at least two additional events and monitoring reports should be submitted to the DEC for review. Based on those groundwater results, additional sampling may be required." ELM's email is uploaded to eDocs. - JAM 7/15/09 Received a "Remedial Action Report" prepared by ELM dated June 26. 2009. The report summarizes all investigative and remedial work performed on-site to date, including a summary of the Phase I and Phase II Site Investigations. The following is included in the report: Section 3 REMEDIATION 1. Pre-demolition removal of ASTs, one 1,200-gallon lube oil UST, sediment from trenches and drains within the on-site structures and oil and sludges from the oil-water separators located on-site - Jan 2008. 2. Removal of 2 oil-water separators and an adjacent UST during demolition from the D-boring area - July 2008. 3. RegenOx injection program - Oct 3 - Nov 12, 2008. 4. Effectiveness monitoring of soil and groundwater - Dec 2008. 5. Re-installation and sampling of ELM-1R in the T-boring area - Jan 2009. 6. Soil excavation and removal for construction purposes - Nov 2008 - Feb 2009 7. Installation of passive SSDS - Feb 2009 8. Installation of a 15-ml poly sheeting soil vapor barrier - Feb 2009. 9. Capping of the site with impermeable surfaces and clean fill in landscaped area - Scheduled for Spring 2009. 10 Qrtly GW monitoring - Ongoing. The report is uploaded to eDocs without the Attachments. - JAM 7/21/09 Reviewed the Quarterly Groundwater Sampling Report submitted by ELM on July 1, 2009. On April 24, 2009, groundwater samples were collected from groundwater monitoring wells ART MW-2 and ART MW-3. ELM-MW-1R was found to be filled with sediment and could not be sampled and ELM-MW-5 was destroyed during construction activities. ELM-MW-4 contained 1.1 feet of free product and could not be sampled. Total VOC concentrations from ART-MW-2 and ART-MW-3 are 108ug/L and 46ug/L, respectively. Report uploaded to eDocs. I called Mimi Raygorodetsky at ELM today to discuss future work. Mimi said that on Friday, July 24, 2009, ELM will perform another round of groundwater sampling, collect a sample of the product for fingerprint analysis, and perform the first product recovery event. Product recovery will be performed weekly, thereafter. I also requested that at least 3 monitoring wells be installed. Two to replace the destroyed wells ELM-MW-1R and ELM-MW-5, and one to installed downgradient and across the street of ELM-MW-4 and ELM-MW-5. I also requested that an up-to-date groundwater flow direction be calculated. ELM will submit a work plan to reinstall the wells within 2 weeks. - JAM 8/31/09 Reviewed the Spill Investigation and Remediation Work Plan submitted by ELM dated August 7, 2009 and submitted via email on August 18, 2009. ELM proposed gauging and bailing product from well ELMMW-4 on a weekly basis and to collect a sample of the product for fingerprint analysis. The first gauging and bailing event occurred on July21, 2009. A sample of the product was collected on that date as well. Additional work includes reinstalling monitoring wells ELMMW-1R and ELMMW-5 that were destroyed during construction of the new building. An off-site monitoring well will be

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installed down-gradient and across the street from ELMMW-4. I wrote a letter today approving the work plan with the following adjustments: 1. Vacuum enhanced fluid recovery should be implemented on ELMMW-4. 2. At least one additional monitoring well should be installed approximately 15 to 20 feet to the east of well ELMMW-4 to delineate the free product plume. If product is encountered in this well, another well should be installed further to the east. 3. Soil sampling should be conducted during installation of the well across 43rd Avenue and the well to the east of well ELMMW-4. Soil should be continuously screened with a PID. Two (2) soil samples should be collected from each well for laboratory analysis: one sample from the soil interval with the highest PID reading, and another sample from the interval directly above the water table. If there are no elevated PID readings, only the sample from above the water table need be collected. The work plan and my approval letter are uploaded to eDocs. - JAM 10/1/09 Received Quarterly Groundwater Monitoring Rpt for 3rd Qtr 2009 submitted by ELM via email on 9/30/09 and dated 8/28/09. GW samples were collected from wells ART MW-2 and ATR MW-3 on July 24, 2009. Wells ELM MW-1 and ELM MW-5 were not sampled because they were destroyed and well ELM MW-4 was not sampled because it contained 3.3 feet of free product. Sample results showed very minor levels of dissolved phase VOCs in ART MW-2 and ART MW-3. ELM states that there was an overall reduction in VOCs since RegenOx injection. Report with sample result tables is uploaded to eDocs. ELM has been monitoring the wells weekly for free product and, if free product is detected it is being hand bailed. On 10/1/09 I visited the site to observe the first vacuum enhanced fluid recovery event on well ELM MW-4. Additional wells will be drilled as per my letter dated 8/31/09. A summary report of all product gauging and recovery events will follow. - JAM 10/16/09 Received updated weekly product recovery table submitted by ELM. On October 15, 2009, well ELM-MW-4 contained 0.22ft of free product, which was recovered using a bailer. The delineation wells are scheduled to be installed on Monday, October, 26. - JAM 10/23/09 Received updated weekly product recovery table submitted by ELM. On October 22, 2009, well ELM-MW-4 contained 0.19ft of free product, which was recovered using a bailer. Delineation wells will be installed next week 10/26 through 10/28. - JAM 10/28/09 Visited site today to observe install'n of 4 additional monitoring wells. At time of my visit, three wells were installed and none showed any signs of contamination. Next week all wells will be surveyed and sampled for dissolved phase contamination. - JAM 12/2/09 Reviewed the Product Recovery Table submitted by ELM on 11/20/09 and 12/2/09. The last three recovery events are tabulated below: Date Prod. dpth DTW P.Thck Final DTW Prod Removed 10/29/09 16.35 16.53 0.18 16.86 0.4 11/18/09 14.33 14.46 0.13 14.58 0.2 12/2/09 14.46 14.62 0.16 14.75 1.2 ELM will continue to visit the site to recover product weekly. A report will be submitted summarizing the installation of the additional monitoring wells. - JAM 3/19/10 Reviewed Well Install'n and Quarterly Groundwater Sampling Rpt for 4th Qtr 2009 submitted by ERM, dated Dec. 17, 2009. On October 27 and 28, 2009, 2 new monitoring wells and 2 replacement wells were installed. Soil samples were collected from new wells only because soil data is already available for replacement wells. According to data, no VOCs or SVOCs were detected that exceeded SCOs in either of newly installed monitoring wells. Free product also was not observed in any of 4 newly installed wells. Groundwater samples were collected from all accessible wells without product on November 4, 2009 (ELM

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MW-4 was not sampled because it contained free product). No VOCs or SVOCs were detected in groundwater samples from ELM MW-6 and ELM MW-7 exceeding NYSDEC TOGS. The other wells each contained several VOCs, with some VOC concentrations exceeding TOGS. On October 1, 2009, ERM performed one VEFR event on well ERM MW-4 and removed approx. 50 gallons of free product/water mixture. ERM recommends continuing to sample GW quarterly for at least 2 more quarters. Product continues to be bailed from ERM MW-4 on a weekly basis. Well Installation and Quarterly Groundwater Sampling Report is uploaded to eDocs. - JAM 3/19/10 Received call from Mimi Raygorodetsky and Jesse Mausner at ERM. In Feb. 2010, approx. 1.5 feet of free product was measured in well ERM-MW-4. ERM plans to schedule another VEFR event. I advised ERM to install more wells and/or soil borings in close proximity to well ERM MW-4 to determine where product originated from. Due to heavy rain events, product may have been desorbed from soil column near well ERM MW-4. Recommendations for future work will be included in next quarterly monitoring rpt (to be submitted). - JAM 4/28/10 Reviewed the Quarterly Monitoring Report submitted by ELM dated April 8, 2010 submitted via email on April 16, 2010. Groundwater samples were collected on February 3, 2010 and results continue to show a reduction of VOCs in ELM-MW-1R, ART-MW-2 and ART-MW-3. The report does not summarize free product gauging and recovery events since April 2009. The next sampling event is scheduled for May 2010. Report uploaded to eDocs. I issued an email today notifying the RP that product monitoring and recovery should be performed monthly and that DEC should receive monthly updates. I also requested that the data from the monthly events be summarized in the quarterly monitoring/sampling reports. Email uploaded to eDocs. - JAM 4/29/10 Received Free Product Remdiation Scope of Work submitted by ELM on April 28, 2010 via email. Work plan proposes using Laser Induced Fluorescence / Ultraviolet Optical Scanning Tool (LIF/UVOST) to delineate free product plume around ELM-MW-4. LIF/UVOST will be advanced into subsurface using direct-push geoprobe and will obtain real time scan of subsurface. ELM proposes installing permanent monitoring wells where mobil phase product is detected. I issued an approval letter on April 28, 2010 with the following requirements: 1. Each boring should be extended to a depth 5 feet below the water table or the extent feasible since bedrock is shallow in the area. 2. At any location where residual or free phase petroleum contamination is encountered, a permanent monitoring well should be installed. At a minimum, one monitoring well should be installed between existing wells ELM-MW-4 and ELM-MW-7 3. During monitoring well installation, soil should be continuously screened with a PID. Soil samples should be collected from the soil interval with the highest PID reading, and another sample from the interval directly above the water table. If there are no PID readings but contamination was detected using UVOST, then a soil sample should be collected from depth intervals where UVOST detected contamination. The work plan and approval letter are uploaded to eDocs. - JAM 5/7/10 Site Visit. LIF/UVOST investigation completed today with six borings advanced around ELM-MW-4. Free phase product was observed in four of the six borings around well ELM-MW-4. Three monitoring wells will be installed and soil and grounwater samples will be collected. Product is delineated toward the street. Product most likely extends beneath the building. A summary report will be submitted when soil and groundwater sample results are returned. -JAM 6/8/10 Spoke to Emily from ELM today. All the wells were gauged this month and approx. 5 inches of product was contained

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in well ELM-MW-4. She will submit a letter documenting the gauging event and will include a submission date for the investigation summary report. - JAM 03/01/11: This spill case transferred from J. Maisonave to J. Kolleeny. Reviewed LNAPL Remediation Rpt by ELM, dated 2/17/11 (in eDocs). Rpt presents product gauging data and GW sampling data, showing free product in well ELM-MW4 has been reduced to 0.08 ft; most notable dissolved-phase impact was in well ELM-MW-1R2, which had 100 ug/L of benzene in Oct. 2010 (up from 65 ug/L benzene in July 2010). Rpt requests spill closure. I sent letter (in eDocs) to Michael Del Cioppo, cc's to Dik Glass, Emily Guyer & Mimi Raygorodetsky, saying spill cannot yet be closed due to measurable free product and other impacts; required continued product recovery (suggested by vac truck), and quarterly GW sampling, until no measurable product in wells, at which point spill closure will be reconsidered. - J. Kolleeny 08/23/11: On Aug. 5, 2011, spoke with Emily Guyer of ELM (consultant), discussed various approaches to product recovery and conditions for spill closure. She suggested use of absorbent socks to remove product from well MW-4, which has persistent small amounts of product (several inches). I agreed to give this a try, since she indicated that vac truck was not very effective and constant use would be cost prohibitive. I also requested GW sampling on at least semi-annual basis. On 8/15/11, received email from Ms. Guyer with attached memo (in eDocs) summarizing our discussion and proposing use of absorbent socks and semi-annual sampling as remedial approach moving forward, and stating that once sufficient data are collected, ELM will re-evaluate effectiveness of this approach. On 8/23/11, I sent email (in eDocs) to Michael Del Cioppo, cc's to Emily Guyer, Mimi Raygorodetsky & Pete Zimmerman of ELM, approving this proposal. - J. Kolleeny

Remarks: TESTED TANK. TANK FAILED.

Material:

Site ID:	164528
Operable Unit ID:	1074904
Operable Unit:	01
Material ID:	310729
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	164528
Spill Tank Test:	1546863
Tank Number:	Not reported
Tank Size:	10000
Test Method:	99
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004

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Test Method: Alternate Test per 613.5a2v

HIST LTANKS:

Region of Spill:	2
Spill Number:	9814023
Spill Date:	07/07/1998
Spill Time:	12:00
Spill Cause:	Tank Test Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	TOMASELLO
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	02/19/99
Reported to Department Time:	14:32
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	1212 43RD AVE
Spiller Address:	1212 23RD AVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Responsible Party
PBS Number:	Not reported
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	True
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	02/19/99
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	02/24/99
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported

12-12 43RD AVE (Continued) **S103824757**

Tank Size: 10000
Test Method: Alternate Test per 613.5a2v (PBS Regulations)
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: TESTED TANK. TANK FAILED.

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154 **TYPHIN STEEL** **LTANKS** **S102150356**
SSE **49-49 30TH STREET** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY** **NY Spills**
0.452 mi. **NY Hist Spills**
2385 ft.

Relative:
Lower

Actual:
12 ft.

LTANKS:
Site ID: 88995
Spill No: 9312128
Spill Date: 1/14/1994
Spill Cause: Tank Overfill
Spill Source: Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 1/14/1994
Facility Addr2: Not reported
Cleanup Ceased: 1/14/1994
Cleanup Meets Standard: True
SWIS: 4101
Investigator: CAMMISA
Referred To: Not reported
Reported to Dept: 1/14/1994
CID: Not reported
Water Affected: Not reported
Spill Notifier: Responsible Party
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 1/18/1994
Spill Record Last Update: 9/30/2004
Spiller Name: Not reported
Spiller Company: WHALECO FUEL OIL
Spiller Address: 1 COFFEY ST.
Spiller City,St,Zip: BROOKLYN, NY
Spiller County: 001
Spiller Contact: Not reported
Spiller Phone: Not reported

TYPHIN STEEL (Continued) **S102150356**

Spiller Extention: Not reported
DEC Region: 2
DER Facility ID: 81338
DEC Memo: Not reported
Remarks: WILL SEND AT SOMEONE W/ SPEEDY DRY.

Material:
Site ID: 88995
Operable Unit ID: 990742
Operable Unit: 01
Material ID: 391124
Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 5
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

HIST LTANKS:
Region of Spill: 2
Spill Number: 9312128
Spill Date: 01/14/1994
Spill Time: 12:00
Spill Cause: Tank Overfill
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 01/14/94
Cleanup Ceased: 01/14/94
Cleanup Meets Standard: True
Investigator: CAMMISA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported

TYPHIN STEEL (Continued) **S102150356**

Notifier Extension: Not reported
Reported to Department Date: 01/14/94
Reported to Department Time: 14:50
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: WHALECO FUEL OIL
Spiller Address: 1 COFFEY ST.
Spiller City,St,Zip: BROOKLYN, NY
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Responsible Party
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 01/18/94
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 5
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: WILL SEND AT SOMEONE W/ SPEEDY DRY.

NY Spills:
Site ID: 88996
Facility Addr2: Not reported
Facility ID: 9607116
Spill Number: 9607116
Facility Type: ER

TYPHIN STEEL (Continued) **S102150356**

SWIS:	4101
Investigator:	EXHAMPST
Referred To:	Not reported
Spill Date:	9/5/1996
Reported to Dept:	9/5/1996
CID:	204
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	12/29/2005
Remediation Phase:	0
Date Entered In Computer:	9/5/1996
Spill Record Last Update:	12/29/2005
Spiller Name:	MR GAMA
Spiller Company:	TYPHIN STEEL
Spiller Address:	49-49 30TH STREET
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller Company:	001
Contact Name:	BOB DECK
Contact Phone:	(718) 624-4842
DEC Region:	2
DER Facility ID:	81338
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ROMMEL" This Spill cleanup project has been reassigned from DEC (Sigona) to Rommel on 2/2/2004. 12/29/05 Transferred to E. Hampston via Spills Initiative. Contacted possible owner Richard Typhin (#609-497-0796) and left message regarding spill, requested call back. Site owner responded. Spill cleaned. Faxing disposal receipts (filed in eDocs).
Remarks:	Cross over line broke

Material:

Site ID:	88996
Operable Unit ID:	1038272
Operable Unit:	01
Material ID:	346384
Material Code:	0008
Material Name:	Diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	50
Units:	Gallons
Recovered:	50
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported

TYPHIN STEEL (Continued) **S102150356**

Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

Site ID:	88997
Facility Addr2:	Not reported
Facility ID:	9607319
Spill Number:	9607319
Facility Type:	ER
SWIS:	4101
Investigator:	LUCE
Referred To:	Not reported
Spill Date:	9/10/1996
Reported to Dept:	9/10/1996
CID:	205
Spill Cause:	Human Error
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	9/16/1996
Remediation Phase:	0
Date Entered In Computer:	9/10/1996
Spill Record Last Update:	12/24/2003
Spiller Name:	CALLER
Spiller Company:	WHALECO FUEL OIL
Spiller Address:	1 COFFEY STREET
Spiller City,St,Zip:	BROOKLYN, NY 11231-
Spiller Company:	001
Contact Name:	THYPIN STEEL INC.
Contact Phone:	(718) 706-4557
DEC Region:	2
DER Facility ID:	81338
DEC Memo:	Not reported
Remarks:	tank overfill.

Material:

Site ID:	88997
Operable Unit ID:	1038480
Operable Unit:	01
Material ID:	346588
Material Code:	0008
Material Name:	Diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	15

TYPHIN STEEL (Continued) **S102150356**

Units:	Gallons
Recovered:	15
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

Click this hyperlink while viewing on your computer to access additional NY_SPILL: detail in the EDR Site Report.

NY Hist Spills:

Region of Spill:	2
Spill Number:	9607319
Investigator:	LUCE
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	09/10/1996 10:45
Reported to Dept Date/Time:	09/10/96 11:39
SWIS:	63
Spiller Name:	WHALECO FUEL OIL
Spiller Contact:	CALLER
Spiller Phone:	(718) 852-7000
Spiller Contact:	THYPIN STEEL INC.
Spiller Phone:	(718) 706-4557
Spiller Address:	1 COFFEY STREET
Spiller City,St,Zip:	BROOKLYN, NY 11231-
Spill Cause:	Human Error
Reported to Dept:	On Land
Water Affected:	Not reported
Spill Source:	09
Spill Notifier:	Responsible Party
PBS Number:	Not reported
Cleanup Ceased:	/ /
Cleanup Meets Std:	False
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response.

TYPHIN STEEL (Continued) **S102150356**

Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 09/16/96
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 09/10/96
Date Spill Entered In Computer Data File: Not reported
Update Date: 09/24/96
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 15
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 15
Unkonwn Quantity Recovered: False
Material: DIESEL
Class Type: DIESEL
Times Material Entry In File: 10625
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: 4KXUG FOR TRUCKS - NOT SURE OF CAUSE - CLEAN UP CREW ON SITE - WILL CALL BACK WITH CAUSE - 09/12/96 - LAPORE SAID THE PAROMETER IS NOT BREAKING - 09/16/96 - THE GAUGE WA SREPLACED - THE SPILL WAS CLEANED UP.
Remark: tank overfill.

Region of Spill: 2
Spill Number: 9607116
Investigator: SIGONA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 09/05/1996 08:30
Reported to Dept Date/Time: 09/05/96 10:36
SWIS: 63
Spiller Name: TYPHIN STEEL
Spiller Contact: MR GAMA
Spiller Phone: (718) 706-4557
Spiller Contact: BOB DECK
Spiller Phone: (718) 624-4842
Spiller Address: 49-49 30TH STREET
Spiller City,St,Zip: LONG ISLAND CITY, NY
Spill Cause: Equipment Failure
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 01
Spill Notifier: Local Agency

TYPHIN STEEL (Continued) **S102150356**

PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 09/05/96
Date Spill Entered In Computer Data File: Not reported
Update Date: 09/23/96
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 50
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 50
Unkonwn Quantity Recovered: False
Material: DIESEL
Class Type: DIESEL
Times Material Entry In File: 10625
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: Not reported
Remark: cross over line broke

Region of Spill: 2
Spill Number: 9503618
Investigator: TANG
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 06/23/1995 15:00
Reported to Dept Date/Time: 06/23/95 15:03
SWIS: 63
Spiller Name: WHALECO FUEL
Spiller Contact: Not reported
Spiller Phone: (718) 352-7018
Spiller Address: 1 COFFEY STREET

TYPHIN STEEL (Continued) **S102150356**

Spiller City,St,Zip: BOOKLYN, NEW YORK 11231
Spill Cause: Equipment Failure
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 01
Spill Notifier: Responsible Party
PBS Number: Not reported
Cleanup Ceased: 06/23/95
Cleanup Meets Std: True
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 06/23/95
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 07/18/95
Date Spill Entered In Computer Data File: Not reported
Update Date: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 1
Unkonwn Quantity Recovered: False
Material: DIESEL
Class Type: DIESEL
Times Material Entry In File: 10625
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: Not reported
Remark: TRAP VENT FAILED CAUSING SPILL OG 1 GALLON - DIESEL FUEL ONTO CEMENT. CLEANED WITH SPEEDY DRY - WHALECO FUEL HAS OWN SPILL CREW THAT HAS BEEN SENT TO SITE TO MAKE SURE ALL IS WELL

155 WNW 1/4-1/2 0.453 mi. 2390 ft.

INTERNATIONAL MASONRY INS
12-07 44TH AV
LONG ISLAND CITY, NY

LTANKS S105055142
HIST LTANKS N/A

Relative: Lower

Actual: 15 ft.

LTANKS:

Site ID:	197925
Spill No:	0103153
Spill Date:	6/21/2001
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	3/31/2006
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	TJDEMEO
Referred To:	Not reported
Reported to Dept:	6/21/2001
CID:	323
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	6/21/2001
Spill Record Last Update:	3/31/2006
Spiller Name:	DENNIS HOLLOWAY
Spiller Company:	INTERNATIONAL MASONRY INS
Spiller Address:	12-07 44TH AV
Spiller City,St,Zip:	LONG ISLAND CITY, ZZ
Spiller County:	001
Spiller Contact:	DENNIS HOLLOWAY
Spiller Phone:	(718) 706-9139
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	164722
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "DEMEO" 12/30/02 TJD International Masonary Institute contacted to provide a summary of activities at site including complete analytical data from sampling event. Fax transmission with incomplete data had been received. Demeo left message with John Cozultini who will have the appropriate individual repond to NYSDEC request for addional information. 1/2/02 TJD Dennis Holaway (International Masonary Institute) called today in response to DEC request for additional information. A complete set of laboratory data faxed to DEC this morning. Lab analysis reveals chemical concentrations above TAGM. Remedial work is required. Tank is reportably a 2,500 gal UST buried inside building. No PBS registration is found for this address. Mr. Hollaway was provided contact information for (5) environmental contractors. A contractor will be selected and a work plan submitted. Based on 11/28/01 tank closure report - which indicated only SVOC contamination - and 10/5/01 DEC Region 2 telephone conference which requested soil borings per approved work plan, additional borings were advanced and analyzed and determined that fill across site

INTERNATIONAL MASONRY INS (Continued) **S105055142**

placed during construction of building was contaminated with low level SVOC's. Case closed.
Remarks: Not reported

Material:
Site ID: 197925
Operable Unit ID: 839740
Operable Unit: 01
Material ID: 535248
Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 197925
Spill Tank Test: 1526410
Tank Number: 1
Tank Size: 3000
Test Method: 03
Leak Rate: 0
Gross Fail: F
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Horner EZ Check I or II

HIST LTANKS:
Region of Spill: 2
Spill Number: 0103153
Spill Date: 06/21/2001
Spill Time: 13:30
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Non Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: DEMEO
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 06/21/01

INTERNATIONAL MASONRY INS (Continued) **S105055142**

Reported to Department Time: 14:44
SWIS: 63
Spiller Contact: DENNIS HOLLOWAY
Spiller Phone: (718) 706-9139
Spiller Extention: Not reported
Spiller Name: INTERNATIONAL MASONRY INS
Spiller Address: 12-07 44TH AV
Spiller City,St,Zip: LONG ISLAND CITY
Spiller Cleanup Date: / /
Facility Contact: DENNIS HOLLOWAY
Facility Phone: (718) 706-9139
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 06/21/01
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 06/21/01
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: 1
Tank Size: 3000
Test Method: Horner EZ Check
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Talk Test Failures only pass or fail

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: Not reported

156
WNW
1/4-1/2
0.459 mi.
2424 ft.

11-15 45TH AVENUE — **LTANKS** **S102672507**
11-15 45TH AVENUE — **HIST LTANKS** **N/A**
LONG ISLAND CITY, NY

Relative:
Lower

Actual:
12 ft.

LTANKS:

Site ID:	265495
Spill No:	9402499
Spill Date:	5/20/1994
Spill Cause:	Tank Overfill
Spill Source:	Tank Truck
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	5/20/1994
Facility Addr2:	Not reported
Cleanup Ceased:	5/20/1994
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	CAMMISA
Referred To:	Not reported
Reported to Dept:	5/20/1994
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	5/25/1994
Spill Record Last Update:	9/30/2004
Spiller Name:	Not reported
Spiller Company:	GOTHAM PETRO
Spiller Address:	Not reported
Spiller City,St,Zip:	ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	216332
DEC Memo:	Not reported
Remarks:	SPILL CONTAINED ON SIDEWALK - CLEAN UP CREW ON SCENE (GOTHAM).

Material:

Site ID:	265495
Operable Unit ID:	996297
Operable Unit:	01
Material ID:	382692
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-5
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

11-15 45TH AVENUE (Continued) **S102672507**

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

HIST LTANKS:

Region of Spill:	2
Spill Number:	9402499
Spill Date:	05/20/1994
Spill Time:	09:15
Spill Cause:	Tank Overfill
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Tank Truck
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	05/20/94
Cleanup Ceased:	05/20/94
Cleanup Meets Standard:	True
Investigator:	CAMMISA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	05/20/94
Reported to Department Time:	09:47
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	GOTHAM PETRO
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Other
PBS Number:	Not reported
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False

11-15 45TH AVENUE (Continued) **S102672507**

Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 05/25/94
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -5
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: SPILL CONTAINED ON SIDEWALK - CLEAN UP CREW ON SCENE GOTHAM).

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157 **GULF STATION** **LTANKS** **S106124280**
North **23-01 41ST AVE** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.459 mi.
2424 ft.

Relative:
Higher

Actual:
27 ft.

LTANKS:
Site ID: 406141
Spill No: 0808735
Spill Date: 11/3/2008
Spill Cause: Tank Test Failure
Spill Source: Gasoline Station
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 8/28/2009
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: JMKRIMGO
Referred To: Not reported
Reported to Dept: 11/3/2008
CID: Not reported
Water Affected: Not reported
Spill Notifier: Tank Tester
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False

GULF STATION (Continued) **S106124280**

Remediation Phase:	0
Date Entered In Computer:	11/3/2008
Spill Record Last Update:	8/28/2009
Spiller Name:	TJ OCONNOR
Spiller Company:	GULF STATION
Spiller Address:	23-01 41ST AVE
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	999
Spiller Contact:	TJ OCONNOR
Spiller Phone:	(516) 678-5115
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	195731
DEC Memo:	TTF 1/15/09. J.Krimgold reviewed the letter-report submitted by Energy Fueling systems Corp and dated 12/22/08. According to the information provided in this letter, a 2000 gal tank failed the test due to a damaged (cut)vent pipe. The failed pipe was abbendoned in place and new pipe run was installed. Tank with pipe was retested and passed the test. NFA.
Remarks:	TANK TEST FAILURE ON A 2000 GALLON UST. UNK IF ANY PRODUCT WAS SPILLED.

Material:

Site ID:	406141
Operable Unit ID:	1162749
Operable Unit:	01
Material ID:	2154029
Material Code:	0009
Material Name:	Gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Gallons
Recovered:	Not reported
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	406141
Spill Tank Test:	2486875
Tank Number:	1
Tank Size:	2000
Test Method:	21
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	JMKRIMGO
Last Modified:	1/15/2009
Test Method:	Horner EZY3/EZY3 Locator Plus

Site ID:	237638
Spill No:	0308076
Spill Date:	10/30/2003
Spill Cause:	Tank Test Failure
Spill Source:	Gasoline Station
Spill Class:	Known release that creates potential for fire or hazard. (Highly

GULF STATION (Continued) **S106124280**

	Improbable)
Spill Closed Dt:	1/7/2004
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	KMFOLEY
Referred To:	Not reported
Reported to Dept:	10/30/2003
CID:	257
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	10/30/2003
Spill Record Last Update:	2/6/2004
Spiller Name:	Not reported
Spiller Company:	CUMBERLAND FARMS
Spiller Address:	777 DEDHAM ST
Spiller City,St,Zip:	CANTON, MA 02021-
Spiller County:	001
Spiller Contact:	BRIAN BERKLE
Spiller Phone:	(610) 278-7203
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	195731
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "K FOLEY" 12/15/03 Letter addressed to Sigona from Environmental Systems Group. On 10/30/03, Crompco conducted precision test on tanks. One 4000gal diesel UST failed the test. Energy Storage Systems reviewed the test data and suggested the test technician failed to plug the air eliminator on the pumps and therefore the tanks failed. On 12/9/03, Crompco retested the tanks and plugged the air eliminator and the tank passed. 12/19/03 Spoke to Andy at Energy Storage systems. As per Sigona's recommendation, he will submit a report summarizing the first and second testing episodes. Rommel 12/23/03 Received letter from Mort Turoff at Energy Storage systems summarizing first and second tests. Diesel tank passed on 12/9/03 retest. Results on file. (KMF) 1/9/04 Sent NFA. (KMF)
Remarks:	liquid level failure

Material:

Site ID:	237638
Operable Unit ID:	874384
Operable Unit:	01
Material ID:	568462
Material Code:	0008
Material Name:	Diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

GULF STATION (Continued) **S106124280**

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

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158 **43-41 32ND PLACE** **LTANKS** **S100560351**
East **43-41 32ND PLACE** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.463 mi.
2443 ft.

Relative:
Higher

Actual:
37 ft.

LTANKS:

Site ID:	307482
Spill No:	9303078
Spill Date:	6/8/1993
Spill Cause:	Tank Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	6/25/1993
Facility Addr2:	Not reported
Cleanup Ceased:	6/25/1993
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	GRIFFIN
Referred To:	Not reported
Reported to Dept:	6/8/1993
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	6/9/1993
Spill Record Last Update:	7/19/1993
Spiller Name:	Not reported
Spiller Company:	ACCO USA INC.
Spiller Address:	Not reported
Spiller City,St,Zip:	ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	248321
DEC Memo:	Not reported
Remarks:	SOIL FOUND UNDER 1200 GAL U/G TANK - TO STOCK PILE SOIL AND SEND SAMPLES TO LAB.

43-41 32ND PLACE (Continued) **S100560351**

Material:

Site ID:	307482
Operable Unit ID:	981294
Operable Unit:	01
Material ID:	400169
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

HIST LTANKS:

Region of Spill:	2
Spill Number:	9303078
Spill Date:	06/08/1993
Spill Time:	11:00
Spill Cause:	Tank Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	06/25/93
Cleanup Ceased:	06/25/93
Cleanup Meets Standard:	True
Investigator:	GRIFFIN
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	06/08/93
Reported to Department Time:	12:27
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported

43-41 32ND PLACE (Continued) **S100560351**

Spiller Extention: Not reported
Spiller Name: ACCO USA INC.
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: (718) 729-9600
Facility Extention: Not reported
Spill Notifier: Other
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 06/09/93
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 07/19/93
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: #4 FUEL OIL
Class Type: #4 FUEL OIL
Times Material Entry In File: 1751
CAS Number: Not reported
Last Date: 19941205
DEC Remarks: Not reported
Spill Cause: SOIL FOUND UNDER 1200 GAL U/G TANK - TO STOCK PILE SOIL AND SEND SAMPLES TO LAB.

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159 **32-32 QUEENS BLVD** **LTANKS** **S103478044**
ESE **32-32 QUEENS BLVD** **HIST LTANKS** **N/A**
1/4-1/2 **LONG ISLAND, NY**
0.467 mi.
2468 ft.

Relative:
Higher

Actual:
34 ft.

LTANKS:
Site ID: 205077
Spill No: 9309167
Spill Date: 10/28/1993
Spill Cause: Tank Test Failure
Spill Source: Gasoline Station
Spill Class: Known release with minimal potential for fire or hazard. DEC Response.

32-32 QUEENS BLVD (Continued) **S103478044**

Willing Responsible Party. Corrective action taken.

Spill Closed Dt:	7/27/1994
Facility Addr2:	Not reported
Cleanup Ceased:	7/27/1994
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	O'DOWD
Referred To:	Not reported
Reported to Dept:	10/28/1993
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	11/1/1993
Spill Record Last Update:	1/23/2003
Spiller Name:	Not reported
Spiller Company:	AA
Spiller Address:	Not reported
Spiller City,St,Zip:	ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	170357
DEC Memo:	Not reported
Remarks:	WILL UNCOVER - RETEST - REPAIR -

Material:

Site ID:	205077
Operable Unit ID:	988255
Operable Unit:	01
Material ID:	391827
Material Code:	0022
Material Name:	Waste Oil/Used Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Pounds
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	205077
Spill Tank Test:	1542142
Tank Number:	Not reported
Tank Size:	0
Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004

32-32 QUEENS BLVD (Continued) **S103478044**

Test Method: Unknown

HIST LTANKS:

Region of Spill:	2
Spill Number:	9309167
Spill Date:	10/28/1993
Spill Time:	12:30
Spill Cause:	Tank Test Failure
Resource Affectd:	On Land
Water Affected:	Not reported
Spill Source:	Gas Station
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	07/27/94
Cleanup Ceased:	07/27/94
Cleanup Meets Standard:	True
Investigator:	O'DOWD
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	10/28/93
Reported to Department Time:	12:44
SWIS:	64
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	AA
Spiller Address:	Not reported
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	Not reported
Facility Extention:	Not reported
Spill Notifier:	Tank Tester
PBS Number:	Not reported
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	11/01/93
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	07/20/98
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported

32-32 QUEENS BLVD (Continued) **S103478044**

Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: False
Units: Pounds
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: WASTE OIL
Class Type: WASTE OIL
Times Material Entry In File: 9509
CAS Number: Not reported
Last Date: 19940927
DEC Remarks: 08/04/94: CROSS REFERENCE TO SPILL 8905358. 10/10/95: This is additional information about material spilled from the translation of the old spill file: TTF.
Spill Cause: WILL UNCOVER - RETEST - REPAIR -

AI160 **RESIDANCE** **LTANKS** **S108957731**
NW **1120 43RD ROAD** **N/A**
1/4-1/2 **QUEENS, NY**
0.498 mi.
2630 ft. **Site 1 of 2 in cluster AI**

Relative:
Lower

Actual:
16 ft.

LTANKS:
Site ID: 389866
Spill No: 0708879
Spill Date: 11/14/2007
Spill Cause: Tank Test Failure
Spill Source: Private Dwelling
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 12/19/2007
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: bkfalvey
Referred To: Not reported
Reported to Dept: 11/14/2007
CID: 404
Water Affected: Not reported
Spill Notifier: Other
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 11/14/2007
Spill Record Last Update: 12/19/2007
Spiller Name: MARLON JOSEPH
Spiller Company: RESIDANCE
Spiller Address: 1120 43RD ROAD
Spiller City,St,Zip: QUEENS, NY
Spiller County: 001

RESIDANCE (Continued) **S108957731**

Spiller Contact:	MARLON JOSEPH
Spiller Phone:	(718) 624-4842
Spiller Extention:	112
DEC Region:	2
DER Facility ID:	339444
DEC Memo:	11/20/07 bf: Sent ttf letter to: Harold Rosenberg J&B Realty LLC 216 Cedar Avenue Hewlett Bay Park, NY 11557 12/13/07 Received call from Mohammad 718-784-5210. Tank was retested by PTC and passed. They did not know of 2nd fillport, so 1st test result was a failure. I told him to send a letter from PTC explaining this and the tank test results. bf 12/19/07 Received letter from PTC by fax confirming the above. Passing tightness test results were included. NFA. bf
Remarks:	dry portion leak;

Material:

Site ID:	389866
Operable Unit ID:	1146990
Operable Unit:	01
Material ID:	2137380
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	389866
Spill Tank Test:	1815876
Tank Number:	1
Tank Size:	5000
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Watchdog
Last Modified:	11/14/2007
Test Method:	Horner EZ Check I or II

AI161 **X** **LTANKS** **S105997827**
NW **11-20 43RD RD** **N/A**
1/4-1/2 **LONG ISLAND CITY, NY**
0.498 mi.
2630 ft. **Site 2 of 2 in cluster AI**

Relative:
Lower

Actual:
16 ft.

LTANKS:

Site ID:	300672
Spill No:	0210116
Spill Date:	1/7/2003
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	2/28/2006

X (Continued) **S105997827**

Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	True
SWIS:	4101
Investigator:	rmpiper
Referred To:	Not reported
Reported to Dept:	1/7/2003
CID:	211
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1/7/2003
Spill Record Last Update:	2/28/2006
Spiller Name:	HAROLD ROSENBERG
Spiller Company:	Not reported
Spiller Address:	11-20 43RD RD
Spiller City,St,Zip:	LONG ISLAND CITY, NY
Spiller County:	001
Spiller Contact:	HAROLD ROSENBERG
Spiller Phone:	(718) 784-5210
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	243201
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SAWYER" ARAKHAN 1/7/03 TTF LETTER FAXED AND MAILED TO FACILITY PERSONNEL. 1/7/04-Vought-Spill transferred from Vought to Austin. 01/27/04 - Sawyer - Spill transferred from Austin to Sawyer. 11/28/05- DEC Piper spoke w/ Harold Rosenberg, Faxed old ttf letter. He stated that work was done on tank, then it passed. He will send info. 2/10/06- DEC Piper spoke w/ Harold Rosenberg again requesting info. He stated that it was sent though I have never received info. He will send it again. 2/28/06- DEC Piper reviewed invoices from PTC.As per invoices and conversation w/ Joe, minor repairs were made to the system. A loose connection in the system was responsible. Closed. E-docs.
Remarks:	Not reported

Material:

Site ID:	300672
Operable Unit ID:	863330
Operable Unit:	01
Material ID:	513517
Material Code:	0001
Material Name:	#2 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

X (Continued) **S105997827**

Site ID:	300672
Spill Tank Test:	1527903
Tank Number:	1
Tank Size:	5000
Test Method:	03
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Horner EZ Check I or II

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162 West 1/2-1 0.616 mi. 3252 ft.

KOSAN INDUSTRIAL CORP
5-49 49TH AVE
LONG ISLAND CITY, NY 11101

CORRACTS
RCRA-NonGen
FINDS
MANIFEST

1000150474
NYD061949228

Relative: Lower

Actual: 7 ft.

CORRACTS:

EPA ID:	NYD061949228
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	01/13/2004
Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	NYD061949228
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	02/28/1995
Action:	CA225NF - Stabilization Measures Evaluation, This facility, is not amenable to stabilization activity at the, present time, because it appears to be technically infeasible or, inappropriate
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	NYD061949228
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	04/25/1995
Action:	CA050 - RFA Completed
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	NYD061949228
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	04/25/1995

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD061949228
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 04/25/1995
Action: CA210T - CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action referred to another non-RCRA Federal Authority
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD061949228
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 09/08/1993
Action: CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: KOSAN INDUSTRIAL CORP
Facility address: 5-49 49TH AVE
LONG ISLAND CITY, NY 111015610
EPA ID: NYD061949228
Mailing address: 49TH AVE
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: 49TH AVE
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: STEPHEN GALGANO
Owner/operator address: 465 LOGAN ST
BROOKLYN, NY 11208
Owner/operator country: US
Owner/operator telephone: (212) 277-3333
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Owner/Op end date: Not reported

Owner/operator name: STEPHEN GALGANO
Owner/operator address: 465 LOGAN ST
OPERCITY, NY 99999
Owner/operator country: US
Owner/operator telephone: (212) 277-3333
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler accessibilty indicator: Transferred to the program or state equivalent.

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: KOSAN INDUSTRIAL CORP
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: KOSAN INDUSTRIAL CORP
Classification: Not a generator, verified

Date form received by agency: 11/19/1980
Facility name: KOSAN INDUSTRIAL CORP
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: KOSAN INDUSTRIAL CORP
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 09/08/1993
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 02/28/1995
Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity at the present time, because it appears to be technically infeasible or inappropriate.

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Event date: 04/25/1995
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 04/25/1995
Event: CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action referred to another non-RCRA Federal Authority.

Event date: 04/25/1995
Event: RFA Completed

Event date: 01/13/2004
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/13/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110000616539

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD061949228
Country: USA
Mailing Name: KOSAN INDUSTRIAL CORP
Mailing Contact: THOMAS GILCHRIST OWNER SE
Mailing Address: 5-49 49ATH AVENUE
Mailing Address 2: Not reported
Mailing City: LONG ISLAND CITY
Mailing State: NY
Mailing Zip: 11101
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-784-8385

Document ID: NYO1651896
Manifest Status: Completed copy
Trans1 State ID: NY2A074
Trans2 State ID: Not reported
Generator Ship Date: 821117
Trans1 Recv Date: 821117

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	821117
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN
Quantity:	00550
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	010
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	82

Document ID:	NYO1650393
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	820703
Trans1 Recv Date:	820703
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	820730
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN
Quantity:	00715
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	013
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	82

Document ID:	NYO1650717
Manifest Status:	Completed copy
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	820915
Trans1 Recv Date:	820915
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	820915
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Quantity:	00550
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	010
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	82

Document ID:	NYO2904912
Manifest Status:	Completed copy
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	830210
Trans1 Recv Date:	830210
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830210
Part A Recv Date:	030222
Part B Recv Date:	030222
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN
Quantity:	00825
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	015
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	83

Document ID:	NYO3019401
Manifest Status:	Completed copy
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	830616
Trans1 Recv Date:	830616
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830616
Part A Recv Date:	030628
Part B Recv Date:	030628
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN
Quantity:	01100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	020
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)

KOSAN INDUSTRIAL CORP (Continued) **1000150474**

Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	83

Document ID:	NYO3080565
Manifest Status:	Completed copy
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	830831
Trans1 Recv Date:	830831
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830831
Part A Recv Date:	030913
Part B Recv Date:	030913
Generator EPA ID:	NYD061949228
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID:	NYD000824334
Waste Code:	F003 - UNKNOWN
Quantity:	00385
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	007
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	83

163
NE
1/2-1
0.619 mi.
3271 ft.

Relative:
Higher

Actual:
23 ft.

AMTRAK SUNNYSIDE YARD
3929 HONEYWELL STREET
LONG ISLAND CITY, NY 11101

RCRA-LQG **1000323850**
PADS **NYD078516895**
FINDS
SHWS
LTANKS
HIST LTANKS
MANIFEST
NY Spills
NY Hist Spills

RCRA-LQG:

Date form received by agency:	03/01/2010
Facility name:	AMTRAK SUNNYSIDE YARD
Facility address:	3929 HONEYWELL STREET LONG ISLAND CITY, NY 11101
EPA ID:	NYD078516895
Mailing address:	HONEYWELL ST LONG ISLAND CITY, NY 11101
Contact:	HARRY S SEUBERT
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(212) 630-6707
Contact email:	SEUBERH@AMTRAK.COM
EPA Region:	02
Land type:	Private
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	AMTRAK
Owner/operator address:	HONEYWELL ST LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	04/01/1976
Owner/Op end date:	Not reported

Owner/operator name:	AMTRAK
Owner/operator address:	HONEYWELL ST LONG ISLAND CITY, NY 11101
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	04/01/1976
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	01/01/2007
Facility name:	AMTRAK SUNNYSIDE YARD
Site name:	AMTRAK-NATIONAL RAILROAD PASSENGER CORP
Classification:	Small Quantity Generator

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Date form received by agency: 02/02/2006
Facility name: AMTRAK SUNNYSIDE YARD
Site name: AMTRAK-NATIONAL RAILROAD PASSENGER CORP
Classification: Large Quantity Generator

Date form received by agency: 02/01/2006
Facility name: AMTRAK SUNNYSIDE YARD
Site name: AMTRAK-NATIONAL RAILROAD PASSENGER CORP
Classification: Large Quantity Generator

Date form received by agency: 02/13/2004
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 08/13/2002
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Small Quantity Generator

Date form received by agency: 02/14/2002
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 01/01/2001
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 07/21/1999
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 02/27/1998
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 03/26/1996
Facility name: AMTRAK SUNNYSIDE YARD
Site name: AMTRAK SUNNYSIDE MAINTENANCE FACILITY
Classification: Large Quantity Generator

Date form received by agency: 06/07/1994
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: AMTRAK SUNNYSIDE YARD
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 3156

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 1100

Waste code: D008
Waste name: LEAD
Amount (Lbs): 1100

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 3386

Waste code: F005

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 95

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Universal Waste - Small Quantity Handlers
Date violation determined: 03/20/2008
Date achieved compliance: 05/29/2008
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/30/2008
Enf. disposition status: Action Satisfied (Case Closed)
Enf. disp. status date: 06/11/2008
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 03/20/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Universal Waste - Small Quantity Handlers
Date achieved compliance: 05/29/2008
Evaluation lead agency: State

PADS:
EPAID: NYD078516895
Facility name: SUNNYSIDE YARD
Facility Address: 3929 HONEYWELL STREET
LONG ISLAND CITY, NY 11101
Facility country: US
Generator: Yes
Storer: No
Transporter: No
Disposer: No
Research facility: No
Smelter: No
Facility owner name: AMTRAK
Contact title: Not reported
Contact name: LIN, CHARLES C.
Contact tel: (202)906-4950
Contact extension: Not reported
Mailing address: 3929 HONEYWELL STREET
LONG ISLAND CITY, NY 11101
Mailing country: US
Cert. title: Not reported
Cert. name: Not reported
Cert. date: 11/24/1992
Date received: 12/16/1992

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

FINDS:

Registry ID: 110000874091

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

FIS (New York - Facility Information System) is New York's Department of Environmental Conservation (DEC) information system for tracking environmental facility information found across the State.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

SHWS:

Program: HW
Site Code: 57794
Classification: SIGNIFICANT THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT - ACTION REQUIRED.
Region: 2

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Acres: 133.000
HW Code: 241006
Record Add: 11/18/1999 12:00:00 PM
Record Upd: 10/1/2010 9:40:00 AM
Updated By: JHOCONNE
Site Description: Sunnyside Yard (the Site) is located at 39-29 Honeywell Street, Long Island City, Queens County, New York. The Site is a railroad maintenance and storage facility that currently encompasses approximately 133 acres. Newtown Creek, which defines the border between Queens and Kings Counties, is located less than 0.5 mile south of the western portion of the Site. The Site is bordered by commercial/residential properties, with Northern Boulevard located to the north, 42nd Place located to the east, Thompson Avenue to the west, and Skillman Avenue located to the south. Historic fill on the Site is predominantly comprised of reworked glacial deposits (unstratified sand, silt, clay and gravel) and railroad ballast, with lesser amounts of ash, cinders and construction debris. With the exception of paved areas, land occupied by buildings, and vegetated areas, the railroad ballast is ubiquitous at the land surface throughout the Site. Groundwater beneath the Site occurs in fill deposits, wetlands, or the Upper Pleistocene glacial deposits. The saturated Upper Pleistocene deposits comprise the Upper Glacial aquifer. The depth to groundwater across the Site varies from one to fifteen feet below ground surface. Groundwater within the shallow deposits flows predominantly west across the Site. However, groundwater between Queens Boulevard and Honeywell Street flows northerly and northwesterly toward the buried flow path of the Dutch Kills Creek and/or East River. In the deeper deposits, groundwater predominantly flows west across the Site. An operable unit represents a portion of the site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. The operable units for this site are: OU-1: Soil above the water table within the footprint of the High Speed Trainset Facility Service and Inspection (HSTF S&I) Building. A Record of Decision (ROD) was issued for OU-1 in August 1997, and the remedial work was completed in April 1998. OU-2: Soil above the water table within the footprint of the HSTF S&I Building ancillary structures. A No Further Action ROD was issued for OU-2 in November 1997. OU-3: Soil and separate phase petroleum hydrocarbon accumulation above the water table and soil below the water table within 8 acres in the north central portion of the Site. A ROD was issued for OU-3 in March 2007. Remediation is ongoing. OU-4: Soil above the water table (unsaturated zone) at the Site, excluding OU-1, OU-2, and OU-3. A ROD was issued for OU-4 in March 2009. The RAWP is under review. OU-5: Sewer system (water and sediment) beneath the Site. The RI is ongoing. OU-6: Groundwater and saturated soil beneath the Site. A No Further Action ROD was issued for OU-6 in March 2010. The Long Island Railroad (LIRR) is planning to construct tunnels through the Yard as part of its East Side Access (ESA) project. Impacts, if any, of the proposed construction are being addressed through the permit process and the Construction Contamination Site Management Plan (CCSMP). A Remedial Design/Remedial Action (RD/RA) Order on Consent and Administrative Settlement for the site was signed in May 2010 to administer the remainder of the remedial program for the Site.
Env Problem: Remedial investigations have been conducted in multiple phases under

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

NYSDEC oversight pursuant to the consent order. Seventeen specific areas of concern (AOC) were identified. PCBs, cPAHs, areas of non-aqueous phase liquid (or NAPL), and lead are the main site-related contaminants of concern (COCs). The following environmental exposure pathways and ecological risks have been identified for the Site: The Site poses an environmental threat associated with the potential impacts of contaminants to groundwater from soils impacted by the COC's. Continued migration of contaminated groundwater from off-site sources poses a potential environmental threat to on-site groundwater. Off-site sources will be addressed by remedial programs for the respective neighboring sites, as appropriate. There are no wetlands or other exposure pathways to fish and wildlife receptors in the Site. Remediation has been completed in OU-1 and OU-2, and has been initiated at OU-3 and OU-4. The OU-5 RI is ongoing and the OU-6 ROD (No Action) was issued on March 30, 2010.

Health Problem:	Groundwater in the area of the site is not used as a source of potable water. Access to the site is controlled, preventing trespassers from coming in contact with contaminated soils.
Dump:	True
Structure:	False
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	1910
Disp Term:	unknown
Lat/Long:	40:45:03:0 / 73:56:01:0
Dell:	False
Record Add:	11/18/1999 12:00:00 PM
Record Upd:	11/18/1999 12:00:00 PM
Updated By:	INITIAL
Own Op:	Owner
Sub Type:	E
Owner Name:	Not reported
Owner Company:	PENNSYLVANIA RAILROAD - AMTRAK
Owner Address:	400 N. CAPITOL ST. NW
Owner Addr2:	Not reported
Owner City,St,Zip:	WASHINGTON, DC 20001
Owner Country:	United States of America
Own Op:	Disp. Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	PENNSYLVANIA RAILROAD - AMTRAK
Owner Address:	Not reported
Owner Addr2:	Not reported
Owner City,St,Zip:	ZZ
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	E
Owner Name:	JOSEPH P. DEVITO
Owner Company:	PENNSYLVANIA RAILROAD - AMTRAK
Owner Address:	39-29 HONEYWELL ST.
Owner Addr2:	Not reported
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	NNN
Owner Name:	Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Owner Company:	Amtrak - Sunnyside Yard
Owner Address:	39-29 Honeywell Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	Document Repository
Sub Type:	NNN
Owner Name:	QUEENS PUBLIC LIBRARY
Owner Company:	AMTRAK
Owner Address:	SUNNYSIDE BRANCH
Owner Addr2:	43-06 GREENPOINT AVENUE
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	National Rail Passenger Corporation
Owner Address:	400 North Capitol Street NW
Owner Addr2:	Not reported
Owner City,St,Zip:	Washington, DC 20001
Owner Country:	United States of America
HW Code:	241006
Waste Type:	TETRACHLOROETHYLENE (PCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	METHYL-TERT-BUTYL ETHER (MTBE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	BENZ(A)ANTHRACENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	Chrysene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	indeno(1,2,3-cd)pyrene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	1,1,2-TRICHLORETHYLENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	LEAD
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	LEAD
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	LEAD
Waste Quantity:	UNKNOWN
Waste Code:	Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

HW Code:	241006
Waste Type:	XYLENE (MIXED)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	FLUORANTHENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	ANTHRACENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	BENZO(B)FLUORANTHENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	BENZO(A)PYRENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	BENZO[K]FLUORANTHENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	1,2,4-TRICHLOROBENZENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	BENZENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	PYRENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	POLYCHLORINATED BIPHENYLS (PCB)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	POLYCHLORINATED BIPHENYLS (PCB)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	POLYCHLORINATED BIPHENYLS (PCB)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006
Waste Type:	POLYCHLORINATED BIPHENYLS (PCB)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241006

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Waste Type: POLYCHLORINATED BIPHENYLS (PCB)
Waste Quantity: UNKNOWN
Waste Code: Not reported
Crossref ID: P-79652
Cross Ref Type Code: 11
Cross Ref Type: ICS ID
Record Added Date: 11/18/1999 12:00:00 PM
Record Updated: 2/24/2005 3:54:00 PM
Updated By: INITIAL

LTANKS:
Site ID: 97453
Spill No: 9013163
Spill Date: 3/23/1991
Spill Cause: Tank Test Failure
Spill Source: Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 3/14/2003
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: ADMIN. CLOSED
Referred To: Not reported
Reported to Dept: 3/26/1991
CID: Not reported
Water Affected: Not reported
Spill Notifier: Responsible Party
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 4/4/1991
Spill Record Last Update: 3/30/2004
Spiller Name: Not reported
Spiller Company: AMTRAK
Spiller Address: 39-29 HONEYWELL STREET
Spiller City,St,Zip: LONG ISLAND CITY, NY
Spiller County: 001
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
DEC Region: 2
DER Facility ID: 86808
DEC Memo: Not reported
Remarks: 20K TANK FAILED,CONTRACTOR WILL PUMP TANK,PRESENTLY ROUX ASSOCIATES PERFORMING SITE ASSESSMENT,SITE IS PART OF RIFF PROJECT,JAMES QUINN, DEC REMEDIAL ACTION (518-457-3395). CLOSED DUE TO LACK OF ANY RECENT INFO - DOES NOT MEET ANY CLEANUP REQUIREMENTS.

Material:
Site ID: 97453
Operable Unit ID: 950385
Operable Unit: 01
Material ID: 426055

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Material Code: 0001
Material Name: #2 Fuel Oil
Case No.: Not reported
Material FA: Petroleum
Quantity: -1
Units: Pounds
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 97453
Spill Tank Test: 1538365
Tank Number: Not reported
Tank Size: 0
Test Method: 00
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Unknown

Site ID: 97456
Spill No: 9207333
Spill Date: 1/1/1991
Spill Cause: Tank Failure
Spill Source: Non Major Facility > 1,100 gal
Spill Class: Known release that creates a file or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: 11/24/2003
Facility Addr2: Not reported
Cleanup Ceased: Not reported
Cleanup Meets Standard: False
SWIS: 4101
Investigator: SIGONA
Referred To: Not reported
Reported to Dept: 9/24/1992
CID: Not reported
Water Affected: Not reported
Spill Notifier: Responsible Party
Last Inspection: Not reported
Recommended Penalty: Penalty Not Recommended
UST Involvement: True
Remediation Phase: 0
Date Entered In Computer: 9/28/1992
Spill Record Last Update: 11/24/2003
Spiller Name: ENVIRONMENTAL DEPT
Spiller Company: NATIONAL RAILROAD PASS
Spiller Address: 400 WEST 31ST STREET, 4TH
Spiller City,St,Zip: NEW YORK, NY 10001-
Spiller County: 001
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
DEC Region: 2
DER Facility ID: 86808

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

DEC Memo: Not reported
Remarks: ALL 14 TANKS CLEANED AND FILLED W/CONCRETE 4 TEST BORINES DONE 2/10/92, 4 EA MONITORING WELLS 3/3/92 INDICATES CONTAMINATED SOIL AND G/W CLOSED SITE 1960

Material:
Site ID: 97456
Operable Unit ID: 970974
Operable Unit: 01
Material ID: 407971
Material Code: 0009
Material Name: Gasoline
Case No.: Not reported
Material FA: Petroleum
Quantity: 0
Units: Gallons
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: Not reported
Spill Tank Test: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate: Not reported
Gross Fail: Not reported
Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

HIST LTANKS:
Region of Spill: 2
Spill Number: 9207333
Spill Date: 01/01/1991
Spill Time: 12:00
Spill Cause: Tank Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Non Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: MILLER
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Reported to Department Date: 09/24/92
Reported to Department Time: 13:14
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: Not reported
Facility Extention: Not reported
Spill Notifier: Responsible Party
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: True
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 09/28/92
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: / /
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: GASOLINE
Class Type: GASOLINE
Times Material Entry In File: 21329
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Spill Cause: ALL 14 TANKS CLEANED AND FILLED W/CONCRETE 4 TEST BORINES DONE 2/10/924 EA MONITORING WELLS 3/3/92 INDICATES CONTAMINATED SOIL AND G/W CLOSED SITE 1960

Region of Spill: 2
Spill Number: 9013163
Spill Date: 03/23/1991
Spill Time: 16:45
Spill Cause: Tank Test Failure
Resource Affectd: Groundwater

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: BATTISTA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 03/26/91
Reported to Department Time: 14:06
SWIS: 63
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: AMTRAK
Spiller Address: 39-29 HONEYWELL STREET
Spiller City,St,Zip: LONG ISLAND CITY, NY
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: (212) 630-7565
Facility Extention: Not reported
Spill Notifier: Responsible Party
PBS Number: Not reported
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 04/04/91
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 07/03/95
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Unkonwn Quantity Recovered: False
Material: #2 FUEL OIL
Class Type: #2 FUEL OIL
Times Material Entry In File: 24464
CAS Number: Not reported
Last Date: 19941207
DEC Remarks: Not reported
Spill Cause: 20K TANK FAILED,CONTRACTOR WILL PUMP TANK,PRESENTLY ROUX ASSOCIATES PERFORMING SITE ASSESSMENT,SITE IS PART OF RIFF PROJECT,JAMES QUINN, DEC REMEDIAL ACTION 518-457-3395).

MANIFEST:
GEN Cert Date: 1/28/2003
Transporter Recpt Date: 1/28/2003
Number Of Containers: Not reported
Container Type: Not reported
Waste Code1: NONE
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: Northland Environmental Inc.
TSDF ID: rid040098352
TSDF Date: Not reported
Date Imported: 9/5/2003 1:26:58 PM
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIS0077662
Waste Description: LAB PACK
Quantity: 20
WT/Vol Units: LBS
Item Number: 10261
Transporter Name: 21ST CENTURY ENV. MGT. INC. - RI
Transporter EPA ID: RID980906986
GEN Cert Date: 1/28/2003
Transporter Recpt Date: 1/28/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: CTF1086367
Waste Description: DETERGENTS/WATER BASED ADHESIVES
Quantity: 150
WT/Vol Units: GAL
Item Number: 9413
Transporter Name: FLEET ENVIRONMENTAL SERVICES
Transporter EPA ID: MA5000004531
GEN Cert Date: 1/23/2003
Transporter Recpt Date: 1/23/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: CTF1086367
Waste Description: WASTE OILY SOLIDS, NON RCRA REGULATED

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Quantity: 2200
WT/Vol Units: LBS
Item Number: 9415
Transporter Name: FLEET ENVIRONMENTAL SERVICES
Transporter EPA ID: MA5000004531
GEN Cert Date: 1/23/2003
Transporter Recpt Date: 1/23/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: RIS0077661
Waste Description: LAB PACK
Quantity: 5
WT/Vol Units: LBS
Item Number: 10257
Transporter Name: 21ST CENTURY ENV. MGT. INC. - RI
Transporter EPA ID: RID980906986
GEN Cert Date: 1/28/2003
Transporter Recpt Date: 1/28/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: CTF1086367
Waste Description: BROKEN BULBS
Quantity: 1200
WT/Vol Units: LBS
Item Number: 9412
Transporter Name: FLEET ENVIRONMENTAL SERVICES
Transporter EPA ID: MA5000004531
GEN Cert Date: 1/23/2003
Transporter Recpt Date: 1/23/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: RIS0077662
Waste Description: LAB PACK
Quantity: 15
WT/Vol Units: LBS
Item Number: 10260
Transporter Name: 21ST CENTURY ENV. MGT. INC. - RI
Transporter EPA ID: RID980906986
GEN Cert Date: 1/28/2003
Transporter Recpt Date: 1/28/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: NYD078516895
Transporter 2 ID: Not reported

Manifest Docket Number: RIS0077661
Waste Description: LAB PACK
Quantity: 2

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

WT/Vol Units:	LBS
Item Number:	10259
Transporter Name:	21ST CENTURY ENV. MGT. INC. - RI
Transporter EPA ID:	RID980906986
GEN Cert Date:	1/28/2003
Transporter Recpt Date:	1/28/2003
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	NYD078516895
Transporter 2 ID:	Not reported

Manifest Docket Number:	CTF1086367
Waste Description:	LAB PACK
Quantity:	900
WT/Vol Units:	LBS
Item Number:	9414
Transporter Name:	FLEET ENVIRONMENTAL SERVICES
Transporter EPA ID:	MA5000004531
GEN Cert Date:	1/23/2003
Transporter Recpt Date:	1/23/2003
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	NYD078516895
Transporter 2 ID:	Not reported

Manifest Docket Number:	RIS0077661
Waste Description:	LAB PACK
Quantity:	1
WT/Vol Units:	LBS
Item Number:	10258
Transporter Name:	21ST CENTURY ENV. MGT. INC. - RI
Transporter EPA ID:	RID980906986
GEN Cert Date:	1/28/2003
Transporter Recpt Date:	1/28/2003
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	NYD078516895
Transporter 2 ID:	Not reported

NY Spills:

Site ID:	97452
Facility Addr2:	Not reported
Facility ID:	8703955
Spill Number:	8703955
Facility Type:	ER
SWIS:	4101
Investigator:	SIGONA
Referred To:	Not reported
Spill Date:	8/12/1987
Reported to Dept:	8/12/1987
CID:	Not reported
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Railroad Car
Spill Notifier:	Local Agency
Cleanup Ceased:	8/12/1987

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates a file or hazard. DEC Response. Unknown Responsible Party. Corrective action taken. (ISR)
Spill Closed Dt:	8/12/1987
Remediation Phase:	0
Date Entered In Computer:	8/18/1987
Spill Record Last Update:	11/24/2003
Spiller Name:	ENVIRONMENTAL DEPT
Spiller Company:	NATIONAL RAILROAD PASS
Spiller Address:	400 WEST 31ST STREET, 4TH
Spiller City,St,Zip:	NEW YORK, NY 10001-
Spiller Company:	001
Contact Name:	Not reported
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	86808
DEC Memo:	Not reported
Remarks:	FIRE ON LOCOMOTIVE CARRYING TRANSFORMER.

Material:

Site ID:	97452
Operable Unit ID:	907846
Operable Unit:	01
Material ID:	470160
Material Code:	0017A
Material Name:	PCB OIL
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	0
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported
Modified By:	Not reported
Last Modified:	Not reported
Test Method:	Not reported

Site ID:	219136
Facility Addr2:	Not reported
Facility ID:	0103793
Spill Number:	0103793
Facility Type:	ER
SWIS:	4101
Investigator:	SIGONA

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Referred To:	Not reported
Spill Date:	7/10/2001
Reported to Dept:	7/10/2001
CID:	382
Spill Cause:	Equipment Failure
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Trust:	False
Spill Class:	Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	6/26/2003
Remediation Phase:	0
Date Entered In Computer:	7/10/2001
Spill Record Last Update:	3/30/2004
Spiller Name:	ENVIRONMENTAL DEPT
Spiller Company:	NATIONAL RAILROAD PASS
Spiller Address:	400 WEST 31ST STREET, 4TH
Spiller City,St,Zip:	NEW YORK, NY 10001-
Spiller Company:	001
Contact Name:	CALLER
Contact Phone:	Not reported
DEC Region:	2
DER Facility ID:	86808
DEC Memo:	Not reported
Remarks:	A leak from either pipe or tank of a low ph car wash fluid - leak found while repairing tank. most contained to inside area but some seepage into ground. clean up in progress by clean harbors and amtrack Not reported

Material:

Site ID:	219136
Operable Unit ID:	840419
Operable Unit:	01
Material ID:	535869
Material Code:	0045A
Material Name:	CLEANING CHEMICALS/PRODUCTS
Case No.:	Not reported
Material FA:	Other
Quantity:	50
Units:	Gallons
Recovered:	No
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	Not reported
Spill Tank Test:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate:	Not reported
Gross Fail:	Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Modified By: Not reported
Last Modified: Not reported
Test Method: Not reported

Click this hyperlink while viewing on your computer to access additional NY_SPILL: detail in the EDR Site Report.

NY Hist Spills:
Region of Spill: 2
Spill Number: 8503066
Investigator: SIGONA
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 11/27/1985 13:51
Reported to Dept Date/Time: 11/27/85 13:51
SWIS: 63
Spiller Name: NATIONAL RAILROAD PASS
Spiller Contact: SAFETY/ENVIRONMENTAL
Spiller Phone: (212) 630-6215
Spiller Contact: JOHN KROLL
Spiller Phone: (212) 630-6215
Spiller Address: 400 WEST 31ST STREET,6TH
Spiller City,St,Zip: NEW YORK
Spill Cause: Housekeeping
Reported to Dept: Groundwater
Water Affected: Not reported
Spill Source: 01
Spill Notifier: Other
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release that creates a file or hazard. DEC Response. Unable/unwilling Responsible Party. Corrective action taken. (ISR)
Spill Closed Dt: 01/09/98
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 05/12/92
Date Spill Entered In Computer Data File: Not reported
Update Date: 01/09/98
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: WASTE OIL
Class Type: WASTE OIL
Times Material Entry In File: 9509
CAS Number: Not reported
Last Date: 19940927
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: PCB OIL
Class Type: PCB OIL
Times Material Entry In File: 1229
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: SUPERFUND HAZARDOUS WASTE SITE. This site is listed on state registry for cleanup of PCBs, Petroleum, etc. project is being handled by ha ardous waste remediation unit. Spill report is closed since project not being managed by Spill Response Unit.
Remark: DIESEL WASTE OIL - GROUNDWATER AND SEWERS - SUMP PIT FILLED WITH WASTEOIL OVER INTO COMBINED SEWERS DEP WILL INVESTIGATE AND REPORT BACK TO DEC DEP FOUND 300 YARD DIA. POND OF OIL

Region of Spill: 2
Spill Number: 8703955
Investigator: Not reported
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 08/12/1987 17:50
Reported to Dept Date/Time: 08/12/87 17:54
SWIS: 63
Spiller Name: AMTRAK
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Address: Not reported
Spiller City,St,Zip: Not reported
Spill Cause: Other
Reported to Dept: Air
Water Affected: Not reported
Spill Source: 11
Spill Notifier: Local Agency
PBS Number: Not reported
Cleanup Ceased: 08/12/87

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Cleanup Meets Std: True
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Not reported
Spill Closed Dt: 08/12/87
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 08/18/87
Date Spill Entered In Computer Data File: Not reported
Update Date: 10/07/88
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Not reported
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: PCB OIL
Class Type: PCB OIL
Times Material Entry In File: 1229
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: Not reported
Remark: FIRE ON LOCOMOTIVE CARRYING TRANSFORMER.

Region of Spill: 2
Spill Number: 0103793
Investigator: SANGESLAND
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Spill Date/Time: 07/10/2001 10:40
Reported to Dept Date/Time: 07/10/01 11:15
SWIS: 63
Spiller Name: AMTRACK
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Contact: CALLER
Spiller Phone: ( ) -
Spiller Address: 400 WEST 31ST ST
Spiller City,St,Zip: NEW YORK, NY 10001-

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Spill Cause: Equipment Failure
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 01
Spill Notifier: Responsible Party
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 07/10/01
Date Spill Entered In Computer Data File: Not reported
Update Date: 07/10/01
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Hazardous Material
Quantity Spilled: 50
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: CLEANING CHEMICALS/PRODUCTS
Class Type: CLEANING CHEMICALS/PRODUCTS
Times Material Entry In File: 55
CAS Number: Not reported
Last Date: Not reported
DEC Remarks: Not reported
Remark: a leak from either pipe or tank of a low ph car wash fluid - leak found while repairing tank. most contained to inside area but some seepage into ground. clean up in progress by clean harbors and amtrack

Region of Spill: 2
Spill Number: 9903705
Investigator: HWR
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Spill Date/Time: 06/29/1999 14:30
Reported to Dept Date/Time: 06/30/99 14:36
SWIS: 63
Spiller Name: AMTRAK
Spiller Contact: ROBERT LAROSA
Spiller Phone: (215) 452-1308
Spiller Contact: ROBERT LAVELLE
Spiller Phone: (212) 630-7245
Spiller Address: 30TH STREET STATION
Spiller City,St,Zip: PHILADELPHIA, PA
Spill Cause: Unknown
Reported to Dept: On Land
Water Affected: Not reported
Spill Source: 12
Spill Notifier: Responsible Party
PBS Number: Not reported
Cleanup Ceased: / /
Cleanup Meets Std: False
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Spiller Cleanup Dt: / /
Enforcement Date: / /
Invstgn Complete: / /
UST Involvement: False
Spill Class: Known release that creates potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Corrective Action Plan Submitted: / /
Date Region Sent Summary to Central Office: / /
Date Spill Entered In Computer Data File: 06/30/99
Date Spill Entered In Computer Data File: Not reported
Update Date: 03/28/00
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: Not reported
Test Method: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: 0
Unkonwn Quantity Spilled: True
Units: Gallons
Quantity Recovered: 0
Unkonwn Quantity Recovered: True
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
DEC Remarks: Not reported
Remark: NOTICED SPIIL DURING EXCAVATION - APPEARS TO BE OLD SPILL

Region of Spill: 2

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Spill Number:	8602016
Investigator:	Not reported
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Spill Date/Time:	06/24/1986 06:50
Reported to Dept Date/Time:	06/24/86 13:55
SWIS:	63
Spiller Name:	AMTRACK
Spiller Contact:	Not reported
Spiller Phone:	(UNK) -
Spiller Address:	UNK
Spiller City,St,Zip:	UNK
Spill Cause:	Equipment Failure
Reported to Dept:	On Land
Water Affected:	NONE
Spill Source:	11
Spill Notifier:	Responsible Party
PBS Number:	Not reported
Cleanup Ceased:	06/24/86
Cleanup Meets Std:	True
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Spiller Cleanup Dt:	/ /
Enforcement Date:	/ /
Invstgn Complete:	/ /
UST Involvement:	False
Spill Class:	Possible release with minimal potential for fire or hazard or Known release with no damage. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	06/24/86
Corrective Action Plan Submitted:	/ /
Date Region Sent Summary to Central Office:	/ /
Date Spill Entered In Computer Data File:	06/25/86
Date Spill Entered In Computer Data File:	Not reported
Update Date:	/ /
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported
Tank Size:	Not reported
Test Method:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	Petroleum
Quantity Spilled:	1
Unkonwn Quantity Spilled:	False
Units:	Gallons
Quantity Recovered:	1
Unkonwn Quantity Recovered:	False
Material:	PCB OIL
Class Type:	PCB OIL

AMTRAK SUNNYSIDE YARD (Continued) **1000323850**

Times Material Entry In File: 1229
CAS Number: Not reported
Last Date: 19940728
DEC Remarks: 10/10/95: This is additional information about material spilled from the translation of the old spill file: 114 PPM PCB ANALYSIS.
Remark: SOURCE OF SPILL WAS LOCOMOTIVE 605; TRANSFORMER OIL BURPED OUT OF TRANSFORMER DUE PRODUCT EXPANSION; DID NOT REACH GROUND.

164
SSE
1/2-1
0.723 mi.
3816 ft.

ACTIVE STEEL DRUM CO INC **CORRACTS** **1000265123**
52-30 34TH ST **RCRA-NonGen** **NYD003933355**
LONG ISLAND CITY, NY 11101 **FINDS**
MANIFEST

Relative:
Higher

Actual:
21 ft.

CORRACTS:

EPA ID: NYD003933355
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 01/13/2004
Action: CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
NAICS Code(s): 332439 81149 42184
Other Metal Container Manufacturing
Other Personal and Household Goods Repair and Maintenance
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD003933355
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 09/08/1993
Action: CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 332439 81149 42184
Other Metal Container Manufacturing
Other Personal and Household Goods Repair and Maintenance
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD003933355
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 09/19/1995
Action: CA225NR - Stabilization Measures Evaluation, This facility is, not amenable to stabilization activity at the, present time for reasons other than (1) it appears to be technically, infeasible or inappropriate (NF) or (2) there is a lack of technical, information (IN). Reasons for this conclusion may be the status of, closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other, administrative considerations
NAICS Code(s): 332439 81149 42184
Other Metal Container Manufacturing
Other Personal and Household Goods Repair and Maintenance
Original schedule date: Not reported
Schedule end date: Not reported

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

EPA ID: NYD003933355
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 09/28/1995
Action: CA050 - RFA Completed
NAICS Code(s): 332439 81149 42184
Other Metal Container Manufacturing
Other Personal and Household Goods Repair and Maintenance
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD003933355
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 09/28/1995
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 332439 81149 42184
Other Metal Container Manufacturing
Other Personal and Household Goods Repair and Maintenance
Original schedule date: Not reported
Schedule end date: Not reported

RCRA-NonGen:
Date form received by agency: 01/01/2007
Facility name: ACTIVE STEEL DRUM CO INC
Facility address: 52-30 34TH ST
LONG ISLAND CITY, NY 111013202
EPA ID: NYD003933355
Mailing address: 34TH ST
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: 34TH ST
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: BARRY K. FINE
Owner/operator address: 27 LAWRANCE LANE
OPERCITY, NY 99999
Owner/operator country: US
Owner/operator telephone: (516) 665-4375
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BARRY K FINE
Owner/operator address: 27 LAWRANCE LANE
BAY SHORE, NY 11706
Owner/operator country: US

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Owner/operator telephone: (516) 665-4375
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler accessibilty indicator: Transferred to the program or state equivalent.

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Facility name: ACTIVE STEEL DRUM CO INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: ACTIVE STEEL DRUM CO INC
Classification: Not a generator, verified

Date form received by agency: 11/19/1980
Facility name: ACTIVE STEEL DRUM CO INC
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: ACTIVE STEEL DRUM CO INC
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 09/08/1993
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 09/19/1995
Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity at the present time for reasons other than 1- it appears to be technically infeasible or inappropriate (NF) or 2- there is a lack of technical information (IN). Reasons for this conclusion may be the status of closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other administrative considerations.

Event date: 09/28/1995

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Event: RFA Completed

Event date: 09/28/1995
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 01/13/2004
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 11/13/1984
Date achieved compliance: 05/13/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/22/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 04/27/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/13/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/13/1987
Evaluation lead agency: State

FINDS:

Registry ID: 110000616432

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: NYD003933355
Country: USA
Mailing Name: ACTIVE STEEL DRUM
Mailing Contact: FINE BARRY K PRESIDENT
Mailing Address: 52-30 34TH ST

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	3202
Mailing Country:	USA
Mailing Phone:	212-786-9300

Document ID:	NJO0174158
Manifest Status:	Completed copy
Trans1 State ID:	S3002BN
Trans2 State ID:	Not reported
Generator Ship Date:	830603
Trans1 Recv Date:	830603
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830603
Part A Recv Date:	030614
Part B Recv Date:	030614
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	NJD096865837
Trans2 EPA ID:	Not reported
TSDF ID:	NJD096865837
Waste Code:	D000 - NON-LISTED TOXIC WASTES
Quantity:	06000
Units:	P - Pounds
Number of Containers:	012
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	02400
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	048
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Year:	83

Document ID:	NYO1554021
Manifest Status:	Completed copy
Trans1 State ID:	NYJA045
Trans2 State ID:	Not reported
Generator Ship Date:	830504
Trans1 Recv Date:	830504
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830504
Part A Recv Date:	030509
Part B Recv Date:	030509
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	NJD096865837
Trans2 EPA ID:	Not reported
TSDF ID:	NJD096865837
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00950
Units:	G - Gallons (liquids only)* (8.3 pounds)

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Number of Containers:	019
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	83

Document ID:	NYO1748151
Manifest Status:	Completed copy
Trans1 State ID:	NYOH003
Trans2 State ID:	Not reported
Generator Ship Date:	830407
Trans1 Recv Date:	830407
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830408
Part A Recv Date:	030502
Part B Recv Date:	030502
Generator EPA ID:	NYP000775650
Trans1 EPA ID:	OHD075006304
Trans2 EPA ID:	Not reported
TSDF ID:	OHD055522429
Waste Code:	U220 - TOLUENE
Quantity:	00030
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	83

Document ID:	NYO1748187
Manifest Status:	Completed copy
Trans1 State ID:	NYOH003
Trans2 State ID:	Not reported
Generator Ship Date:	830409
Trans1 Recv Date:	830409
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830411
Part A Recv Date:	030502
Part B Recv Date:	030502
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	OHD075006304
Trans2 EPA ID:	Not reported
TSDF ID:	OHD055522429
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00023
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	002
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	83

Document ID:	NYO1031967
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	840718
Trans1 Recv Date:	840718
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840719
Part A Recv Date:	840904
Part B Recv Date:	840726
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	OHD075006304
Trans2 EPA ID:	Not reported
TSDF ID:	OHD055522429
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00012
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	84

EPA ID:	NYP000775650
Country:	USA
Mailing Name:	ACTIVE STEEL DRUM
Mailing Contact:	UNKNOWN
Mailing Address:	52-30 34TH ST
Mailing Address 2:	Not reported
Mailing City:	LONG ISLAND CITY
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	3202
Mailing Country:	USA
Mailing Phone:	212-786-9300

Document ID:	NJO0174158
Manifest Status:	Completed copy
Trans1 State ID:	S3002BN
Trans2 State ID:	Not reported
Generator Ship Date:	830603
Trans1 Recv Date:	830603
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830603
Part A Recv Date:	030614
Part B Recv Date:	030614
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	NJD096865837
Trans2 EPA ID:	Not reported
TSDF ID:	NJD096865837
Waste Code:	D000 - NON-LISTED TOXIC WASTES
Quantity:	06000
Units:	P - Pounds
Number of Containers:	012
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Quantity: 02400
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 048
Container Type: DM - Metal drums, barrels
Handling Method: Not reported
Specific Gravity: 100
Year: 83

Document ID: NYO1554021
Manifest Status: Completed copy
Trans1 State ID: NYJA045
Trans2 State ID: Not reported
Generator Ship Date: 830504
Trans1 Recv Date: 830504
Trans2 Recv Date: Not reported
TSD Site Recv Date: 830504
Part A Recv Date: 030509
Part B Recv Date: 030509
Generator EPA ID: NYD003933355
Trans1 EPA ID: NJD096865837
Trans2 EPA ID: Not reported
TSDF ID: NJD096865837
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00950
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 019
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 83

Document ID: NYO1748151
Manifest Status: Completed copy
Trans1 State ID: NYOH003
Trans2 State ID: Not reported
Generator Ship Date: 830407
Trans1 Recv Date: 830407
Trans2 Recv Date: Not reported
TSD Site Recv Date: 830408
Part A Recv Date: 030502
Part B Recv Date: 030502
Generator EPA ID: NYP000775650
Trans1 EPA ID: OHD075006304
Trans2 EPA ID: Not reported
TSDF ID: OHD055522429
Waste Code: U220 - TOLUENE
Quantity: 00030
Units: Y - Cubic yards* (.85 tons)
Number of Containers: 001
Container Type: DT - Dump trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 83

ACTIVE STEEL DRUM CO INC (Continued) **1000265123**

Document ID:	NYO1748187
Manifest Status:	Completed copy
Trans1 State ID:	NYOH003
Trans2 State ID:	Not reported
Generator Ship Date:	830409
Trans1 Recv Date:	830409
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	830411
Part A Recv Date:	030502
Part B Recv Date:	030502
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	OHD075006304
Trans2 EPA ID:	Not reported
TSDF ID:	OHD055522429
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00023
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	002
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	83

Document ID:	NYO1031967
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	840718
Trans1 Recv Date:	840718
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840719
Part A Recv Date:	840904
Part B Recv Date:	840726
Generator EPA ID:	NYD003933355
Trans1 EPA ID:	OHD075006304
Trans2 EPA ID:	Not reported
TSDF ID:	OHD055522429
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00012
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	84

165
West
1/2-1
0.730 mi.
3856 ft.

ACCURATE ASSOCIATES
5-36 46TH RD
LONG ISLAND CITY, NY 11101

CORRACTS **1000426821**
RCRA-LQG **NYD001264191**
FINDS
RAATS
MANIFEST

Relative:
Lower

Actual:
10 ft.

CORRACTS:

EPA ID:	NYD001264191
EPA Region:	02

ACCURATE ASSOCIATES (Continued) **1000426821**

Area Name: SITEWIDE
Actual Date: 03/15/1991
Action: CA050 - RFA Completed
NAICS Code(s): 53119
Lessors of Other Real Estate Property
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD001264191
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 05/24/1991
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 53119
Lessors of Other Real Estate Property
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD001264191
EPA Region: 02
Area Name: SITEWIDE
Actual Date: 11/17/1992
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 53119
Lessors of Other Real Estate Property
Original schedule date: Not reported
Schedule end date: Not reported

RCRA-LQG:
Date form received by agency: 07/07/2010
Facility name: OCONNER CAPITAL PARTNERS
Facility address: 5-36 46TH ROAD
QUEENS, NY 11101
EPA ID: NYD001264191
Mailing address: MADISON AVE
NEW YORK, NY 10022
Contact: BRENT CARRIER
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (212) 546-0832
Contact email: Not reported
EPA Region: 02
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than

ACCURATE ASSOCIATES (Continued) **1000426821**

100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	ACCURATE ASSOC
Owner/operator address:	5-20 46TH RD
	LONG ISLAND CITY, NY 11101
Owner/operator country:	Not reported
Owner/operator telephone:	(718) 729-2957
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	OCA LONG ISLAND CITY LLC
Owner/operator address:	MADISON AVE
	NEW YORK, NY 10022
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/22/2006
Owner/Op end date:	Not reported

Owner/operator name:	O'CONNOR CAPITAL PARTNERS
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	12/22/2006
Owner/Op end date:	Not reported

Owner/operator name:	ACCURATE ASSOCIATES
Owner/operator address:	5-20 46TH RD
	LONG ISLAND CITY, NY 11101
Owner/operator country:	Not reported
Owner/operator telephone:	(718) 729-2957
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

ACCURATE ASSOCIATES (Continued) **1000426821**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 06/17/2008
Facility name: OCONNER CAPITAL PARTNERS
Site name: O C A LONG ISLAND CITY LLC
Classification: Small Quantity Generator

Date form received by agency: 01/01/2007
Facility name: OCONNER CAPITAL PARTNERS
Site name: ACCURATE ASSOCIATES
Classification: Not a generator, verified

Date form received by agency: 01/01/2006
Facility name: OCONNER CAPITAL PARTNERS
Site name: ACCURATE ASSOCIATES
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Facility name: OCONNER CAPITAL PARTNERS
Site name: ACCURATE ASSOCIATES
Classification: Not a generator, verified

Date form received by agency: 07/31/1991
Facility name: OCONNER CAPITAL PARTNERS
Site name: ACCURATE ASSOCIATES
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Waste code: D000
Waste name: Not Defined

Waste code: D003

ACCURATE ASSOCIATES (Continued) **1000426821**

Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D004
Waste name: ARSENIC

Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D010
Waste name: SELENIUM

Waste code: F007
Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS

Waste code: F008
Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Waste code: X003
Waste name: OTHER STATE REGULATED WASTES [i.e., DIESEL FUEL, GASOLINE AND HOME HEATING OIL]

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 17664.6

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 50

Waste code: D018

ACCURATE ASSOCIATES (Continued) **1000426821**

Waste name: BENZENE
Amount (Lbs): 150

Corrective Action Summary:
Event date: 03/15/1991
Event: RFA Completed

Event date: 05/24/1991
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 11/17/1992
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/23/1991
Date achieved compliance: 05/24/1991
Violation lead agency: EPA
Enforcement action: FINAL IMMINENT HAZARD ORDER
Enforcement action date: 05/24/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 02/10/2000
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 09/13/1991
Evaluation: CORRECTIVE ACTION COMPLIANCE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 08/26/1991
Evaluation: CORRECTIVE ACTION COMPLIANCE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/24/1991
Evaluation: CORRECTIVE ACTION COMPLIANCE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/13/1991

ACCURATE ASSOCIATES (Continued) **1000426821**

Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/31/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/28/1991
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/24/1991
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/23/1991
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/23/1991
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 05/20/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/24/1991
Evaluation lead agency: EPA

FINDS:

Registry ID: 110004333043

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with

ACCURATE ASSOCIATES (Continued) **1000426821**

a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

NY MANIFEST:

EPA ID:	NYD001264191
Country:	USA
Mailing Name:	OCONNER CAPITAL PARTNERS
Mailing Contact:	KATERINE RUTER
Mailing Address:	5-36 46th ROAD
Mailing Address 2:	Not reported
Mailing City:	QUEENS
Mailing State:	NY
Mailing Zip:	11101
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	732-969-4888

Document ID:	MIA2302313
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	JA113
Trans2 State ID:	Not reported
Generator Ship Date:	910416
Trans1 Recv Date:	910416
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910418
Part A Recv Date:	910708
Part B Recv Date:	910503
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	NJD054126164
Trans2 EPA ID:	Not reported
TSDF ID:	MID098011992
Waste Code:	F008 - PLAT SLDG FM BTM PLAT BATH OPER CYANIDE.
Quantity:	00700
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00700
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00700
Units:	G - Gallons (liquids only)* (8.3 pounds)

ACCURATE ASSOCIATES (Continued) **1000426821**

Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Waste Code: Not reported
Quantity: 00700
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 91

Document ID: MIA2302315
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: JA113
Trans2 State ID: Not reported
Generator Ship Date: 910416
Trans1 Recv Date: 910416
Trans2 Recv Date: Not reported
TSD Site Recv Date: 910418
Part A Recv Date: 910708
Part B Recv Date: 910503
Generator EPA ID: NYD001264191
Trans1 EPA ID: NJD054126164
Trans2 EPA ID: Not reported
TSDF ID: MID098011992
Waste Code: F008 - PLAT SLDG FM BTM PLAT BATH OPER CYANIDE.
Quantity: 07700
Units: P - Pounds
Number of Containers: 011
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 91

Document ID: NYB2201247
Manifest Status: Completed copy
Trans1 State ID: PD1010
Trans2 State ID: Not reported
Generator Ship Date: 911205
Trans1 Recv Date: 911205
Trans2 Recv Date: Not reported
TSD Site Recv Date: 911205
Part A Recv Date: Not reported
Part B Recv Date: 911224
Generator EPA ID: NYD001264191
Trans1 EPA ID: NYD077444263
Trans2 EPA ID: Not reported
TSDF ID: NYD077444263
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 03930
Units: P - Pounds
Number of Containers: 027
Container Type: DM - Metal drums, barrels

ACCURATE ASSOCIATES (Continued) **1000426821**

Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-08
Trans1 Recv Date:	2010-01-08
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-08
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	3041.0
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000960849GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-11
Trans1 Recv Date:	2010-01-11
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-11
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	2206.0

ACCURATE ASSOCIATES (Continued) **1000426821**

Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001056922GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-11
Trans1 Recv Date:	2010-01-11
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-11
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	2300.0
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003533003JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported

ACCURATE ASSOCIATES (Continued) **1000426821**

Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-08
Trans1 Recv Date:	2010-01-08
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-08
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	3041.0
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	000960849GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-11
Trans1 Recv Date:	2010-01-11
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-11
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	2206.0
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010

ACCURATE ASSOCIATES (Continued) **1000426821**

Manifest Tracking Num:	001056922GBF
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-11
Trans1 Recv Date:	2010-01-11
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-11
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NJD002200046
Waste Code:	Not reported
Quantity:	2300.0
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	1.0
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003533003JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	NYB2639376
Manifest Status:	Completed copy
Trans1 State ID:	HM3506
Trans2 State ID:	Not reported
Generator Ship Date:	910826
Trans1 Recv Date:	910826
Trans2 Recv Date:	Not reported

ACCURATE ASSOCIATES (Continued) **1000426821**

TSD Site Recv Date:	910826
Part A Recv Date:	910909
Part B Recv Date:	910904
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	NYD082785429
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	F007 - PLATING BATH SOL FM ELECTROPLATING OPER
Quantity:	00880
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	016
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	135
Waste Code:	Not reported
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	135
Waste Code:	Not reported
Quantity:	00385
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	007
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	135
Year:	91

Document ID:	NYB2639385
Manifest Status:	Completed copy
Trans1 State ID:	HL4120
Trans2 State ID:	Not reported
Generator Ship Date:	910826
Trans1 Recv Date:	910826
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910826
Part A Recv Date:	910909
Part B Recv Date:	910904
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	NYD082785429
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	F007 - PLATING BATH SOL FM ELECTROPLATING OPER
Quantity:	00990
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	018
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	135
Waste Code:	Not reported
Quantity:	00495
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	009
Container Type:	DM - Metal drums, barrels

ACCURATE ASSOCIATES (Continued) **1000426821**

Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 135
Year: 91

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NYD986908085
Trans2 State ID: Not reported
Generator Ship Date: 2008-06-19
Trans1 Recv Date: 2008-06-19
Trans2 Recv Date: Not reported
TSD Site Recv Date: 2008-06-20
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD001264191
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: Not reported
Quantity: 200.0
Units: P - Pounds
Number of Containers: 2.0
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 1.0
Year: 2008
Manifest Tracking Num: 003404659JJK
Import Ind: N
Export Ind: N
Discr Quantity Ind: N
Discr Type Ind: N
Discr Residue Ind: N
Discr Partial Reject Ind: N
Discr Full Reject Ind: N
Manifest Ref Num: Not reported
Alt Fac RCRA Id: Not reported
Alt Fac Sign Date: Not reported
Mgmt Method Type Code: H141

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: NYD986908085
Trans2 State ID: Not reported
Generator Ship Date: 2008-06-19
Trans1 Recv Date: 2008-06-19
Trans2 Recv Date: Not reported
TSD Site Recv Date: 2008-06-20
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD001264191
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: NYD082785429
Waste Code: Not reported
Quantity: 100.0

ACCURATE ASSOCIATES (Continued) **1000426821**

Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	003404659JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2008-06-19
Trans1 Recv Date:	2008-06-19
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-06-20
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	200.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	003404659JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported

ACCURATE ASSOCIATES (Continued) **1000426821**

Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2008-06-19
Trans1 Recv Date:	2008-06-19
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-06-20
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	003404659JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2008-06-19
Trans1 Recv Date:	2008-06-19
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-06-20
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	200.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2008

ACCURATE ASSOCIATES (Continued) **1000426821**

Manifest Tracking Num:	003404659JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD986908085
Trans2 State ID:	Not reported
Generator Ship Date:	2008-06-19
Trans1 Recv Date:	2008-06-19
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2008-06-20
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD001264191
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD082785429
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2008
Manifest Tracking Num:	003404659JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

166
NNE
1/2-1
0.806 mi.
4256 ft.

JUNG SUN LAUNDRY PLUME
37-10 24TH STREET
LONG ISLAND CITY, NY 11101

SHWS **S110246984**
DRYCLEANERS **N/A**

Relative:
Equal

Actual:
19 ft.

SHWS:

Program:	HW
Site Code:	374812
Classification:	SIGNIFICANT THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT - ACTION REQUIRED.
Region:	2
Acres:	.480
HW Code:	241102
Record Add:	12/13/2006 11:17:00 AM
Record Upd:	9/6/2011 4:07:00 PM
Updated By:	JAMORAS

Site Description: Location: The site is located in a mixed residential/commercial/light industrial area of Long Island City (Borough of Queens, New York City). The location of the site is west corner of the intersection of 24th Street and 37th Avenue. Site Features: The main site features includes single story buildings and an open area. There are three inter connected single story buildings, which occupies three adjacent lots. Approximately one third of the site is open area and occupies another lot. The open area is extended to the west up to 23rd Street. The open area also houses a tractor trailer sized metal storage container. Current Zoning/Use(s): The on-site laundry is currently inactive and is zoned for commercial use. The surrounding parcels are currently used for a combination of commercial, light industrial, and utility right-of-ways. The nearest residential area is on the upgradient and located on the north of laundry building, other side of 37th Avenue. Residential area at downgradient is approximately 400 feet, south side of 38th Avenue. Historical Use(s): Since 1930 s to until late 1980 s, the site was used as a commercial laundry. The site had been utilized as a commercial dry cleaner from the late 1980 s to the mid 1990 s. Prior uses that appear to have led to site contamination include dry cleaning operation, and poor housekeeping and spills. Adjacent property owner conducted a Phase I Environmental Site Assessment in September 2003, a Phase 2 Limited Subsurface Investigation in October 2003 and a Phase 2 Limited Groundwater Investigation in December 2003. The Department conducted Site Characterization during August 2007 through March 2010. In October 2010, the site was placed on the registry as a Class 2 Inactive Hazardous Waste Disposal site. Operable Units: Currently the site has one operable unit, OU1. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Site Geology and Hydrogeology: Subsurface material consists of sand and some silt and urban fill. The depth to the groundwater varies from approximately 13 to 15 feet below the ground surface. On-site groundwater flow direction is relatively flat. The general flow direction appears to be towards the southwest. Based on the MIP (Membrane Interface Probe) survey, the PCE plume appears to be spreading south.

Env Problem: Nature and Extent of Contamination: The primary contaminants of concern at the site are tetrachloroethene (PCE) and trichloroethene (TCE). PCE and TCE have been found in on-site soils at concentrations up to 22 ppm, and 2.6 ppm, respectively, near the large metal storage

JUNG SUN LAUNDRY PLUME (Continued) **S110246984**

container in the open area behind the laundry building. The unrestricted use RSCO s for both PCE and TCE have been exceeded. PCE and TCE have been detected in on-site shallow groundwater at concentrations up to 2,000 ppb and 110 ppb respectively. Groundwater standards have been exceeded for both PCE and TCE and also for Vinyl Chloride (VC). Other compounds detected on-site in excess of groundwater standards are Chloroform and cis-1,2-Dichloroethene. Per February 2009 laboratory data, the plume of PCE and TCE-contaminated groundwater has migrated at least 400' off-site at levels up to 13,000 ppb and 1800 ppb, respectively. PCE and TCE were detected in on-site soil vapor at levels up to 560,000 g/m3 and 6400 g/m3 respectively and off-site at levels up to 2600 g/m3 and to 470 g/m3, respectively. Special Resources Impacted/Threatened: The site is located in the urban area and Fish and Wildlife Impact Analysis is not warranted. Investigations are on going to determine if the PCE plume, releases from the site have migrated further downgradient. Significant Threat: The site poses a significant environmental threat because the area overlies a sole-source aquifer and because there is an ongoing release of PCE and TCE from soil into groundwater.

Health Problem:	Contact with contaminated soil is not expected since it is located at depth and covered by buildings, asphalt and concrete. Ingestion of contaminated groundwater is not likely since the area is served with public water. Site-related contaminants are present in soil vapor. Therefore, there is a potential for soil vapor intrusion to occur in on-site and off-site structures. Investigation of this potential pathway is recommended.
Dump:	False
Structure:	False
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	Not reported
Disp Term:	Not reported
Lat/Long:	Not reported
Dell:	Not reported
Record Add:	5/6/2010 3:30:00 PM
Record Upd:	5/6/2010 3:30:00 PM
Updated By:	MOBARRIE
Own Op:	Owner
Sub Type:	05
Owner Name:	c/o Tony X.F. Yang
Owner Company:	Feiyang Group, LLC
Owner Address:	37-08 24th Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
HW Code:	241102
Waste Type:	TETRACHLOROETHYLENE (PCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241102
Waste Type:	TRICHLOROETHENE (TCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
Crossref ID:	0711317
Cross Ref Type Code:	01
Cross Ref Type:	Spill No.

JUNG SUN LAUNDRY PLUME (Continued) **S110246984**

Record Added Date: 3/31/2009 11:06:00 AM
Record Updated: 3/31/2009 11:06:00 AM
Updated By: JAAVERSA

DRYCLEANERS:
Facility ID: 2-6304-00393
Phone Number: Not reported
Region: 2
Registration Effective Date: N/A
Inspection Date: 04SEP21
Install Date: Not reported
Drop Shop: Not reported
Shutdown: Not reported
Alternate Solvent: WATER
Current Business: WET CLEANING

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167 North 1/2-1 0.857 mi. 4525 ft. **NATIONAL RUBBER ADHESIVES, INC.** **SHWS S102239992**
38-31 9TH STREET **CBS UST N/A**
LONG ISLAND CITY, NY 11101 **CBS**

Relative: Lower

Actual: 13 ft.

SHWS:
Program: HW
Site Code: 58713
Classification: SIGNIFICANT THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT - ACTION REQUIRED.
Region: 2
Acres: 1.000
HW Code: 241028
Record Add: 11/18/1999 12:00:00 PM
Record Upd: 3/16/2011 8:14:00 AM
Updated By: JAQUINN
Site Description: LOCATION: The site is located in an urban/industrial section of Long Island City at the intersection of 9th Street between 38th Avenue and 40th Avenue. It is located on the east side of 9th Street, approximately 0.4 miles north of the Queensboro Bridge. SITE FEATURES: The property extends 335 feet from the north to the south and 117 feet from the west to the east. The entire property is occupied by a 30,000 square feet, one story, slab-on-grand masonry building. A small courtyard is located in the central portion of the building on the western side. The site and surrounding areas are generally level. CURRRENT ZONING/USE(S): The site is currently zoned commercial. The site is currently used as a marble fabrication shop, an automotive repair shop, and a production studio. Another tenant occupies the other one-third of the building for storage of sheet metal and supplies for an off-site manufacturing business. No metal fabrication, cutting, or manufacturing associated with this business takes place on this site. HISTORICAL USE(S): National Rubber Adhesives, Inc. was a manufacturing facility for adhesives until it went out of business in 1995 and operated at this location for 62 years. (National Rubber Adhesives, Inc. occupied the northern two-thirds of the building.) The property is registered with the USEPA as a small quantity generator of hazardous waste, and is also listed as a registered Petroleum Bulk Storage Facility (PBS) and a Chemical Bulk Storage Facility (CBS). Five underground storage tanks (USTs) were closed in-place, including one toluene, two gasoline, one

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

methyl ethyl ketone (MEK) and one heptane UST. A number of previous site investigations were conducted to evaluate the site conditions from 1996 to 2006. None of these investigations provided a comprehensive investigation to determine all the impacts on and off the site; however, information was generated from these investigations to determine that a significant volatile organic contaminant problem exists at this site. A state-funded remedial investigation was initiated in the spring of 2010; however, access issues prevented any on-site work from being performed. OPERABLE UNIT(S): The site is being managed by a single operable unit for both on-site and off-site contamination of the soils and groundwater. Off-site field work is being conducted in 2011 to determine the nature and extent of contamination off-site. Further investigation on-site will be done at a later date. SITE GEOLOGY AND HYDROGEOLOGY: The site is approximately 15 to 20 feet above mean sea level. The nearest surface water body is the East River, approximately one quarter mile west of the site. Groundwater was observed approximately 5 to 10 feet below ground surface and flows in a westerly direction toward the East River.

Env Problem: NATURE AND EXTENT OF CONTAMINATION: Based upon investigations to date, the primary contaminants of concern at the site include toluene. Toluene has been detected at levels as high as 280,000,000 parts per billion (ppb) in groundwater in MW-2, which is above the respective groundwater standard of 5 ppb. Other wells have shown levels of toluene in the 10,000 s ppb. Benzene, ethylbenzene, and xylenes have all been shown to be elevated. These previous investigations have identified exceedances of standards, criteria and guidance for those contaminants in soil as well. Elevated levels of benzene and toluene were also noted in the soil vapor as well. The groundwater plume appears to be migrating off-site however the extent of the plume is unknown.. Possible site impacts to the East River have not been assessed at this time. SPECIAL RESOURCES IMPACTED/THREATENED : None known. SIGNIFICANT THREAT: A significant threat is posed from potential exposure to site related contaminants from soil vapor intrusion both on and off-site structures. Exposures to contaminated groundwater are not expected because public water serves the area residents.

Health Problem: Elevated levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals have been identified in soil and groundwater at this site. The area is paved and served by pubic water so exposures to contaminated soils and groundwater are unlikely. Due to the high levels of VOCs in on-site groundwater, there is the potential for exposures related to soil vapor intrusion in surrounding buildings. A soil vapor investigation is planned as part of the ongoing remedial investigation.

Dump: False
Structure: True
Lagoon: False
Landfill: False
Pond: False
Disp Start: unknown
Disp Term: unknown
Lat/Long: 40:45:30:0 / 73:56:39:0
Dell: False
Record Add: 11/18/1999 12:00:00 PM
Record Upd: 11/18/1999 12:00:00 PM
Updated By: INITIAL

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

Own Op:	Owner
Sub Type:	E
Owner Name:	Not reported
Owner Company:	UNKNOWN
Owner Address:	25 KNICKERBOCKER AVE.
Owner Addr2:	Not reported
Owner City,St,Zip:	BROOKLYN, NY 11101
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	National Rubber Adhesives, Inc.
Owner Address:	38-31 9th Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11385
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	E
Owner Name:	Not reported
Owner Company:	UNKNOWN3
Owner Address:	Not reported
Owner Addr2:	Not reported
Owner City,St,Zip:	ZZ
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	National Rubber Adhesives, Inc.
Owner Address:	25 Knickerbocker Avenue
Owner Addr2:	Not reported
Owner City,St,Zip:	Brooklyn, NY 11208
Owner Country:	United States of America
HW Code:	241028
Waste Type:	TOLUENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241028
Waste Type:	TOLUENE U-220 (F005 WASTE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241028
Waste Type:	XYLENE (MIXED)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241028
Waste Type:	BENZENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
Crossref ID:	C241028
Cross Ref Type Code:	22
Cross Ref Type:	BCP Site ID
Record Added Date:	5/27/2008 11:08:00 AM
Record Updated:	5/27/2008 11:08:00 AM
Updated By:	DMMOLOUG
Crossref ID:	V00662
Cross Ref Type Code:	04
Cross Ref Type:	VC Site ID

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

Record Added Date: 8/4/2003 1:42:00 PM
Record Updated: 8/4/2003 1:42:00 PM
Updated By: ajsylves
Crossref ID: NYD990690190
Cross Ref Type Code: 05
Cross Ref Type: EPA Site ID
Record Added Date: 11/18/1999 12:00:00 PM
Record Updated: 5/10/2001 4:31:00 PM
Updated By: REGTRANS

CBS UST:
UST_CBS Number: 2-000015
Facility Status: CLOSED IN PLACE
Facility Type: MANUFACTURING
Facility Tel: (718) 784-7945
Total Tanks: 0
Region: STATE
ICS No: 2-125734
PBS No: 2-145203
MOSF No: Not reported
SPDES No: Not reported
Town: NEW YORK CITY
Operator: NATIONAL RUBBER BACKING CORP.
Emergency Contact: MARC HALPERN
Emergency Contact Phone: (914) 353-4838
Certification Date: 11/16/1994
Expiration Date: 02/17/1997
Owner Name: NATIONAL RUBBER BACKING CORP.
Owner Address: 38-31 9TH STREET
Owner City,St,Zip: LONG ISLAND CITY, NY 11101
Owner Tele: (718) 784-7945
Owner Type: Corporate/Commercial
Owner Subtype: Not reported
Mail To Name: NATIONAL RUBBER BACKING CORP.
Mail To Contact: MARC HALPERN
Mail To Address: 38-31 9TH STREET
Mail To Address 2: Not reported
Mail To City,St,Zip: LONG ISLAND CITY, NY 11101
Mail To Telephone: (718) 784-7945

Tank Number: 00001
Date Entered: 02/17/1989
Capacity: 1500
Chemical: Toluene
Tank Closed: 05/95
Tank Status: Temporarily Out Of Service
Tank Type: Steel/carbon steel
Install Date: 00/00
CAS No: 108883
Substance: Single Hazardous Substance on DEC List
Tank Location: UNDERGROUND
Tank Internal: None
Tank External: None
Pipe Location: Aboveground/Underground Combination
Pipe Internal: None
Pipe External: None
Leak Detection: None

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

2nd Containmt:	Other
Overfill Protection:	None
Haz Percent:	100
Pipe Containment:	None
Tank Error Status:	No Missing Data
Tank Secret:	False
Date Entered:	08:01:46
Last Test:	Not reported
Due Date:	Not reported
SWIS Code:	6301
Pipe Type:	STEEL/IRON
Cert Flag:	False
Is it There:	False
Is Updated:	False
Owners Mark:	First Owner
Lat/Long:	Not reported
Renew Date:	11/02/92
Deliquent:	False
Total Capacity:	0
Date Expired:	02/17/95
Flag:	C
Case No:	Not reported
Federal Amt:	True
Pipe Flag:	False
Reserve Flag:	True

Tank Number:	00002
Date Entered:	02/17/1989
Capacity:	1500
Chemical:	Toluene
Tank Closed:	02/91
Tank Status:	Temporarily Out Of Service
Tank Type:	Steel/carbon steel
Install Date:	00/00
CAS No:	108883
Substance:	Not reported
Tank Location:	UNDERGROUND
Tank Internal:	Not reported
Tank External:	Not reported
Pipe Location:	Not reported
Pipe Internal:	Not reported
Pipe External:	Not reported
Leak Detection:	Not reported
2nd Containmt:	Other
Overfill Protection:	Not reported
Haz Percent:	0
Pipe Containment:	Not reported
Tank Error Status:	Minor Data Missing
Tank Secret:	False
Date Entered:	08:02:00
Last Test:	Not reported
Due Date:	Not reported
SWIS Code:	6301
Pipe Type:	STEEL/IRON
Cert Flag:	False
Is it There:	False

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

Is Updated:	False
Owners Mark:	First Owner
Lat/Long:	Not reported
Renew Date:	11/02/92
Deliquent:	False
Total Capacity:	0
Date Expired:	02/17/95
Flag:	C
Case No:	Not reported
Federal Amt:	True
Pipe Flag:	False
Reserve Flag:	True

Tank Number:	00003
Date Entered:	02/17/1989
Capacity:	1500
Chemical:	Methyl ethyl ketone
Tank Closed:	05/95
Tank Status:	Temporarily Out Of Service
Tank Type:	Steel/carbon steel
Install Date:	00/00
CAS No:	78933
Substance:	Single Hazardous Substance on DEC List
Tank Location:	UNDERGROUND
Tank Internal:	None
Tank External:	None
Pipe Location:	Aboveground/Underground Combination
Pipe Internal:	None
Pipe External:	None
Leak Detection:	None
2nd Containmt:	Other
Overfill Protection:	None
Haz Percent:	100
Pipe Containment:	None
Tank Error Status:	No Missing Data
Tank Secret:	False
Date Entered:	08:02:33
Last Test:	Not reported
Due Date:	Not reported
SWIS Code:	6301
Pipe Type:	STEEL/IRON
Cert Flag:	False
Is it There:	False
Is Updated:	False
Owners Mark:	First Owner
Lat/Long:	Not reported
Renew Date:	11/02/92
Deliquent:	False
Total Capacity:	0
Date Expired:	02/17/95
Flag:	C
Case No:	Not reported
Federal Amt:	True
Pipe Flag:	False
Reserve Flag:	True

NATIONAL RUBBER ADHESIVES, INC. (Continued) **S102239992**

CBS:
CBS Number: 2-000015
Program Type: CBS
Dec Region: 2
Expiration Date: N/A
Facility Status: Unregulated
UTMX: 589256.22733000
UTMY: 4512690.5957800

168
SSE
1/2-1
0.874 mi.
4613 ft.

Relative:
Higher

Actual:
35 ft.

ROEHR CHEMICALS INC
52-20 37TH ST
LONG ISLAND CITY, NY 11101

CERC-NFRAP **1000243997**
RCRA-CESQG **NYD000764936**
FINDS
SHWS
LTANKS
HIST LTANKS
CBS UST
CBS AST
MANIFEST
MANIFEST
ENG CONTROLS
INST CONTROL
CBS

CERC-NFRAP:
Site ID: 0203512
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: Removal Only Site (No Site Assessment Work Needed)

CERCLIS-NFRAP Assessment History:
Action: REMOVAL ASSESSMENT
Date Started: 03/06/1991
Date Completed: 05/03/1991
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 01/31/1997
Priority Level: Not reported

RCRA-CESQG:
Date form received by agency: 01/01/2007
Facility name: ROEHR CHEMICALS INC
Facility address: 52-20 37TH ST
LONG ISLAND CITY, NY 111012001
EPA ID: NYD000764936
Mailing address: 37TH ST
LONG ISLAND CITY, NY 11101
Contact: Not reported
Contact address: 37TH ST
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.

ROEHR CHEMICALS INC (Continued) **1000243997**

Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: ACETO CHEMICAL CORP
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: ACETO CHEMICAL CORP
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: (212) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006

ROEHR CHEMICALS INC (Continued) **1000243997**

Facility name: ROEHR CHEMICALS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 07/08/1999
Facility name: ROEHR CHEMICALS INC
Classification: Not a generator, verified

Date form received by agency: 07/09/1992
Facility name: ROEHR CHEMICALS INC
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: ROEHR CHEMICALS INC
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1991
Date achieved compliance: 08/25/1992
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/03/1986
Date achieved compliance: 04/30/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/02/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 03/08/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 08/25/1992
Evaluation lead agency: State

Evaluation date: 02/03/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/30/1986
Evaluation lead agency: State

ROEHR CHEMICALS INC (Continued) **1000243997**

FINDS:

Registry ID: 110001581075

Environmental Interest/Information System
US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:
Program: HW
Site Code: 55924
Classification: SITE IS PROPERLY CLOSED - REQUIRES CONTINUED MANAGEMENT
Region: 2
Acres: .500
HW Code: 241014
Record Add: 11/18/1999 12:00:00 PM
Record Upd: 1/14/2011 9:43:00 AM
Updated By: JHOCONNE
Site Description: The former Roehr Chemicals facility is located at 52-20 37th Street, Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street, and Newtown Creek is located approximately 1750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five Block 310 Lots: 1, 8, 23, 24 and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemicals was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found to be contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. The maximum concentration of total xylenes in these wells was 19 ppb. Soil vapor extraction and air

ROEHR CHEMICALS INC (Continued) **1000243997**

sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues. The remedial system was pulsed in Sept-Dec 2007 and was reactivated in Dec 2007. Remediation system operation and groundwater monitoring continues. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Env Problem:	The Remedial Investigation/Feasibility Study (RI/FS) found groundwater contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. The remedial actions taken to date have adequately addressed environmental significant threat posed by the contamination, and the site has been reclassified to Class 4 status (continued monitoring required). The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.
Health Problem:	On-site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on-site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Soil and groundwater contamination continue to diminish as the remedial measure progresses.
	Not reported
Dump:	False
Structure:	True
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	1991
Disp Term:	unknown
Lat/Long:	40:44:05:0 / 73:56:10:0
Dell:	False
Record Add:	11/18/1999 12:00:00 PM
Record Upd:	11/18/1999 12:00:00 PM
Updated By:	INITIAL
Own Op:	Disp. Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	ACETO CORPORATION
Owner Address:	Not reported
Owner Addr2:	Not reported
Owner City,St,Zip:	ZZ
Owner Country:	United States of America

ROEHR CHEMICALS INC (Continued) **1000243997**

Own Op:	Disp. Owner
Sub Type:	E
Owner Name:	Not reported
Owner Company:	ACETO CORPORATION
Owner Address:	ONE HOLLOW LANE
Owner Addr2:	Not reported
Owner City,St,Zip:	LAKE SUCCESS, NY 110421215
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	Roehr Chemicals, Inc.
Owner Address:	50-20 37th Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	E
Owner Name:	Not reported
Owner Company:	Wonton Foods Inc
Owner Address:	50-20 37th Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	NNN
Owner Name:	DONALD LAU
Owner Company:	WONTON FOODS
Owner Address:	220-222 MOORE STREET
Owner Addr2:	Not reported
Owner City,St,Zip:	BROOKLYN, NY 11206
Owner Country:	United States of America
HW Code:	241014
Waste Type:	ACETONE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241014
Waste Type:	XYLENE (MIXED)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	241014
Waste Type:	ETHYLBENZENE
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
Crossref ID:	NYD000764936
Cross Ref Type Code:	05
Cross Ref Type:	EPA Site ID
Record Added Date:	11/18/1999 12:00:00 PM
Record Updated:	5/10/2001 4:31:00 PM
Updated By:	REGTRANS

LTANKS:

Site ID:	280999
Spill No:	8709604
Spill Date:	2/11/1988
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial

ROEHR CHEMICALS INC (Continued) **1000243997**

Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	3/4/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	ADMIN. CLOSED
Referred To:	Not reported
Reported to Dept:	2/12/1988
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2/12/1988
Spill Record Last Update:	3/14/2003
Spiller Name:	Not reported
Spiller Company:	HARRY OLENBERG/ROEHER CHE
Spiller Address:	SAME AS ABOVE
Spiller City,St,Zip:	ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	228183
DEC Memo:	Prior to Sept, 2004 data translation this spill Lead_DEC Field was "ADMIN.CLOSED" Roeher Chemical Corp.03/04/2003-Closed Due To The Nature / Extent Of The Spill Report
Remarks:	3K TANK/ LEAK RATE IS UNDETERMINED. LEAK PROBABLY AT TANK TOP; STICKING TANKS TODAY. EXCAVATE--ISOLATE--RETEST-CLOSED DUE TO LACK OF ANY RECENT INFO- DOES NOT MEET ANY CLEAN UP REQUIREMENTS.

Material:

Site ID:	280999
Operable Unit ID:	915039
Operable Unit:	01
Material ID:	461402
Material Code:	0002
Material Name:	#4 Fuel Oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Gallons
Recovered:	Yes
Resource Affected:	Not reported
Oxygenate:	False

Tank Test:

Site ID:	280999
Spill Tank Test:	1533224
Tank Number:	Not reported
Tank Size:	0

ROEHR CHEMICALS INC (Continued) **1000243997**

Test Method:	00
Leak Rate:	0
Gross Fail:	Not reported
Modified By:	Spills
Last Modified:	10/1/2004
Test Method:	Unknown

Site ID:	295686
Spill No:	8907364
Spill Date:	10/25/1989
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	2/13/2003
Facility Addr2:	Not reported
Cleanup Ceased:	Not reported
Cleanup Meets Standard:	False
SWIS:	4101
Investigator:	TOMASELLO
Referred To:	Not reported
Reported to Dept:	10/25/1989
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	Penalty Not Recommended
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	11/2/1989
Spill Record Last Update:	4/15/2004
Spiller Name:	Not reported
Spiller Company:	ROEHER CHMCLS, INC
Spiller Address:	Not reported
Spiller City,St,Zip:	HARRY OENBERG, ZZ
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	239282
DEC Memo:	Not reported
Remarks:	TWO 1.5K TANKS FAIL HORNER-EZY @ GROSS. #003 HAS BAD FILL BOX, #004 WOULD NOT STABILIZE IN STAND PIPE.

Material:

Site ID:	295686
Operable Unit ID:	932423
Operable Unit:	01
Material ID:	444148
Material Code:	0066A
Material Name:	UNKNOWN PETROLEUM
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	-1
Units:	Pounds

ROEHR CHEMICALS INC (Continued) **1000243997**

Recovered: No
Resource Affected: Not reported
Oxygenate: False
Site ID: 295686
Operable Unit ID: 932423
Operable Unit: 01
Material ID: 444149
Material Code: 0326A
Material Name: ISOPROPYL ALCOHOL
Case No.: 00067630
Material FA: Other
Quantity: 0
Units: Pounds
Recovered: No
Resource Affected: Not reported
Oxygenate: False

Tank Test:
Site ID: 295686
Spill Tank Test: 1536308
Tank Number: Not reported
Tank Size: 0
Test Method: 00
Leak Rate: 0
Gross Fail: Not reported
Modified By: Spills
Last Modified: 10/1/2004
Test Method: Unknown

HIST LTANKS:
Region of Spill: 2
Spill Number: 8907364
Spill Date: 10/25/1989
Spill Time: 13:45
Spill Cause: Tank Test Failure
Resource Affectd: On Land
Water Affected: Not reported
Spill Source: Other Commercial/Industrial
Spill Class: Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt: / /
Cleanup Ceased: / /
Cleanup Meets Standard: False
Investigator: TOMASELLO
Caller Name: Not reported
Caller Agency: Not reported
Caller Phone: Not reported
Caller Extension: Not reported
Notifier Name: Not reported
Notifier Agency: Not reported
Notifier Phone: Not reported
Notifier Extension: Not reported
Reported to Department Date: 10/25/89
Reported to Department Time: 15:10
SWIS: 63

ROEHR CHEMICALS INC (Continued) **1000243997**

Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
Spiller Name: ROEHER CHMCLS, INC
Spiller Address: Not reported
Spiller City,St,Zip: HARRY OENBERG
Spiller Cleanup Date: / /
Facility Contact: Not reported
Facility Phone: (718) 784-8473
Facility Extention: Not reported
Spill Notifier: Tank Tester
PBS Number: 2-005398
Last Inspection: / /
Recommended Penalty: Penalty Not Recommended
Enforcement Date: / /
Investigation Complete: / /
UST Involvement: False
Date Region Sent Summary to Central Office: / /
Corrective Action Plan Submitted: / /
Date Spill Entered In Computer Data File: 11/02/89
Time Spill Entered In Computer Data File: Not reported
Spill Record Last Update: 02/13/97
Is Updated: False

Tank:
PBS Number: Not reported
Tank Number: Not reported
Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Pounds
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: UNKNOWN PETROLEUM
Times Material Entry In File: 16414
CAS Number: Not reported
Last Date: 19940929
Material Class Type: Hazardous Material
Quantity Spilled: 0
Unkonwn Quantity Spilled: False
Units: Pounds
Quantity Recovered: 0
Unkonwn Quantity Recovered: False
Material: ISOPROPYL ALCOHOL
Class Type: ISOPROPYL ALCOHOL
Times Material Entry In File: 27
CAS Number: 00067630
Last Date: 19950815
DEC Remarks: 07/03/90: TANKS REPAIRED RETESTED, SITE ASSESSMENT CONDUCTED BY YWC ENVIRONMENTAL REVEALED LITTLE CONTAMINATION, NO IMMEDIATE DANGER TO ENVIRONMENT

ROEHR CHEMICALS INC (Continued) **1000243997**

THAT CAN BE ATTRIBUTED TO SUBSURFACE CONTAMINATION. CLEANUP BEING OVERSEEN BY HAZ WASTE REMEDIATION.

Spill Cause: TWO 1.5K TANKS FAIL HORNER-EZY @ GROSS. 003 HAS BAD FILL BOX, 004 WOULD NOT STABILIZE IN STAND PIPE.

Region of Spill:	2
Spill Number:	8709604
Spill Date:	02/11/1988
Spill Time:	16:30
Spill Cause:	Tank Test Failure
Resource Affectd:	Groundwater
Water Affected:	Not reported
Spill Source:	Other Commercial/Industrial
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.
Spill Closed Dt:	/ /
Cleanup Ceased:	/ /
Cleanup Meets Standard:	False
Investigator:	BATTISTA
Caller Name:	Not reported
Caller Agency:	Not reported
Caller Phone:	Not reported
Caller Extension:	Not reported
Notifier Name:	Not reported
Notifier Agency:	Not reported
Notifier Phone:	Not reported
Notifier Extension:	Not reported
Reported to Department Date:	02/12/88
Reported to Department Time:	11:08
SWIS:	63
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
Spiller Name:	HARRY OLENBERG
Spiller Address:	SAME AS ABOVE
Spiller City,St,Zip:	Not reported
Spiller Cleanup Date:	/ /
Facility Contact:	Not reported
Facility Phone:	(718) 784-8473
Facility Extention:	Not reported
Spill Notifier:	Tank Tester
PBS Number:	2-005398
Last Inspection:	/ /
Recommended Penalty:	Penalty Not Recommended
Enforcement Date:	/ /
Investigation Complete:	/ /
UST Involvement:	False
Date Region Sent Summary to Central Office:	/ /
Corrective Action Plan Submitted:	/ /
Date Spill Entered In Computer Data File:	02/12/88
Time Spill Entered In Computer Data File:	Not reported
Spill Record Last Update:	07/03/95
Is Updated:	False

Tank:

PBS Number:	Not reported
Tank Number:	Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

Tank Size: 0
Test Method: Not reported
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Not reported

Material:
Material Class Type: Petroleum
Quantity Spilled: -1
Unkonwn Quantity Spilled: False
Units: Gallons
Quantity Recovered: -1
Unkonwn Quantity Recovered: False
Material: #4 FUEL OIL
Class Type: #4 FUEL OIL
Times Material Entry In File: 1751
CAS Number: Not reported
Last Date: 19941205
DEC Remarks: Not reported
Spill Cause: 3K TANK/ LEAK RATE IS UNDETERMINED. LEAK PROBABLY AT TANK TOP; STICKING TANKS TODAY. EXCAVATE--ISOLATE--RETEST

CBS UST:
UST_CBS Number: 2-000014
Facility Status: NO LONGER A MAJOR FACILITY
Facility Type: MANUFACTURING
Facility Tel: (212) 671-4218
Total Tanks: 0
Region: STATE
ICS No: 2-125730
PBS No: Not reported
MOSF No: Not reported
SPDES No: Not reported
Town: NEW YORK CITY
Operator: HARRY OLENBERG
Emergency Contact: HARRY OLENBERG
Emergency Contact Phone: (212) 671-4218
Certification Date: 02/22/1991
Expiration Date: 02/17/1993
Owner Name: ROEHR CHEMICALS INC. (DIV. OF ACETO CORP.)
Owner Address: 52-20 37TH ST.
Owner City,St,Zip: L.I.C., NY 11101
Owner Tele: (718) 784-8473
Owner Type: Corporate/Commercial
Owner Subtype: Not reported
Mail To Name: ROEHR CHEMICALS INC. (DIV. OF ACETO CORP.)
Mail To Contact: HARRY OLENBERG
Mail To Address: 52-20 37TH ST.
Mail To Address 2: Not reported
Mail To City,St,Zip: L.I.C., NY 11101
Mail To Telephone: (718) 784-8473

Tank Number: 22683
Date Entered: 02/17/1989
Capacity: 1500
Chemical: Xylene (mixed)
Tank Closed: 12/91
Tank Status: Temporarily Out Of Service

ROEHR CHEMICALS INC (Continued) **1000243997**

Tank Type:	Steel/carbon steel
Install Date:	03/83
CAS No:	1330207
Substance:	Single Hazardous Substance on DEC List
Tank Location:	UNDERGROUND
Tank Internal:	None
Tank External:	None
Pipe Location:	Aboveground/Underground Combination
Pipe Internal:	None
Pipe External:	Painted/Asphalt Coating
Leak Detection:	Groundwater Well
2nd Containmt:	Vault (w/o access)
Overfill Protection:	Product Level Gauge
Haz Percent:	100
Pipe Containment:	None
Tank Error Status:	No Missing Data
Tank Secret:	False
Date Entered:	07:57:06
Last Test:	Not reported
Due Date:	Not reported
SWIS Code:	6301
Pipe Type:	STEEL/IRON
Cert Flag:	False
Is it There:	False
Is Updated:	False
Owners Mark:	First Owner
Lat/Long:	Not reported
Renew Date:	12/18/90
Deliquent:	False
Total Capacity:	0
Date Expired:	02/17/93
Flag:	C
Case No:	Not reported
Federal Amt:	True
Pipe Flag:	False
Reserve Flag:	True

Tank Number:	31867
Date Entered:	02/17/1989
Capacity:	1500
Chemical:	Methanol
Tank Closed:	12/91
Tank Status:	Temporarily Out Of Service
Tank Type:	Steel/carbon steel
Install Date:	05/75
CAS No:	67561
Substance:	Single Hazardous Substance on DEC List
Tank Location:	UNDERGROUND
Tank Internal:	None
Tank External:	None
Pipe Location:	Aboveground/Underground Combination
Pipe Internal:	None
Pipe External:	Painted/Asphalt Coating
Leak Detection:	Groundwater Well
2nd Containmt:	Vault (w/o access)
Overfill Protection:	Product Level Gauge

ROEHR CHEMICALS INC (Continued) **1000243997**

Haz Percent:	100
Pipe Containment:	None
Tank Error Status:	No Missing Data
Tank Secret:	False
Date Entered:	07:56:27
Last Test:	Not reported
Due Date:	Not reported
SWIS Code:	6301
Pipe Type:	STEEL/IRON
Cert Flag:	False
Is it There:	False
Is Updated:	False
Owners Mark:	First Owner
Lat/Long:	Not reported
Renew Date:	12/18/90
Deliquent:	False
Total Capacity:	0
Date Expired:	02/17/93
Flag:	C
Case No:	Not reported
Federal Amt:	True
Pipe Flag:	False
Reserve Flag:	True

CBS AST:

CBS Number:	2-000014
Region:	STATE
ICS Number:	2-125730
PBS Number:	Not reported
MOSF Number:	Not reported
Telephone:	(212) 671-4218
Facility Town:	NEW YORK CITY
Operator:	HARRY OLENBERG
Emrgncy Contact:	HARRY OLENBERG
Emrgncy Phone:	(212) 671-4218
Expiration Date:	02/17/1993
Owner Name:	ROEHR CHEMICALS INC. (DIV. OF ACETO CORP.)
Owner Address:	52-20 37TH ST.
Owner City,St,Zip:	L.I.C., NY 11101
Owner Telephone:	(718) 784-8473
Owner type:	Corporate/Commercial
Facility Type:	MANUFACTURING
Mail Name:	ROEHR CHEMICALS INC. (DIV. OF ACETO CORP.)
Mail Contact Addr:	52-20 37TH ST.
Mail Contact Addr2:	Not reported
Mail Contact Contact:	HARRY OLENBERG
Mail Contact City,St,Zip:	L.I.C., NY 11101
Mail Phone:	(718) 784-8473
SPDES Number:	Not reported
Facility Status:	ACTIVE FACILITY
Owner Sub Type:	Not reported

Tank Id:	000S1
Date Entered:	02/17/1989
Capacity (Gal):	2000
Chemical:	Sodium nitrite
Tank Closed:	12/91

ROEHR CHEMICALS INC (Continued) **1000243997**

Tank Status:	0
Tank Type:	Stainless steel alloy
Install Date:	00/00
Certified Date:	02/22/1991
CAS Number:	7632000
Substance:	Single Hazardous Substance on DEC List
Tank Location:	ABOVEGROUND
Intrnl Protection:	None
Extrnl Protection:	None
Pipe Location:	Aboveground
Pipe Type:	STAINLESS STEEL ALLOY
Pipe Internal:	None
Pipe External:	0
Pipe Containment:	None
Tank Containment:	None
Leak Detection:	Groundwater Well,Fiberglass
Overfill Protection:	Product Level Gauge
Haz Percent:	41
Total Tanks:	0
Tank Secret:	False
Last Test:	Not reported
Due Date:	Not reported
Tank Error Status:	No Missing Data
SWIS Code:	6301
Lat/Long:	Not reported
Pipe Flag:	False
Federal ID:	Not reported
Is Updated:	F
Renew Date:	12/18/90
Is it There:	F
Deliquent:	F
Date Expired:	02/17/93
Owner Mark:	1
Certificate Needs to be Printed:	False
Fiscal Amt for Registration Fee Correct:	True
Renewal Has Been Printed for Facility:	True
Pre-Printed Renewal App Last Printed:	12/18/1990
Total Capacity of All Active Tanks(gal):	0

Tank Id:	000S2
Date Entered:	02/17/1989
Capacity (Gal):	2000
Chemical:	Propionic acid
Tank Closed:	12/91
Tank Status:	0
Tank Type:	Stainless steel alloy
Install Date:	00/00
Certified Date:	02/22/1991
CAS Number:	79094
Substance:	Single Hazardous Substance on DEC List
Tank Location:	ABOVEGROUND
Intrnl Protection:	None
Extrnl Protection:	None
Pipe Location:	Aboveground
Pipe Type:	STAINLESS STEEL ALLOY
Pipe Internal:	None

ROEHR CHEMICALS INC (Continued) **1000243997**

Pipe External: 0
Pipe Containment: None
Tank Containment: None
Leak Detection: Groundwater Well,Fiberglass
Overfill Protection: Product Level Gauge
Haz Percent: 100
Total Tanks: 0
Tank Secret: False
Last Test: Not reported
Due Date: Not reported
Tank Error Status: No Missing Data
SWIS Code: 6301
Lat/Long: Not reported
Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 12/18/90
Is it There: F
Deliquent: F
Date Expired: 02/17/93
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 12/18/1990
Total Capacity of All Active Tanks(gal): 0

Tank Id: 000S4
Date Entered: 02/17/1989
Capacity (Gal): 2000
Chemical: Sodium hydroxide
Tank Closed: 12/91
Tank Status: 0
Tank Type: Steel/carbon steel
Install Date: 00/00
Certified Date: 02/22/1991
CAS Number: 1310732
Substance: Single Hazardous Substance on DEC List
Tank Location: ABOVEGROUND
Intrnl Protection: None
Extrnl Protection: Painted/Asphalt Coating
Pipe Location: Aboveground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: 0
Pipe Containment: None
Tank Containment: None
Leak Detection: Groundwater Well,Fiberglass
Overfill Protection: Product Level Gauge
Haz Percent: 25
Total Tanks: 0
Tank Secret: False
Last Test: Not reported
Due Date: Not reported
Tank Error Status: No Missing Data
SWIS Code: 6301

ROEHR CHEMICALS INC (Continued) **1000243997**

Lat/Long: Not reported
Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 12/18/90
Is it There: F
Deliquent: F
Date Expired: 02/17/93
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 12/18/1990
Total Capacity of All Active Tanks(gal): 0

Tank Id: 000S9
Date Entered: 02/17/1989
Capacity (Gal): 2000
Chemical: Sodium nitrite
Tank Closed: 12/91
Tank Status: 0
Tank Type: Steel/carbon steel
Install Date: 00/00
Certified Date: 02/22/1991
CAS Number: 7632000
Substance: Single Hazardous Substance on DEC List
Tank Location: ABOVEGROUND
Intrnl Protection: Rubber Liner
Extrnl Protection: Painted/Asphalt Coating
Pipe Location: Aboveground
Pipe Type: STAINLESS STEEL ALLOY
Pipe Internal: None
Pipe External: 0
Pipe Containment: None
Tank Containment: None
Leak Detection: Groundwater Well,Fiberglass
Overfill Protection: Product Level Gauge
Haz Percent: 41
Total Tanks: 0
Tank Secret: False
Last Test: Not reported
Due Date: Not reported
Tank Error Status: No Missing Data
SWIS Code: 6301
Lat/Long: Not reported
Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 12/18/90
Is it There: F
Deliquent: F
Date Expired: 02/17/93
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True

ROEHR CHEMICALS INC (Continued) **1000243997**

Pre-Printed Renewal App Last Printed: 12/18/1990
Total Capacity of All Active Tanks(gal): 0

Tank Id: 000S6
Date Entered: 02/17/1989
Capacity (Gal): 1200
Chemical: Xylene (mixed)
Tank Closed: 12/91
Tank Status: 0
Tank Type: Steel/carbon steel
Install Date: 00/00
Certified Date: 02/22/1991
CAS Number: 1330207
Substance: Single Hazardous Substance on DEC List
Tank Location: ABOVEGROUND
Intrnl Protection: None
Extrnl Protection: Painted/Asphalt Coating
Pipe Location: Aboveground
Pipe Type: STEEL/IRON
Pipe Internal: None
Pipe External: 0
Pipe Containment: None
Tank Containment: None
Leak Detection: Groundwater Well,Fiberglass
Overfill Protection: Product Level Gauge
Haz Percent: 70
Total Tanks: 0
Tank Secret: False
Last Test: Not reported
Due Date: Not reported
Tank Error Status: No Missing Data
SWIS Code: 6301
Lat/Long: Not reported
Pipe Flag: False
Federal ID: Not reported
Is Updated: F
Renew Date: 12/18/90
Is it There: F
Deliquent: F
Date Expired: 02/17/93
Owner Mark: 1
Certificate Needs to be Printed: False
Fiscal Amt for Registration Fee Correct: True
Renewal Has Been Printed for Facility: True
Pre-Printed Renewal App Last Printed: 12/18/1990
Total Capacity of All Active Tanks(gal): 0

Click this hyperlink while viewing on your computer to access
2 additional NY_AST_CBS: record(s) in the EDR Site Report.

NY MANIFEST:
EPA ID: NYD000764936
Country: USA
Mailing Name: ROEHR CHEMICALS INC
Mailing Contact: BILL LEYSER
Mailing Address: P O BOX 8

ROEHR CHEMICALS INC (Continued) **1000243997**

Mailing Address 2:	Not reported
Mailing City:	CARLSTADT
Mailing State:	NJ
Mailing Zip:	07072
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	718-784-8473

Document ID:	NJA1157024
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	910523
Trans1 Recv Date:	910523
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910523
Part A Recv Date:	910605
Part B Recv Date:	910612
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	F003 - UNKNOWN
Quantity:	03000
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	NJA1156787
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	910430
Trans1 Recv Date:	910430
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910430
Part A Recv Date:	910711
Part B Recv Date:	910515
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	F003 - UNKNOWN
Quantity:	02000
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

ROEHR CHEMICALS INC (Continued) **1000243997**

Document ID:	NJA0293966
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS-30
Trans2 State ID:	Not reported
Generator Ship Date:	871002
Trans1 Recv Date:	871002
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871002
Part A Recv Date:	871023
Part B Recv Date:	871026
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	13000
Units:	P - Pounds
Number of Containers:	026
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	87

Document ID:	NJA1157500
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	910723
Trans1 Recv Date:	910723
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910723
Part A Recv Date:	910731
Part B Recv Date:	910805
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	F003 - UNKNOWN
Quantity:	03575
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	065
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	PAC4312733
Manifest Status:	Completed copy
Trans1 State ID:	PAAH0139
Trans2 State ID:	Not reported
Generator Ship Date:	910926
Trans1 Recv Date:	910926
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910927
Part A Recv Date:	Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

Part B Recv Date:	911017
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	PAD085690592
Trans2 EPA ID:	Not reported
TSDF ID:	PAD085690592
Waste Code:	D006 - CADMIUM 1.0 MG/L TCLP
Quantity:	00005
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00015
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00057
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00009
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00001
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00005
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	PAC4312733
Manifest Status:	Completed copy
Trans1 State ID:	PAAH0139
Trans2 State ID:	Not reported
Generator Ship Date:	910926
Trans1 Recv Date:	910926
Trans2 Recv Date:	Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

TSD Site Recv Date:	910927
Part A Recv Date:	Not reported
Part B Recv Date:	911017
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	PAD085690592
Trans2 EPA ID:	Not reported
TSDF ID:	PAD085690592
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	00013
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00011
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00001
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00007
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00007
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00014
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	06
Manifest Status:	NJA5325860
Trans1 State ID:	NYD000764936
Trans2 State ID:	Not reported
Generator Ship Date:	NJD991291105

ROEHR CHEMICALS INC (Continued) **1000243997**

Trans1 Recv Date:	Not reported
Trans2 Recv Date:	NJD054126164
TSD Site Recv Date:	Not reported
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	N
Trans1 EPA ID:	N
Trans2 EPA ID:	N
TSDF ID:	N
Waste Code:	N
Quantity:	Not reported
Units:	1
Number of Containers:	TT
Container Type:	245
Handling Method:	G
Specific Gravity:	1
Waste Code:	T
Quantity:	Not reported
Units:	Not reported
Number of Containers:	Not reported
Container Type:	Not reported
Handling Method:	Not reported
Specific Gravity:	Not reported
Year:	Not reported

Document ID:	NJA5076152
Manifest Status:	Not reported
Trans1 State ID:	2265
Trans2 State ID:	Not reported
Generator Ship Date:	03/09/2004
Trans1 Recv Date:	03/09/2004
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	03/09/2004
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD054126164
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291
Waste Code:	F005 - UNKNOWN
Quantity:	00270
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2004

Document ID:	PAC4318322
Manifest Status:	Completed copy
Trans1 State ID:	PAAH0139
Trans2 State ID:	Not reported
Generator Ship Date:	910926
Trans1 Recv Date:	910926
Trans2 Recv Date:	Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

TSD Site Recv Date:	910927
Part A Recv Date:	Not reported
Part B Recv Date:	911017
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	PAD085690592
Trans2 EPA ID:	Not reported
TSDF ID:	PAD085690592
Waste Code:	D004 - ARSENIC 5.0 MG/L TCLP
Quantity:	00080
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00094
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00001
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00015
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00043
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00004
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	PAC4318322
Manifest Status:	Completed copy
Trans1 State ID:	PAAH0139
Trans2 State ID:	Not reported
Generator Ship Date:	910926

ROEHR CHEMICALS INC (Continued) **1000243997**

Trans1 Recv Date:	910926
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910927
Part A Recv Date:	Not reported
Part B Recv Date:	911017
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	PAD085690592
Trans2 EPA ID:	Not reported
TSDF ID:	PAD085690592
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Quantity:	00019
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00002
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00011
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00015
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00004
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	91

Document ID:	NJA1177655
Manifest Status:	Completed copy
Trans1 State ID:	NJDEPS727
Trans2 State ID:	Not reported
Generator Ship Date:	911112
Trans1 Recv Date:	911112
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	911112
Part A Recv Date:	Not reported
Part B Recv Date:	911120

ROEHR CHEMICALS INC (Continued) **1000243997**

Generator EPA ID: NYD000764936
Trans1 EPA ID: NJD986609949
Trans2 EPA ID: Not reported
TSDF ID: NJD991291105
Waste Code: F003 - UNKNOWN
Quantity: 00275
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 005
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 91

Document ID: PAC4312696
Manifest Status: Completed copy
Trans1 State ID: PA-AH0139
Trans2 State ID: Not reported
Generator Ship Date: 911022
Trans1 Recv Date: 911022
Trans2 Recv Date: Not reported
TSD Site Recv Date: 911023
Part A Recv Date: Not reported
Part B Recv Date: 911107
Generator EPA ID: NYD000764936
Trans1 EPA ID: PAD085690592
Trans2 EPA ID: Not reported
TSDF ID: PAD085690592
Waste Code: P106 - SODIUM CYANIDE
Quantity: 00005
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 91

Document ID: NJA3171654
Manifest Status: Not reported
Trans1 State ID: NJD054126164
Trans2 State ID: Not reported
Generator Ship Date: 01/03/2001
Trans1 Recv Date: 01/03/2001
Trans2 Recv Date: Not reported
TSD Site Recv Date: 01/03/2001
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD000764936
Trans1 EPA ID: NJD991291105
Trans2 EPA ID: Not reported
TSDF ID: S2265
Waste Code: F005 - UNKNOWN
Quantity: 00290
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks

ROEHR CHEMICALS INC (Continued) **1000243997**

Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 2001

Document ID: NYG1070613
Manifest Status: Not reported
Trans1 State ID: CTD982191942
Trans2 State ID: CTD982191942
Generator Ship Date: 10/22/1998
Trans1 Recv Date: 10/22/1998
Trans2 Recv Date: 10/23/1998
TSD Site Recv Date: 11/03/1998
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD000764936
Trans1 EPA ID: OHD066060609
Trans2 EPA ID: Not reported
TSDF ID: 31124MA
Waste Code: F005 - UNKNOWN
Quantity: 04800
Units: P - Pounds
Number of Containers: 006
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 98

Document ID: NJA2953022
Manifest Status: Not reported
Trans1 State ID: NJD054126164
Trans2 State ID: Not reported
Generator Ship Date: 12/21/1999
Trans1 Recv Date: 12/21/1999
Trans2 Recv Date: Not reported
TSD Site Recv Date: 12/21/1999
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD000764936
Trans1 EPA ID: NJD991291105
Trans2 EPA ID: Not reported
TSDF ID: S2265
Waste Code: F005 - UNKNOWN
Quantity: 00250
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 01.00
Year: 99

Document ID: NJA5325860
Manifest Status: Not reported
Trans1 State ID: NJD054126164
Trans2 State ID: Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

Generator Ship Date:	04/26/2006
Trans1 Recv Date:	04/26/2006
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/26/2006
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	2265
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	F005 - UNKNOWN
Quantity:	00245
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00
Year:	2006

Document ID:	NYA1596105
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	NJSWAS300
Trans2 State ID:	Not reported
Generator Ship Date:	841016
Trans1 Recv Date:	841016
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	841016
Part A Recv Date:	841114
Part B Recv Date:	841115
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported
TSDF ID:	NJD991291105
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	84

Document ID:	NJA0030628
Manifest Status:	Completed copy
Trans1 State ID:	NJSWAS-30
Trans2 State ID:	Not reported
Generator Ship Date:	841204
Trans1 Recv Date:	841204
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	841204
Part A Recv Date:	841210
Part B Recv Date:	841218
Generator EPA ID:	NYD000764936
Trans1 EPA ID:	NJD991291105
Trans2 EPA ID:	Not reported

ROEHR CHEMICALS INC (Continued) **1000243997**

TSDF ID: NJD991291105
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00880
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 016
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 84

Document ID: NJA0159603
Manifest Status: Completed copy
Trans1 State ID: NJSWAS-30
Trans2 State ID: Not reported
Generator Ship Date: 860703
Trans1 Recv Date: 860703
Trans2 Recv Date: Not reported
TSD Site Recv Date: 860703
Part A Recv Date: 860708
Part B Recv Date: 860715
Generator EPA ID: NYD000764936
Trans1 EPA ID: NJD991291105
Trans2 EPA ID: Not reported
TSDF ID: NJD991291105
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00495
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 009
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 86

Document ID: NJA1013653
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: NJSWAS300
Trans2 State ID: Not reported
Generator Ship Date: 900518
Trans1 Recv Date: 900518
Trans2 Recv Date: Not reported
TSD Site Recv Date: 900518
Part A Recv Date: 900814
Part B Recv Date: 900717
Generator EPA ID: NYD000764936
Trans1 EPA ID: NJD991291105
Trans2 EPA ID: Not reported
TSDF ID: NJD991291105
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 01045
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 019
Container Type: DM - Metal drums, barrels
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 90

ROEHR CHEMICALS INC (Continued) **1000243997**

Click this hyperlink while viewing on your computer to access
10 additional NY_MANIFEST: record(s) in the EDR Site Report.

NJ MANIFEST:

Manifest Code:	NJA5325860
EPA ID:	NYD000764936
Date Shipped:	20060426
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	060426
Date Trans2 Transported Waste:	000000
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	060426
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	06200622
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

Manifest Code:	NJA5076152
EPA ID:	NYD000764936
Date Shipped:	20040309
TSDF EPA ID:	NJD991291105
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	040309

ROEHR CHEMICALS INC (Continued) **1000243997**

Date Trans2 Transported Waste:	000000
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	040309
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	04020425
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

ENG CONTROLS:

Site Code:	55924
HW Code:	241014
Control Code:	13
Control Type:	ENG
Date Record Added:	7/17/2008 4:04:00 PM
Date Rec Updated:	4/22/2010 9:29:50 AM
Updated By:	SRHEIGEL
Site Description:	The former Roehr Chemicals facility is located at 52-20 37th Street, Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street, and Newtown Creek is located approximately 1750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five Block 310 Lots: 1, 8, 23, 24 and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemicals was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found to be contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of Calvary

ROEHR CHEMICALS INC (Continued) **1000243997**

Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. The maximum concentration of total xylenes in these wells was 19 ppb. Soil vapor extraction and air sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues. The remedial system was pulsed in Sept-Dec 2007 and was reactivated in Dec 2007. Remediation system operation and groundwater monitoring continues. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Env Problem: The Remedial Investigation/Feasibility Study (RI/FS) found groundwater contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. The remedial actions taken to date have adequately addressed environmental significant threat posed by the contamination, and the site has been reclassified to Class 4 status (continued monitoring required). The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Health Problem: On-site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on-site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Soil and groundwater contamination continue to diminish as the remedial measure progresses.

Not reported

INST CONTROL:

Site Code: 55924
Control Name: Legacy Restriction
HW Code: 241014
Control Code: A
Control Type: INST
Dt record added: 7/17/2008 4:04:00 PM
Dt rec updated: 4/22/2010 9:29:50 AM
Updated By: SRHEIGEL
Site Code: 55924
Site Description: The former Roehr Chemicals facility is located at 52-20 37th Street, Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street, and Newtown Creek is located approximately 1750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five Block 310 Lots:

ROEHR CHEMICALS INC (Continued) **1000243997**

1, 8, 23, 24 and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemicals was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found to be contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. The maximum concentration of total xylenes in these wells was 19 ppb. Soil vapor extraction and air sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues. The remedial system was pulsed in Sept-Dec 2007 and was reactivated in Dec 2007. Remediation system operation and groundwater monitoring continues. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Env Problem: The Remedial Investigation/Feasibility Study (RI/FS) found groundwater contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. The remedial actions taken to date have adequately addressed environmental significant threat posed by the contamination, and the site has been reclassified to Class 4 status (continued monitoring required). The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Health Problem: On-site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on-site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Soil and groundwater

ROEHR CHEMICALS INC (Continued) **1000243997**

contamination continue to diminish as the remedial measure progresses.
Not reported

Site Code: 55924
Control Name: Ground Water Use Restriction
HW Code: 241014
Control Code: 08
Control Type: INST
Dt record added: 7/17/2008 4:04:00 PM
Dt rec updated: 4/22/2010 9:29:50 AM
Updated By: SRHEIGEL
Site Code: 55924
Site Description: The former Roehr Chemicals facility is located at 52-20 37th Street, Long Island City, Queens. The Long Island Expressway (Interstate 495) is located about 1200 feet north of the site. Calvary Cemetery is located immediately east of the site across 37th Street, and Newtown Creek is located approximately 1750 feet southwest of the site. Roehr Chemicals owned and operated four buildings on five Block 310 Lots: 1, 8, 23, 24 and 28. Lot 28 contained the main building and has been the focus of the current investigation and remediation. Other lots (1, 8, 23, & 24) were investigated and closed in August 1992 under RCRA closure. The site is presently used as a warehouse for storing packing boxes. Roehr Chemicals was a manufacturer of bulk pharmaceuticals and pharmaceutical intermediates such as diet pills, allergy pills and chemicals used in muscle relaxants. Several VOCs such as xylene, benzene and diethyl-ketone were used in the production of these items. During site operations involving the removal of spent xylene a containment system failed, leaking xylene to the surrounding soil. This release contaminated at least 2,000 cubic yards of on-site soil. The site has been investigated through multiple phases from Preliminary Site Assessment (PSA) in 1994 to a Remedial Investigation/Feasibility Study (RI/FS), concluded in 2000. The groundwater was found to be contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of Calvary Cemetery. A series of geoprobe borings and four monitoring wells were installed along Review Avenue. The maximum concentration of total xylenes in these wells was 19 ppb. Soil vapor extraction and air sparging systems installed in 1994 as Interim Remedial Measures (IRMs) were further expanded in 1999. A Record of Decision signed in March 2001 selected a No Further Action Remedy with continued Operation, Maintenance and Monitoring (OM&M) of the installed SVE/AS system. These measures have reduced groundwater concentrations from a high of 105 ppm of xylenes to non-detect levels in most wells. Quarterly groundwater sampling continues. The remedial system was pulsed in Sept-Dec 2007 and was reactivated in Dec 2007. Remediation system operation and groundwater monitoring continues. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.
Env Problem: The Remedial Investigation/Feasibility Study (RI/FS) found groundwater contaminated with xylene and acetone. The RI showed an elongate and narrow xylene plume leaving the site and entering the Calvary Cemetery. An off-site investigation was conducted in October 2000 to determine the impact of on-site contamination on the groundwater quality downgradient of the Calvary Cemetery. A series of

ROEHR CHEMICALS INC (Continued) **1000243997**

geoprobe borings and four monitoring wells were installed along Review Avenue. Total xylenes in many of these wells were found to be at a maximum concentration of 19 ppb. The remedial actions taken to date have adequately addressed environmental significant threat posed by the contamination, and the site has been reclassified to Class 4 status (continued monitoring required). The continuing groundwater monitoring shows that groundwater concentrations of site related contaminants have reduced to non-detect levels in most wells. The AS part of the remedial system is currently being pulsed and the SVE is operating continuously.

Health Problem: On-site groundwater, surface water and soil contamination has been documented. Drinking water supplies are not impacted by contamination from this site. Drinking water contamination is unlikely as groundwater is not used as a potable supply within a five mile radius. Site access is controlled, limiting the potential for direct contact to contaminated surface soils to on-site workers. Indoor air sampling in homes immediately west of site did not indicate contamination warranting public health concerns. Soil and groundwater contamination continue to diminish as the remedial measure progresses.
Not reported

CBS:

CBS Number:	2-000014
Program Type:	CBS
Dec Region:	2
Expiration Date:	N/A
Facility Status:	Unregulated
UTMX:	590504.76017000
UTMY:	4510900.8936400

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169 NNW 1/2-1 0.880 mi. 4646 ft. **CON EDISON RAVENSWOOD GENERATING STA** **CORRACTS** **1000111639**
38-54 VERNON BLVD **RCRA-LQG** **NYD003917960**
LONG ISLAND CITY, NY 11101 **PADS**
MANIFEST
MANIFEST

Relative: Lower

Actual: 12 ft.

CORRACTS:

EPA ID:	NYD003917960
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	12/01/1994
Action:	CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	NYD003917960
EPA Region:	02
Area Name:	SITEWIDE
Actual Date:	12/01/1994
Action:	CA050 - RFA Completed
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

RCRA-LQG:
Date form received by agency: 03/12/2007
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Facility address: 3854 VERNON BLVD NW CORNER
LONG ISLAND CITY, NY 11101
EPA ID: NYD003917960
Mailing address: VERNON BLVD NW CORNER
LONG ISLAND CITY, NY 11101
Contact: WARREN MILLER
Contact address: VERNON BLVD NW CORNER
LONG ISLAND CITY, NY 11101
Contact country: US
Contact telephone: (978) 578-9757
Contact email: MILLERW@CONED.COM
EPA Region: 02
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: CONSOLIDATED EDISON COMPANY OF NY, INC.
Owner/operator address: 4 IRVING PLACE
NEW YORK, NY 10003
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 04/02/1957
Owner/Op end date: Not reported

Owner/operator name: CONSOLIDATED EDISON COMPANY OF NY, INC.
Owner/operator address: 4 IRVING PLACE
NEW YORK, NY 10003
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 04/02/1957
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 03/11/2007
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Classification: Large Quantity Generator

Date form received by agency: 03/11/2007
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Classification: Large Quantity Generator

Date form received by agency: 02/21/2006
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD SITE
Classification: Large Quantity Generator

Date form received by agency: 02/25/2004
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD SITE
Classification: Large Quantity Generator

Date form received by agency: 05/31/2002
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISION - RAVENSWOOD SITE
Classification: Large Quantity Generator

Date form received by agency: 01/01/2001
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: RAVENSWOOD GENERATING STATION
Classification: Large Quantity Generator

Date form received by agency: 02/26/1998
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON ED - REVENSWOOD GENERATING STATION
Classification: Large Quantity Generator

Date form received by agency: 03/29/1996
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON-RAVENSWOOD GENERATING STATION
Classification: Large Quantity Generator

Date form received by agency: 03/28/1994
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD GENERATING STA
Classification: Large Quantity Generator

Date form received by agency: 03/15/1993

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD GENERATING STA
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON ED - RAVENSWOOD STATION
Classification: Large Quantity Generator

Date form received by agency: 09/23/1991
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD GENERATING STA
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CONSOLIDATED EDISON COMPANY OF NEW YORK
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: CON EDISON - RAVENSWOOD TUNNEL HEADHOUSE
Site name: CON EDISON - RAVENSWOOD GENERATING STA
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: B002
Waste name: B002

Waste code: B007
Waste name: B007

Corrective Action Summary:
Event date: 12/01/1994
Event: RFA Determination Of Need For An RFI, RFI is Not Necessary;

Event date: 12/01/1994
Event: RFA Completed

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/30/1994
Date achieved compliance: 10/23/1997
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/23/1997
Enf. disposition status: Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/29/1993
Date achieved compliance: 11/08/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/29/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/08/1991
Date achieved compliance: 10/15/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/08/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/31/1990
Date achieved compliance: 05/17/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/09/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/14/1988
Date achieved compliance: 06/21/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/12/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/14/1988
Date achieved compliance: 06/21/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/12/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 0
Final penalty amount: 0
Paid penalty amount: 0

Evaluation Action Summary:
Evaluation date: 01/18/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/30/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/23/1997
Evaluation lead agency: State

Evaluation date: 08/24/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 11/08/1993
Evaluation lead agency: State

Evaluation date: 03/12/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/15/1991
Evaluation lead agency: State

Evaluation date: 01/31/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/17/1990
Evaluation lead agency: State

Evaluation date: 03/14/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/21/1988
Evaluation lead agency: State

Evaluation date: 03/14/1988

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 06/21/1988
Evaluation lead agency: State

Evaluation date: 04/22/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/13/1986
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

PADS:
EPAID: NYD003917960
Facility name: RAVENSWOOD PCB STORAGE FAC
Facility Address: 40TH AVE & VERNON BLVD
LONG ISLAND, NY 11101
Facility country: US
Generator: Yes
Storer: No
Transporter: No
Disposer: No
Research facility: No
Smelter: No
Facility owner name: CONSOLIDATED EDISON OF NY INC
Contact title: Not reported
Contact name: KEEGAN ROBERT T
Contact tel: (212)460-4833
Contact extension: Not reported
Mailing address: 4 IRVING PLACE ROOM 300
NEW YORK, NY 10003
Mailing country: US
Cert. title: Not reported
Cert. name: Not reported
Cert. date: 3/28/1990
Date received: 5/4/1990

NY MANIFEST:
EPA ID: NYD003917960
Country: USA
Mailing Name: CONSOLIDATED EDISON
Mailing Contact: FRANKLIN MURRAY
Mailing Address: 4 IRVING PLACE RM 828
Mailing Address 2: Not reported
Mailing City: NEW YORK
Mailing State: NY
Mailing Zip: 10003
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 212-460-2808

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2009-05-20
Trans1 Recv Date:	2009-05-20
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2009-05-21
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	25.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	001440621FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2009-02-12
Trans1 Recv Date:	2009-02-12
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2009-02-13
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	5.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1.0

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Year:	2009
Manifest Tracking Num:	001433892FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2009-04-24
Trans1 Recv Date:	2009-04-24
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2009-04-28
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	100.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	4.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	001440663FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2009-02-12
Trans1 Recv Date:	2009-02-12

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2009-02-13
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	001433891FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2010-02-01
Trans1 Recv Date:	2010-02-01
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-02-01
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980593636
Waste Code:	Not reported
Quantity:	100.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001442055FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	Y

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NYD006982359
Trans2 State ID:	Not reported
Generator Ship Date:	2010-01-14
Trans1 Recv Date:	2010-01-14
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	2010-01-14
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980593636
Waste Code:	Not reported
Quantity:	30.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	1.0
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	001440826FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	NYA5616279
Manifest Status:	Completed copy
Trans1 State ID:	22174GU
Trans2 State ID:	Not reported
Generator Ship Date:	871005
Trans1 Recv Date:	871005
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871005
Part A Recv Date:	871014
Part B Recv Date:	871014
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00240
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	87

Document ID:	NYA5617458
Manifest Status:	Completed copy
Trans1 State ID:	22174GU
Trans2 State ID:	Not reported
Generator Ship Date:	871231
Trans1 Recv Date:	871231
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871231
Part A Recv Date:	880108
Part B Recv Date:	880107
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00240
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	87

Document ID:	NYA5618313
Manifest Status:	Completed copy
Trans1 State ID:	22174GU
Trans2 State ID:	Not reported
Generator Ship Date:	871104
Trans1 Recv Date:	871104
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	871104
Part A Recv Date:	871110
Part B Recv Date:	871116
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00240
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Year: 87

Document ID: NYA5617422
Manifest Status: Completed copy
Trans1 State ID: 22174GU
Trans2 State ID: Not reported
Generator Ship Date: 871203
Trans1 Recv Date: 871203
Trans2 Recv Date: Not reported
TSD Site Recv Date: 871203
Part A Recv Date: 871215
Part B Recv Date: 871209
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD051060408
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00240
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 87

Document ID: NYA5519385
Manifest Status: Completed copy
Trans1 State ID: 22174GH
Trans2 State ID: Not reported
Generator Ship Date: 870617
Trans1 Recv Date: 870617
Trans2 Recv Date: Not reported
TSD Site Recv Date: 870617
Part A Recv Date: 870626
Part B Recv Date: 870624
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD000805911
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00240
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 87

Document ID: NYA4240631
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: IL009
Trans2 State ID: Not reported
Generator Ship Date: 870112
Trans1 Recv Date: 870112

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Trans2 Recv Date: Not reported
TSD Site Recv Date: 870112
Part A Recv Date: 870302
Part B Recv Date: 870123
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD000805911
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00240
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 87

Document ID: NYA5204763
Manifest Status: Completed copy
Trans1 State ID: 59239GK
Trans2 State ID: Not reported
Generator Ship Date: 880321
Trans1 Recv Date: 880321
Trans2 Recv Date: Not reported
TSD Site Recv Date: 880321
Part A Recv Date: 880329
Part B Recv Date: 880329
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD051060408
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00240
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 88

Document ID: NYA5559885
Manifest Status: Completed copy
Trans1 State ID: 22174GU
Trans2 State ID: Not reported
Generator Ship Date: 880222
Trans1 Recv Date: 880222
Trans2 Recv Date: Not reported
TSD Site Recv Date: 880222
Part A Recv Date: 880229
Part B Recv Date: 880229
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD051060408
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D001 - NON-LISTED IGNITABLE WASTES

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Quantity: 00240
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 88

Document ID: NYC0666808
Manifest Status: Completed copy
Trans1 State ID: NYMU4522
Trans2 State ID: Not reported
Generator Ship Date: 910104
Trans1 Recv Date: 910104
Trans2 Recv Date: Not reported
TSD Site Recv Date: 910104
Part A Recv Date: 910129
Part B Recv Date: 910129
Generator EPA ID: NYD003917960
Trans1 EPA ID: ILD051060408
Trans2 EPA ID: Not reported
TSDF ID: NYD980785760
Waste Code: D039 - TETRACHLOROETHYLENE 0.73 MG/L TCLP
Quantity: 00258
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 91

Document ID: NYA7667469
Manifest Status: Completed copy
Trans1 State ID: Not reported
Trans2 State ID: NJT272MR
Generator Ship Date: 910619
Trans1 Recv Date: 910619
Trans2 Recv Date: Not reported
TSD Site Recv Date: 910619
Part A Recv Date: 910708
Part B Recv Date: 910705
Generator EPA ID: NYD003917960
Trans1 EPA ID: MAD039322250
Trans2 EPA ID: Not reported
TSDF ID: NYD980593636
Waste Code: D002 - NON-LISTED CORROSIVE WASTES
Quantity: 00600
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 91

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Document ID:	NYC0976623
Manifest Status:	Completed copy
Trans1 State ID:	GF4332
Trans2 State ID:	Not reported
Generator Ship Date:	910520
Trans1 Recv Date:	910520
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910520
Part A Recv Date:	910604
Part B Recv Date:	910529
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00258
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	91

Document ID:	NYC0866992
Manifest Status:	Completed copy
Trans1 State ID:	MJ4524
Trans2 State ID:	Not reported
Generator Ship Date:	910325
Trans1 Recv Date:	910325
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910325
Part A Recv Date:	910404
Part B Recv Date:	910403
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00258
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	91

Document ID:	NYC0916795
Manifest Status:	Completed copy
Trans1 State ID:	MU4524
Trans2 State ID:	Not reported
Generator Ship Date:	910423
Trans1 Recv Date:	910423
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910423
Part A Recv Date:	910509

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Part B Recv Date:	910502
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00258
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	91

Document ID:	NYC1196774
Manifest Status:	Completed copy
Trans1 State ID:	AP6277NY
Trans2 State ID:	Not reported
Generator Ship Date:	910906
Trans1 Recv Date:	910906
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	910906
Part A Recv Date:	910916
Part B Recv Date:	910916
Generator EPA ID:	NYD003917960
Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported
TSDF ID:	NYD980785760
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00258
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	91

Click this hyperlink while viewing on your computer to access
617 additional NY_MANIFEST: record(s) in the EDR Site Report.

NJ MANIFEST:

Manifest Code:	NJA5212625
EPA ID:	NYD003917960
Date Shipped:	20050715
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJD063147797
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	050715
Date Trans2 Transported Waste:	000000

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	050715
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	08240521
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

Manifest Code:	NJA5212778
EPA ID:	NYD003917960
Date Shipped:	20050714
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJD063147797
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	050714
Date Trans2 Transported Waste:	000000
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	050714
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	08240521
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Hand Code: Not reported

Manifest Code: NJA5067385
EPA ID: NYD003917960
Date Shipped: 20041104
TSDF EPA ID: NJD991291105
Transporter EPA ID: NJD003812047
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 041104
Date Trans2 Transported Waste: 000000
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 041104
Tranporter 1 Decal: Not reported
Tranporter 2 Decal: Not reported
Data Entry Number: 12280421
Reference Manifest Number: Not reported
Was Load Rejected (Y/N): No
Reason Load Was Rejected: Not reported
Waste Code: Not reported
Manifest Year: Not reported
Quantity: Not reported
Unit: Not reported
Hand Code: Not reported

Manifest Code: NJA5212627
EPA ID: NYD003917960
Date Shipped: 20050714
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJD063147797
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050714
Date Trans2 Transported Waste: 000000

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	050714
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	08240521
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

Manifest Code:	NJA5212777
EPA ID:	NYD003917960
Date Shipped:	20050715
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJD063147797
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	050715
Date Trans2 Transported Waste:	000000
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	050715
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	08240521
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Hand Code: Not reported

Manifest Code: NJA5212628
EPA ID: NYD003917960
Date Shipped: 20050713
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJD063147797
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050713
Date Trans2 Transported Waste: 000000
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 050714
Tranporter 1 Decal: Not reported
Tranporter 2 Decal: Not reported
Data Entry Number: 08240521
Reference Manifest Number: Not reported
Was Load Rejected (Y/N): No
Reason Load Was Rejected: Not reported
Waste Code: Not reported
Manifest Year: Not reported
Quantity: Not reported
Unit: Not reported
Hand Code: Not reported

Manifest Code: NJA5212623
EPA ID: NYD003917960
Date Shipped: 20050715
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJD063147797
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050715
Date Trans2 Transported Waste: 000000

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 050715
Tranporter 1 Decal: Not reported
Tranporter 2 Decal: Not reported
Data Entry Number: 08240521
Reference Manifest Number: Not reported
Was Load Rejected (Y/N): No
Reason Load Was Rejected: Not reported
Waste Code: Not reported
Manifest Year: Not reported
Quantity: Not reported
Unit: Not reported
Hand Code: Not reported

Manifest Code: NJA5212624
EPA ID: NYD003917960
Date Shipped: 20050718
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJ0000027193
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050718
Date Trans2 Transported Waste: 000000
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 050720
Tranporter 1 Decal: Not reported
Tranporter 2 Decal: Not reported
Data Entry Number: 08290521
Reference Manifest Number: Not reported
Was Load Rejected (Y/N): No
Reason Load Was Rejected: Not reported
Waste Code: Not reported
Manifest Year: Not reported
Quantity: Not reported
Unit: Not reported

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Hand Code: Not reported

Manifest Code: NJA5009586
EPA ID: NYD003917960
Date Shipped: 20050512
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJ0000027193
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050512
Date Trans2 Transported Waste: 000000
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 050520
Tranporter 1 Decal: Not reported
Tranporter 2 Decal: Not reported
Data Entry Number: 06220522
Reference Manifest Number: Not reported
Was Load Rejected (Y/N): No
Reason Load Was Rejected: Not reported
Waste Code: Not reported
Manifest Year: Not reported
Quantity: Not reported
Unit: Not reported
Hand Code: Not reported

Manifest Code: NJA5212626
EPA ID: NYD003917960
Date Shipped: 20050712
TSDF EPA ID: NJD002200046
Transporter EPA ID: NJ0000027193
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 050712
Date Trans2 Transported Waste: 000000

CON EDISON RAVENSWOOD GENERATING STA (Continued) **1000111639**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	050712
Tranporter 1 Decal:	Not reported
Tranporter 2 Decal:	Not reported
Data Entry Number:	08250521
Reference Manifest Number:	Not reported
Was Load Rejected (Y/N):	No
Reason Load Was Rejected:	Not reported
Waste Code:	Not reported
Manifest Year:	Not reported
Quantity:	Not reported
Unit:	Not reported
Hand Code:	Not reported

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170 ENE 1/2-1 0.893 mi. 4714 ft. **STANDARD MOTOR PRODUCTS, INC.** **SHWS** **S101008344**
37-18 NORTHERN BOULEVARD **VAPOR REOPENED** **N/A**
LONG ISLAND CITY, NY **CBS AST**
CBS

Relative: Higher

Actual: 24 ft.

SHWS:

Program:	HW
Site Code:	58682
Classification:	SIGNIFICANT THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT - ACTION REQUIRED.
Region:	2
Acres:	1.100
HW Code:	241016
Record Add:	11/18/1999 12:00:00 PM
Record Upd:	9/12/2011 2:26:00 PM
Updated By:	JHOCONNE

Site Description: Location: The site is located at 37-18 Northern Boulevard, Long Island City, Queens County, New York in the northwestern section of the county. Bordering the Site is Northern Boulevard to the north; Amtrak s Sunnyside Railroad Yard (Sunnyside Yard) to the south; 39th Street, an automobile dealership, and a Hess (formerly Merit) gasoline station to the east; and commercial and industrial properties to the west. Site Features: The Site is approximately rectangular in shape and occupies approximately one acre of land. The Site contains a six-story industrial building with approximately 42,000 square feet per floor. A narrow strip of land on the south side of the property contains a loading dock and a dirt access path for vehicles. This strip of land is owned by the Metropolitan Transportation Authority (MTA) and is part of a long-term lease to Standard Motor Products. Current Zoning/Use(s): The site is being used for commercial office space. There is a commercial vegetable farm occupying part of the building s roof. Historical Use(s): The Site has historically been involved in industrial and manufacturing activities since 1919. A small plating line for chrome plating of

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

small machine parts operated from approximately 1975 to 1984. The site was previously used for painting automobile parts prior to distribution. In 1984, aqueous based paints replaced the previously used solvent-based paints. All painting operations were gradually eliminated between 1990 and 1991. The site also housed several other processes and included die-casting operations that ceased in the 1970s; rubber production that was eliminated around 1985; and degreasing which utilized chlorinated solvents that ended in 1990. Until March 2008, automobile parts and components at the site were primarily manufactured in the basement within recent years. The manufacturing operations included metal fabrication and machining, plastic injection molding, and assembly. A small photography laboratory for production of newsletters, brochures also operated. Hazardous or toxic materials involved in plant operations are lubricating oils for machinery, caustics for degreasing, phenolics used in molding processes, epoxies for coil production, and water-based inks involved in their small-scale printing. All wastes were temporarily stored on-site in secure containers prior to off-site disposal at a licensed treatment, storage, and disposal (TSD) facility. The Record of Decision was issued on March 23, 2009, and the Remedial Design/Remedial Action Order on Consent was signed in April 2010. Site Geology and Hydrogeology: The Site is underlain by the following units (in order by increasing depth): urban fill, Upper Pleistocene glacial deposits (including both till and channel deposits), and bedrock. The fill is predominantly comprised of reworked glacial deposits (sand, silt, clay, and gravel) and railroad ballast with minor amounts of construction debris and other materials. The Upper Pleistocene glacial deposits consist mainly of ground moraine deposits (unstratified, poorly sorted mixture of sand, silt, clay, and gravel). Bedrock was encountered at a depth of 74 feet below land surface (i.e. 53 feet below mean sea level). The groundwater beneath the Site occurs under water table (unconfined) conditions. The depth to groundwater in the vicinity of the Site is approximately 5 feet below ground surface (bgs) but may be influenced by surface runoff that results in standing water across most of the Site during rain events. The water table occurs in either fill or glacial deposits. Groundwater elevation data show that flow is primarily from east to west beneath the Site. Due to the proximity to the East River, the hydraulic gradients are gentle which is consistent with the regional groundwater contour map and the groundwater contours present on the adjacent Sunnyside Yard property. Vertical groundwater movement is restricted by the Gardiners Clay where present or by the Precambrian bedrock which is considered to be the bottom hydrogeologic boundary of the groundwater flow system. The groundwater flow rate was estimated to be 0.78 feet/day.

Env Problem: Nature and Extent of Contamination: A site investigation in 1990 was initiated after an oily sheen was observed in a puddled area on the southeast side of the property. Soil samples from this area revealed elevated levels of petroleum hydrocarbons and volatile organic compounds (VOCs), primarily 1,1,1-trichloroethane. Approximately 2,700 sq. ft. of soil was excavated to a depth of 18 inches and stockpiled on-site. Further investigation determined that soils in the area of the rear loading platform contained elevated levels of petroleum hydrocarbons and VOCs (trichloroethane TCA, triclhoroethene - TCE and other related chlorinated VOCs). Contaminated soils extended beyond the area excavated. Subsequent groundwater samples taken indicated contamination with TCA and lead. The highest levels

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

of groundwater contamination are adjacent to the loading dock at the back of the building. Soil- Arsenic was detected at 19 ppm, which is above the applicable soil cleanup objectives (SCOs). Groundwater- For PCE, two monitoring well samples contained concentrations which exceeded the groundwater standard of 5 ppb. The sample from MW06 contained PCE concentration that has increased from 10 ppb in 2003 to 17 ppb in 2008. The sample from MW14D contained PCE at a level of 5.8 ppb. For TCE, four monitoring wells contained concentrations which exceeded the groundwater standard of 5 ppb. TCE concentration in MW06 has increased from 6 to 8.2 ppb between 2003 and 2008. MW11S detections declined slowly from 13 ppb to non-detect from 2003 to 2008. MW11D detections declined from 18 ppb in 2003 to non-detect in 2008 with a spike of 78 ppb in 2005. MW14D detected TCE at 5.1 ppb. For cis-1,2-DCE, 10 monitoring wells contained concentrations which exceeded the groundwater standard of 5 ppb. MW09D sample contained detections that fluctuated between 2003 and 2006, the concentrations ranged from 48 to 36 ppb. The sample from MW11S contained cis-1,2-DCE concentrations that declined slowly from 71 ppb in 2003 to non-detect in 2008. The sample from MW11D contained concentrations that declined from 93 ppb in 2003 to 43 ppb in 2005 and 2008. The sample from MW12 contained cis-1,2-DCE concentrations that declined slowly from 64 ppb in 2003 to non-detect in 2008. The samples from MW13S and MW13D contained concentrations that declined from 44 ppb in 2003 to 17 ppb in 2005, and 34 ppb in 2003 to 20 ppb in 2005, respectively. The samples from MW14S and MW14D contained detected cis-1,2-DCE concentrations at 14 and 21 ppb, respectively. The samples from MW15 and MW16 contained detected concentrations of 19 and 9.4 ppb, respectively. For VC, 7 monitoring wells yielded samples whose concentrations exceeded the groundwater standard of 2 ppb. The sample from MW09S contained VC at 11 ppb in 2003 and 0.1 ppb in 2006. The sample from MW09D contained VC at a constant concentration of 4 ppb from 2003 to 2006. The sample from MW11S contained VC concentrations that declined slowly from 31 ppb in 2003 to non-detect in 2008. The sample from MW11D contained detections that fluctuated between 2003 and 2008, the concentrations ranged from 12 ppb in 2003, 6 ppb in 2006, and 8.5 ppb in 2008 The sample from MW12 contained VC concentrations that declined slowly from 13 ppb in 2003 to non-detect in 2008. The sample from MW13S contained VC concentrations that declined from 3 ppb in 2003 to 0.5 ppb in 2008. The sample from MW15 contained a VC concentration of 19 ppb in 2008. For 1,1,1-TCA, 2 monitoring wells yielded samples whose concentrations exceeded the groundwater standard of 5 ppb. The sample from MW10 contained 1,1,1-TCA at 13 ppb in 2003 to non-detect in 2005, and increased to 9.2 ppb in 2008. The same well, MW10 also detected 1,1-DCA at 74 ppb in 2005, but the concentration decreased to 8.2 ppb in 2008. The relatively flat gradient may cause more outward dispersion than advection. MW10 is also located underneath the 39th Street Bridge which could be a potential source for this relatively low contamination. The sample from MW11D contained 1,1,1-TCA at 6 ppb in 2003 and increased to 180 ppb in 2008. Significant Threat: The site presents a significant environmental threat. An Interim Remedial Measure (IRM) consisting of a sub-slab depressurization system (SSDS) has been installed in the building and is currently in operation.

Health Problem: The on-site structure will have an active sub-slab depressurization system which will prevent contamination from entering the building via soil vapor intrusion. A air sparge/soil vapor extraction system will address contaminants present in the groundwater. Exposure to

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

site-related contaminants in drinking water are not expected because public water serves the area.

Dump:	False
Structure:	True
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	unknown
Disp Term:	unknown
Lat/Long:	40:45:07:0 / 73:55:31:0
Dell:	False
Record Add:	11/18/1999 12:00:00 PM
Record Upd:	2/29/2008 11:07:00 AM
Updated By:	SMMARTIN
Own Op:	Disp. Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	STANDARD MOTOR PRODS./MTA
Owner Address:	Not reported
Owner Addr2:	Not reported
Owner City,St,Zip:	ZZ
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	E
Owner Name:	Not reported
Owner Company:	Standard Motor Products/MTA
Owner Address:	37-18 Northern Boulevard
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	Standard Motor Products/MTA
Owner Address:	37-18 Northern Boulevard
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	Standard Motor Products/MTA
Owner Address:	37-18 Northern Boulevard
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	E
Owner Name:	Not reported
Owner Company:	Standard Motor Products/MTA
Owner Address:	37-18 Northern Boulevard
Owner Addr2:	Not reported
Owner City,St,Zip:	Long Island City, NY 11101
Owner Country:	United States of America
Own Op:	Document Repository
Sub Type:	NNN
Owner Name:	ROZ RUBINSTEIN

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

Owner Company: QUEENS PUBLIC LIBRARY BROADWAY BRANCH
Owner Address: 40-20 BROADWAY
Owner Addr2: Not reported
Owner City,St,Zip: LONG ISLAND CITY, NY 11103
Owner Country: United States of America
HW Code: 241016
Waste Type: DICHLOROETHYLENE
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: VINYL CHLORIDE
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: XYLENE (MIXED)
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: ETHYLBENZENE
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: TETRACHLOROETHYLENE (PCE)
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: 1,1,1 TCA
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: 1,1-DICHLOROETHANE
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: TRICHLOROETHENE (TCE)
Waste Quantity: UNKNOWN
Waste Code: Not reported
HW Code: 241016
Waste Type: METHYL-TERT-BUTYL ETHER (MTBE)
Waste Quantity: UNKNOWN
Waste Code: Not reported
Crossref ID: NYD001315266
Cross Ref Type Code: 05
Cross Ref Type: EPA Site ID
Record Added Date: 11/18/1999 12:00:00 PM
Record Updated: 5/10/2001 4:31:00 PM
Updated By: REGTRANS
Crossref ID: 2-477869
Cross Ref Type Code: 18
Cross Ref Type: PBS No.
Record Added Date: 1/4/2007 3:05:00 PM
Record Updated: 1/4/2007 3:05:00 PM
Updated By: SMMARTIN

VAPOR REOPENED:
Site Code: 241016
Facility Status: Complete

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

CBS AST:

CBS Number:	2-000153
Region:	STATE
ICS Number:	2-021443
PBS Number:	Not reported
MOSF Number:	Not reported
Telephone:	(718) 392-0200
Facility Town:	NEW YORK CITY
Operator:	MURRAY ROSE
Emrgncy Contact:	CRAIG SWANBURG
Emrgncy Phone:	(516) 795-7147
Expiration Date:	07/27/1991
Owner Name:	STANDARD MOTOR PRODUCTS, INC.
Owner Address:	37-18 NORTHERN BOULEVARD
Owner City,St,Zip:	LONG ISLAND CITY, NY 11101
Owner Telephone:	(718) 392-0200
Owner type:	Corporate/Commercial
Facility Type:	Not reported
Mail Name:	STANDARD MOTOR PRODUCTS, INC.
Mail Contact Addr:	37-18 NORTHERN BOULEVARD
Mail Contact Addr2:	Not reported
Mail Contact Contact:	MURRAY L. ROSE
Mail Contact City,St,Zip:	LONG ISLAND CITY, NY 11101
Mail Phone:	(718) 392-0200
SPDES Number:	Not reported
Facility Status:	INACTIVE FACILITY
Owner Sub Type:	Not reported

Tank Id:	061
Date Entered:	07/27/1989
Capacity (Gal):	1000
Chemical:	1,1,1-Trichloroethane
Tank Closed:	07/91
Tank Status:	0
Tank Type:	Steel/carbon steel
Install Date:	01/77
Certified Date:	07/27/1989
CAS Number:	71556
Substance:	Not reported
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE
Intrnl Protection:	Not reported
Extrnl Protection:	Not reported
Pipe Location:	Not reported
Pipe Type:	STEEL/IRON
Pipe Internal:	Not reported
Pipe External:	Not reported
Pipe Containment:	Not reported
Tank Containment:	None
Leak Detection:	Not reported
Overfill Protection:	Not reported
Haz Percent:	0
Total Tanks:	0
Tank Secret:	False
Last Test:	Not reported
Due Date:	Not reported
Tank Error Status:	Major Data Missing (which is on the certificate)
SWIS Code:	6301

STANDARD MOTOR PRODUCTS, INC. (Continued) **S101008344**

Lat/Long:	Not reported
Pipe Flag:	False
Federal ID:	Not reported
Is Updated:	F
Renew Date:	08/20/91
Is it There:	F
Deliquent:	F
Date Expired:	07/27/91
Owner Mark:	1
Certificate Needs to be Printed:	False
Fiscal Amt for Registration Fee Correct:	True
Renewal Has Been Printed for Facility:	True
Pre-Printed Renewal App Last Printed:	08/20/1991
Total Capacity of All Active Tanks(gal):	0

CBS:

CBS Number:	2-000153
Program Type:	CBS
Dec Region:	2
Expiration Date:	N/A
Facility Status:	Unregulated
UTMX:	591047.33773000
UTMY:	4511892.8172899

171
South
1/2-1
0.931 mi.
4916 ft.

Relative:
Lower

Actual:
7 ft.

FORMER MANHATTAN ADHESIVES PLANT **DEL SHWS** **S105972443**
425-459 GREENPOINT AVENUE **N/A**
BROOKLYN, NY

DEL SHWS:

Year:	Not reported
Site Code Id:	224009
Site Classification:	D1
Region:	2
Epa Id Number:	NYD980780811
Site Type - Dump:	No
Site Type - Structure:	No
Site Type - Lagoon:	No
Site Type - Landfill:	No
Site Type - Treat Pond:	No
Site Size (Acres):	Acres
Site Size Comment:	Not reported
Period Assoc/HW Start:	Not reported
Period Assoc/HW End:	Not reported
Lat/Long:	40 43’ 56 / 73 56’ 42
Lat/Long Decimal:	0.00000 / 0.00000
Lat/Long (dms):	0 0 0 / 0 0 0
Hazardous Waste Code:	Not reported
Hazard Waste Disposed:	Not reported
Quantity:	Not reported
Air Data Available:	No
SW Std Contravention:	No
GW Std Contravention:	No
Soil Type:	Not reported
Sediment Data Available:	No
GW Std Contravention:	No

FORMER MANHATTAN ADHESIVES PLANT (Continued) **S105972443**

DW Std Contravention:	No
SW Std Contravention:	No
Air Stand Contraventions:	No
Legal Action Type:	Not reported
State Legal Action:	No
Federal Legal Action:	No
Enforce Status Code:	Not reported
Remedial Act Proposed:	No
Rem Act Under Design:	No
Rem Act In Progress:	No
Rem Act Completed:	No
Remedial Action Type:	Not reported
Soil Type:	Not reported
Depth To Groundwater:	Not reported
Owner Name:	Frank Castiglione
Owner Address:	32-02 College Point Boulevard
Owner City,St,Zip:	Flushing, NY 11354
Owner Phone:	Not reported
Owner Contact Name:	Not reported
Owner During Disposal:	Not reported
Owner During Use:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City,St,Zip:	Not reported
Operator Phone:	Not reported
Operator Contact Name:	Not reported
Oper During Disposal:	Not reported
Site Type:	Structure
HW Disposal Period:	From: To:
Analytical Data Available:	Not reported
Applicable Std Exceeded:	Not reported
Geotech Info:	Not reported
Depth To Groundwater:	Not reported
Status:	Not reported
Nature Of Action:	Not reported
Env Prob Assessment:	Not reported
Site Description:	Manhattan Adhesives is currently an empty factory building that is located at the foot of the Greenpoint Ave., Bridge in Brooklyn. Besides the Manhattan Adhesives factory, about 10 feet from the northeast wall is a manhole (not a sewer of drain) into which liquid waste was allegedly discharged. This waste came from a condemned oil storage site located at the intersection of Rt. 280, and the NJ Turnpike in NJ. The manhole is suspected of being the opening to an underground tank; however, the quantity of the waste allegedly dumped exceeds the capacity of most tanks. This information was obtained from the State Senate Committee on Crime and the Brooklyn District Attorney's office. Phase I State Superfund has been completed. A partial phase IIinvestigation was completed during 1985 and recommended no further action. The Responsible Party has agreed to undertake an investigation in 1986. An investigation has not found hazardous waste on-site.
Confirmed HW:	Waste oil alleged to contain PCB's: Over 400,000 gal.
Environment Assesment:	Not reported
Health Assesment:	Not reported
Disposal Start Date:	Not reported
Disposal Term Date:	Not reported
Air Violation:	Not reported
Groundwater Violation:	Not reported
Drink Water Violation:	Not reported

FORMER MANHATTAN ADHESIVES PLANT (Continued) **S105972443**

Surface Water Violation:	Not reported
Legal New York State:	Not reported
Legal Federal:	Not reported
Legal State:	Not reported
Remedial Action Active:	Not reported
Remedial Action Done:	Not reported
NPL Status:	Not reported
Count Operator:	Not reported
Count Owner:	Not reported
NYTM X:	0
NYTM Y:	0
Co Name:	Not reported
Co Addr:	Not reported
Operator Addr:	Not reported
Operator Addr 2:	Not reported
Operator Addr 3:	Not reported
Operator Addr 4:	Not reported
HWDP From:	Not reported
From To:	Not reported
Assessment of Health:	Not reported
Description:	Not reported
Env Assessment:	Not reported
HW Disposed/Quantity:	Not reported
Assess/Env Prog:	Not reported
Assess/Health Prob:	Not reported
Site Description:	Not reported

Count: 20 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
QUEENS	1001489235	NYCTA	QUEENSBORO PLAZA		FINDS,RCRA-CESQG,MANIFEST
QUEENS	1004755718	NYCDOT BRIDGES BIN 2247260	JACKSON AVE BRIDGE OVER	11101	FINDS,RCRA-NLR
QUEENS	1006810334	CON ED	11 ST QUEENS PLAZA SOUTH		FINDS,MANIFEST,RCRA-CESQG
LONG ISLAND CITY	1007112483	MTA EXISTING RAIL YARD	QUEENS ST - DEAD END	11101	RCRA-NLR
QUEENS	1007206606	CONSOLIDATED EDISON	V 4551 - 44 AVE & 22 ST		RCRA-NLR,MANIFEST
QUEENS	1007206626	CONSOLIDATED EDISON	VS 8487 - QUEENS BLVD & 38 ST		RCRA-NLR,MANIFEST
QUEENS	1007206690	CONSOLIDATED EDISON	VS 7533 - 43 AVE & 38 ST		RCRA-NLR,MANIFEST
QUEENS	1007206732	CONSOLIDATED EDISON	7598 - 21ST & 43 AVE		RCRA-NLR,MANIFEST
LONG ISLAND CITY	1007207967	CONSOLIDATED EDISON	V1617 THOMSON AVE & 31ST ST		RCRA-NLR,MANIFEST
LONG ISLAND CITY	1007208408	CONSOLIDATED EDISON	TM6766-JACKSON AVE & CRDANE ST		RCRA-NLR,MANIFEST
QUEENS	1007770905	CLASSIC DREAM CARS-45-25 39TH STRE	45/25 39TH STREET	11104	FINDS
BROOKLYN	1008404470	NYCDEP - BORDEN AVE VENTURI FLOW C	BORDEN AVE & 11TH ST	11222	RCRA-NLR
LONG ISLAND CITY	1009231477	CONSOLIDATED EDISON	MH776 43RD & 11TH ST	11101	MANIFEST
LONG ISLAND CITY	1009236896	CONSOLIDATED EDISON CO	V0940 F\O217 WEST 43RD ST		MANIFEST
LONG ISLAND CITY	1009236897	CONSOLIDATED EDISON CO	V1435 F\O 249 W 43RD ST		MANIFEST
LONG ISLAND CITY	1009238913	CONSOLIDATED EDISON	MH5345-36TH & 11TH ST		MANIFEST
LONG ISLAND CITY	1009242069	CONSOLIDATED EDISON	MH16169-43RD AVE & 10TH ST		MANIFEST
LONG ISLAND CITY	1009244478	NYC DEPARTMENT OF EDUCATION	28 11 QUEENS PLAZA	11101	MANIFEST
LONG ISLAND CITY	1009244592	NYC OFF TRACK BETTING CORP	37-16 QUEENS BLVD NYD980582845	11101	MANIFEST
BRONX	1010488291	NYSDOT BIN 1066220	GRANT HIGHWAY OVER CROSS BRONX	11101	FINDS,MANIFEST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/30/2011
Date Data Arrived at EDR: 07/12/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 79

Source: EPA
Telephone: N/A
Last EDR Contact: 10/12/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 11/29/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/14/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 11/29/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/09/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 91

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/14/2011
Next Scheduled EDR Contact: 02/27/2012
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/03/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Referred to as the State Superfund Program, the Inactive Hazardous Waste Disposal Site Remedial Program is the cleanup program for inactive hazardous waste sites and now includes hazardous substance sites

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Annually

VAPOR REOPENED: Vapor Intrustion Legacy Site List

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 21

Source: Department of Environmenal Conservation
Telephone: 518-402-9814
Last EDR Contact: 11/23/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Varies

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Facility Register

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 10/11/2011
Date Data Arrived at EDR: 10/11/2011
Date Made Active in Reports: 11/15/2011
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-457-2051
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LTANKS: Spills Information Database

Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/23/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Varies

HIST LTANKS: Listing of Leaking Storage Tanks

A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/16/2011
Date Data Arrived at EDR: 06/02/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 103
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

TANKS: Storage Tank Faciliy Listing
This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 15
Source: Department of Environmental Conservation
Telephone: 518-402-9543
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

UST: Petroleum Bulk Storage (PBS) Database
Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/24/2011
Number of Days to Update: 19
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/11/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CBS UST: Chemical Bulk Storage Database
Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 10/24/2005
Next Scheduled EDR Contact: 01/23/2006
Data Release Frequency: No Update Planned

MOSF UST: Major Oil Storage Facilities Database
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: Varies

AST: Petroleum Bulk Storage
Registered Aboveground Storage Tanks.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/24/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/11/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: No Update Planned

CBS AST: Chemical Bulk Storage Database
Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF AST: Major Oil Storage Facilities Database
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF: Major Oil Storage Facility Site Listing
These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/11/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

CBS: Chemical Bulk Storage Site Listing
These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/11/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 18

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/12/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 32

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 25

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 06/01/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 13

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/02/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 7

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2011
Date Data Arrived at EDR: 11/01/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 10

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Registry of Engineering Controls

Environmental Remediation sites that have engineering controls in place.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Quarterly

INST CONTROL: Registry of Institutional Controls

Environmental Remediation sites that have institutional controls in place.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Quarterly

RES DECL: Restrictive Declarations Listing

A restrictive declaration is a covenant running with the land which binds the present and future owners of the property. As a condition of certain special permits, the City Planning Commission may require an applicant to sign and record a restrictive declaration that places specified conditions on the future use and development of the property. Certain restrictive declarations are indicated by a D on zoning maps.

Date of Government Version: 11/18/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/11/2011
Number of Days to Update: 50

Source: NYC Department of City Planning
Telephone: 212-720-3401
Last EDR Contact: 09/30/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Agreements

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. The Voluntary Cleanup Program was developed to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfield" sites.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9711
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 08/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

ERP: Environmental Restoration Program Listing

In an effort to spur the cleanup and redevelopment of brownfields, New Yorkers approved a $200 million Environmental Restoration or Brownfields Fund as part of the $1.75 billion Clean Water/Clean Air Bond Act of 1996 (1996 Bond Act). Enhancements to the program were enacted on October 7, 2003. Under the Environmental Restoration Program, the State provides grants to municipalities to reimburse up to 90 percent of on-site eligible costs and 100% of off-site eligible costs for site investigation and remediation activities. Once remediated, the property may then be reused for commercial, industrial, residential or public use.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Quarterly

BROWNFIELDS: Brownfields Site List

A Brownfield is any real property where redevelopment or re-use may be complicated by the presence or potential presence of a hazardous waste, petroleum, pollutant, or contaminant.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9764
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Semi-Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/27/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/28/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SWRCY: Registered Recycling Facility List

A listing of recycling facilities.

Date of Government Version: 10/11/2011
Date Data Arrived at EDR: 10/11/2011
Date Made Active in Reports: 11/15/2011
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8705
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Semi-Annually

SWTIRE: Registered Waste Tire Storage & Facility List

A listing of facilities registered to accept waste tires.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 11/15/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8694
Last EDR Contact: 10/28/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/08/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/07/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

DEL SHWS: Delisted Registry Sites
A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

Date of Government Version: 08/23/2011
Date Data Arrived at EDR: 08/25/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 22
Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Annually

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

HIST UST: Historical Petroleum Bulk Storage Database
These facilities have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. It is no longer updated due to the sensitive nature of the information involved. See UST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

HIST AST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capabilities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. No longer updated due to the sensitive nature of the information involved. See AST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/09/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/04/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/04/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Annually

SPILLS: Spills Information Database

Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 09/27/2011
Date Data Arrived at EDR: 09/28/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/23/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Varies

HIST SPILLS: SPILLS Database

This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 10/05/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/29/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 94

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 41

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2011
Next Scheduled EDR Contact: 01/16/2012
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/31/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 15

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/29/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/08/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 12/02/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/27/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/19/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/13/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 09/13/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/30/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Biennially

HSWDS: Hazardous Substance Waste Disposal Site Inventory

The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites now that the New York State Superfund has been refinanced and changed. This means that the study inventory has served its purpose and will no longer be maintained as a separate entity. The last version of the study inventory is frozen in time. The sites on the study will not automatically be made Superfund sites, rather each site will be further evaluated for listing on the Registry. So overtime they will be added to the registry or not.

Date of Government Version: 01/01/2003
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-9564
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: No Update Planned

UIC: Underground Injection Control Wells

A listing of enhanced oil recovery underground injection wells.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 518-402-8056
Last EDR Contact: 09/14/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2011
Date Data Arrived at EDR: 08/09/2011
Date Made Active in Reports: 09/16/2011
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/08/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Annually

DRYCLEANERS: Registered Drycleaners

A listing of all registered drycleaning facilities.

Date of Government Version: 06/28/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/05/2011
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-8403
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Varies

SPDES: State Pollutant Discharge Elimination System

New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

Date of Government Version: 10/18/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 11/15/2011
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 518-402-8233
Last EDR Contact: 10/17/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AIRS: Air Emissions Data

Point source emissions inventory data.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/24/2011
Date Made Active in Reports: 11/03/2011
Number of Days to Update: 71

Source: Department of Environmental Conservation
Telephone: 518-402-8452
Last EDR Contact: 10/31/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Annually

E DESIGNATION: E DESIGNATION SITE LISTING

The (E (Environmental)) designation would ensure that sampling and remediation take place on the subject properties, and would avoid any significant impacts related to hazardous materials at these locations. The (E) designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 10/05/2011
Date Made Active in Reports: 10/20/2011
Number of Days to Update: 15

Source: New York City Department of City Planning
Telephone: 718-595-6658
Last EDR Contact: 09/27/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Varies

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/31/2008
Date Data Arrived at EDR: 11/25/2008
Date Made Active in Reports: 12/11/2008
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-8712
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/18/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/16/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/04/2011
Next Scheduled EDR Contact: 02/13/2012
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
Financial assurance information.

Date of Government Version: 10/13/2011
Date Data Arrived at EDR: 10/14/2011
Date Made Active in Reports: 11/15/2011
Number of Days to Update: 32

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Site Listing
A listing of coal ash disposal site locations.

Date of Government Version: 10/11/2011
Date Data Arrived at EDR: 10/11/2011
Date Made Active in Reports: 11/15/2011
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/20/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

CORTLAND COUNTY:

Cortland County Storage Tank Listing

A listing of aboveground storage tank sites located in Cortland County.

Date of Government Version: 09/13/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 10/21/2011
Number of Days to Update: 37

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Quarterly

Cortland County Storage Tank Listing

A listing of underground storage tank sites located in Cortland County.

Date of Government Version: 09/13/2011
Date Data Arrived at EDR: 09/14/2011
Date Made Active in Reports: 10/21/2011
Number of Days to Update: 37

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Quarterly

NASSAU COUNTY:

Registered Tank Database

A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 05/21/2003
Date Data Arrived at EDR: 05/27/2003
Date Made Active in Reports: 06/09/2003
Number of Days to Update: 13

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: No Update Planned

Storage Tank Database
A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

Registered Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 05/21/2003
Date Data Arrived at EDR: 05/27/2003
Date Made Active in Reports: 06/09/2003
Number of Days to Update: 13

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 10/11/2011
Next Scheduled EDR Contact: 01/23/2012
Data Release Frequency: No Update Planned

Storage Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

ROCKLAND COUNTY:

Petroleum Bulk Storage Database
A listing of aboveground storage tank sites located in Rockland County.

Date of Government Version: 09/14/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 10/21/2011
Number of Days to Update: 35

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

Petroleum Bulk Storage Database
A listing of underground storage tank sites located in Rockland County.

Date of Government Version: 09/14/2011
Date Data Arrived at EDR: 09/16/2011
Date Made Active in Reports: 10/21/2011
Number of Days to Update: 35

Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Quarterly

SUFFOLK COUNTY:

Storage Tank Database
A listing of aboveground storage tank sites located in Suffolk County.

Date of Government Version: 09/13/2006
Date Data Arrived at EDR: 01/11/2007
Date Made Active in Reports: 02/07/2007
Number of Days to Update: 27

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Annually

Storage Tank Database

A listing of underground storage tank sites located in Suffolk County.

Date of Government Version: 09/13/2006
Date Data Arrived at EDR: 01/11/2007
Date Made Active in Reports: 02/07/2007
Number of Days to Update: 27

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Annually

WESTCHESTER COUNTY:

Listing of Storage Tanks

A listing of aboveground storage tank sites located in Westchester County.

Date of Government Version: 08/22/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

Listing of Storage Tanks

A listing of underground storage tank sites located in Westchester County.

Date of Government Version: 08/22/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 09/19/2011
Number of Days to Update: 27

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 11/07/2011
Next Scheduled EDR Contact: 02/20/2012
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/22/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 07/20/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 22

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/18/2011
Next Scheduled EDR Contact: 01/30/2012
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/24/2011
Date Made Active in Reports: 06/30/2011
Number of Days to Update: 6

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 08/11/2011
Date Data Arrived at EDR: 08/26/2011
Date Made Active in Reports: 09/14/2011
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 10/24/2011
Next Scheduled EDR Contact: 02/06/2012
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Providers
Source: Department of Health
Telephone: 212-676-2444

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

44-26 TO 44-30 PIRVES STREET
44-26 TO 44-30 PURVES STREET
LONG ISLAND CITY, NY 11101

TARGET PROPERTY COORDINATES

Latitude (North):	40.74640 - 40˚ 44' 47.0''
Longitude (West):	73.9412 - 73˚ 56' 28.3''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	589390.3
UTM Y (Meters):	4510933.5
Elevation:	19 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	40073-F8 BROOKLYN, NY
Most Recent Revision:	1995
North Map:	40073-G8 CENTRAL PARK, NY
Most Recent Revision:	1995

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

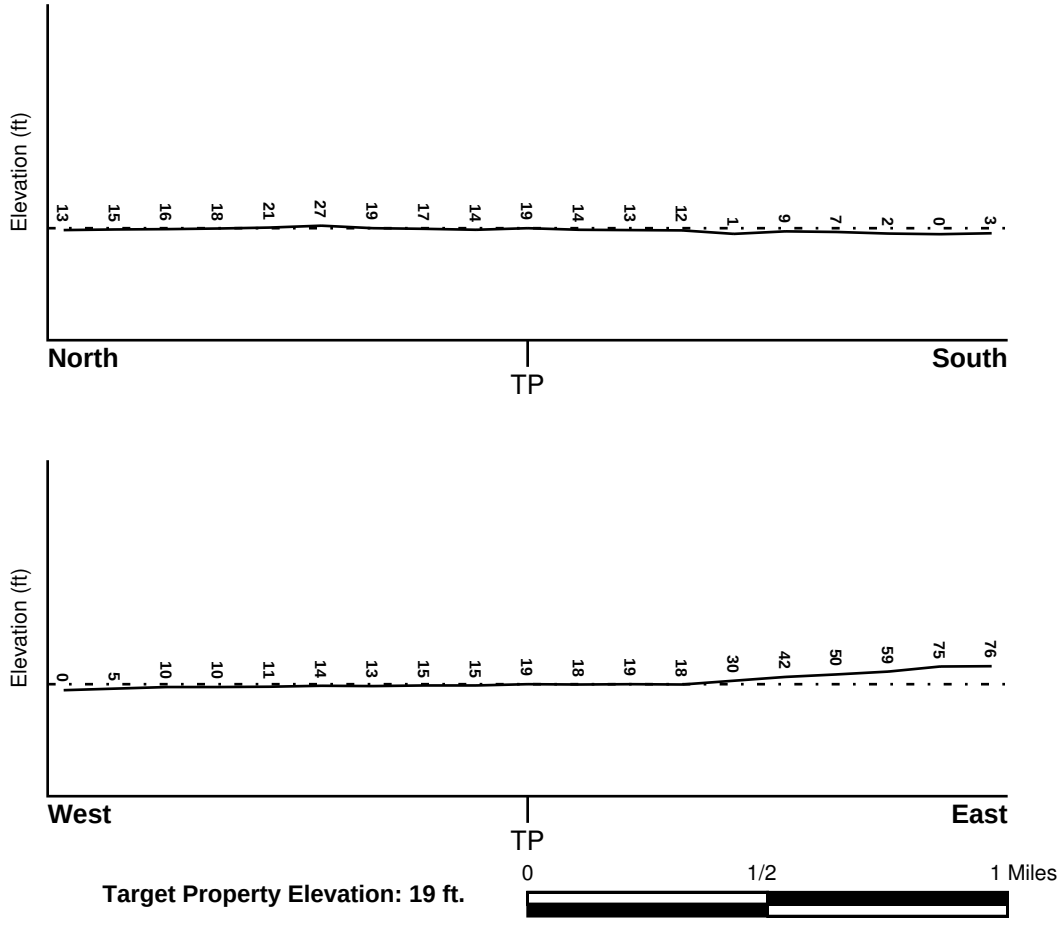
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 19 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
QUEENS, NY	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 360497 - FEMA DFIRM Flood data

Additional Panels in search area:
3604970032B - FEMA Q3 Flood data
3604970040B - FEMA Q3 Flood data
3604970039B - FEMA Q3 Flood data
3604970048B - FEMA Q3 Flood data
3604970047B - FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BROOKLYN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site--specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Ordovician
Series:	Ordovician
Code:	Oe *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
loamy sand
sandy loam
fine sandy loam

Surficial Soil Types: silt loam
loamy sand
sandy loam
fine sandy loam

Shallow Soil Types: sandy loam

Deeper Soil Types: unweathered bedrock
very gravelly - loamy sand
stratified
sandy loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS2116497	0 - 1/8 Mile West
2	USGS2116425	1/8 - 1/4 Mile ESE
3	USGS2116593	1/4 - 1/2 Mile SW
4	USGS2116506	1/4 - 1/2 Mile West
5	USGS2116570	1/4 - 1/2 Mile SE
6	USGS2116264	1/4 - 1/2 Mile NNW
7	USGS2116268	1/4 - 1/2 Mile NNE
8	USGS2382631	1/4 - 1/2 Mile East
9	USGS2116217	1/4 - 1/2 Mile NE
A10	USGS2116678	1/4 - 1/2 Mile SSE
A11	USGS2116860	1/4 - 1/2 Mile SSE
12	USGS2116688	1/2 - 1 Mile SW
13	USGS2116571	1/2 - 1 Mile WSW
14	USGS2116291	1/2 - 1 Mile NE
15	USGS2116694	1/2 - 1 Mile SE
16	USGS2116496	1/2 - 1 Mile East
17	USGS2116263	1/2 - 1 Mile NE
18	USGS2116038	1/2 - 1 Mile North
19	USGS2116841	1/2 - 1 Mile SW
20	USGS2116290	1/2 - 1 Mile NE
21	USGS2116169	1/2 - 1 Mile NE
22	USGS2116269	1/2 - 1 Mile WNW
23	USGS2116092	1/2 - 1 Mile NNW
24	USGS2117046	1/2 - 1 Mile SSW
B25	USGS2116495	1/2 - 1 Mile East
26	USGS2116629	1/2 - 1 Mile West
B27	USGS2116455	1/2 - 1 Mile East
28	USGS2115882	1/2 - 1 Mile NNE
C29	USGS2116320	1/2 - 1 Mile East
30	USGS2116617	1/2 - 1 Mile East
31	USGS2116545	1/2 - 1 Mile ESE
32	USGS2116017	1/2 - 1 Mile NE
C33	USGS2116348	1/2 - 1 Mile East
34	USGS2116664	1/2 - 1 Mile ESE
35	USGS2115923	1/2 - 1 Mile NNW
36	USGS2116900	1/2 - 1 Mile SW
37	USGS2116725	1/2 - 1 Mile WSW
38	USGS2117116	1/2 - 1 Mile South
39	USGS2115786	1/2 - 1 Mile North
40	USGS2116277	1/2 - 1 Mile ENE
41	USGS2116899	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

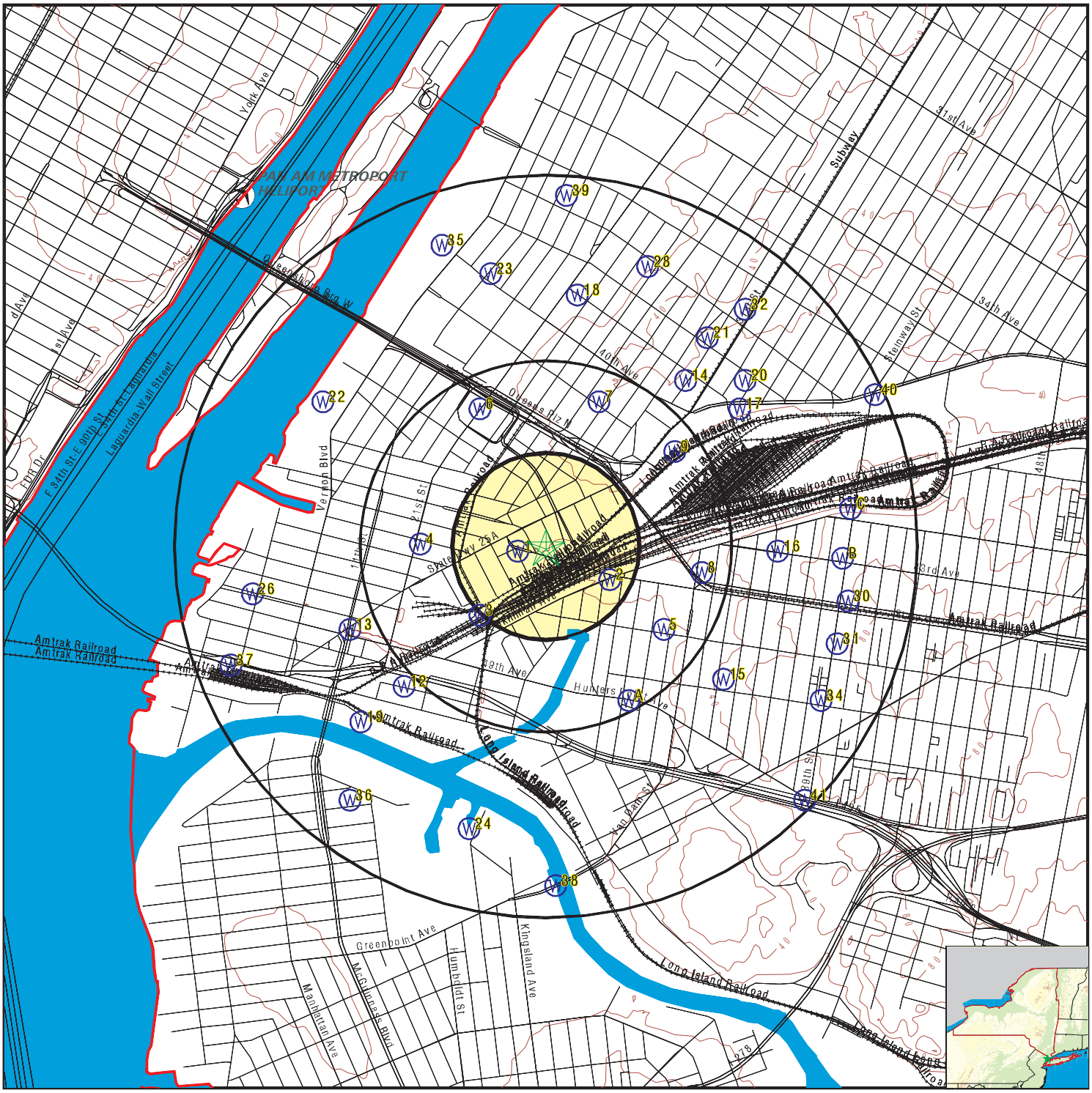
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 03217979.2r



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	44-26 To 44-30 Pirves Street	CLIENT:	IVI Assessment Services, Inc.
ADDRESS:	44-26 To 44-30 Purves Street Long Island City NY 11101	CONTACT:	Sandy Smith
LAT/LONG:	40.7464 / 73.9412	INQUIRY #:	03217979.2r
		DATE:	December 02, 2011 7:08 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
West
0 - 1/8 Mile
Lower

FED USGS **USGS2116497**

Agency cd:	USGS	Site no:	404446073563501
Site name:	Q 1738. 1		
Latitude:	404446	EDR Site id:	USGS2116497
Longitude:	0735635	Dec lat:	40.74621298
Dec lon:	-73.9426378	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1063	Map scale:	Not Reported
Altitude:	15.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	146.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

2
ESE
1/8 - 1/4 Mile
Higher

FED USGS **USGS2116425**

Agency cd:	USGS	Site no:	404442073561801
Site name:	Q 171. 1		
Latitude:	404442	EDR Site id:	USGS2116425
Longitude:	0735618	Dec lat:	40.7451019
Dec lon:	-73.93791544	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1084	Map scale:	Not Reported

Altitude:	46.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	500.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
SW **FED USGS** **USGS2116593**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	404437073564201
Site name:	Q 398. 1		
Latitude:	404437	EDR Site id:	USGS2116593
Longitude:	0735642	Dec lat:	40.74371303
Dec lon:	-73.94458229	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1054	Map scale:	Not Reported
Altitude:	2.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	67.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

4
West **FED USGS** **USGS2116506**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	404447073565301
Site name:	Q 399. 1		
Latitude:	404447	EDR Site id:	USGS2116506
Longitude:	0735653	Dec lat:	40.74649074
Dec lon:	-73.94763794	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1043	Map scale:	Not Reported
Altitude:	13.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	68.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
SE **FED USGS** **USGS2116570**
1/4 - 1/2 Mile
Higher

Agency cd:	USGS	Site no:	404435073560801
Site name:	Q 1632. 1		
Latitude:	404435	EDR Site id:	USGS2116570
Longitude:	0735608	Dec lat:	40.7431575
Dec lon:	-73.93513758	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1005	Map scale:	Not Reported
Altitude:	18.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	63.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

6
NNW
1/4 - 1/2 Mile
Lower

FED USGS **USGS2116264**

Agency cd:	USGS	Site no:	404506073564201
Site name:	Q 962. 1		
Latitude:	404506	EDR Site id:	USGS2116264
Longitude:	0735642	Dec lat:	40.75176843
Dec lon:	-73.94458229	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1050	Map scale:	Not Reported
Altitude:	20.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	195.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

7
NNE **FED USGS** **USGS2116268**
1/4 - 1/2 Mile
Higher

Agency cd:	USGS	Site no:	404507073552001
Site name:	Q 2721. 1		
Latitude:	404507	EDR Site id:	USGS2116268
Longitude:	0735620	Dec lat:	40.75204621
Dec lon:	-73.938471	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1080	Map scale:	Not Reported
Altitude:	35.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Lower Hudson. Connecticut, New Jersey, New York. Area = 720 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	300.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1972-09-28
Water quality data end date:	1975-09-28	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

8
East
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS2382631**

Agency cd:	USGS	Site no:	404443073560101
Site name:	Q 2333. 1		
Latitude:	404443	EDR Site id:	USGS2382631
Longitude:	0735601	Dec lat:	40.74537969
Dec lon:	-73.93319308	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1003	Map scale:	Not Reported
Altitude:	25.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	37.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

9
NE
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS2116217**

Agency cd:	USGS	Site no:	404500073560601
Site name:	Q 2445. 1		
Latitude:	404500	EDR Site id:	USGS2116217
Longitude:	0735606	Dec lat:	40.75010181
Dec lon:	-73.93458201	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1001	Map scale:	Not Reported

Altitude:	26.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	110.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

A10
SSE **FED USGS** **USGS2116678**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	404426073561401
Site name:	Q 1502. 1		
Latitude:	404426	EDR Site id:	USGS2116678
Longitude:	0735614	Dec lat:	40.74065755
Dec lon:	-73.93680429	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1096	Map scale:	Not Reported
Altitude:	15.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	93.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

A11
SSE **FED USGS** **USGS2116860**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	404424073561501
Site name:	Q 1638. 1		
Latitude:	404424	EDR Site id:	USGS2116860
Longitude:	0735615	Dec lat:	40.740102
Dec lon:	-73.93708207	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1096	Map scale:	Not Reported
Altitude:	13.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	73.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

12
SW **FED USGS** **USGS2116688**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	404427073565601
Site name:	Q 17. 1		
Latitude:	404427	EDR Site id:	USGS2116688
Longitude:	0735656	Dec lat:	40.7409353
Dec lon:	-73.94847129	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1046	Map scale:	Not Reported
Altitude:	17.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	175.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

13
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS2116571**

Agency cd:	USGS	Site no:	404435073570601
Site name:	Q 423. 1		
Latitude:	404435	EDR Site id:	USGS2116571
Longitude:	0735706	Dec lat:	40.74315747
Dec lon:	-73.95124915	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1035	Map scale:	Not Reported
Altitude:	17.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	69.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

14
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2116291**

Agency cd:	USGS	Site no:	404510073560402
Site name:	Q 3122. 2		
Latitude:	404510	EDR Site id:	USGS2116291
Longitude:	0735604	Dec lat:	40.75287954
Dec lon:	-73.93402643	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	CENTRAL PARK R-25-4	Map scale:	24000
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	Not Reported		
Altitude datum:	Not Reported		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	20000614
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Unconfined single aquifer		
Aquifer:	GLACIAL AQUIFER,UPPER		
Well depth:	55.0	Hole depth:	55.0
Source of depth data:	owner		
Project number:	443600240		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	2000-07-24	Ground water data end date:	2005-02-23
Ground water data count:	54		

Ground-water levels, Number of Measurements: 54

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2005-02-23		14.42	2004-12-17		14.55
2004-11-17		14.54	2004-10-26		14.52
2004-09-22		14.49	2004-08-24		14.35
2004-07-22		14.13	2004-06-23		14.03
2004-05-25		14.13	2004-04-29		14.10
2004-03-17		14.12	2004-02-25		14.21
2003-12-29		14.24	2003-11-26		14.13
2003-10-30		14.14	2003-09-26		14.23
2003-08-28		14.26	2003-07-30		14.13
2003-06-26		14.16	2003-05-28		13.85
2003-04-24		13.78	2003-03-19		13.57
2003-02-26		13.54	2003-01-30		13.38
2002-12-23		13.35	2002-11-22		13.32
2002-10-23		13.10	2002-09-24		12.84
2002-08-28		12.70	2002-07-18		12.76
2002-06-26		12.80	2002-05-30		12.78
2002-04-26		12.72	2002-03-19		12.90
2002-02-26		13.05	2002-01-29		13.20
2001-12-27		13.45	2001-11-20		13.83
2001-10-23		14.58	2001-09-25		15.36
2001-08-22		15.17	2001-07-25		15.02
2001-06-27		15.06	2001-05-23		14.75
2001-04-24		14.44	2001-03-19		14.03
2001-02-26		13.78	2001-01-31		13.48
2000-12-20		12.91	2000-11-29		12.89
2000-10-24		13.00	2000-09-27		12.86
2000-08-28		12.82	2000-07-24		12.56

15
SE
1/2 - 1 Mile
Higher

FED USGS **USGS2116694**

Agency cd:	USGS	Site no:	404428073555701
Site name:	Q 122. 1		
Latitude:	404428	EDR Site id:	USGS2116694
Longitude:	0735557	Dec lat:	40.7412131
Dec lon:	-73.93208193	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1016	Map scale:	Not Reported
Altitude:	42.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	125.	Hole depth:	140.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

16
East
1/2 - 1 Mile
Higher

FED USGS **USGS2116496**

Agency cd:	USGS	Site no:	404446073554701
Site name:	Q 1258. 1		
Latitude:	404446	EDR Site id:	USGS2116496
Longitude:	0735547	Dec lat:	40.74621301
Dec lon:	-73.92930408	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1023	Map scale:	Not Reported
Altitude:	55.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	63.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

17
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2116263**

Agency cd:	USGS	Site no:	404506073555401
Site name:	Q 13. 1		
Latitude:	404506	EDR Site id:	USGS2116263
Longitude:	0735554	Dec lat:	40.75176846
Dec lon:	-73.93124857	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1010	Map scale:	Not Reported
Altitude:	24.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	89.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

18
North
1/2 - 1 Mile
Higher

FED USGS **USGS2116038**

Agency cd:	USGS	Site no:	404522073562401
Site name:	Q 1221. 1		
Latitude:	404522	EDR Site id:	USGS2116038
Longitude:	0735624	Dec lat:	40.75621281
Dec lon:	-73.93958213	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE 988	Map scale:	Not Reported
Altitude:	17.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	178.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

19
SW
1/2 - 1 Mile
Lower

FED USGS **USGS2116841**

Agency cd:	USGS	Site no:	404422073570401
Site name:	Q 395. 1		
Latitude:	404422	EDR Site id:	USGS2116841
Longitude:	0735704	Dec lat:	40.73954643
Dec lon:	-73.95069358	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1036	Map scale:	Not Reported
Altitude:	7.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	74.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

20
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2116290**

Agency cd:	USGS	Site no:	404510073555301
Site name:	Q 1635. 1		
Latitude:	404510	EDR Site id:	USGS2116290
Longitude:	0735553	Dec lat:	40.75287955
Dec lon:	-73.93097078	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1010	Map scale:	Not Reported
Altitude:	3.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	40.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

21
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2116169**

Agency cd:	USGS	Site no:	404516073560001
Site name:	Q 1912. 1		
Latitude:	404516	EDR Site id:	USGS2116169
Longitude:	0735600	Dec lat:	40.75454618
Dec lon:	-73.93291528	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF 919	Map scale:	Not Reported

Altitude:	40.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	400.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

22
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS2116269**

Agency cd:	USGS	Site no:	404507073571101
Site name:	Q 161. 1		
Latitude:	404507	EDR Site id:	USGS2116269
Longitude:	0735711	Dec lat:	40.75204618
Dec lon:	-73.95263808	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1020	Map scale:	Not Reported
Altitude:	5.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	228.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

23
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS2116092**

Agency cd:	USGS	Site no:	404525073564001
Site name:	Q 1272. 1		
Latitude:	404525	EDR Site id:	USGS2116092
Longitude:	0735640	Dec lat:	40.75704612
Dec lon:	-73.9440267	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE 968	Map scale:	Not Reported
Altitude:	10.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	195.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

24
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS2117046**

Agency cd:	USGS	Site no:	404407073564401
Site name:	K 692. 1		
Latitude:	404407	EDR Site id:	USGS2117046
Longitude:	0735644	Dec lat:	40.73537986
Dec lon:	-73.94513786	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	047
Country:	US	Land net:	Not Reported
Location map:	KE1059	Map scale:	Not Reported
Altitude:	3.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	88.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

B25
East
1/2 - 1 Mile
Higher

FED USGS **USGS2116495**

Agency cd:	USGS	Site no:	404446073553501
Site name:	Q 453. 1		
Latitude:	404446	EDR Site id:	USGS2116495
Longitude:	0735535	Dec lat:	40.74621302
Dec lon:	-73.92597065	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1043	Map scale:	Not Reported
Altitude:	68.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	147.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

26
West
1/2 - 1 Mile
Lower

FED USGS **USGS2116629**

Agency cd:	USGS	Site no:	404440073572401
Site name:	Q 966. 1		
Latitude:	404440	EDR Site id:	USGS2116629
Longitude:	0735724	Dec lat:	40.74454632
Dec lon:	-73.9562493	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1004	Map scale:	Not Reported
Altitude:	8.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	200.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B27
East
1/2 - 1 Mile
Higher | **FED USGS** | **USGS2116455**

Agency cd:	USGS	Site no:	404444073553501
Site name:	Q 425. 1		
Latitude:	404444	EDR Site id:	USGS2116455
Longitude:	0735535	Dec lat:	40.74565747
Dec lon:	-73.92597065	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1043	Map scale:	Not Reported
Altitude:	75.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	159.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

28
NNE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS2115882**

Agency cd:	USGS	Site no:	404526073561101
Site name:	Q 95. 1		
Latitude:	404526	EDR Site id:	USGS2115882
Longitude:	0735611	Dec lat:	40.75732391
Dec lon:	-73.93597091	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE 997	Map scale:	Not Reported

Altitude:	20.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	92.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

C29
East
1/2 - 1 Mile
Higher

FED USGS **USGS2116320**

Agency cd:	USGS	Site no:	404451073553401
Site name:	Q 386. 1		
Latitude:	404451	EDR Site id:	USGS2116320
Longitude:	0735534	Dec lat:	40.74760188
Dec lon:	-73.92569286	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1042	Map scale:	Not Reported
Altitude:	75.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	222.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

30
East
1/2 - 1 Mile
Higher

FED USGS **USGS2116617**

Agency cd:	USGS	Site no:	404439073553401
Site name:	Q 1098. 1		
Latitude:	404439	EDR Site id:	USGS2116617
Longitude:	0735534	Dec lat:	40.74426861
Dec lon:	-73.92569286	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1044	Map scale:	Not Reported
Altitude:	72.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	215.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

31
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS2116545**

Agency cd:	USGS	Site no:	404433073553601
Site name:	Q 388. 1		
Latitude:	404433	EDR Site id:	USGS2116545
Longitude:	0735536	Dec lat:	40.74260198
Dec lon:	-73.92624843	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1035	Map scale:	Not Reported
Altitude:	70.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	203.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

32
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2116017**

Agency cd:	USGS	Site no:	404520073555301
Site name:	Q 1246. 1		
Latitude:	404520	EDR Site id:	USGS2116017
Longitude:	0735553	Dec lat:	40.75565728
Dec lon:	-73.93097077	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF 918	Map scale:	Not Reported
Altitude:	42.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	220.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

C33
East
1/2 - 1 Mile
Higher

FED USGS **USGS2116348**

Agency cd:	USGS	Site no:	404453073553301
Site name:	Q 602. 1		
Latitude:	404453	EDR Site id:	USGS2116348
Longitude:	0735533	Dec lat:	40.74815743
Dec lon:	-73.92541508	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1042	Map scale:	Not Reported
Altitude:	50.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	159.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

34
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS2116664**

Agency cd:	USGS	Site no:	404425073553901
Site name:	Q 387. 1		
Latitude:	404425	EDR Site id:	USGS2116664
Longitude:	0735539	Dec lat:	40.7403798
Dec lon:	-73.92708179	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1036	Map scale:	Not Reported
Altitude:	64.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	176.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

35
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS2115923**

Agency cd:	USGS	Site no:	404529073564901
Site name:	Q 165. 1		
Latitude:	404529	EDR Site id:	USGS2115923
Longitude:	0735649	Dec lat:	40.7581572
Dec lon:	-73.94652677	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE 957	Map scale:	Not Reported

Altitude:	5.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	205.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

36
SW
1/2 - 1 Mile
Lower

FED USGS **USGS2116900**

Agency cd:	USGS	Site no:	404411073570601
Site name:	K 465. 1		
Latitude:	404411	EDR Site id:	USGS2116900
Longitude:	0735706	Dec lat:	40.73649094
Dec lon:	-73.95124915	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	047
Country:	US	Land net:	Not Reported
Location map:	KE1038	Map scale:	Not Reported
Altitude:	10.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	400.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

37
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS2116725**

Agency cd:	USGS	Site no:	404430073572801
Site name:	Q 422. 1		
Latitude:	404430	EDR Site id:	USGS2116725
Longitude:	0735728	Dec lat:	40.74176859
Dec lon:	-73.95736044	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE1005	Map scale:	Not Reported
Altitude:	7.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	66.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

38
South
1/2 - 1 Mile
Lower

FED USGS **USGS2117116**

Agency cd:	USGS	Site no:	404359073562801
Site name:	K 711. 1		
Latitude:	404359	EDR Site id:	USGS2117116
Longitude:	0735628	Dec lat:	40.73315769
Dec lon:	-73.94069328	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	047
Country:	US	Land net:	Not Reported
Location map:	KE1170	Map scale:	Not Reported
Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	Not Reported		
Altitude datum:	Not Reported		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	74.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

39
North
1/2 - 1 Mile
Lower

FED USGS **USGS2115786**

Agency cd:	USGS	Site no:	404536073562601
Site name:	Q 954. 1		
Latitude:	404536	EDR Site id:	USGS2115786
Longitude:	0735626	Dec lat:	40.76010163
Dec lon:	-73.94013768	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QE 976	Map scale:	Not Reported
Altitude:	12.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	301.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

40
ENE **FED USGS** **USGS2116277**
1/2 - 1 Mile
Higher

Agency cd:	USGS	Site no:	404508073552901
Site name:	Q 389. 1		
Latitude:	404508	EDR Site id:	USGS2116277
Longitude:	0735529	Dec lat:	40.75232402
Dec lon:	-73.92430393	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1040	Map scale:	Not Reported
Altitude:	35.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	84.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

41
SE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS2116899**

Agency cd:	USGS	Site no:	404411073554201
Site name:	Q 394. 1		
Latitude:	404411	EDR Site id:	USGS2116899
Longitude:	0735542	Dec lat:	40.73649098
Dec lon:	-73.92791514	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	36
State:	36	County:	081
Country:	US	Land net:	Not Reported
Location map:	QF1038	Map scale:	Not Reported
Altitude:	48.0		
Altitude method:	Level or other surveying method		
Altitude accuracy:	0.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Northern Long Island. New York. Area = 915 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	N		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	175.
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for QUEENS County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for QUEENS COUNTY, NY

Number of sites tested: 81

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.620 pCi/L	97%	0%	3%
Basement	0.970 pCi/L	93%	6%	1%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Tanks Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2441 or 2442

Fuel Tank Special Report Request Form

SECTION A **CUSTOMER INFORMATION**

Please print the required information below.

Maria Sinnamon, IVI Assessment Services
Name

55 West Red Oak Lane
Address

White Plains, NY 10604
State Zip Code

914-612-3828
Telephone Number

OFFICE USE ONLY

Cashier / Search No.

PRU Staff
Accepted By/Initials:

Searched By:

Total Amount:

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order made payable to the **NYC Fire Department and a stamped self-addressed envelope (with postage).** Mail checks or money orders directly to the address and unit listed above. **DO NOT MAIL CASH.**

SECTION B **FUEL TANK REPORT - FEE $10.00 / PER REPORT**

44-26 Purves Street — Queens
House Number Street Name — Borough

- [x] **THE TOTAL AMOUNT AND SIZE OF EXISTING FUEL OIL / HEATING TANKS**
- [x] **THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED FUEL OIL / HEATING TANKS**
- [ ] **THE TOTAL AMOUNT AND SIZE OF EXISTING BURIED MOTOR VEHICLE TANKS**
- [ ] **THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED BURIED MOTOR VEHICLE TANKS**
- [ ] **MOST RECENT TANK / PIPING TEST RESULTS**
- [ ] **HISTORY OF BURIED TANKS LEAKS**

Note: Requests will be responded to within 10 business days.

PR3 (July-08)

FIRE DEPARTMENT – CITY OF NEW YORK

Public Records Unit / Tanks Section

9 MetroTech Center
Brooklyn, New York 11201-3857
(718) 999-2441 or 2442

Fuel Tank Special Report Request Form

SECTION A **CUSTOMER INFORMATION**

Please print the required information below.

Maria Sinnamon, IVI Assessment Services
Name

55 West Red Oak Lane
Address

White Plains, NY 10604
State Zip Code

914-612-3828
Telephone Number

OFFICE USE ONLY

Cashier / Search No.

PRU Staff
Accepted By/Initials:

Searched By:

Total Amount:

Note: Please make sure you complete this form and attach all required documents. Enclose a check or money order made payable to the **NYC Fire Department** and a **stamped self-addressed envelope (with postage).** Mail checks or money orders directly to the address and unit listed above. **DO NOT MAIL CASH.**

SECTION B **FUEL TANK REPORT - FEE $10.00 / PER REPORT**

44-30 Purves Street
aka 28-23 Thomson Avenue
House Number Street Name

Queens
Borough

- [x] THE TOTAL AMOUNT AND SIZE OF EXISTING FUEL OIL / HEATING TANKS
- [x] THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED FUEL OIL / HEATING TANKS
- [ ] THE TOTAL AMOUNT AND SIZE OF EXISTING BURIED MOTOR VEHICLE TANKS
- [ ] THE TOTAL AMOUNT AND SIZE OF REMOVED OR SEALED BURIED MOTOR VEHICLE TANKS
- [ ] MOST RECENT TANK / PIPING TEST RESULTS
- [ ] HISTORY OF BURIED TANKS LEAKS

Note: Requests will be responded to within 10 business days.

PR3 (July-08)

PROPERTY CONDITION & ENVIRONMENTAL DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.

55 West Red Oak Lane
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-1335 (fax)
www.ivi-intl.com

December 7, 2011

Ms. Marie Dooley
Freedom of Information Officer
NYCDEP-Department of Legal Counsel
59-17 Junction Boulevard, 19th Floor
Corona, New York 11373
(718) 595-6530 (tel)
(718) 595-6543 (fax)

Sent-by-fax

Re: IVI Job No.: PC1119280
Freedom of Information Law Request
44-26 and 44-30 Purves Street
Queens, New York

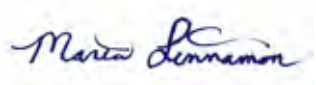
Dear Ms. Dooley:

Please forward all available information regarding USTs, spill records, remediation sites, dump sites, storage of hazardous materials, hazardous material activities, etc., as it pertains to the above referenced site, to us as soon as possible.

Please let me know if there are any costs associated with this request prior to processing same. Your response can either be faxed to me at 914-368-4672 or emailed to me at maria.sinnamon@ivi-intl.com. If you have any questions, please call me at (914) 612-3828. Thank you for your attention to this matter.

Sincerely,

IVI Assessment Services, Inc.



Maria Sinnamon
Phase I Project Manager

PROPERTY CONDITION & ENVIRONMENTAL DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.

55 West Red Oak Lane
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-1335 (fax)
www.ivi-intl.com

December 7, 2011

Records Access Officer
New York City Department of Health and Mental Hygiene
Gotham Center
42-09 28th Street, Floor 14th, CN31
Long Island City, NY 11101
(347) 396-6088 (fax)

Re: IVI Job No.: PC1119280
Freedom of Information Law Request
44-26 and 44-30 Purves Street
Queens, New York

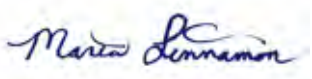
To Whom It May Concern:

Pursuant to the Freedom of Information Law, please forward available non-identifying records regarding cases of reported lead poisoning, any information regarding USTs, spill records, remediation sites, dump sites, storage of hazardous material, and hazardous material activities to us as soon as possible.

Please let me know if there are any costs associated with this request prior to processing same. Your response can either be faxed to me at 914-368-4672 or emailed to me at maria.sinnamon@ivi-intl.com. If you have any questions, please call me at (914) 612-3828. Thank you for your attention to this matter.

Sincerely,

IVI Assessment Services, Inc.



Maria Sinnamon
Phase I Project Manager

PROPERTY CONDITION & ENVIRONMENTAL DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.
55 West Red Oak Lane
White Plains, New York 10604
914.694.9600 (tel)
914.694.8549 (fax)
www.ivi-intl.com

December 7, 2011

Mr. Fawzy I. Abdelsadek, Ph.D., P.E.
Region 2 - Freedom of Information Officer
New York State Department of Environmental Conservation
Hunters Point Place
47-40 21st Street
Long Island City, NY 11101
(718) 482-4949 (tel)
(718) 482-6729 (fax)

Re: IVI Job No.: PC1119280
Freedom of Information Law Request
44-26 and 44-30 Purves Street
Queens, New York

Dear Mr. Abdelsadek:

Please forward all available information regarding UST's, spill records, remediation sites, dump sites, storage of hazardous materials, hazardous materials activities, etc., as it pertains to the above referenced site, to us as soon as possible.

Please let me know if there are any costs associated with this request prior to processing same. Your response can either be faxed to me at 914-368-4672 or emailed to me at maria.sinnamon@ivi-intl.com. If you have any questions, please call me at (914) 612-3828. Thank you for your attention to this matter.

Sincerely,

IVI Assessment Services, Inc.

Maria Sinnamon
Phase I Project Manager

44-26 To 44-30 Pirves Street
44-26 Purves Street
Long Island City, NY 11101

Inquiry Number: 3217979.4
December 07, 2011

The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2005. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2005	Hill-Donnelly Information Services	-	X	X	-
2000	Cole Information Services	X	X	X	-
1996	NYNEX	-	X	X	-
1991	NYNEX Information Resource Company	-	X	X	-
1983	New York Telephone	-	X	X	-
1976	New York Telephone	-	X	X	-
1970	New York Telephone	-	X	X	-
1967	New York Telephone	-	X	X	-
1962	New York Telephone Directory	-	X	X	-
1950	New York Telephone	X	X	X	-
1945	New York Telephone	X	X	X	-
1939	New York Telephone Company	-	X	X	-
1934	R. L. Polk Co.	-	X	X	-
	R. L. Polk & Co.	-	X	X	-
1922	The Metropolitan Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

44-26 Purves Street
Long Island City, NY 11101

FINDINGS DETAIL

Target Property research detail.

Year	*Uses*	*Source*
2000	Bartellino Vincent	Cole Information Services
1950	ORTHO CHEMCL CORP	New York Telephone
1945	F R Mach Wks	New York Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

25TH ST

4412 25TH ST

Year	Uses	Source
1934	Bloom Philip clk	R. L. Polk & Co.

4416 25TH ST

Year	Uses	Source
1991	Garoutsos Helen	NYNEX Information Resource Company

27TH ST

4268 27TH ST

Year	Uses	Source
2005	Code Inspections	Hill-Donnelly Information Services
	h Ciccarella Joe 718 786 3813 oi	Hill-Donnelly Information Services
	H Uotta Vincent P E 0718 472 3506 oi	Hill-Donnelly Information Services
2000	Michael V Longo	Cole Information Services
	43RD AV INTS FROM	Cole Information Services

43RD AVE

2701 43RD AVE

Year	Uses	Source
1945	Ace Gold Stamping Co	New York Telephone
1939	Ace Gold Stamping Co	New York Telephone Company
1934	Marino Vito Josephine lab	R. L. Polk & Co.
	Britt Eugene Charlotte slsmn	R. L. Polk & Co.

2702 43RD AVE

Year	Uses	Source
2005	Page Ari	Hill-Donnelly Information Services
	Page A Ride	Hill-Donnelly Information Services
	TNT Auto Body Is	Hill-Donnelly Information Services
	E Z Car Express Inc	Hill-Donnelly Information Services
2000	Hunter Auto	Cole Information Services

FINDINGS

Year	Uses	Source
2000	Page A Ride	Cole Information Services
1991	ECUADOR BODY SHOP INC	NYNEX Information Resource Company
1983	ECUADOR BODY SHOP INC	New York Telephone
1970	Volks Kar Auto Svce Inc	New York Telephone
1967	Eastern Motor Guard Corp	New York Telephone
	Eichler Hans b	New York Telephone
	Hans Eichler Small Cars Svce Inc	New York Telephone
	Wilmat Inc	New York Telephone
1962	BERNA CORP corrosion engnrs	New York Telephone Directory
1945	Hamilton Forge & Mfg Co	New York Telephone
1939	Neodyne Chemical Co Inc	New York Telephone Company
	Neon Lights Claude Inc	New York Telephone Company

2703 43RD AVE

Year	Uses	Source
1934	Catterson Jas M Dorothy chauf	R. L. Polk & Co.
	Huebner Edw A Mary E Huebners Service Station	R. L. Polk & Co.

2705 43RD AVE

Year	Uses	Source
1945	Gainey Mfg Corp metl stmpngs	New York Telephone

2706 43RD AVE

Year	Uses	Source
2000	Runwell Auto Rprs	Cole Information Services
1991	Formia Marble Works Ltd	NYNEX Information Resource Company
1983	RADIO CITY PLUMBING & HEATING CO INC	New York Telephone
	Braver Irving CPA	New York Telephone
	Migdol Max b	New York Telephone
	Alert Gas Svce Inc	New York Telephone
1976	GBI Inc	New York Telephone
1970	G B I Inc	New York Telephone
1962	Transformner Sales Co Inc	New York Telephone Directory
	Jefferson Elec Co	New York Telephone Directory

2707 43RD AVE

Year	Uses	Source
2005	No Current Listing	Hill-Donnelly Information Services
	Engine Factory s	Hill-Donnelly Information Services

FINDINGS

Year	Uses	Source
2000	Engine Factory	Cole Information Services
	AVI Engine Factory	Cole Information Services
1991	Dentex Research	NYNEX Information Resource Company
	Dentex Research Development Corp	NYNEX Information Resource Company
1983	Dentex Research	New York Telephone
	Dentex Research Development Corp	New York Telephone
1976	Carmel Collision & Auto Body Shop	New York Telephone
	Berger Glass Works Inc	New York Telephone
	Berger Glass Works Inc	New York Telephone
	Berger Glass Works Inc	New York Telephone
1934	Insul Chemical Co Inc NY Percy Goldman pres Jermiah J Soukup v pres Isdore Glaser sec treas mfrs	R. L. Polk & Co.
	Court Square Service Station RTN Feremish Soukup	R. L. Polk & Co.
	Kosina Edw Emily auto reprs	R. L. Polk & Co.
	Queens Auto Sales Corp NY Jermiah Soukup pres treas used carp	R. L. Polk & Co.

2709 43RD AVE

Year	Uses	Source
2000	Infnty Tow & Recvy	Cole Information Services
1970	Pilkauskas Peter J	New York Telephone
1967	Pilkauskas Peter J	New York Telephone
1945	Sitzler Wm	New York Telephone
1934	Sitzler Wm Pauline car opr	R. L. Polk & Co.
	Sitzler Wm jr truck driver	R. L. Polk & Co.
	Pilkowski Peter Lillian inspr	R. L. Polk & Co.
	Sitzler Fred pkr	R. L. Polk & Co.

2710 43RD AVE

Year	Uses	Source
2005	Comaskey Holdings LLC	Hill-Donnelly Information Services
2000	Nulife Metal Mrbl	Cole Information Services
1991	ATKINSON AUTO SVCE INC	NYNEX Information Resource Company
1983	ATKINSON AUTO SVCE INC	New York Telephone
1970	Aaron S W Signs Inc	New York Telephone
1962	Weyer & Nilson cabnt mkrs	New York Telephone Directory
1945	Industri Sheet Metal Co	New York Telephone
1934	Polack Isadore pres Plaza Auto Top Body Corp	R. L. Polk & Co.

Year	Uses	Source
1934	Plaza Auto Top & Body Corp NY Isadore Polack pres Albert sec treas	R. L. Polk & Co.

2712 43RD AVE

Year	Uses	Source
1945	Burns Supl Co insulatn matls	New York Telephone
1939	Doyle & Roth refrightn	New York Telephone Company
1934	DALLETT COMPANY OF NEW YORK THE P C Tweed Penumatic Electric Machinery Tools Supplies	R. L. Polk & Co.
	Tweed P C The Dallett Co of New York	R. L. Polk & Co.
	Stillwell Auto Repair RTN Sydney Miller	R. L. Polk & Co.

44TH DR

2553 44TH DR

Year	Uses	Source
2000	Avtonio Calvi	Cole Information Services

2562 44TH DR

Year	Uses	Source
2000	Edgar Cuevas	Cole Information Services

2566 44TH DR

Year	Uses	Source
2005	Messemer Frank A	Hill-Donnelly Information Services
	Plate O	Hill-Donnelly Information Services

2568 44TH DR

Year	Uses	Source
2005	Milcetic J	Hill-Donnelly Information Services

2569 44TH DR

Year	Uses	Source
2000	W Mc Kee	Cole Information Services

2572 44TH DR

Year	Uses	Source
2005	Almeida Sabrina v	Hill-Donnelly Information Services

FINDINGS

2576 44TH DR

Year	Uses	Source
2005	Tonna Brown Anna L v	Hill-Donnelly Information Services
2000	B Kastner	Cole Information Services

2580 44TH DR

Year	Uses	Source
2005	h Gherghlceanu Costica	Hill-Donnelly Information Services
2000	John Spinelli	Cole Information Services
	Douglas Williams	Cole Information Services

2581 44TH DR

Year	Uses	Source
2000	Ruben Maldonado	Cole Information Services

2582 44TH DR

Year	Uses	Source
2005	Malley K	Hill-Donnelly Information Services
2000	K Malley	Cole Information Services

2583 44TH DR

Year	Uses	Source
2000	Christina Trepim	Cole Information Services

2586 44TH DR

Year	Uses	Source
2005	Sehovic Soco v	Hill-Donnelly Information Services
	h Frost Janice	Hill-Donnelly Information Services
2000	Husnija Kolenovic	Cole Information Services
	Zamo Redzematovic	Cole Information Services
	Goran Varajic	Cole Information Services
	Amir Zejnilovic	Cole Information Services

2589 44TH DR

Year	Uses	Source
2000	V Jurich	Cole Information Services
	Amy Shore	Cole Information Services

2595 44TH DR

Year	Uses	Source
2005	Dinnean Gary	Hill-Donnelly Information Services
2000	Jane Dugan	Cole Information Services

FINDINGS

Year	Uses	Source
2000	Gary Dinnean	Cole Information Services

2702 44TH DR

Year	Uses	Source
1983	AAA Stamp & Seal Mfg Co	New York Telephone

2707 44TH DR

Year	Uses	Source
2005	S C Casting Jewelry Gen Corp	Hill-Donnelly Information Services

2710 44TH DR

Year	Uses	Source
1983	Dunns Auto Electric	New York Telephone
1976	Dunns Auto Electric	New York Telephone

2719 44TH DR

Year	Uses	Source
2005	Nastasi Racing Car Corp	Hill-Donnelly Information Services
2000	Nastasi Racg Car	Cole Information Services

2721 44TH DR

Year	Uses	Source
1967	Wm Berg Inc	New York Telephone
1962	Jackson Cabinet Corp	New York Telephone Directory
	Berg Trucking Co	New York Telephone Directory
	Berg Truck Rentl Co Inc	New York Telephone Directory
	Berg Rent A Car Svce	New York Telephone Directory
1945	Packaging div	New York Telephone
1939	Ideal Garage	New York Telephone Company

2723 44TH DR

Year	Uses	Source
2000	NE Auto Repair Inc	Cole Information Services
1983	Alvic Foreign Auto Repr	New York Telephone
1970	Tul Mor Auto Svce Inc	New York Telephone
	Tul Mor Auto Service Inc	New York Telephone
1962	Berg Truck Rental Co Inc	New York Telephone Directory
	Berg Rent A Car Svce	New York Telephone Directory

FINDINGS

2762 44TH DR

Year	Uses	Source
1976	AAA Stamp & Seal Mfg Co	New York Telephone

44TH RD

3 44TH RD

Year	Uses	Source
2000	A Hamuk	Cole Information Services
	George Goydon	Cole Information Services
	Christina K Tomala	Cole Information Services
	John King	Cole Information Services
	Rodriguez Jr	Cole Information Services

9 44TH RD

Year	Uses	Source
2000	Lesvia Valentin	Cole Information Services
	Tryk Tokyo Sndwch	Cole Information Services

COURT

21 COURT

Year	Uses	Source
1934	Clancey Stewart ball player r	R. L. Polk Co.
	Fitzgerald Betty G r	R. L. Polk Co.
	Fitzpatrick Betty C tchr r	R. L. Polk Co.
	Fitzpatrick Thos Anna h	R. L. Polk Co.
	Grant Ross ball player r	R. L. Polk Co.
	Bowden Wm R Anna clk r	R. L. Polk Co.
	Lambert Bernard mach r	R. L. Polk Co.
	Lampert Bernard mach r	R. L. Polk Co.
	Marshall Chas ball player r	R. L. Polk Co.
	Meinert Gustav clk r	R. L. Polk Co.
	Meinert Herman r	R. L. Polk Co.
	Kanner Albert ball player r	R. L. Polk Co.

26 COURT

Year	Uses	Source
1996	SCHNAPP Stanley atty	NYNEX
	STERNGASS Jack lwyr	NYNEX
	AA Personal Injury Hotline	NYNEX

FINDINGS

Year	Uses	Source
1996	A 1 Criminal Defense attorney	NYNEX
	Fortune Five Music Inc	NYNEX
	Schnapp Stanley atty	NYNEX
	Shields Gail a Tty	NYNEX
	Sterngass Jack lwyr	NYNEX
1983	ALL STATE BUS CORP	New York Telephone
	ALL STATE BUS CORP	New York Telephone
	Center For College & Career Counsel	New York Telephone
	Corcoran Amabile & Cowin attys	New York Telephone
	Corcoran John J atty	New York Telephone
	Dechter Chas CPA	New York Telephone
	EDELMAN JEROME ATTORNEY PROFESSIONAL CORP	New York Telephone
	EDELMAN MARTIN WILLIAM lwyer	New York Telephone
	Fier Chas H atty	New York Telephone
	Atty	New York Telephone
	Macrobiotics Inc	New York Telephone
	Neumann Waldemar J atty	New York Telephone
	Ng David atty	New York Telephone
	Profile Agency Inc	New York Telephone
	Schnapp Stanley atty	New York Telephone
	Sterngass Jack lwyr	New York Telephone
	Sugameli Anthony atty	New York Telephone
	Weicholz David atty	New York Telephone
	Wollerstein & Futoran attys	New York Telephone
1976	Hogan Jones & Parisi attys	New York Telephone
	Jones Brian S atty	New York Telephone
	Macrobiotics Inc	New York Telephone
	ALL STATE BUS CORP	New York Telephone
	Allstate Bus Corp	New York Telephone
	Astro Investigations Inc	New York Telephone
	Astro Jet Room restrnts JFK Intrnatl Airpt ABBREV Idlwld 65	New York Telephone
	Berman David T atty	New York Telephone
	Bklyn Underwriting Agncy Inc	New York Telephone
	BKLYN UNION GAS CO THE	New York Telephone
	Emergencies Day Or Night	New York Telephone
	Applnce Svcng	New York Telephone
	Initial Svce	New York Telephone

FINDINGS

Year	Uses	Source
1976	Call Number Shown On Bill If No Bill Available Call	New York Telephone
	Corcoran Amabile & Danahar	New York Telephone
	Corcoran B J	New York Telephone
	Corcoran John J atty	New York Telephone
	Dechter Chas CPA	New York Telephone
	Fier Chas H atty	New York Telephone
	Fries J E Co Ins	New York Telephone
	Gellman Harold lwyr	New York Telephone
	Atty	New York Telephone
1970	Abstract Assocs Inc	New York Telephone
	Amer Examnr pblctn	New York Telephone
	Amer Realty Co industrl rl est	New York Telephone
	Baron Harry atty	New York Telephone
	Berman David T atty	New York Telephone
	Bklyn Underwriting Agncy Inc	New York Telephone
	Butt Nathan W Jr atty	New York Telephone
	Camp Ta Go La	New York Telephone
	Haas Carl E CLU Inc	New York Telephone
	Corcoran John J atty	New York Telephone
	Decher Chas CPA	New York Telephone
	Eveready Ins Co	New York Telephone
	Fier Chas H atty	New York Telephone
	Fries J E Co ins	New York Telephone
	Gellman Harold lwyr	New York Telephone
	Genl Accident Fire & Life Assurance Corp	New York Telephone
	Gibraltar Brokrge Co	New York Telephone
	Gilman Sidney atty	New York Telephone
	Greenberg Saml acctnt	New York Telephone
	Greenberg Saml acctnt	New York Telephone
	Atty	New York Telephone
	Healy Jas F atty	New York Telephone
	Bklyn Offices	New York Telephone
	Lande Abstract Co Inc	New York Telephone
	Lesser Arthur S ins	New York Telephone
	Macrobiotics Inc	New York Telephone
	Neumann Waldemar J atty	New York Telephone
	Raider David L atty	New York Telephone
	Schnapp Stanley atty	New York Telephone

FINDINGS

Year	Uses	Source
1970	Sieven Jacob rl est	New York Telephone
	Sieven Louis I rl est	New York Telephone
	Business	New York Telephone
	Sugameli Antnony atty	New York Telephone
	Branch	New York Telephone
	Ta Go La Camp	New York Telephone
	Branch	New York Telephone
	Branch	New York Telephone
1967	Raider David Latty	New York Telephone
	Schnapp Stanley atty	New York Telephone
	Sieven Jacob rl est	New York Telephone
	Sieven Louis I rl est	New York Telephone
	Sugameli Anthony atty	New York Telephone
	Ta Go La Camp	New York Telephone
	Abrams Murray atty	New York Telephone
	Abstract Assocs Inc	New York Telephone
	Amer Realty Co Industrilest	New York Telephone
	Baron Harry atty	New York Telephone
	Bklyn Underwriting Agncy Inc	New York Telephone
	BKLYN UNION GAS CO THE Emergencies Day or Night	New York Telephone
	Applnce Svcng	New York Telephone
	If No Bill Available Call @Brooklyn@	New York Telephone
	Butt Nathan W Jr atty	New York Telephone
	Camp Ta Go La	New York Telephone
	Haas Carl E CLU Inc	New York Telephone
	Corcoran John J atty	New York Telephone
	Dechter Chas CPA	New York Telephone
	Eveready Ins Corp	New York Telephone
	Fier Chas H atty	New York Telephone
	Gellman Harold lwyr	New York Telephone
	Geni Accident Fire & Life Assurance Corp	New York Telephone
	Gibralter Brokrge Co	New York Telephone
	Gilman Sidney atty	New York Telephone
	Haas Carl E CLU Inc	New York Telephone
	Healy Jas F atty	New York Telephone
	Branch Office	New York Telephone
	Bklyn Offices	New York Telephone
	Atty	New York Telephone

FINDINGS

Year	Uses	Source
1967	Lande Abstract CoInc	New York Telephone
	Lesser Arthur S Ins	New York Telephone
	Macrobiotics Inc	New York Telephone
	Neumann Waldemar J atty	New York Telephone
	Powsner Katz & Powsner lwyrs	New York Telephone
1962	Barker File Office Inc The ins	New York Telephone Directory
	Baron Harry atty	New York Telephone Directory
	Bklyn Offices	New York Telephone Directory
	Berman David T atty	New York Telephone Directory
	Birnbaum Harris atty	New York Telephone Directory
	Bklyn Underwriting Agncy Inc	New York Telephone Directory
	Camp Ta Go La	New York Telephone Directory
	Raider David L atty	New York Telephone Directory
	Schnapp Stanley atty	New York Telephone Directory
	Sieven Jacob rl est	New York Telephone Directory
	Sieven Louis I rl est	New York Telephone Directory
	Ta Go La Camp	New York Telephone Directory
	Wellens Nath I L atty	New York Telephone Directory
	Zabatta Anthony J CPA	New York Telephone Directory
	DAndrea D Jos lwyr	New York Telephone Directory
	De Andrea D Jos lwyr	New York Telephone Directory
	Dechter Chas CPA	New York Telephone Directory
	Fier Chas H atty	New York Telephone Directory
	Genl Accident Fire & Life Assurance Corp	New York Telephone Directory
	Gibraltar Brokrge Co	New York Telephone Directory
	Gilman Sidney atty	New York Telephone Directory
	Greenberg Saml acctnt	New York Telephone Directory
	Healy Jas F atty	New York Telephone Directory
	Heitler Herman L	New York Telephone Directory
	Lawyer	New York Telephone Directory
	Bklyn Offices	New York Telephone Directory
	Holis	New York Telephone Directory
	Isidore Herman	New York Telephone Directory
	JOHN HANCOCK MUTUAL LIFE INS CO Genl Agencies	New York Telephone Directory
	JOHN HANCOCK MUTUAL LIFE INS CO Genl Agencies	New York Telephone Directory
	Kenwood Labs Inc pharmaceuticals	New York Telephone Directory
	Lesser Arthur S ins	New York Telephone Directory

FINDINGS

Year	Uses	Source
1962	Macribiotics Inc	New York Telephone Directory
	Massachusetts Mutual Life Ins Co	New York Telephone Directory
	Neumann Waldemar J atty	New York Telephone Directory
	Powsner Katz & Powsner lwyrs	New York Telephone Directory
1945	Encyclopaedia Britannica Inc	New York Telephone
	Fier Chas H atty	New York Telephone
	Hagendorn Wm V lwyr	New York Telephone
	Salman J T Mrs electrlsis	New York Telephone
	Sieven Jacob rl est	New York Telephone
	Sieven Louis l rl est	New York Telephone
	TCA Co finance	New York Telephone
	Wheeler Bros Inc rlty investmts	New York Telephone
1939	Amer Title & Guar Co	New York Telephone Company
	Bloomgarden Hyman atty	New York Telephone Company
	Caronna Louis atty	New York Telephone Company
	Fier Chas H atty	New York Telephone Company
	Hagendorn Wm V lwyr	New York Telephone Company
	Lesser Sidney S atty	New York Telephone Company
	Liss Chas S atty	New York Telephone Company
	Miller Saml A atty	New York Telephone Company
	Sieven Jacob rl est	New York Telephone Company
	Sieven Louis l rl est	New York Telephone Company
	Wheeler Bros Inc rity Investmts	New York Telephone Company
1934	Kalt Edw v pres treas Copley Homes Inc	R. L. Polk & Co.
	Kalt Isadore M Sec Copley Homes Inc	R. L. Polk & Co.
	Shanlk Danl mgr Jackson Heights Garage	R. L. Polk & Co.

28 COURT

Year	Uses	Source
1934	Stirn Edmund A mi Blle h	R. L. Polk Co.
	Hahn Kate Mrs cook r	R. L. Polk Co.
	Badehousen Walter Dorothea auto agt r	R. L. Polk Co.

29 COURT

Year	Uses	Source
1934	Koncelik Mollie maid r	R. L. Polk Co.
	Lieberman Belle wid Danl r	R. L. Polk Co.
	Lieberman Dorothy clk r	R. L. Polk Co.
	Warthmuller Wm A Beatrice artist	R. L. Polk Co.

FINDINGS

Year	Uses	Source
1934	h	R. L. Polk Co.
	Werth Herman supt r	R. L. Polk Co.
	Lieberman Nathan Anne dry gds	R. L. Polk Co.

32 COURT

Year	Uses	Source
1996	Brettschneider Joel H atty	NYNEX
	Fallek Jos Attorney Professinal Corp	NYNEX
	Firestone & Harris atty	NYNEX
	Pinsky Irving lawyer	NYNEX
	Wasserman Blair lawyer	NYNEX
1983	Fallek Jos Attorney Professional Corp	New York Telephone
	Greenbaum Bernard lwyr	New York Telephone
	Romanoff Bernard H CPA	New York Telephone
	Rudnick Burton G atty	New York Telephone
1976	Clason & Lee Inc Ins	New York Telephone
	Corner Finn Dwyer Charles attys	New York Telephone
	Jos atty	New York Telephone
	Greenbaum Bernard lwyr	New York Telephone
1970	Caron Wilfred R atty	New York Telephone
	Clason & Lee Inc ins	New York Telephone
	Cuomo Mario M atty	New York Telephone
	Fallek Jos atty	New York Telephone
	Atty	New York Telephone
	Fulton Svce Corp	New York Telephone
	Greenbaum Bernard lwyr	New York Telephone
	Lanza Vito F lwyr	New York Telephone
	Remsen Brokerage Co Inc ins	New York Telephone
	Weiss Marvin atty	New York Telephone
1967	Byrne & Co	New York Telephone
	Caron Wilfred R atty	New York Telephone
	Main Office	New York Telephone
	Cooks Herbert atty	New York Telephone
	Cuomo Mario M atty	New York Telephone
	Fallek Jos atty	New York Telephone
	Fulton Svce Corp	New York Telephone
	Lanza Vito F lwyr	New York Telephone
	Remsen Brokerage Co Ine ins	New York Telephone
	Schulze Thilo C lwyr	New York Telephone

FINDINGS

Year	Uses	Source
1967	Weiss Marvin atty	New York Telephone
1962	Cooks Herbert	New York Telephone Directory
	Atty	New York Telephone Directory
	Cuomo Mario M atty	New York Telephone Directory
	Forman Herman B	New York Telephone Directory
	Ofc	New York Telephone Directory
	Fulton Svce Corp	New York Telephone Directory
	Haas Carl E C L U Inc	New York Telephone Directory
	Lanza Vito F lwyr	New York Telephone Directory
	LOCAL LOAN CO INC	New York Telephone Directory
	Pensig Herbert H atty	New York Telephone Directory
	Remsen Brokerage Co Inc ins	New York Telephone Directory
	Weiss Marvin atty	New York Telephone Directory
1945	Clinton Agency Inc ins	New York Telephone
	Ofc	New York Telephone
	Fulton Svce Corp	New York Telephone
	Gulotta Aug M lwyr	New York Telephone
	Hurley Denis M lwyr	New York Telephone
	Hutton&Holahan lwyrs	New York Telephone
	Kee Wm H mgr	New York Telephone
	Lanza Vito F lwyr	New York Telephone
	Lehman Sewer Pipe Co	New York Telephone
	Lockwood Kessler & Bartlett Inc CEs city survyrs	New York Telephone
	Branch offices	New York Telephone
	Remsen Brokerage Co Inc ins	New York Telephone
	See A B Elevator Co Inc	New York Telephone
	Westinghouise Elec Elevator Co	New York Telephone
1939	Conroy & Hardy lwyrs	New York Telephone Company
	Genl Public Loan Carp Branches	New York Telephone Company
	Heavside Henry P atty	New York Telephone Company
	Hurley Denis M lwyr	New York Telephone Company
	Hutton & Holahan lwyrs	New York Telephone Company
	Lehman Sewer Pipe Co	New York Telephone Company
	Lewis David N atty	New York Telephone Company
	Lockwood Kessler & Bartlett civil engnrs & city surveyors	New York Telephone Company
	Schulze Thilo C lwyr	New York Telephone Company
	Tompkins Leonard J lwyr	New York Telephone Company

FINDINGS

44 COURT

Year	*Uses*	*Source*
1996	Boro Hall Center	NYNEX
	PLANNED PARENTHOOD OF NEW YORK CITY INC	NYNEX
	Resource Personnel Managmnt Svce Inc	NYNEX
	Youth Line	NYNEX
1983	Bora Hall	New York Telephone
	Silverman Irwin B atty	New York Telephone
1976	Brooklyn Ofc	New York Telephone
	Brackley Albert J lwyr	New York Telephone
	Family Planning Resources Center	New York Telephone
	Boro Hall	New York Telephone
1967	Delaney Jas J atty	New York Telephone
1962	Delaney Jas J atty	New York Telephone Directory
	Estate Svce Inc rl est	New York Telephone Directory
	Funk Arthur S acctnt	New York Telephone Directory
	Funk L B & Son Inc ins	New York Telephone Directory
	GENL PUBLIC LOAN CORP	New York Telephone Directory
	Bklyn Offices	New York Telephone Directory
	Good & Kent attys	New York Telephone Directory
	Hardy Reginald S lwyr	New York Telephone Directory
	Main Office Auto Dept	New York Telephone Directory
	Main Office Auto Dept	New York Telephone Directory
	Fire & Inland Marine	New York Telephone Directory
	Main Office Auto Dept	New York Telephone Directory
	Main Office Auto Dept	New York Telephone Directory
	Fire & Inland Marine	New York Telephone Directory
	Metro Agncy ins	New York Telephone Directory
	Sugameli Anthony atty	New York Telephone Directory
	Tamarin Harold W atty	New York Telephone Directory
1945	Commercial Union Assurance Co Ltd	New York Telephone
	Delaney Jas J atty	New York Telephone
	Estate Svce Inc rl est	New York Telephone
	Hardy Reginald S lwyr	New York Telephone
	Herman Nathl atty	New York Telephone
	Peterson Peter A lwyr	New York Telephone
	Porte Raphael atty	New York Telephone
1939	Delaney Jas J atty	New York Telephone Company
	Dow Geo H DDS b	New York Telephone Company

Year	Uses	Source
1939	Empire Personal Loan Co Inc	New York Telephone Company
	Estate Svce Inc rl est	New York Telephone Company
	Giamberso Dominic atty	New York Telephone Company
	Lincoln Wrecking Co Inc	New York Telephone Company
	Milligan Arthur M lwyr	New York Telephone Company
	Peterson Peter A lwyr	New York Telephone Company
1934	Kaplan Benj L Debbe v pres Uni Stop Auto Service Ltd	R. L. Polk & Co.
	Siller Molly sec Uni stop Auto Service Ltd	R. L. Polk & Co.

45 COURT

Year	Uses	Source
1996	Eagle Electric Mfg Co Inc	NYNEX
	Eagle Electric Mfg Co Inc	NYNEX
	JAFFE Robert	NYNEX
	HULL Robert	NYNEX
1939	Wessmann R H b	New York Telephone Company

COURT PL

44 COURT PL

Year	Uses	Source
1934	Farley Cornelius A Bridget J pruner h	R. L. Polk Co.

COURT SQ

2510 COURT SQ

Year	Uses	Source
2005	Supreme Court 2 G	Hill-Donnelly Information Services
	Queens Criminal Term	Hill-Donnelly Information Services
	Nyc Dist Atly Queens County	Hill-Donnelly Information Services
1991	Leviten Iris L CSR	NYNEX Information Resource Company

27 COURT SQ

Year	Uses	Source
1996	BROOKS Eric	NYNEX
1945	Hub Papr & Twine Co	New York Telephone

28 COURT SQ

Year	Uses	Source
1934	Justice Diner RTN Mary Podlaski restr	R. L. Polk & Co.

FINDINGS

45 COURT SQ

Year	*Uses*	*Source*
2005	Coaxicom 0 718 937 1806 oi	Hill-Donnelly Information Services
1996	ROMANO Michael A	NYNEX
	Werfin Jerald atty	NYNEX
	Kinny Parking Systems	NYNEX
	Forty Eleven	NYNEX
	Acme Pallet Co Inc	NYNEX
	ABERLE C	NYNEX
	DOHNEY Jos	NYNEX
	GRIPPO C R	NYNEX
	HANLEY Gerard	NYNEX
	HERTRICH Alfred	NYNEX
	KREVEY G	NYNEX
	MAHER Daniel	NYNEX
	MONTALVO M	NYNEX
	MONTALVO M	NYNEX
	RAMOS Ana	NYNEX
	Werfin Jerry atty	NYNEX
	SNOW F M	NYNEX
	VAQUERO Andre	NYNEX
	VIDIC Mellssa	NYNEX

COURT ST

28 COURT ST

Year	*Uses*	*Source*
1934	Bodenhausen Walter E Dorothea pres Island Motor Corp h	R. L. Polk Co.

32 COURT ST

Year	*Uses*	*Source*
1934	HUTTON & HOLAHAN Albert Hutton George R Holahan Jr Lawyers	R. L. Polk & Co.

DUTCH KILLS ST

43 DUTCH KILLS ST

Year	*Uses*	*Source*
1996	Hedberg Lawrence S	NYNEX

FINDINGS

43-X DUTCH KILLS ST

Year	Uses	Source
1950	METAL SPRAY CORP	New York Telephone
	ALLIED CLEANING CONTRS INC	New York Telephone
	ALLIED PNEUMATIC SVCES INC	New York Telephone

DUTCHKILLS ST

4315 DUTCHKILLS ST

Year	Uses	Source
2005	Smi Construction Mgmt Inc	Hill-Donnelly Information Services
2000	Steve Mark Inc	Cole Information Services
1945	Vasconcellos J Inc stage equip	New York Telephone
	Colonial Wire & Cable Co Inc	New York Telephone

HUNTER

4266 HUNTER

Year	Uses	Source
1934	Mc Corkindale Duncan T Isabelle carp	R. L. Polk & Co.
	Quinn Marjorie cash	R. L. Polk & Co.
	Mac Millan Wm Mary brklyr	R. L. Polk & Co.
	Mc Corkindale Wm carp	R. L. Polk & Co.
	Quinn Chas pkr	R. L. Polk & Co.
	Brant Algot Evelyn mech dentist	R. L. Polk & Co.

4268 HUNTER

Year	Uses	Source
1934	Bates Anna Mrs	R. L. Polk & Co.
	Mc Lean Cath wid John	R. L. Polk & Co.
	Bates Howard clk	R. L. Polk & Co.
	Bates Fred Anna cnocrete wkr	R. L. Polk & Co.

4269 HUNTER

Year	Uses	Source
1934	Lewis Wm Isabelle printer	R. L. Polk & Co.
	Adametz Anna hlpr	R. L. Polk & Co.
	Adametz Amiel lab	R. L. Polk & Co.

FINDINGS

4270 HUNTER

Year	Uses	Source
1934	Muchlelsen Jacob Clara cabt mkr	R. L. Polk & Co.
	Mc Lean Kath wid John	R. L. Polk & Co.
	Swver Helen dry gds	R. L. Polk & Co.
	Corcoran John electn	R. L. Polk & Co.
	Abamont Theresa clk	R. L. Polk & Co.
	Abamont Louis clk	R. L. Polk & Co.
	Abamont Julia V clk	R. L. Polk & Co.
	Abamont Frances wid Ralph	R. L. Polk & Co.

4271 HUNTER

Year	Uses	Source
1934	Hulley DAvid Margt	R. L. Polk & Co.
	Hulley Cath clk	R. L. Polk & Co.
	Hulley DAvid jr gas ftr	R. L. Polk & Co.
	Hulley Elizabeth clk	R. L. Polk & Co.
	Hulley Margt silk winder	R. L. Polk & Co.
	Hulley Martin blpr	R. L. Polk & Co.

4273 HUNTER

Year	Uses	Source
1934	Carroll John Kath sta eng	R. L. Polk & Co.

4274 HUNTER

Year	Uses	Source
1934	Baylis Horace G Nilah chef	R. L. Polk & Co.
	Holmes Ida maid	R. L. Polk & Co.
	Lee Amos Rebecca lab Mhn	R. L. Polk & Co.

4275 HUNTER

Year	Uses	Source
1934	Biederman Fred Irmina chauf	R. L. Polk & Co.

4276 HUNTER

Year	Uses	Source
1934	Righetti Henry Carolina porter	R. L. Polk & Co.
	Righetti Jos shoe shiner	R. L. Polk & Co.

FINDINGS

4279 HUNTER

Year	Uses	Source
1934	Dediszky Mary wid Frank	R. L. Polk & Co.

4281 HUNTER

Year	Uses	Source
1934	Liguori Nicholas Mary brklyr	R. L. Polk & Co.

4283 HUNTER

Year	Uses	Source
1934	Karple Louis C & K Motors	R. L. Polk & Co.
	C & K Motors TN Jos Carlin Louis Karple auto reprs	R. L. Polk & Co.
	Carlin Jos Louis C & K Motors	R. L. Polk & Co.

4291 HUNTER

Year	Uses	Source
1939	Schilling Chas A	New York Telephone Company
1934	Schilling Robt	R. L. Polk & Co.
	Schilling Chas A acct	R. L. Polk & Co.

4307 HUNTER

Year	Uses	Source
1939	Federal Chemcl Prods Inc	New York Telephone Company
1934	Yanseski Carl Anna wtchmn	R. L. Polk & Co.
	Kessler Margt wid Jos	R. L. Polk & Co.
	Kessler John	R. L. Polk & Co.
	Brachulis Peter Lucy electn	R. L. Polk & Co.
	Baker Chalotte wid John	R. L. Polk & Co.

4309 HUNTER

Year	Uses	Source
1996	FRYE Robin	NYNEX
1934	Tracy Timothy G police	R. L. Polk & Co.

4312 HUNTER

Year	Uses	Source
1934	Andes Henry Anna wirewkr	R. L. Polk & Co.
	Franz Anna wid Richd	R. L. Polk & Co.
	Franz Thos designer	R. L. Polk & Co.
	Franz Richd towermn	R. L. Polk & Co.

FINDINGS

4315 HUNTER

Year	Uses	Source
1939	Gohn Robt	New York Telephone Company
1934	Jakstones Antonis Millie pkr	R. L. Polk & Co.
	Gohn Withelmina wid Peter	R. L. Polk & Co.
	Gohn Robt Josepnine hdw	R. L. Polk & Co.
	Kevellis Chas lab	R. L. Polk & Co.

4393 HUNTER

Year	Uses	Source
1934	Huebners Service Station N Edw Huebner auto reprs	R. L. Polk & Co.

86 HUNTER

Year	Uses	Source
1934	Fiesel Eug J Margt plmbg	R. L. Polk & Co.

93 HUNTER

Year	Uses	Source
1996	DAYTON P	NYNEX

HUNTER AVE

4303 HUNTER AVE

Year	Uses	Source
1934	Wilson Fredk porter	R. L. Polk & Co.

70 HUNTER AVE

Year	Uses	Source
1934	Digby Wm Eliz Ironwkr h	R. L. Polk Co.

74 HUNTER AVE

Year	Uses	Source
1934	Grefe Eank B Minnie W clk h	R. L. Polk Co.

80 HUNTER AVE

Year	Uses	Source
1934	Holley Margt	R. L. Polk & Co.

81 HUNTER AVE

Year	Uses	Source
1934	Romagnola Frank Marianna barber h	R. L. Polk Co.

FINDINGS

Year	Uses	Source
1934	Romagnola Anthony barber r	R. L. Polk Co.
	Romagnola Carmella r	R. L. Polk Co.

82 HUNTER AVE

Year	Uses	Source
1934	Lewis Isabel tchr	R. L. Polk & Co.

83 HUNTER AVE

Year	Uses	Source
1934	Ring Cath wid Patk h	R. L. Polk Co.
	Ring Jos clk r	R. L. Polk Co.
	Ring Thos r	R. L. Polk Co.

85 HUNTER AVE

Year	Uses	Source
1934	NELSON Oscar Margt sheet metalwkr h	R. L. Polk Co.

87 HUNTER AVE

Year	Uses	Source
1934	Adinolfi A	R. L. Polk Co.
	Adnolfi Amello Annetto h	R. L. Polk Co.

HUNTER ST

4266 HUNTER ST

Year	Uses	Source
1983	De Gaetano A	New York Telephone
1970	DeGaetano Joseph	New York Telephone
1967	Quinn Terance J	New York Telephone
	Trinker Arthur L	New York Telephone
1962	Trinker Arthur L	New York Telephone Directory
	Yiannitsis Lea L	New York Telephone Directory

4268 HUNTER ST

Year	Uses	Source
1991	Shini Kazi	NYNEX Information Resource Company
1983	Castillo F	New York Telephone
1976	Izquierdo Juan	New York Telephone
1967	Moore Margaret Mrs	New York Telephone
	McDermott Walter X	New York Telephone
	Kennedy Patk J	New York Telephone

FINDINGS

Year	Uses	Source
1967	Callahan John P	New York Telephone
1962	McDermott Walter X	New York Telephone Directory
	Kennedy Patk J	New York Telephone Directory
1945	Kennedy Patk J	New York Telephone
1939	Mc Corkindale Duncan	New York Telephone Company

4269 HUNTER ST

Year	Uses	Source
1970	Otero Adolfo	New York Telephone
	Behan Adelaide F	New York Telephone
1967	Behan Adelaide F	New York Telephone
	Poland Laurence	New York Telephone
1962	Homek Peter	New York Telephone Directory

4271 HUNTER ST

Year	Uses	Source
2000	Apple Cmpctn Corp	Cole Information Services
	Apple Cmpctn Corp	Cole Information Services
	AIC Compactor Corp	Cole Information Services
1991	Automatic Incinerator Correction Corp	NYNEX Information Resource Company
	AIC Compactor Corp	NYNEX Information Resource Company
1983	Rockaway Plumbing & Heating	New York Telephone
	Automatic Incinerator Correction Corp	New York Telephone
	A I C Incinerator Upgrading	New York Telephone
	AIC Compactor Corp	New York Telephone
1976	AUTOMATIC INCINERATOR CORRECTION CORP	New York Telephone
	A I C Incinerator Upgrading	New York Telephone
	AIC Compactor Corp	New York Telephone
1970	Padilla Ramon	New York Telephone
1967	Rosales Justo	New York Telephone
	Padilla Ramon	New York Telephone

4272 HUNTER ST

Year	Uses	Source
2005	Horvath Printing Machinery	Hill-Donnelly Information Services
1991	Beacon Metal Maintenance Inc	NYNEX Information Resource Company
1983	Sirocco Air Conditioning Corp	New York Telephone
	Aetna Air Conditioning Corp	New York Telephone
1970	Chambers Eaton Colnc	New York Telephone

FINDINGS

4273 HUNTER ST

Year	Uses	Source
2005	Distribution Association Inc	Hill-Donnelly Information Services
	123 Js Corp Inc 1s	Hill-Donnelly Information Services
2000	Dstrbtn Asscs Inc	Cole Information Services
1991	Distribution Assocs Inc	NYNEX Information Resource Company
1983	Distribution Assocs Inc	New York Telephone
1976	Distribution Assocs Inc	New York Telephone
1970	Platers Research Corp	New York Telephone
	Masters Electro Plating Assn Inc	New York Telephone
	Platers Technical Service Inc	New York Telephone
1967	Masters Electro Plating Assn Inc	New York Telephone
	Platers Research Corp	New York Telephone
	Platers Tech Svce Inc	New York Telephone

4274 HUNTER ST

Year	Uses	Source
2005	Cumgachi Maria v	Hill-Donnelly Information Services
2000	S Murdock	Cole Information Services
1991	Guzman Victor	NYNEX Information Resource Company
1983	Astillero Jose R	New York Telephone
1970	Harris Helen H	New York Telephone
1967	Harris Helen H	New York Telephone
1962	Harris Helen H	New York Telephone Directory

4277 HUNTER ST

Year	Uses	Source
2005	4278 Na L	Hill-Donnelly Information Services
2000	R Lafontaine	Cole Information Services
	F Mathews	Cole Information Services
1991	Mathews F	NYNEX Information Resource Company
	La Fontaine R	NYNEX Information Resource Company
1983	Mathews F	New York Telephone
	La Fontaine R	New York Telephone
1962	Auriemmo Rose Virginia	New York Telephone Directory
1945	Raso Mary	New York Telephone

4278 HUNTER ST

Year	Uses	Source
2000	Nazix	Cole Information Services

FINDINGS

Year	Uses	Source
1991	Rimini Enterprises	NYNEX Information Resource Company
1983	A T Mechanical & Sprinkler Inc	New York Telephone
1970	DAMIR IRON WKS INC	New York Telephone
1967	Olympic Plating Eqp Co pltrs eqp	New York Telephone
	OLYMPIC RADIO & TELVISN DIV OF LEAR SIEGLER INC	New York Telephone

4279 HUNTER ST

Year	Uses	Source
1945	Cox J J	New York Telephone

4281 HUNTER ST

Year	Uses	Source
2005	Belfor European Closets Inc	Hill-Donnelly Information Services
	All American Mechanical Inc	Hill-Donnelly Information Services
1991	European Closet & Cabinet Inc	NYNEX Information Resource Company
1983	Edward A Designs	New York Telephone
	Commercial Lettershop Inc The	New York Telephone
	A & J Doll Acesries Co	New York Telephone
	A & D Mfg Co	New York Telephone
1976	A & J Doll Acesries Co	New York Telephone
1970	A & J Doll Acesries Co	New York Telephone

4283 HUNTER ST

Year	Uses	Source
2005	Final Dimension I R	Hill-Donnelly Information Services
2000	Team Mechl Corp	Cole Information Services
	Air Flow Cntrl Crp	Cole Information Services
	27TH ST INTS FROM	Cole Information Services
	43RD ST INTS FROM	Cole Information Services
1991	Hendersons Auto Body	NYNEX Information Resource Company
1983	Hunter Contrctng & Maintenance Corp	New York Telephone
1945	Valencia Bakery	New York Telephone
	Oven Gold Cookies	New York Telephone
1939	Oven Gold Cookies	New York Telephone Company

4291 HUNTER ST

Year	Uses	Source
1945	Schilling Chas A rl est	New York Telephone

FINDINGS

4293 HUNTER ST

Year	Uses	Source
1945	Huebners Serv Sta	New York Telephone

4302 HUNTER ST

Year	Uses	Source
1991	Custom Auto Sound & Security Ltd	NYNEX Information Resource Company
	Express City Elevator Ltd	NYNEX Information Resource Company

4308 HUNTER ST

Year	Uses	Source
1983	Nervestral Inc	New York Telephone
1970	Nervestral Inc	New York Telephone

4309 HUNTER ST

Year	Uses	Source
2005	No Current Listing	Hill-Donnelly Information Services
2000	John Orcutt	Cole Information Services
	Robin Frye	Cole Information Services
1991	Antekeier Kristopher	NYNEX Information Resource Company
	Dayton P	NYNEX Information Resource Company
	Frye Robin	NYNEX Information Resource Company
	Morgan Stephen W	NYNEX Information Resource Company
1983	Couso Antonio	New York Telephone
	Ledo Antonio	New York Telephone
1976	Couso Antonio	New York Telephone
	Ledo Antonio	New York Telephone
1970	Couso Antonio	New York Telephone
1967	Cuozzo Mario A	New York Telephone
1962	McKee Susan	New York Telephone Directory

4311 HUNTER ST

Year	Uses	Source
2005	Charles j Hassel & Sons Inc	Hill-Donnelly Information Services
2000	Hassel C & Sons Inc	Cole Information Services
1991	HASSEL CHARLES J & SONS INC	NYNEX Information Resource Company
1983	HASSEL CHARLES J & SONS INC	New York Telephone
1976	Adequate Power & Heat Corp	New York Telephone
1970	Adequate Power & Heat Corp	New York Telephone
1967	Adequate Power & Heat Corp	New York Telephone
1962	Hunter Electrcl Suply Co	New York Telephone Directory

FINDINGS

4315 HUNTER ST

Year	Uses	Source
2005	8 Craigen Amelia	Hill-Donnelly Information Services
2000	Kumiko Nakayam	Cole Information Services
	Matty Lau	Cole Information Services
	Carmen Gee	Cole Information Services
	Pauline Garber	Cole Information Services
	David A Garber	Cole Information Services
1991	Kavanagh Billy	NYNEX Information Resource Company
1983	Kavanagh Billy	New York Telephone
1970	Penczak Michl	New York Telephone
1962	Penczak Michl	New York Telephone Directory
1945	Gohn Robt	New York Telephone
1939	Gohn Wilhelmina Mrs	New York Telephone Company

4317 HUNTER ST

Year	Uses	Source
1962	Hunter Parking Sta	New York Telephone Directory

4325 HUNTER ST

Year	Uses	Source
2005	Centralized Lab Svc 3 P	Hill-Donnelly Information Services
2000	Cntrlzd Lab Svces	Cole Information Services
	44TH RD INTS FROM	Cole Information Services
	44TH DR INTS FROM	Cole Information Services
1991	Centralized Lab Svces Inc	NYNEX Information Resource Company
1983	Centralized Lab Svces Inc	New York Telephone
1976	Centralized Lab Svces Inc	New York Telephone
1970	Centralized Lab Svces Inc	New York Telephone
	Kason Hardware Corp	New York Telephone
	Sales Ofc	New York Telephone
	Svce & Parts	New York Telephone
1967	Centralized Lab Svces Inc	New York Telephone
	Kason Hardware Corp	New York Telephone
	Toledo Kitchn Mach Div of Toledo Scale Corp	New York Telephone
	Sales Office	New York Telephone
	Svce & Parts	New York Telephone
1962	Toledo Scale Div	New York Telephone Directory
	Svce Depts	New York Telephone Directory

Year	Uses	Source
1962	Toledo Scale Div	New York Telephone Directory

4422 HUNTER ST

Year	Uses	Source
1991	Peper Contracting Corp	NYNEX Information Resource Company
1970	Crescent Boiler Wks Inc	New York Telephone
1967	Crescent Boiler Wks Inc	New York Telephone

4426 HUNTER ST

Year	Uses	Source
2005	Quill Kevin P I P	Hill-Donnelly Information Services
	h Quill Kevin P v 718 786 5299 o	Hill-Donnelly Information Services
	Mangan J Warren	Hill-Donnelly Information Services
2000	Silagl Robert Atty	Cole Information Services
	Mangan J Warren	Cole Information Services
	Quill Kevin P Lwyr	Cole Information Services
1991	GREINER J B CO INC rlest Industrial & Commercral Real Estate	NYNEX Information Resource Company
1983	GREINER J B CO INC rl est	New York Telephone
1976	GREINER J B CO INC rl est	New York Telephone

4428 HUNTER ST

Year	Uses	Source
1970	Natl Sound Systms Inc	New York Telephone
1967	Natl Sound Systms Inc	New York Telephone

JACKSON AVE

2526 JACKSON AVE

Year	Uses	Source
1934	Wilen Harry Eva staioner	R. L. Polk & Co.

2528 JACKSON AVE

Year	Uses	Source
2005	USA Locksmith i s	Hill-Donnelly Information Services
	Dominos Pizza 2 R	Hill-Donnelly Information Services
1991	Precision Scale Co Inc	NYNEX Information Resource Company
1983	Precision Scale Co Inc	New York Telephone
	Detecto Industrl Scales Of New York Inc	New York Telephone
1976	DETECTO INDUSTRL SCALES OF NEW PARK INC	New York Telephone

FINDINGS

Year	Uses	Source
1970	Precision Scale Co Inc	New York Telephone
	Detecto Industrl Scales of New York Inc	New York Telephone
1967	Precision Scale Co Inc	New York Telephone
	Precision Scale Co Inc	New York Telephone
	Glazed Indstries Inc	New York Telephone
	Detecto Industrl Scales of New York Inc	New York Telephone

2534 JACKSON AVE

Year	Uses	Source
2005	MXD Becom	Hill-Donnelly Information Services
	Qualex Inc I 1 718 433 0895 oo	Hill-Donnelly Information Services
	Phoenix Signs 0 o 718 707 0751 oo	Hill-Donnelly Information Services
1991	Muzak Ltd Partnership	NYNEX Information Resource Company
	P I P	NYNEX Information Resource Company
	Long Island City	NYNEX Information Resource Company
1983	Goffa International Corp toys	New York Telephone
	Queens Progress	New York Telephone
	Shoe Wind International Corp	New York Telephone
	Queens Progress Div Of Brooklyn Progress	New York Telephone
1976	Keuffel & Esser Co draftg mnatls	New York Telephone
1970	Keuffel & Esser Co draftg matls	New York Telephone
1967	Keuffel & Esser Co draftg matls	New York Telephone
1962	Keuffel & Esser Co draftg matls	New York Telephone Directory

2536 JACKSON AVE

Year	Uses	Source
2005	A 24 Hour Emergency Locksmith	Hill-Donnelly Information Services
	A Emergency Lock A Locksmith	Hill-Donnelly Information Services
	AAA Quality Label Co	Hill-Donnelly Information Services
	h DI Sa Ivo D AO	Hill-Donnelly Information Services
	La Sirena Pizza & Pasta I R	Hill-Donnelly Information Services
	Link N Lock Locksmlths 1s	Hill-Donnelly Information Services
	Silvia M Surdez Law Office	Hill-Donnelly Information Services
1991	AAA Quality Label Co	NYNEX Information Resource Company
	Banco Industrial De Venezuela	NYNEX Information Resource Company
	Sals Corner Pizzeria	NYNEX Information Resource Company
	Sals Corner Pizzeria fax	NYNEX Information Resource Company
	Scheffs M	NYNEX Information Resource Company

FINDINGS

Year	Uses	Source
1991	Strictly Strips Grams	NYNEX Information Resource Company
1983	Banco Industrial De Venezuela	New York Telephone
	Barth Envelope Co Inc	New York Telephone
	Scheffs M	New York Telephone
1976	Barth Envelope Co Inc	New York Telephone
1970	Barth Envelope Co Inc	New York Telephone
	Knoscraft Co Inc belts	New York Telephone
	Solson Handbag Co	New York Telephone
1967	Barth Envelope Co	New York Telephone
	Knotcraft Co Inc belts	New York Telephone
	Solson Handbag Co	New York Telephone
1962	Dairy Craft Supl Co	New York Telephone Directory
	Electro Dispersion Corp	New York Telephone Directory
	Knotcraft Co belts	New York Telephone Directory
1934	Mc Carron John Elizabeth trucking	R. L. Polk & Co.
	Mc Carron John jr chauf	R. L. Polk & Co.
	Stevenson Jas A Co Inc NY Jas A Stevenson pres Wm C Cole sec treas trucking	R. L. Polk & Co.

2540 JACKSON AVE

Year	Uses	Source
1962	Premier Eqp Co	New York Telephone Directory

2547 JACKSON AVE

Year	Uses	Source
1934	Corbin Thos brakmn	R. L. Polk & Co.

2604 JACKSON AVE

Year	Uses	Source
2005	Mr Wonton Chinese Restaurant	Hill-Donnelly Information Services
	Mishali Naomi	Hill-Donnelly Information Services
	Maya Recordings is	Hill-Donnelly Information Services
	h Manzi	Hill-Donnelly Information Services
	Kito Kazuo A	Hill-Donnelly Information Services
	h Jadidian Usa 0718 706 61059s	Hill-Donnelly Information Services
	24 All Day Emergency Locksmith	Hill-Donnelly Information Services
	24 Hour Emergency Locksmith	Hill-Donnelly Information Services
	h Neman Yosi +0 718 433 Ol Sas	Hill-Donnelly Information Services
	h Roque John 0718 784 38959a	Hill-Donnelly Information Services

FINDINGS

Year	Uses	Source
2005	Weitz Michael	Hill-Donnelly Information Services
	Multi Unit Address	Hill-Donnelly Information Services
1991	Business Resource Center	NYNEX Information Resource Company
	Business Scoop recorded announcemnt Call	NYNEX Information Resource Company
	Cin Bal Brokerage Inc	NYNEX Information Resource Company
	Contaminant Control & Assoc	NYNEX Information Resource Company
	Corp Restrnt The	NYNEX Information Resource Company
1983	HADNAGY CORP	New York Telephone
1976	Hadnagy Corp	New York Telephone
1970	Hadnagy Corp	New York Telephone
1967	Hadnagy Corp	New York Telephone
1962	G M K Precision Machs Inc	New York Telephone Directory
	G M K Research Engnrng Co	New York Telephone Directory
	Goldsmith Abraham M Matl hndlg	New York Telephone Directory
	Grand Specialties Co matl handlg	New York Telephone Directory
	Midtown Mach Tool Co Inc	New York Telephone Directory
	Twin City Monorail Co	New York Telephone Directory
1934	Nolan Danl	R. L. Polk & Co.
	Nolan Dorothy wid Danl	R. L. Polk & Co.
	OConnell Gerald Kath supt	R. L. Polk & Co.
	Paulines Coffee Shop Sigmund Feldman	R. L. Polk & Co.

2606 JACKSON AVE

Year	Uses	Source
1991	Beaver Concrete Breaking Co Inc	NYNEX Information Resource Company
1976	AA Sales & Svce	New York Telephone
	American Locksmith Inc	New York Telephone
1970	AAA Sales & Svce Inc	New York Telephone
1967	Tasty Sandwich Shop	New York Telephone
1962	Tasty Sandwich Shop	New York Telephone Directory
1939	Blum Elect Co	New York Telephone Company
	If no answer call WI ndsr 60394	New York Telephone Company
1934	Bugenis Michl Grace lab	R. L. Polk & Co.
	Gregorash John Margt lab	R. L. Polk & Co.
	Podelski Ephraim Malanka lab	R. L. Polk & Co.
	Queens Court Barber Shop RTN Anthony Trombibe	R. L. Polk & Co.
	Ratske Stanislaz mach	R. L. Polk & Co.
	Riordan Timothy Julia lab	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1934	Trombino Anthony Queens Court Barber Shop	R. L. Polk & Co.
	Blum Electric Co Louis Blum elec contr	R. L. Polk & Co.

2607 JACKSON AVE

Year	Uses	Source
1976	CENTURY RUBBR SUPL CO INC	New York Telephone
1934	Gromme Feo meter tester	R. L. Polk & Co.
	Gromme Hanry	R. L. Polk & Co.
	Gromme Tessie pkr	R. L. Polk & Co.
	Scanlon W J granite fire places	R. L. Polk & Co.
	Welsh Cornelius Margt chauf	R. L. Polk & Co.
	Welsh John chauf taxi	R. L. Polk & Co.
	Welsh Patk brklyr	R. L. Polk & Co.
	State Windod Cleaning Co Thos Spencer Jos Murphy	R. L. Polk & Co.

2608 JACKSON AVE

Year	Uses	Source
1970	Fleischman I wdwkr	New York Telephone
1967	Fleischman I wdwkr	New York Telephone
1962	Fleischman I wdwkr	New York Telephone Directory
1945	Fleischman H wdwkr	New York Telephone
1939	Fleischman H wdwkr F	New York Telephone Company
1934	Dorff Jos Inc NY Hyman Fleishman mgr carp contrs	R. L. Polk & Co.

2609 JACKSON AVE

Year	Uses	Source
2005	Archetypal i s 718 389 6777 os	Hill-Donnelly Information Services
	Peter Consola Inc	Hill-Donnelly Information Services
1991	Queens Plaza Auto Parts	NYNEX Information Resource Company
1983	AAA Adding Machine Co Inc	New York Telephone
	AAA Cash Registers	New York Telephone
	AAA Cash Registers div of a a a adding mach co inc	New York Telephone
	American Electronic Security	New York Telephone
	Lytle Shore Prntrs	New York Telephone
	Weinstock Seymour b	New York Telephone
1976	AAA Adding Machine Co Inc	New York Telephone
	AAA Cash Registers	New York Telephone

FINDINGS

Year	Uses	Source
1976	AAA Cash Registers Div Of A A A Adding Mach Co Inc	New York Telephone
1970	AAA ADDING MACH CO INC	New York Telephone
	Weinstock Seymour b	New York Telephone
1967	AAA ADDING MACH CO INC	New York Telephone
	Weinstock Seymour b	New York Telephone
1962	AAA ADDING MACH CO INC	New York Telephone Directory
	Republic Flow Meters Co	New York Telephone Directory
	Weinstock Seymour b	New York Telephone Directory
1934	Genega Ilko Tessie gro	R. L. Polk & Co.
	Genega Tessie Mrs clk Ilko Genega	R. L. Polk & Co.
	Hewitt Margt wid Jas	R. L. Polk & Co.
	Klein Mae wid Jos	R. L. Polk & Co.
	Lee John jute wkr	R. L. Polk & Co.
	Sinnott Kath wid Jas	R. L. Polk & Co.

2611 JACKSON AVE

Year	Uses	Source
1991	Eagle Design Furniture Corp	NYNEX Information Resource Company
1939	Paraschos Lambros	New York Telephone Company
1934	Benanti Fred Sbea shoe repr	R. L. Polk & Co.
	Gartner Mary wid Herman	R. L. Polk & Co.
	Walseman Chas Kath chauf	R. L. Polk & Co.
	Woods Frank May lab Mhn	R. L. Polk & Co.

2612 JACKSON AVE

Year	Uses	Source
1967	Ged Mfg Co	New York Telephone
1962	Ged Mfg Co	New York Telephone Directory
1945	Ged Instrument Co	New York Telephone
1939	Amer Motion Picture Mach Wks	New York Telephone Company
	Amer Museum of Heath Inc Worlds Fair NE wtwn 98018	New York Telephone Company
1934	Archon John Alexandra tailor	R. L. Polk & Co.
	Hroch Geo Antoinette auto body bldr Morrissey	R. L. Polk & Co.
	Hroch Herbert hlpr	R. L. Polk & Co.
	Manganielo Fred Mary lab	R. L. Polk & Co.
	Napolitano Felice Concetta carp	R. L. Polk & Co.
	Napolitano Michl uphol	R. L. Polk & Co.

Year	Uses	Source
1934	Rahthus Isaac Johanna	R. L. Polk & Co.
	Rahthus Jennie pkr	R. L. Polk & Co.
	SCHUELER J L E Irene Awnings Tents and Canvas Goods	R. L. Polk & Co.

2613 JACKSON AVE

Year	Uses	Source
1934	Wyant Casper W Penelope piano mover	R. L. Polk & Co.
	Jaggli Geo Anna harnessmkr	R. L. Polk & Co.
	Wyant Anna M tel opr	R. L. Polk & Co.

2614 JACKSON AVE

Year	Uses	Source
1945	Dykes Lumber Co	New York Telephone
1939	Dykes Lumber Co	New York Telephone Company
1934	Hughes Michl carp	R. L. Polk & Co.
	Dykes Lumber Co John Mitchell mgr	R. L. Polk & Co.

2615 JACKSON AVE

Year	Uses	Source
2005	Moe Taxi & Black Car Svc Ctr	Hill-Donnelly Information Services
1991	Long Island City Tires Corp	NYNEX Information Resource Company
	CITY CORP TIRES	NYNEX Information Resource Company
1970	Berger Max glas	New York Telephone
	Berger Glass Wks Inc	New York Telephone
	BERGER GLASS WKS INC	New York Telephone
1967	BERGER GLASS WKS INC	New York Telephone
	Berger Glass Wks Inc	New York Telephone
	Berger Max glas	New York Telephone
1934	Malenoskas Jos hlpr	R. L. Polk & Co.
	Kernacs Jos lab	R. L. Polk & Co.
	Dancha Danl Eva lab	R. L. Polk & Co.
	Balchunas Sylvester Pauline lab	R. L. Polk & Co.

2616 JACKSON AVE

Year	Uses	Source
2005	Dykes Lumber Co Inc 2 R 718 784 3920 as	Hill-Donnelly Information Services
1991	Dykes Lumber Co Inc	NYNEX Information Resource Company
	Dykes Lumber Co Inc	NYNEX Information Resource Company
1983	DYKES LUMBER CO INC	New York Telephone

FINDINGS

Year	Uses	Source
1983	Dykes Lumber Co Inc	New York Telephone
1976	DYKES LUMBER CO INC	New York Telephone
1970	DYKES LUMBR CO	New York Telephone
1967	DYKES LUMBR CO	New York Telephone
1962	DYKES LUMBR CO	New York Telephone Directory

2617 JACKSON AVE

Year	Uses	Source
1934	Franke Dorothy Mrs elk	R. L. Polk & Co.
	Franke Geo Dorothy Frankes Stationery Store	R. L. Polk & Co.
	Frankes Stationary Store TN Geo Franke	R. L. Polk & Co.
	Francke Gustay contr	R. L. Polk & Co.

2618 JACKSON AVE

Year	Uses	Source
1967	Plaza Fluorescent Inc	New York Telephone
1962	Plaza Fluorescent Inc	New York Telephone Directory
1945	Plaza Fluorescent Inc	New York Telephone

2619 JACKSON AVE

Year	Uses	Source
1983	Nadel Hardware & Supl Corp	New York Telephone
1970	Builders for Industry Inc	New York Telephone
1967	Tek Bearing Co Inc	New York Telephone
	All Power Transmission Co Inc	New York Telephone
1962	All Power Transmission Co Inc	New York Telephone Directory
1945	Susannes Luncheonette	New York Telephone
1939	Franke D statnry	New York Telephone Company
1934	Shidlauskas John Stella lab	R. L. Polk & Co.
	Bugenis John Josephine car inspr	R. L. Polk & Co.

2620 JACKSON AVE

Year	Uses	Source
2005	No Current Listing	Hill-Donnelly Information Services
1991	TRE Precision Corp	NYNEX Information Resource Company
1983	Gale Graphics	New York Telephone
	TRE PRECISION CORP	New York Telephone
1976	Aero Clean Tech Inc	New York Telephone
	Apollo Mach Shop	New York Telephone

FINDINGS

Year	Uses	Source
1976	Clean Tech Inc	New York Telephone
1970	Apollo Mach Shop	New York Telephone
1962	Smith Mary infnts headwr	New York Telephone Directory
1934	Schwartz Saml Sadie shoes	R. L. Polk & Co.

2621 JACKSON AVE

Year	Uses	Source
2005	Wiliamson David	Hill-Donnelly Information Services
	Sage American Kitchen 2 i	Hill-Donnelly Information Services
	Anderson Chanmayne	Hill-Donnelly Information Services
1991	PRISCILLAS	NYNEX Information Resource Company
	Ribeiro Priscilla	NYNEX Information Resource Company
	Vivian Michael	NYNEX Information Resource Company
1976	Clark Daniel B	New York Telephone
1970	Clark Danl B	New York Telephone
	Golden Bugle Tavern The	New York Telephone
	VonDer Geest Eliz Mrs	New York Telephone
1967	Clark Danl B	New York Telephone
	Golden Bugle Tavern The	New York Telephone
	VonDer Geest Eliz Mrs	New York Telephone
1962	Petes Bar & Restrnt	New York Telephone Directory
	Von Der Geest Peter	New York Telephone Directory
1939	Maxwell Wm J machnst	New York Telephone Company

2622 JACKSON AVE

Year	Uses	Source
1934	Sterling Art Metal Works Wm Ivan art metal	R. L. Polk & Co.

2623 JACKSON AVE

Year	Uses	Source
2005	Frey Machael	Hill-Donnelly Information Services
	Minuteman Press	Hill-Donnelly Information Services
1991	Kui San Chi	NYNEX Information Resource Company
	Minuteman Press	NYNEX Information Resource Company
	Muthana Ali	NYNEX Information Resource Company
1976	Brzoska Jos H	New York Telephone
	Colonial Lunchnet	New York Telephone
1970	Brzoska Jos H	New York Telephone
	Colonial Lunchnet	New York Telephone

FINDINGS

Year	Uses	Source
1970	Stanion Walter H	New York Telephone
1967	Brzoska Jos H	New York Telephone
	Colonial Lunchnet	New York Telephone
	Stanion Walter H	New York Telephone
1962	Brzoska Jos H	New York Telephone Directory
	Court Sq Lunch Room	New York Telephone Directory
1945	Thomas Restrnt	New York Telephone
1934	Carlson Axel Marie sta eng	R. L. Polk & Co.
	Court Square Bakery & Lunch Room RTN Adolf Weidner	R. L. Polk & Co.
	Weidner Adolf Helen Court Square Bakey & Lunch Room	R. L. Polk & Co.
	Weidner Helen Mrs clk	R. L. Polk & Co.

2625 JACKSON AVE

Year	Uses	Source
2005	No Current Listing	Hill-Donnelly Information Services
1991	Devito Jas V	NYNEX Information Resource Company
1983	Marx Fred Sr	New York Telephone
1976	Devito Jas V	New York Telephone
1970	Flores Jose Restrnt	New York Telephone
	Marx Fred	New York Telephone
1967	Electro Temp Systms Inc	New York Telephone
	Kold Draft NY Distribtrs	New York Telephone
	Marx Fred	New York Telephone
1962	BERGER GLASS WKS	New York Telephone Directory
	Berger Max glass	New York Telephone Directory
	Marx Fred	New York Telephone Directory
1945	Berger Glass Wks	New York Telephone
	Berger Max glass	New York Telephone
1939	Berger Glass Works	New York Telephone Company
	Berger Max glass	New York Telephone Company
1934	Berger Glass Works TN Max Berger	R. L. Polk & Co.
	Berger Max Anne Berger Glass Wks	R. L. Polk & Co.
	Berger Louis hlpr	R. L. Polk & Co.

2626 JACKSON AVE

Year	Uses	Source
2005	Panam/city Ride Tmsprtn	Hill-Donnelly Information Services
	Pan Am Corp Transportation LTD	Hill-Donnelly Information Services

FINDINGS

Year	Uses	Source
2005	Craftsweld Equip Corp Weldg	Hill-Donnelly Information Services
	C T Ride Discount Auto Repair	Hill-Donnelly Information Services
	A City Ride Car & Lino	Hill-Donnelly Information Services
	1 800 Ctyride	Hill-Donnelly Information Services
1991	Kandel R weldg cutg & diving equip	NYNEX Information Resource Company
	Craftsweld Equip Corp weldg cutg & diving equip	NYNEX Information Resource Company
1983	Kandel R weldg cutg & diving equip	New York Telephone
	Craftsweld Equip Corp weldg cutg & drving equip	New York Telephone
1976	Kandel Richard	New York Telephone
	Kandel R weldg cutg & diving equip	New York Telephone
	Craftsweld Equip Corp weldg cutg & diving equip	New York Telephone
1970	Kandel R weldg cutg & diving equip	New York Telephone
	Craftsweld Equip Corp weldg cutg & diving equip	New York Telephone
1967	Kandel R weldg cutg & diving equip	New York Telephone
	Craftsweld Equip Corp weldg cutg & diving equip	New York Telephone
1962	Kandel R weldg cutg & diving equip	New York Telephone Directory
	Craftsweld Equip Corp weldg cutg & diving equip	New York Telephone Directory
1945	Kaandel Chas weldng & cutng equip	New York Telephone
	Craftsweld Equip Corp welding cutng equip	New York Telephone
1939	Central Auto Radiator Co	New York Telephone Company

2627 JACKSON AVE

Year	Uses	Source
2005	Century Rubber Supply Co	Hill-Donnelly Information Services
1991	CENTURY RUBBER SUPL CO INC Specialist In Hydraulic Hose	NYNEX Information Resource Company
1983	CENTURY RUBBR SUPL CO INC	New York Telephone
1970	CENTURY RUBBR SUPL CO INC	New York Telephone
1967	CENTURY RUBBR SUPL CO INC	New York Telephone
1962	Korff Arthur	New York Telephone Directory
	CENTURY RUBBR SUPL CO INC	New York Telephone Directory
1945	Midtown Mach Tool Co	New York Telephone
1934	Ferbers Cut Shop RTN: Jacob Ferber dry gds	R. L. Polk & Co.
	Rempel Wm H Elsie clk PO	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1934	Rempel Elsie tel opr	R. L. Polk & Co.
	Mazur Pauline wid Leo smstrs	R. L. Polk & Co.
	Bielaski Sophie smstrs	R. L. Polk & Co.

2630 JACKSON AVE

Year	Uses	Source
1934	QUEENS METAL PEILINOS INC NY Morros Howlt pres C Howit sec treas Sheet Metel Working	R. L. Polk & Co.

2632 JACKSON AVE

Year	Uses	Source
1939	Doane Chas M b	New York Telephone Company
1934	Kline Wm L Anna photog	R. L. Polk & Co.

2634 JACKSON AVE

Year	Uses	Source
1934	Rosenthal Siegfried storage	R. L. Polk & Co.
	Rosenthal Jules clk	R. L. Polk & Co.

2636 JACKSON AVE

Year	Uses	Source
2005	Queens Plaza Auto Parts	Hill-Donnelly Information Services
	I 718 786 3333 B	Hill-Donnelly Information Services
1983	BRIDGE PLAZA ELECTRCL SUPL CO INC	New York Telephone
	Starobin Morris L ofc	New York Telephone
1976	Bridge Plaza Electrcl Supl Co Inc J	New York Telephone
1970	BRIDGE PLAZA ELECTROL SUPL CO INC	New York Telephone
	Plaza Fluorescent Inc	New York Telephone
	Starobin Morris L ofc	New York Telephone
1967	BRIDGE PLAZA ELECTRCL SUPL GO INC	New York Telephone
	Starobin Morris L ofc	New York Telephone
1962	BRIDGE PLAZA ELECTRCL SUPL CO INC	New York Telephone Directory
	Starobin Morris L ofc	New York Telephone Directory
1945	Bridge Plaza Electrcl Supl Co Inc	New York Telephone
	Starobin Morris L ofc	New York Telephone
1939	Bridge Plaza Electrcl Supl Co Inc	New York Telephone Company
	Starobin Morris L ofc	New York Telephone Company

FINDINGS

2638 JACKSON AVE

Year	Uses	Source
1934	Ideal System of Garages Inc NY Michl D Greenwald V pres treas auto Grenwald v pres see auto garages	R. L. Polk & Co.

2640 JACKSON AVE

Year	Uses	Source
1976	Johnson Herbert L	New York Telephone
1970	Gross Tool & Die Corp	New York Telephone
	Abbey Tool & Die Co	New York Telephone
1962	Yeats Applnce Dolly Sales Co Inc	New York Telephone Directory
	Wire & Iron Prods Co	New York Telephone Directory
	Towsley Truck Inc	New York Telephone Directory
	Somers J C engnr	New York Telephone Directory
	Schmieg Industries Co	New York Telephone Directory
	Ramirez Plinio C	New York Telephone Directory
	Ipeco Systms	New York Telephone Directory
	Industrl Prods Engnrng Co showrms & ofes	New York Telephone Directory
	Heppenstall Grabs & Safe T Tonps Co	New York Telephone Directory
	Essex Conveyors Inc	New York Telephone Directory
	Heppenstall Co	New York Telephone Directory
	Cameron Somers Colnc	New York Telephone Directory
1934	Putiriu Anthony lab	R. L. Polk & Co.
	Putiriu Yustinor Veronica veneer wkr	R. L. Polk & Co.
	Sestok Michl Sophie dishwasher	R. L. Polk & Co.
	Tish Jacob plstr	R. L. Polk & Co.
	Udes Jas airport mech	R. L. Polk & Co.
	Udes Peter baker	R. L. Polk & Co.
	Napolitano Gaetano Frances hlpr	R. L. Polk & Co.
	Dichpetrys Jos lab	R. L. Polk & Co.
	Balukas Paul Anna baker	R. L. Polk & Co.

2642 JACKSON AVE

Year	Uses	Source
1945	Famous Empee Co Inc flour	New York Telephone
	Pietrolewicz M flour	New York Telephone
	Famous Fashion Shops ladies & infants wear	New York Telephone
1939	Downy Flake Doughnut Shop	New York Telephone Company

FINDINGS

Year	Uses	Source
1939	Famous Empee Co Inc	New York Telephone Company
1934	Gain Studios Edw A Pietrolewick adv agcy	R. L. Polk & Co.

2644 JACKSON AVE

Year	Uses	Source
1945	Eddies Tavern	New York Telephone
	Pappas & Kylas lunch	New York Telephone
1939	Marsan Claude M	New York Telephone Company
1934	Chambers Mary Mrs silk prsr	R. L. Polk & Co.
	Borowsky Aaron Selma pres Bridge Plaza Electric Co Inc	R. L. Polk & Co.
	Bridge Plaza Electric Co Inc NY Aaron Borowsky pres Clara Starobin sec treas elec supplies	R. L. Polk & Co.

2646 JACKSON AVE

Year	Uses	Source
1962	Hoppenfeld Jerome prkg lot	New York Telephone Directory

2699 JACKSON AVE

Year	Uses	Source
1934	OConnor Thos Josephine lab	R. L. Polk & Co.

2701 JACKSON AVE

Year	Uses	Source
2005	Gasgo Petroleum Inc	Hill-Donnelly Information Services
	Nestor Auto Repair Inc l s	Hill-Donnelly Information Services
1996	Neli Corp	NYNEX
1991	Brandys Automotive Inc	NYNEX Information Resource Company
	Jomi Svce Sta Inc	NYNEX Information Resource Company
1983	Joml Svce Sta Inc	New York Telephone
	Jomi Svce Sta	New York Telephone
1976	M & J Svce Sta	New York Telephone
	M & J Svce Stas	New York Telephone
1970	M & J Svce Sta	New York Telephone
	M & J Svce Stas	New York Telephone
1962	Lairsinc Stas Inc	New York Telephone Directory
1945	Gillam Kenneth carpnt & contr	New York Telephone
1934	Long Island Laundry RTN Wm Lucas Fred Gregory	R. L. Polk & Co.

FINDINGS

2702 JACKSON AVE

Year	Uses	Source
1934	Johnson Chas R carp	R. L. Polk & Co.
	Fisher & Kaival Harry Fisher Walter Kaival whol motor oils	R. L. Polk & Co.
	Central Auto Radiator Co Edw Osorowitz	R. L. Polk & Co.

2703 JACKSON AVE

Year	Uses	Source
1945	Storck Wm F carpntr	New York Telephone
	Carsco Metal Store Fronts Co Inc	New York Telephone
1939	Eveready Bar Equip Co	New York Telephone Company
	Carsco Metal Store Fronts Co Inc	New York Telephone Company
1934	Schwarz Isaac Furn	R. L. Polk & Co.

2704 JACKSON AVE

Year	Uses	Source
1934	Standfast Sales Corp NY Jacob Fresco pres sec treas garage	R. L. Polk & Co.
	Queens Garage TN Standfast Sales Corp	R. L. Polk & Co.

2705 JACKSON AVE

Year	Uses	Source
1939	Boris Mach Wks	New York Telephone Company
1934	Rothschild Saml Lena delicatessen	R. L. Polk & Co.

2706 JACKSON AVE

Year	Uses	Source
1934	Flaacke Wm Sophie delicatessen	R. L. Polk & Co.

2707 JACKSON AVE

Year	Uses	Source
1934	Harley DAvidson Motorcycle Agency Kenneth C Butler motorcycles	R. L. Polk & Co.

2709 JACKSON AVE

Year	Uses	Source
1945	Gilbert C F crpntr	New York Telephone
1939	Gilbert C F carpntr	New York Telephone Company
	State Window Cleaning Co	New York Telephone Company
1934	Ristem Frank Rose wtchmn	R. L. Polk & Co.
	Ristem Chas chauf	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1934	Kennedy Patk lab	R. L. Polk & Co.
	Grines Frank Marie auto mach	R. L. Polk & Co.
	Dougherty Dennis Anna lab	R. L. Polk & Co.
	Gleman Frank plmbr	R. L. Polk & Co.

2711 JACKSON AVE

Year	Uses	Source
1945	Rosenzweig E statnry	New York Telephone
1939	Rosenzweig E statnry	New York Telephone Company
1934	Strickberger Jos Regina stationer	R. L. Polk & Co.

2717 JACKSON AVE

Year	Uses	Source
1991	Alling & Cory Co	NYNEX Information Resource Company
1976	Acme Brush Corp	New York Telephone
1970	Acme Brush Corp	New York Telephone
1967	Acme Brush Co	New York Telephone

2719 JACKSON AVE

Year	Uses	Source
1939	Five Bore Neon Corpn	New York Telephone Company
	Indepndnt Sign Mntnce Co	New York Telephone Company
	C & S Svce Inc	New York Telephone Company
	Clark & Smith auto reprs	New York Telephone Company
	Crane Simplex Co Inc	New York Telephone Company
1934	All Saints Service Co RTN Richd P Morgan Selden R Hopkins	R. L. Polk & Co.
	Gilbert Carl F carp	R. L. Polk & Co.
	Royal Eastern Electric Supply Co	R. L. Polk & Co.

2720 JACKSON AVE

Year	Uses	Source
2005	3ules Printing & Stationery Co	Hill-Donnelly Information Services
1991	Furst Elec Co Inc	NYNEX Information Resource Company
	Furst George DDS	NYNEX Information Resource Company
	Furst Industrl Eqp Co Inc	NYNEX Information Resource Company
	Jacobs Electric Inc	NYNEX Information Resource Company
1983	FURST ELEC CO INC	New York Telephone
	E M A International Inc	New York Telephone
	FURST INDUSTRL EOP CO INC	New York Telephone

FINDINGS

Year	Uses	Source
1976	FURST INDUSTRL EOP CO INC	New York Telephone
	FURST ELEC CO INC	New York Telephone
1970	FURST INDUSTRL EQP CO INC	New York Telephone
	FURST ELEC CO INC	New York Telephone
1967	Furst Industrl Eqp Corp	New York Telephone
	FURST ELEC CO INC	New York Telephone
	FURST INDUSTRL EQP CO INC	New York Telephone
1962	FURST ELEC CO INC	New York Telephone Directory
	FURST INDUSTRL EQP CO INC	New York Telephone Directory
	Furst Industrl Eqp Corp	New York Telephone Directory
1934	Metro outdoor Advertising Corp	R. L. Polk & Co.

2721 JACKSON AVE

Year	Uses	Source
1939	Aays Taxi Svce	New York Telephone Company

2722 JACKSON AVE

Year	Uses	Source
2005	Beardslee Transmission Equip	Hill-Donnelly Information Services
1991	Beardslee Transmission	NYNEX Information Resource Company
	BEARDSLEE TRANSMISSION EQUIPT CO INC Queens Sales & Warehouse	NYNEX Information Resource Company
1983	Beardslee Transmission	New York Telephone
	BEARDSLEE TRANSMISSION EQUIPT CO INC	New York Telephone
	Queens Sales & Warehouse	New York Telephone
1976	Queens Sales & Warehouse	New York Telephone
1970	Queens Sales & Warehse	New York Telephone
1967	Queens Sales & Warehse	New York Telephone
1962	Queens Sales & Warehse	New York Telephone Directory
	BEAROSLEE TRANSMISSION EQUIP	New York Telephone Directory
1939	Queens Bd of Business Agents	New York Telephone Company
1934	Mc Keon Blenda wid Jas E	R. L. Polk & Co.
	Mc Keon Mathew truck driver	R. L. Polk & Co.
	Schroder Chas Frances truck driver	R. L. Polk & Co.

2724 JACKSON AVE

Year	Uses	Source
2005	Optimum Delivery Systems Inc	Hill-Donnelly Information Services
	Nassau Rental & Supply	Hill-Donnelly Information Services

FINDINGS

Year	Uses	Source
1991	Aristo Sales Company Inc	NYNEX Information Resource Company
1983	Aristo Sales Co	New York Telephone
1976	Aristo Sales Co	New York Telephone
1970	Aristo Sales CO	New York Telephone
1967	Aristo Sales Co	New York Telephone
1962	Aristo Sales Co	New York Telephone Directory
1945	Blackman Brands Inc	New York Telephone
	Premo Pharmaceutical Labs Inc	New York Telephone
1939	EM Lab Inc	New York Telephone Company
1934	Sharkey Henrietta tel opr Mhn	R. L. Polk & Co.
	Sharkey Harry Ethel truck driver	R. L. Polk & Co.
	Kline Veronica Mrs	R. L. Polk & Co.
	Hurley Margt	R. L. Polk & Co.
	Hurley John police	R. L. Polk & Co.
	Hurley Jas truck driver	R. L. Polk & Co.
	Hayes Harry jr lab	R. L. Polk & Co.
	Hayes Harry pntr	R. L. Polk & Co.
	Blum Lora wid Julius	R. L. Polk & Co.

2726 JACKSON AVE

Year	Uses	Source
2005	Hole Cutting Inc	Hill-Donnelly Information Services
1983	Kupferman Bert	New York Telephone
	Hole Cutting & Tool Rental Inc	New York Telephone
	Krone Helmut	New York Telephone
1976	Empire State Hrdwr & Supl Corp	New York Telephone
1970	Empire State Hrdwr & Supl Corp	New York Telephone
	Model Bride Inc Ine	New York Telephone
1967	Empire State Hrdwr & Supl Corp	New York Telephone
	Model Bride Inc The	New York Telephone
1962	Empire State Hrdwr & Supl Corp	New York Telephone Directory
	Model Bride Inc The	New York Telephone Directory
	El Trebol Inc	New York Telephone Directory
1945	Empire State Hrdwr & Supl Corp	New York Telephone
	Hoffman Tool & Engnrng Co	New York Telephone
	Severance Tool Inc	New York Telephone
	Treacy Geo hrdwr	New York Telephone
1939	Medico Chemcl Corp lab	New York Telephone Company
	Empire State Hrdwr & Supl Corp	New York Telephone Company

Year	Uses	Source
1939	Amer Inhibitor Corp lab	New York Telephone Company
1934	EMPIRE STATE HARDWARE & SUPPLY CORP Ambrose B Acker Pres and Treas Joseph J Cooke Sec Hardware and MIN Supplies	R. L. Polk & Co.

2727 JACKSON AVE

Year	Uses	Source
1945	Seamlex Co Inc metl hose mfrs	New York Telephone
	Ac Ril Dental Corp	New York Telephone
1939	Craftsweld Equip Corp weldg cutg equip	New York Telephone Company
	Kandel Chas weldg cutg equip	New York Telephone Company
	Marvelyn Dental Prods Inc	New York Telephone Company
1934	Martin Rubber Co Inc NY Walter L Tepper pres Martin Tepper sec treas rubber gds whol	R. L. Polk & Co.
	Mastin Rubber Co Inc	R. L. Polk & Co.

2730 JACKSON AVE

Year	Uses	Source
1945	City Bronze Foundry Inc	New York Telephone
1939	Dutch Kills Garage	New York Telephone Company

2731 JACKSON AVE

Year	Uses	Source
1934	Ted & Ethel Service Lunch	R. L. Polk & Co.

2732 JACKSON AVE

Year	Uses	Source
1934	Brown Delmont Elizabeth truck driver	R. L. Polk & Co.
	Yacobellis Chas Sazita imptr	R. L. Polk & Co.
	Brown Elizabeth	R. L. Polk & Co.
	Brown Florence clk	R. L. Polk & Co.
	Liddane Chas Gladys truck driver	R. L. Polk & Co.
	King Francis Kath truck driver	R. L. Polk & Co.

2733 JACKSON AVE

Year	Uses	Source
1945	Special Welding Alloy Co Inc	New York Telephone
1934	White Anna	R. L. Polk & Co.
	Supreme Electric Equipment Co Inc NY Harry J Barth pres Louis Barth sec treas	R. L. Polk & Co.

FINDINGS

2734 JACKSON AVE

Year	Uses	Source
2005	Cab Management Corp	Hill-Donnelly Information Services
1991	CAB MANAGEMT CORP	NYNEX Information Resource Company
1983	CAB MANAGEMT CORP	New York Telephone
1976	Cab Managemt Corp	New York Telephone
1970	Cab Managemt Corp	New York Telephone
1967	Cab Managemt Corp	New York Telephone

2735 JACKSON AVE

Year	Uses	Source
2005	Mini Micro Supply 2 R	Hill-Donnelly Information Services
	Hinson & Co	Hill-Donnelly Information Services
	H L Hinson & Co LTD	Hill-Donnelly Information Services
1991	Kent Bragaline Inc	NYNEX Information Resource Company
	Hinson & Co Ltd	NYNEX Information Resource Company
	Edlo Fabrics Inc	NYNEX Information Resource Company
1983	Bowen Louis W Inc Ofc & Shipping	New York Telephone
	Kent Bragaline Inc	New York Telephone
	Edlo Fabrics inc	New York Telephone
1976	Edio Fabrics Inc	New York Telephone
	Ofc & Shipping	New York Telephone
1970	Edlo Fabrics Inc	New York Telephone
	Shipng Dept	New York Telephone
	Bkkeepg Dept	New York Telephone
1967	Kent Bragaline Inc fabrc prntng	New York Telephone
	Shipng Dept	New York Telephone
	Bkkeepg Dept	New York Telephone
1962	Standard Die Set Co	New York Telephone Directory
	Regent Distribtrs Industrl supls	New York Telephone Directory
	H & S Specialty Co industrl supls	New York Telephone Directory
1945	Supreme Electric Equipment Co Inc elec contrs	New York Telephone
	Barth H J electrcn	New York Telephone
1939	Supreme Electric Equipment Co Inc elec contrs	New York Telephone Company
1934	Goldberg Morris clo prsr	R. L. Polk & Co.
	Caslin Thos Florence chauf	R. L. Polk & Co.

FINDINGS

2737 JACKSON AVE

Year	Uses	Source
1934	L C Club restr	R. L. Polk & Co.

2739 JACKSON AVE

Year	Uses	Source
1934	Sluskin Stanley Tessie lab	R. L. Polk & Co.
	Amato Jos Antoinette Joes TAvern	R. L. Polk & Co.
	Novicks Wm	R. L. Polk & Co.
	Mulinsky Chas lab	R. L. Polk & Co.
	Joes TAvern TN Jos D Amato	R. L. Polk & Co.

2741 JACKSON AVE

Year	Uses	Source
2005	Powell Eric A	Hill-Donnelly Information Services
	24 7 Emergency Locksmith	Hill-Donnelly Information Services
	Porter Brian	Hill-Donnelly Information Services
	Papa Johnnys Restaurants	Hill-Donnelly Information Services
1991	Porter Brian	NYNEX Information Resource Company
	Porter M	NYNEX Information Resource Company
1983	Graham Charles	New York Telephone
1976	Graham Charles	New York Telephone
1970	John A Connolly Vets Inc	New York Telephone
1967	Whitestone Restrnt	New York Telephone
1962	Josephs Theatrical Shoe Co	New York Telephone Directory
1945	Muzio F lunchnet	New York Telephone
1939	DAmato B	New York Telephone Company
	Kligfeld Benj Statnry	New York Telephone Company
1934	Diestel Albert Margt gro	R. L. Polk & Co.
	DAmato Peter Rosarie carp	R. L. Polk & Co.
	DAmato Mary hairdrsr	R. L. Polk & Co.

2743 JACKSON AVE

Year	Uses	Source
2005	WMD Lifien Hardware LLC	Hill-Donnelly Information Services
	Sprotrer Tools & Supply LLC	Hill-Donnelly Information Services
1991	Lilien Hardware & Supl Corp	NYNEX Information Resource Company
1983	Lilien Hardware Supl Corp	New York Telephone
1976	Lilien Hardware & Supl Corp	New York Telephone
1945	Koch Francis	New York Telephone

FINDINGS

Year	Uses	Source
1945	LIC	New York Telephone

2745 JACKSON AVE

Year	Uses	Source
1967	Scarpulla A	New York Telephone
1962	Dans Food Svce	New York Telephone Directory
	Scarpulla A	New York Telephone Directory
1945	Scarpulla A	New York Telephone
1934	Scarpulla Andrew Marie barber	R. L. Polk & Co.
	DAmato Jos Antoinette restr	R. L. Polk & Co.

2747 JACKSON AVE

Year	Uses	Source
1934	Young Leo Eugenia M & Y Trucking	R. L. Polk & Co.
	Young Henry Helen pntr	R. L. Polk & Co.
	M & Y Trucking TN: Leo Young	R. L. Polk & Co.

2748 JACKSON AVE

Year	Uses	Source
2005	Spi Operating Corp	Hill-Donnelly Information Services
1945	Rand Coat Tailors Inc	New York Telephone
	B & D Coat Co	New York Telephone
1939	Bristol Co Inc fcty	New York Telephone Company

2749 JACKSON AVE

Year	Uses	Source
2005	Long Island City Corp IF	Hill-Donnelly Information Services
	Cojam Realty Inc	Hill-Donnelly Information Services
1967	Lilien Hardware & Supl Corp	New York Telephone
1962	LILIEN HRDWR & SUPL CORP	New York Telephone Directory
	Lilien Hardware & Supl Corp	New York Telephone Directory

2750 JACKSON AVE

Year	Uses	Source
1983	College Garage Corp	New York Telephone
1976	College Garage Corp	New York Telephone
1970	College Garage Corp	New York Telephone
1962	Jaysan Parking Sta	New York Telephone Directory

FINDINGS

2751 JACKSON AVE

Year	Uses	Source
2005	Um Dong Sung 1 P	Hill-Donnelly Information Services
	h UDong Sung	Hill-Donnelly Information Services
1991	Razzo Dolores	NYNEX Information Resource Company
1983	Razzo Dolores	New York Telephone
1970	Satmary Alexndr	New York Telephone
	M & S Food Shop	New York Telephone
1967	Satmary Alexndr	New York Telephone
	Ottos Lunch	New York Telephone
1962	Satmary Alexndr	New York Telephone Directory
	Ottos Lunch	New York Telephone Directory
1945	Ottos Lunch	New York Telephone
1939	Ottos Lunch	New York Telephone Company
1934	Zabella Jos lab	R. L. Polk & Co.
	Yuknes Jos Julia auto mech	R. L. Polk & Co.
	Smith Minnie	R. L. Polk & Co.
	Bells Pharmacy TN Saml Bell	R. L. Polk & Co.

2755 JACKSON AVE

Year	Uses	Source
2005	Abrasive Outlet LTD	Hill-Donnelly Information Services
	Arxpo International	Hill-Donnelly Information Services
	Fernandos Jewelry is	Hill-Donnelly Information Services
	Jackson Tool Corp	Hill-Donnelly Information Services
1991	Resibon Grinding Wheel Co Inc	NYNEX Information Resource Company
	Jackson Tool Corp	NYNEX Information Resource Company
1983	Jackson Tool Corp	New York Telephone
	Resibon Grinding Wheel Co Inc	New York Telephone
	Abrasive Outlet Ltd	New York Telephone
1976	Jackson Tool Corp	New York Telephone
	H & S Specialty Co industrl supls	New York Telephone
1970	Jackson Tool Corp	New York Telephone
	H & S Soecialty Co Industrl supls	New York Telephone
	Cortland Grinding Wheels Corp	New York Telephone
	Regent Distribtrs Inc	New York Telephone
	Standard Die Set Co	New York Telephone
1967	Toom Indstry	New York Telephone
	Standard Die Set Co	New York Telephone

Year	Uses	Source
1967	Regent Elec Co NY Blvd & Baisly Blvd @Jamaica@	New York Telephone
	Regent Distribtrs Inc	New York Telephone
	H & S Specialty Co industrl supls	New York Telephone
	Cortland Grinding Wheels Corp	New York Telephone
1945	Ll Hrdwr Co	New York Telephone
	Keystone Lubricating Co	New York Telephone
1939	Ll Hrdwr Co	New York Telephone Company
	Keystone Lubricating Co	New York Telephone Company
1934	LONG ISLAND HARDWARE CO INC NY F A Scholl Pres Treas H W Kornrumph V Pres J J Swayze Sec Hardware and Factory Suplies	R. L. Polk & Co.

2766 JACKSON AVE

Year	Uses	Source
1945	Furst Elec Co Inc	New York Telephone
1939	Furst Elec Co Inc	New York Telephone Company
	Mic Nils Elec Co Inc	New York Telephone Company
1934	Keystone Auto Radiator Co TN Saml Green	R. L. Polk & Co.
	Long Island Welding Supply RTN Thos Watson Smith	R. L. Polk & Co.

2782 JACKSON AVE

Year	Uses	Source
1934	Jung Chas Indry	R. L. Polk & Co.

PURVES ST

44-17 PURVES ST

Year	Uses	Source
1950	EXPERT CONCRETE BREAKERS INC	New York Telephone

44-19 PURVES ST

Year	Uses	Source
1950	BALTIC MACH & TOOL CO	New York Telephone
	GETOMER EQUIP CO	New York Telephone

44-23 PURVES ST

Year	Uses	Source
1950	CONCRETE BREAKING CO	New York Telephone

FINDINGS

44-26 PURVES ST

Year	Uses	Source
1950	ORTHO CHEMCL CORP	New York Telephone

44-27 PURVES ST

Year	Uses	Source
1950	GRUENWALD & NIEMITZ ENGNRS	New York Telephone
	DE PAUL CHEMCL CO INC	New York Telephone

44-30 PURVES ST

Year	Uses	Source
1950	WELSH BROS CONTRACTG CO TRUKNG	New York Telephone
	CENTRAL AUTO RADIATOR SVCE	New York Telephone
	TRU SYNTHETICS INC	New York Telephone

44-35 PURVES ST

Year	Uses	Source
1950	THOMPSON O INC ELEC MFR	New York Telephone
	GAY TRUCKING CO	New York Telephone
	BONDED PAPR PRODS CO INC	New York Telephone

44-37 PURVES ST

Year	Uses	Source
1950	MARRERO JOSE	New York Telephone
	KIMMEL MARY	New York Telephone

44-39 PURVES ST

Year	Uses	Source
1950	GENL DETROIT CORP THE EXTNGSHRS	New York Telephone
	GENL FIRE TRUCK CORP	New York Telephone

44-43 PURVES ST

Year	Uses	Source
1950	HUGHES GLADYS	New York Telephone
	WILLIAMS BENJ	New York Telephone

4411 PURVES ST

Year	Uses	Source
1991	NORTH EASTERN INTERIOR DEMOLITION CORP	NYNEX Information Resource Company
1983	North Eastern Interior Demolition Corp	New York Telephone

FINDINGS

Year	Uses	Source
1976	HOWNOR ASSOC INC	New York Telephone
1970	Expert Concrete Pumping Co	New York Telephone

4412 PURVES ST

Year	Uses	Source
2005	S 5 P Performance Intl Inc	Hill-Donnelly Information Services
	Barko Automotive 1 R	Hill-Donnelly Information Services
1939	Ellis Wm A auto sprngs	New York Telephone Company

4414 PURVES ST

Year	Uses	Source
1934	Smith Herman rigger	R. L. Polk & Co.
	Simms Arth truck driver	R. L. Polk & Co.
	Martin Daisy drss opr	R. L. Polk & Co.
	Gonzalez Rais film fcty	R. L. Polk & Co.
	Armour Walter Mattie lab	R. L. Polk & Co.

4416 PURVES ST

Year	Uses	Source
1991	Gimme Seltzer Manhattan	NYNEX Information Resource Company
1983	Leber Katz b	New York Telephone
1934	Yates John Delia	R. L. Polk & Co.
	Christian Sonny Bertha musician	R. L. Polk & Co.
	Christian Oliver Lillian porter	R. L. Polk & Co.

4417 PURVES ST

Year	Uses	Source
1976	Consolidated Concrete Cutting Corp	New York Telephone
1970	Consolidated Concrete Cuting Corp	New York Telephone
	Expert Concrete Breakers Inc	New York Telephone
1967	Expert Concrete Breakers Inc	New York Telephone
1962	Expert Concrete Breakers Inc	New York Telephone Directory
1945	Expert Concrete Breakers Inc	New York Telephone

4418 PURVES ST

Year	Uses	Source
2005	Art Entree Io	Hill-Donnelly Information Services
	Artisan Designs 100 718 747 1343 9s	Hill-Donnelly Information Services
2000	Artisan Designs	Cole Information Services
1991	Viewrite Manufacturing Inc	NYNEX Information Resource Company

Year	Uses	Source
1983	J & A Plating Equip Inc platers equip	New York Telephone
	Viewrite Manufacturing Inc	New York Telephone
1970	Olympic Plating Equip Co pltrs equip	New York Telephone
	Pyramid Enterprises Inc	New York Telephone
	Pyramid Leathr Goods Co Inc	New York Telephone
1967	Custom Bins Inc	New York Telephone
	Pyramid Enterprises Inc	New York Telephone
	Pyramid Leathr Goods Co Inc	New York Telephone
1962	Rozilda Labs Inc	New York Telephone Directory

4419 PURVES ST

Year	Uses	Source
2005	Global Instalation Corp	Hill-Donnelly Information Services
2000	Glob Gates Inc	Cole Information Services
	Globe Gates	Cole Information Services
1991	GLOBE GATES INC	NYNEX Information Resource Company
	GLOBE GATES	NYNEX Information Resource Company
1983	European Gates Co	New York Telephone
1970	Concrete Breaking Co	New York Telephone
	HOWNOR ASSOCS INC	New York Telephone
1967	Hownor Assocs Inc	New York Telephone
	Concrete Breaking Co	New York Telephone
1945	Baltic Mach & Tool Co	New York Telephone
	Factory	New York Telephone
	Getomer Equip Co	New York Telephone

4420 PURVES ST

Year	Uses	Source
2005	Russell Cress Co 010718 786 0098 a	Hill-Donnelly Information Services

4421 PURVES ST

Year	Uses	Source
2000	Russell Cress Co	Cole Information Services
1945	Concrete Breaking Co	New York Telephone

4422 PURVES ST

Year	Uses	Source
1934	Robinsson DAvid Mamie professional boxer	R. L. Polk & Co.

FINDINGS

4423 PURVES ST

Year	Uses	Source
1962	Concrete Breaking Co	New York Telephone Directory

4424 PURVES ST

Year	Uses	Source
1934	Robinson Isabelle walter	R. L. Polk & Co.
	Snelson Chas A clk	R. L. Polk & Co.
	Snelson Pearl wid Chas	R. L. Polk & Co.
	Browder Florence wid Nicholas maid	R. L. Polk & Co.
	Greer Clara Mrs maid	R. L. Polk & Co.
	JAvakian Gabriel Alice carpet clnr	R. L. Polk & Co.

4427 PURVES ST

Year	Uses	Source
2005	Purvis Auto Repair is	Hill-Donnelly Information Services
2000	Statewide Mgmt Grp	Cole Information Services
	Purvis Auto Repair	Cole Information Services
1991	Apexton Record Pressing Plant Corp	NYNEX Information Resource Company
	Apexton Lamination Corp	NYNEX Information Resource Company
1983	APEXTON RECORD PRESSING PLANT CORP	New York Telephone
	Apexton Lamination Corp	New York Telephone
1976	De Paul Chemical Co Inc	New York Telephone
1970	DePaul Chemcl Co Inc	New York Telephone
1967	De Paul Chemcl Co Inc	New York Telephone
1962	Syn Cote Chemel Corp	New York Telephone Directory
1945	De Paul Chemcl CoInc	New York Telephone
1939	AM & J News Co Inc	New York Telephone Company

4428 PURVES ST

Year	Uses	Source
1934	Glover Grace wid Jos dom	R. L. Polk & Co.
	Solomon Bert Charlotte pipemkr	R. L. Polk & Co.

4430 PURVES ST

Year	Uses	Source
2005	Welsh Bros Contracting Co	Hill-Donnelly Information Services
2000	LIc Const Inc	Cole Information Services
	Welsh Brs Cntrctng	Cole Information Services
1991	L C Constr	NYNEX Information Resource Company

FINDINGS

Year	Uses	Source
1983	Welsh Bros Contrctng Co trucking	New York Telephone
	L C Constr	New York Telephone
1970	Welsh Bros Contractg Co truknq	New York Telephone
1967	Welsh Bros Contractg Co truknq	New York Telephone
	Green Gertrude	New York Telephone
	Green Gertrude	New York Telephone
	Copes Roscoe T	New York Telephone
1962	Green Gertrude	New York Telephone Directory
	Welsh Bros Contractg Co truknq	New York Telephone Directory
	Copes Roscoe T	New York Telephone Directory
	Tru Synthetics Inc	New York Telephone Directory
1945	Welsh Bros Contractg Co truknq	New York Telephone
1934	Schwarta Augusta wid Clement	R. L. Polk & Co.

4433 PURVES ST

Year	Uses	Source
1945	Bonded Papr Prods Co Inc	New York Telephone

4435 PURVES ST

Year	Uses	Source
2005	Long Island Concrete	Hill-Donnelly Information Services
	Elite Interior is	Hill-Donnelly Information Services
	Express Limousine Svc Inc	Hill-Donnelly Information Services
	Lic Motors Inc 15 R	Hill-Donnelly Information Services
	First Wall Constru	Hill-Donnelly Information Services
	Zep Construction I	Hill-Donnelly Information Services
2000	Express Limo Svce	Cole Information Services
	Zep Construction	Cole Information Services
	Express Limo Svce	Cole Information Services
1991	Express Limousine Svce Inc	NYNEX Information Resource Company
	Express Limousine Svce Inc	NYNEX Information Resource Company
1945	Thompson O Inc elec mfr	New York Telephone

4437 PURVES ST

Year	Uses	Source
1967	Dellaquila Lawrence	New York Telephone
	Gartner Mary	New York Telephone
	Perez Jose	New York Telephone
1934	Dell Aquila Lawrence brklyr	R. L. Polk & Co.

Year	Uses	Source
1934	Rego Michl Angelina shoe repr	R. L. Polk & Co.
	Dell Aquila Maurice Theresa	R. L. Polk & Co.

4438 PURVES ST

Year	Uses	Source
2005	Lorraine Flooring Inc l R	Hill-Donnelly Information Services
2000	Lorraine Flng Inc	Cole Information Services
1991	Manhattan Store Fixtures Inc	NYNEX Information Resource Company

4439 PURVES ST

Year	Uses	Source
2005	Oil Burner Utility Co Inc	Hill-Donnelly Information Services
	Goldberg David v	Hill-Donnelly Information Services
	Goldberg David 0212 361 8181 a	Hill-Donnelly Information Services
	David Goldberg Design Co	Hill-Donnelly Information Services
2000	Goldberg Dvd Artst	Cole Information Services
	Goldberg David	Cole Information Services
1991	Pum Yang Shipping U S A Inc	NYNEX Information Resource Company
1983	Loeb Morris b	New York Telephone
	Liberty Hardware Mfg Corp	New York Telephone
1976	Liberty Hardware Mfg Corp	New York Telephone
	Loeb Morris b	New York Telephone
1970	Loeb Morris b	New York Telephone
	Liberty Hrdwr Mfg Corp	New York Telephone
1967	Loeb Morris b	New York Telephone
	Liberty Hrdwr Mfg Corp	New York Telephone
1962	Loeb Morris b	New York Telephone Directory
	Hownor Assocs Inc	New York Telephone Directory
	Liberty Hrdwr Mfg Corp	New York Telephone Directory

4440 PURVES ST

Year	Uses	Source
1945	Russell Gerald S Insctcids	New York Telephone

4443 PURVES ST

Year	Uses	Source
2005	S & M Automatic Precision Corp	Hill-Donnelly Information Services
2000	S & M Precision Crp	Cole Information Services
1991	S & M Automatic Precision Corp	NYNEX Information Resource Company
1976	Astro Automatic Precision Corp	New York Telephone

Year	Uses	Source
1970	Exhibit Graphics Inc	New York Telephone
1967	Dessauer Doris Appntmnts By Inc wrhse	New York Telephone
1934	Bond Jas Pencie porter	R. L. Polk & Co.

4448 PURVES ST

Year	Uses	Source
1934	Rich John Pauline lab	R. L. Polk & Co.

QUEENS ST

43-12 QUEENS ST

Year	Uses	Source
1950	ARGENTO MATTHEW	New York Telephone

43-13 QUEENS ST

Year	Uses	Source
1950	HOSTESS PRODS CORP	New York Telephone
	SPRAGUE P G FOOD PRODS	New York Telephone

43-14 QUEENS ST

Year	Uses	Source
1950	SMITH FLORENE	New York Telephone

43-15 QUEENS ST

Year	Uses	Source
1950	CHANALT CLOTHING CORP	New York Telephone
	COHEN M & SON SHOES CO	New York Telephone
	FORD SHOES	New York Telephone

43-22 QUEENS ST

Year	Uses	Source
1950	F	New York Telephone
	MCQUEENY JOHN F PRNTR	New York Telephone
	MCQUEENY WM J PRNTR	New York Telephone
	S	New York Telephone
	STRAWBERRY-HILL PRESS INC	New York Telephone
	TAPLEY J F CO BOOK MFRS	New York Telephone
	WESSMAN R H	New York Telephone

FINDINGS

43-43 QUEENS ST

Year	Uses	Source
1950	FROMMER B LUNCHNET	New York Telephone

4301 QUEENS ST

Year	Uses	Source
2005	Dimensional Lettering	Hill-Donnelly Information Services
2000	Dimensional Lttrng	Cole Information Services
1991	W E Transport Ltd	NYNEX Information Resource Company
	North East Tool & Bit Corp	NYNEX Information Resource Company
	Air Ride Ltd	NYNEX Information Resource Company
	Biticorp Of America Inc	NYNEX Information Resource Company

4312 QUEENS ST

Year	Uses	Source
2000	Patriot Contrng	Cole Information Services
1991	Dimensional Lettering	NYNEX Information Resource Company
1983	Dimensional Lettering	New York Telephone

4313 QUEENS ST

Year	Uses	Source
1945	Hostess Prods Inc	New York Telephone
	Sprague P G food prods	New York Telephone

4314 QUEENS ST

Year	Uses	Source
1962	INTERSTATE VENDING CO	New York Telephone Directory

4315 QUEENS ST

Year	Uses	Source
2005	Numbr 2 Power Sewing Machine s	Hill-Donnelly Information Services
	Primo Coat Corp	Hill-Donnelly Information Services
	Rubino Anthony	Hill-Donnelly Information Services
	S&B Fashion Inc	Hill-Donnelly Information Services
	Sung Hou Yi y	Hill-Donnelly Information Services
	Top Two Ysh 0718 784 3603 9a	Hill-Donnelly Information Services
	W L Sewing Machine Inc	Hill-Donnelly Information Services
	s 718 707 9345 a	Hill-Donnelly Information Services
	Multi Unit Address	Hill-Donnelly Information Services
	Ciccarelli Custom Tailoring	Hill-Donnelly Information Services
	Dae Woo Machinery	Hill-Donnelly Information Services

FINDINGS

Year	Uses	Source
2005	Julian Craker London 1 R	Hill-Donnelly Information Services
	Luxerdame Co	Hill-Donnelly Information Services
	MHK 20718392 9350 o	Hill-Donnelly Information Services
2000	Cycle City Corp	Cole Information Services
	Top Two Ysh	Cole Information Services
	Twirly Towel	Cole Information Services
1991	Seasons Plus	NYNEX Information Resource Company
1970	Als Cabinet Shop	New York Telephone
	Astoria Fuar Refinishing Co	New York Telephone
	Cruet Expert Piano Refinishing Co	New York Telephone
	Cruet Furn Refinishing Co	New York Telephone
	Queens Mills	New York Telephone
	Standwear Pleating Co Inc	New York Telephone
	Window Mates Ltd	New York Telephone
1967	Als Cabinet Shop	New York Telephone
	Astoria Furn Refinishing Co	New York Telephone
	Cruet Expert Piano Refinishing Co	New York Telephone
	Cruet Furn Refinishing Co	New York Telephone
	Elgot Air Conditioning Sales & Svce	New York Telephone
	ELGOT AIR CONDITIONING & TELVISN SVCE	New York Telephone
	Elgot Sales & Svce	New York Telephone
	Elgot Telvisn Svce	New York Telephone
	Lesjay Co	New York Telephone
	Queens Mills	New York Telephone
	Standwear Pleating Co Inc	New York Telephone
	Tucks Unlimited Corp	New York Telephone
1962	Cohen M & Son Shoes Co CC	New York Telephone Directory
	Shenanigans Shoes	New York Telephone Directory
1945	Cohen M & Son Shoes Co	New York Telephone
	Dann Clothing Co Inc	New York Telephone
	Ford Shoes	New York Telephone

4317 QUEENS ST

Year	Uses	Source
1983	Greenpoint Termnl Warehouse	New York Telephone
	A & P FOOD STORES	New York Telephone
	GREENPOINT WAREHOUSING & DSTRBTN SVCES INC Noble & West Bklyn	New York Telephone

FINDINGS

Year	Uses	Source
1983	APF ELECTRONi S INC svce department	New York Telephone
1976	Apf Svce Inc	New York Telephone

4322 QUEENS ST

Year	Uses	Source
2005	Eagle Electric Mfg Co Inc	Hill-Donnelly Information Services
2000	Eagle Elec Mfg Co	Cole Information Services
	Eagle Elec Mfg Co	Cole Information Services
1983	Wellfleet Fabrics	New York Telephone
	Wellfleet Prods Inc	New York Telephone
	Topseed Inc	New York Telephone
1976	Dolls & Guys Inc	New York Telephone
1970	Dolls & Guys Inc	New York Telephone
	ENVIRONMENTAL CONTRL SYSTMS DIV OF PALL CORP	New York Telephone
	Nina Footwear Co Inc Office	New York Telephone
	PALL CORP ENVIRONMENTAL CONTRL CONYRL SYSTMS DIV	New York Telephone
	Wellfleet Prods Inc	New York Telephone
	Wellfleet Prods Inc	New York Telephone
1967	Dolls & Guys Inc	New York Telephone
	Dolls & Guys Inc	New York Telephone
	Nina Footwear Co Inc	New York Telephone
	Wellfleet Prods Inc	New York Telephone
	Wellfleet Prods Inc	New York Telephone
	Schmidt Geo C caftria	New York Telephone
	Pall Corp Environmental Contrl Systms Div	New York Telephone
1962	BUDD ELECTRNCS INC	New York Telephone Directory
	Strauss Jerome L b	New York Telephone Directory

4323 QUEENS ST

Year	Uses	Source
1983	Brooks Piece Dye Wks Corp	New York Telephone
1976	Brooks Piece Dye Wks Corp	New York Telephone
1970	Brooks Piece Dye Wks Corp	New York Telephone
1967	Brooks Piece Dye Wks Corp	New York Telephone
1962	Brooks Piece Dye Wks Corp	New York Telephone Directory

FINDINGS

4327 QUEENS ST

Year	Uses	Source
2005	Sam Hwa Iron Works s	Hill-Donnelly Information Services
	Koram Construction Inc	Hill-Donnelly Information Services
2000	Best Irom Works	Cole Information Services
1991	Lee Kil Ryol	NYNEX Information Resource Company
	I C One Sportswear Inc	NYNEX Information Resource Company
	Joon & Brother Inc	NYNEX Information Resource Company

4343 QUEENS ST

Year	Uses	Source
1991	Gara International	NYNEX Information Resource Company
1950	HEARN TRAVEL BUR	New York Telephone
	L I RAILROAD STA	New York Telephone

QUEENS VLG

4319 QUEENS VLG

Year	Uses	Source
1934	Lewis Maud Cake & Pie Shop Maud Lewis bakers	R. L. Polk & Co.

QUEENS WALK

4312 QUEENS WALK

Year	Uses	Source
1934	Wagner Fred hlpr	R. L. Polk & Co.
	Wagner Eric litho	R. L. Polk & Co.
	Wagner Andrew plstr	R. L. Polk & Co.
	Strodthoff Rose wid Geo clnr	R. L. Polk & Co.
	Horel Blanche clk	R. L. Polk & Co.

4314 QUEENS WALK

Year	Uses	Source
1934	Barnett Rose wid Max	R. L. Polk & Co.
	Welsh Mary wid Thos	R. L. Polk & Co.
	Shepherd Theresa L Mrs	R. L. Polk & Co.
	Welsh Wm Mary	R. L. Polk & Co.

FINDINGS

4315 QUEENS WALK

Year	Uses	Source
1934	Hostess Products Corp NY Philip G Sprague pres Dr Shirly Sprague v pres Parthenia Hunter sec Paul G Sprague treas condiments	R. L. Polk & Co.

4316 QUEENS WALK

Year	Uses	Source
1934	Jaskoka Jos elev opr Mhn	R. L. Polk & Co.
	Jaskoka Frances nov opr Mhn	R. L. Polk & Co.
	Jaskoka Helen nov opr Mhn	R. L. Polk & Co.
	Jaskoka Paul Agnes	R. L. Polk & Co.

4322 QUEENS WALK

Year	Uses	Source
1934	American Metal Cap Co Anchor Cap & Closure Corp	R. L. Polk & Co.
	Capstan Glass Co Connellsville Pa DAvid Corin Plant mgr	R. L. Polk & Co.

THOMSON AVE

123 THOMSON AVE

Year	Uses	Source
2000	residence 162 business	Cole Information Services

2528 THOMSON AVE

Year	Uses	Source
2000	Dominos Pizz	Cole Information Services

2534 THOMSON AVE

Year	Uses	Source
2000	Qualex Inc	Cole Information Services
	Multi Signs	Cole Information Services
	TDX Construction	Cole Information Services
	TDX Constr	Cole Information Services

2536 THOMSON AVE

Year	Uses	Source
2000	AAA Quality Lbl	Cole Information Services
	D Di Salvo	Cole Information Services

FINDINGS

2604 THOMSON AVE

Year	Uses	Source
2000	Lisa Jadidian	Cole Information Services
	Scot Hall	Cole Information Services
	Vered Grenadir	Cole Information Services
	Mr Wonton Chinese	Cole Information Services
	We Go Car & Limo	Cole Information Services
	Yosi Neman	Cole Information Services
	Yosi Neman	Cole Information Services
	Kazuo Kito	Cole Information Services
	John Roque	Cole Information Services

2609 THOMSON AVE

Year	Uses	Source
2000	New York Calendar Co	Cole Information Services
	Prmtn Prdcts Mktg	Cole Information Services
	Peter Consola Inc	Cole Information Services

2611 THOMSON AVE

Year	Uses	Source
2000	Eagle Design Furn	Cole Information Services

2615 THOMSON AVE

Year	Uses	Source
2000	Moe Taxi & Blck Inc	Cole Information Services

2616 THOMSON AVE

Year	Uses	Source
2000	Dykes Lmbr Co Inc	Cole Information Services

2619 THOMSON AVE

Year	Uses	Source
2000	Labor Ready	Cole Information Services

2620 THOMSON AVE

Year	Uses	Source
2000	TRE Precision Corp	Cole Information Services
	A Stmp & Sl Inc	Cole Information Services

2621 THOMSON AVE

Year	Uses	Source
2000	Kevin Meegan	Cole Information Services

FINDINGS

Year	Uses	Source
2000	Sage Amer Foods	Cole Information Services
	David Williamson	Cole Information Services

2623 THOMSON AVE

Year	Uses	Source
2000	Stephen Svobod	Cole Information Services
	H Tsuchiwat	Cole Information Services
	Randy K Liken	Cole Information Services

2625 THOMSON AVE

Year	Uses	Source
2000	43RD AV INTS FROM	Cole Information Services
	The Outsider Gllry	Cole Information Services

2627 THOMSON AVE

Year	Uses	Source
2000	Century Rubbr SPL	Cole Information Services

2636 THOMSON AVE

Year	Uses	Source
2000	Queens Plz At Prts	Cole Information Services

2701 THOMSON AVE

Year	Uses	Source
2000	Makhan Singh	Cole Information Services
	Lincoln Caddy Cor	Cole Information Services

2708 THOMSON AVE

Year	Uses	Source
1945	LI City	New York Telephone

2712 THOMSON AVE

Year	Uses	Source
1967	MELT A ENU FOODS	New York Telephone

2713 THOMSON AVE

Year	Uses	Source
1934	Long Island De Luxe Diner RTN Robt D Gross Albert Burtan	R. L. Polk & Co.

FINDINGS

2715 THOMSON AVE

Year	Uses	Source
1945	De Luxe Grill	New York Telephone
1939	Lusardi J restrnt	New York Telephone Company
1934	Lusardi Julius rostr	R. L. Polk & Co.

2717 THOMSON AVE

Year	Uses	Source
2000	Alling & Cory Co	Cole Information Services

2719 THOMSON AVE

Year	Uses	Source
2005	Manny Auto Electric Co is	Hill-Donnelly Information Services
2000	44TH DR INTS FROM	Cole Information Services
	Manny Auto Elec	Cole Information Services
1991	Manny Auto Electric Co	NYNEX Information Resource Company
1983	Manny Auto Electric Co	New York Telephone
1970	Soltan & Son	New York Telephone
1967	Sweeneys Esso Svce Sta	New York Telephone
1962	Sweeneys Esso Svce Sta	New York Telephone Directory

2720 THOMSON AVE

Year	Uses	Source
2000	Jules Prntng Inc	Cole Information Services

2722 THOMSON AVE

Year	Uses	Source
2000	Brdsl Co Sls & Wrhs	Cole Information Services

2724 THOMSON AVE

Year	Uses	Source
2000	Wild Style Studios	Cole Information Services

2726 THOMSON AVE

Year	Uses	Source
2000	Hole Crng & Rnt Inc	Cole Information Services
	Heather B Wagner	Cole Information Services
	Exhbtn Emplys Un	Cole Information Services
	Joan PRR Srgng STD	Cole Information Services

FINDINGS

2734 THOMSON AVE

Year	Uses	Source
2000	Cab Managemt Corp	Cole Information Services

2735 THOMSON AVE

Year	Uses	Source
2000	Hinson & Co Ltd	Cole Information Services

2741 THOMSON AVE

Year	Uses	Source
2000	Tayor Megan	Cole Information Services
	Jackson House Corp	Cole Information Services

2742 THOMSON AVE

Year	Uses	Source
1991	Crusader Press Inc pubrs	NYNEX Information Resource Company
1976	Crusader Press Inc pubrs	New York Telephone
1970	Crusader Press Inc pubrs	New York Telephone
1967	Crusader Press Inc pubrs	New York Telephone
1962	Crusader Press Inc pubrs	New York Telephone Directory
1945	Zeese Willkinson Co Inc Hthgphr	New York Telephone
	Sackett Nathan b	New York Telephone
	New England Art Co Inc	New York Telephone
1939	Sackett Nathan b	New York Telephone Company
	New England Art Co Inc	New York Telephone Company
1934	Zeese & Wilkinson Co Inc RTN cap $107000 Wm J Wilkinson pres treas Frank W Esling v pres Henry B Stephan sec printers	R. L. Polk & Co.
	Tapley J F Co Inc NY Robt H Wessman pres S Alan Chedsey sec Maud M Wessman treas book mfrs	R. L. Polk & Co.
	Emergency Work & Relief Bureau Mrs E Kath Fox mgr cutting div	R. L. Polk & Co.

2743 THOMSON AVE

Year	Uses	Source
2000	D Lia Hdwr Lic	Cole Information Services

2745 THOMSON AVE

Year	Uses	Source
2000	Hinson & Co	Cole Information Services
	Kent Bragaline Inc	Cole Information Services

FINDINGS

2751 THOMSON AVE

Year	Uses	Source
2000	Segundo Vazquez	Cole Information Services
	Edgar Vermejo	Cole Information Services
	G Lopez	Cole Information Services

2755 THOMSON AVE

Year	Uses	Source
2000	Jackson Tool Corp	Cole Information Services
	Jackson Abrasive	Cole Information Services
	Fernandos Jewelry	Cole Information Services
	Abrasive Ontlt Ltd	Cole Information Services

2801 THOMSON AVE

Year	Uses	Source
1991	Jema Coach Auto Body	NYNEX Information Resource Company
1983	Jema Coach Auto Body	New York Telephone
1970	Filter Cleaner Co	New York Telephone
	Hydro Cote Corp of Amer	New York Telephone
	Berdell Indstries Inc heat exchngrs	New York Telephone
	CENTRAL AUTO RADIATOR CO INC	New York Telephone
1967	Hydro Cote Corp of Amer	New York Telephone
	Berdell Indstries Inc heat exchngrs	New York Telephone
	CENTRAL AUTO RADIATOR CO INC	New York Telephone
	Filler Cleaner Co	New York Telephone
1962	CENTRAL AUTO RADIATOR CO INC	New York Telephone Directory
	BERDELL INDSTRIES INC heat exchngrs	New York Telephone Directory
	Filter Cleaner Co	New York Telephone Directory

2811 THOMSON AVE

Year	Uses	Source
1991	Marling Auto Repr Inc	NYNEX Information Resource Company
	Marling Auto Repr Inc	NYNEX Information Resource Company
1983	Parliament Limousine Svce Inc	New York Telephone
	Taxi City	New York Telephone
	Timely Towing Inc	New York Telephone
1976	Filter Cleaner Co	New York Telephone
	BERDELL IND STRIES INC heat exchange	New York Telephone
	CENTERL AUTO RADIATOR CO INC	New York Telephone
1970	Natl Announcements Inc	New York Telephone

FINDINGS

Year	Uses	Source
1970	Rosner Card & Papr Co	New York Telephone
1967	Natl Announcements Inc	New York Telephone
	Rosner Card & Papr Co	New York Telephone
1962	Natl Announcements Inc	New York Telephone Directory

2831 THOMSON AVE

Year	Uses	Source
1991	A NE AUTO COLLISION & TOWING	NYNEX Information Resource Company
1983	A One Auto Collision Inc	New York Telephone
	A NE AUTO COLLISION INC	New York Telephone
1976	A One Auto Collision Inc	New York Telephone
	A One Auto Collision Inc	New York Telephone
1970	A One Auto Collision Inc	New York Telephone
	A One Auto Collision Inc	New York Telephone
1967	A One Auto Collision Inc	New York Telephone
	A One Auto Collision Inc A	New York Telephone
1962	BURNS HEATING SUPL CO INC	New York Telephone Directory
	Burns Supl Co heating & insulatn	New York Telephone Directory
	Jackson & Church Co heating units	New York Telephone Directory
1945	Grand Chromium Plating Co	New York Telephone
1939	Grand Chromium Plating Corpn	New York Telephone Company
	Forbath John J off	New York Telephone Company
1934	Grand Chromium Plating Corp NY Mathias DAvid pres Jacob Fischer see treats	R. L. Polk & Co.

42 THOMSON AVE

Year	Uses	Source
2000	ND RD INTS FROM	Cole Information Services

59 THOMSON AVE

Year	Uses	Source
2000	th Stret Brg Plz	Cole Information Services
	MY City Schl Const	Cole Information Services
	th Stret Brg Plz	Cole Information Services
	th Stret Brg Plz	Cole Information Services
	th Stret Brg Plz	Cole Information Services
	Floor Cover News	Cole Information Services
	Insignia E Grdn	Cole Information Services
	Lehrer Mc Gvrn & Bvs	Cole Information Services
	Lehrer Mc Gvrn BVS	Cole Information Services

FINDINGS

Year	Uses	Source
2000	Lohrer Mc Gvrn BVS	Cole Information Services
	Minolta Copr Corp	Cole Information Services
	Minolta Cpr Crp	Cole Information Services
	Skcyline Displays	Cole Information Services
	30TH PL INTS FROM	Cole Information Services
	th Sret Brg Plz	Cole Information Services
	City Schl Const	Cole Information Services
	th Stret Brg Plz	Cole Information Services

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
44-26 Purves Street	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1939, 1934, 1922

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
123 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
21 COURT	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2510 COURT SQ	2000, 1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2526 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2528 JACKSON AVE	2000, 1996, 1962, 1950, 1945, 1939, 1934, 1922
2528 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2534 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1934, 1922
2534 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2536 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1922
2536 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2540 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1950, 1945, 1939, 1934, 1922
2547 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2553 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2562 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2566 44TH DR	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2568 44TH DR	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2569 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2572 44TH DR	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2576 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2580 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2581 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2582 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
2583 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2586 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2589 44TH DR	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2595 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
26 COURT	2005, 2000, 1991, 1950, 1922
2604 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1922
2604 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2606 JACKSON AVE	2005, 2000, 1996, 1983, 1950, 1945, 1922
2607 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2608 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1950, 1922
2609 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1922
2609 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2611 JACKSON AVE	2005, 2000, 1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
2611 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2612 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1950, 1922
2613 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2614 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2615 JACKSON AVE	2000, 1996, 1983, 1976, 1962, 1950, 1945, 1939, 1922
2615 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2616 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1934, 1922
2616 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2617 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2618 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1950, 1939, 1934, 1922
2619 JACKSON AVE	2005, 2000, 1996, 1991, 1976, 1950, 1922
2619 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2620 JACKSON AVE	2000, 1996, 1967, 1950, 1945, 1939, 1922
2620 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2621 JACKSON AVE	2000, 1996, 1983, 1950, 1945, 1934, 1922
2621 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2622 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2623 JACKSON AVE	2000, 1996, 1983, 1950, 1939, 1922
2623 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
2625 JACKSON AVE	2000, 1996, 1950, 1922
2625 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2626 JACKSON AVE	2000, 1996, 1950, 1934, 1922
2627 JACKSON AVE	2000, 1996, 1976, 1950, 1939, 1922
2627 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2630 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2632 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
2634 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2636 JACKSON AVE	2000, 1996, 1991, 1950, 1934, 1922
2636 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2638 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2640 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1967, 1950, 1945, 1939, 1922
2642 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2644 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2646 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1950, 1945, 1939, 1934, 1922
2699 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
27 COURT SQ	2005, 2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
2701 43RD AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2701 JACKSON AVE	2000, 1967, 1950, 1939, 1922
2701 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2702 43RD AVE	1996, 1976, 1950, 1934, 1922
2702 44TH DR	2005, 2000, 1996, 1991, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2702 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2703 43RD AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2703 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2704 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2705 43RD AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
2705 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
2706 43RD AVE	2005, 1996, 1967, 1950, 1945, 1939, 1934, 1922
2706 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2707 43RD AVE	1996, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2707 44TH DR	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
2707 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2708 THOMSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
2709 43RD AVE	2005, 1996, 1991, 1983, 1976, 1962, 1950, 1939, 1922
2709 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2710 43RD AVE	1996, 1976, 1967, 1950, 1939, 1922
2710 44TH DR	2005, 2000, 1996, 1991, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2711 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2712 43RD AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2712 THOMSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1962, 1950, 1945, 1939, 1934, 1922
2713 THOMSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2715 THOMSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2717 JACKSON AVE	2005, 2000, 1996, 1983, 1962, 1950, 1945, 1939, 1934, 1922
2717 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2719 44TH DR	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2719 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
2719 THOMSON AVE	1996, 1976, 1950, 1945, 1939, 1934, 1922
2720 JACKSON AVE	2000, 1996, 1950, 1945, 1939, 1922
2720 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2721 44TH DR	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1950, 1934, 1922
2721 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1934, 1922
2722 JACKSON AVE	2000, 1996, 1950, 1945, 1922
2722 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2723 44TH DR	2005, 1996, 1991, 1976, 1967, 1950, 1945, 1939, 1934, 1922
2724 JACKSON AVE	2000, 1996, 1950, 1922
2724 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2726 JACKSON AVE	2000, 1996, 1991, 1950, 1922
2726 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2727 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2730 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1934, 1922
2731 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2732 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2733 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
2734 JACKSON AVE	2000, 1996, 1962, 1950, 1945, 1939, 1934, 1922
2734 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2735 JACKSON AVE	2000, 1996, 1950, 1922
2735 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2737 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2739 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2741 JACKSON AVE	2000, 1996, 1950, 1922
2741 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2742 THOMSON AVE	2005, 2000, 1996, 1983, 1950, 1922
2743 JACKSON AVE	2000, 1996, 1970, 1967, 1962, 1950, 1939, 1934, 1922
2743 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2745 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1950, 1939, 1922
2745 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2747 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2748 JACKSON AVE	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1934, 1922
2749 JACKSON AVE	2000, 1996, 1991, 1983, 1976, 1970, 1950, 1945, 1939, 1934, 1922
2750 JACKSON AVE	2005, 2000, 1996, 1991, 1967, 1950, 1945, 1939, 1934, 1922
2751 JACKSON AVE	2000, 1996, 1976, 1950, 1922
2751 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2755 JACKSON AVE	2000, 1996, 1962, 1950, 1922
2755 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2762 44TH DR	2005, 2000, 1996, 1991, 1983, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
2766 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1922
2782 JACKSON AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
28 COURT	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
28 COURT SQ	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
28 COURT ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
2801 THOMSON AVE	2005, 2000, 1996, 1976, 1950, 1945, 1939, 1934, 1922
2811 THOMSON AVE	2005, 2000, 1996, 1950, 1945, 1939, 1934, 1922
2831 THOMSON AVE	2005, 2000, 1996, 1950, 1922
29 COURT	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
3 44TH RD	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
32 COURT	2005, 2000, 1991, 1950, 1934, 1922
32 COURT ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
42 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4266 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4266 HUNTER ST	2005, 2000, 1996, 1991, 1976, 1950, 1945, 1939, 1934, 1922
4268 27TH ST	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4268 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4268 HUNTER ST	2005, 2000, 1996, 1970, 1950, 1934, 1922
4269 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4269 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1950, 1945, 1939, 1934, 1922
4270 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4271 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4271 HUNTER ST	2005, 1996, 1962, 1950, 1945, 1939, 1934, 1922
4272 HUNTER ST	2000, 1996, 1976, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4273 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4273 HUNTER ST	1996, 1962, 1950, 1945, 1939, 1934, 1922
4274 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4274 HUNTER ST	1996, 1976, 1950, 1945, 1939, 1934, 1922
4275 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4276 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4277 HUNTER ST	1996, 1976, 1970, 1967, 1950, 1939, 1934, 1922
4278 HUNTER ST	2005, 1996, 1976, 1962, 1950, 1945, 1939, 1934, 1922
4279 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4279 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4281 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4281 HUNTER ST	2000, 1996, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4283 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4283 HUNTER ST	1996, 1976, 1970, 1967, 1962, 1950, 1934, 1922
4291 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
4291 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4293 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
43 DUTCH KILLS ST	2005, 2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

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Address Researched	Address Not Identified in Research Source
43-12 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-13 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-14 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-15 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-22 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-43 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
43-X DUTCH KILLS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
4301 QUEENS ST	1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4302 HUNTER ST	2005, 2000, 1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4303 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4307 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
4308 HUNTER ST	2005, 2000, 1996, 1991, 1976, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4309 HUNTER	2005, 2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4309 HUNTER ST	1996, 1950, 1945, 1939, 1934, 1922
4311 HUNTER ST	1996, 1950, 1945, 1939, 1934, 1922
4312 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4312 QUEENS ST	2005, 1996, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4312 QUEENS WALK	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4313 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4314 QUEENS ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1950, 1945, 1939, 1934, 1922
4314 QUEENS WALK	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4315 DUTCHKILLS ST	1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4315 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1922
4315 HUNTER ST	1996, 1976, 1967, 1950, 1934, 1922
4315 QUEENS ST	1996, 1983, 1976, 1950, 1939, 1934, 1922
4315 QUEENS WALK	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4316 QUEENS WALK	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4317 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1950, 1945, 1939, 1934, 1922
4317 QUEENS ST	2005, 2000, 1996, 1991, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4319 QUEENS VLG	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4322 QUEENS ST	1996, 1991, 1950, 1945, 1939, 1934, 1922
4322 QUEENS WALK	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922

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Address Researched	Address Not Identified in Research Source
4323 QUEENS ST	2005, 2000, 1996, 1991, 1950, 1945, 1939, 1934, 1922
4325 HUNTER ST	1996, 1950, 1945, 1939, 1934, 1922
4327 QUEENS ST	1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4343 QUEENS ST	2005, 2000, 1996, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
4393 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
44 COURT	2005, 2000, 1991, 1970, 1950, 1922
44 COURT PL	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
44-17 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-19 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-23 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-26 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-27 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-30 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-35 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-37 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-39 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
44-43 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1945, 1939, 1934, 1922
4411 PURVES ST	2005, 2000, 1996, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4412 25TH ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4412 PURVES ST	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1934, 1922
4414 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4416 25TH ST	2005, 2000, 1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4416 PURVES ST	2005, 2000, 1996, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4417 PURVES ST	2005, 2000, 1996, 1991, 1983, 1950, 1939, 1934, 1922
4418 PURVES ST	1996, 1976, 1950, 1945, 1939, 1934, 1922
4419 PURVES ST	1996, 1976, 1962, 1950, 1939, 1934, 1922
4420 PURVES ST	2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4421 PURVES ST	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4422 HUNTER ST	2005, 2000, 1996, 1983, 1976, 1962, 1950, 1945, 1939, 1934, 1922
4422 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4423 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1950, 1945, 1939, 1934, 1922
4424 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
4426 HUNTER ST	1996, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4427 PURVES ST	1996, 1950, 1934, 1922
4428 HUNTER ST	2005, 2000, 1996, 1991, 1983, 1976, 1962, 1950, 1945, 1939, 1934, 1922
4428 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
4430 PURVES ST	1996, 1976, 1950, 1939, 1922
4433 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4435 PURVES ST	1996, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4437 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1962, 1950, 1945, 1939, 1922
4438 PURVES ST	1996, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
4439 PURVES ST	1996, 1950, 1945, 1939, 1934, 1922
4440 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1939, 1934, 1922
4443 PURVES ST	1996, 1983, 1962, 1950, 1945, 1939, 1922
4448 PURVES ST	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
45 COURT	2005, 2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1934, 1922
45 COURT SQ	2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
59 THOMSON AVE	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
70 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
74 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
80 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
81 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
82 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
83 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
85 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
86 HUNTER	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
87 HUNTER AVE	2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1922
9 44TH RD	2005, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922
93 HUNTER	2005, 2000, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT

for

44-30 PURVES STREET
LONG ISLAND CITY, NEW YORK

Prepared For:

Purves Street Owners LLC
c/o Brause Realty, Inc.
72 Vanderbilt Avenue
New York, NY 10017

Prepared By:

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Senior Associate

LANGAN

March 18, 2014
Langan Project No. 170282501

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Appendix A: Previous Environmental Reports (CD)
Appendix B: Geophysical Survey Report
Appendix C: Soil Boring Logs
Appendix D: Laboratory Analytical Reports with Chain of Custody Documentation
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Appendix G: Soil Vapor Sampling Logs

1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) prepared this Phase II Environmental Site Investigation (ESI) Report on behalf of Purves Street Owners, LLC, for 44-30 Purves Street in Long Island City, New York (the "Site"). The purpose of this ESI was to investigate potential environmental concerns identified in previous Phase I Environmental Site Assessments (ESA) in support of proposed site development.

The Phase II ESI was implemented between February 19 and 28, 2014 in accordance with Langan's January 17, 2014 Proposal for Environmental and Geotechnical Services. The investigation consisted of a geophysical survey, advancement of soil borings, installation of groundwater monitoring wells and soil vapor sampling points, and collection and laboratory analysis of soil, groundwater, and soil vapor samples.

The remainder of this ESI Report is organized as follows:

- Section 2.0 describes the site setting, physical characteristics of the site, proposed development and summarizes previous investigations.
- Section 3.0 presents the ESI field procedures.
- Section 4.0 describes the RI field observations and analytical results.
- Section 5.0 presents conclusions and recommendations pertaining to the nature and extent of contamination in all site media as determined through the field investigation and analysis of environmental samples.

2.0 BACKGROUND

2.1 Site Location and Description

The Site is located at 44-30 Purves Street in Long Island City, New York (Block 268, Lots 1, 24, 25, and 26), and is bounded by Purves Street to the east, Lot 31 with a two-story brick building to the south, Thomson Avenue to the southwest, 44th Drive to the west, and lots 4 and 23 to the north. Lot 4 has an existing two-story brick building and Lot 23 has no structures. The Site is irregularly shaped and encompasses an area of approximately 26,900 square feet. According to survey data, the site grade is at approximately elevation (el) 9 feet[1]. The sidewalk grade of Thomson Avenue and 44th Drive is elevated above site grade, and slopes upward from north to south from approximately el 18 to el 28. A retaining wall supports the Thomson Avenue and 44th Drive sidewalks. The sidewalk grade of Purves Street is at approximately site grade. The Site has been a vacant lot nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes. A Site Location Map is provided as Figure 1.

2.2 Previous Environmental Reports

Available environmental reports are included in Appendix A and summarized below in chronological order.

April 27, 2006 Phase I ESA Report, Middleton Environmental, Inc.
Middleton Environmental, Inc. prepared a Phase I ESA Report for the property located at 44-26/30 Purves Street (Block 268, Lots 24, 25, and 26), and a Phase I ESA update that included 44-32/38 Purves Street (Block 268, Lot 1). The Phase I ESA reports concluded the following:

- No recognized environmental conditions (RECs) were identified.
- At the time of this Phase I ESA, two buildings were present at the Site. The buildings were vacant, and had most recently been used for automobile repair and carpet storage. The site was previously used by a chemical laboratory, a filter cleaner company, a hardware warehouse, a paper embossing company, a taxi repair facility, a controller manufacturing company, a pine chemical company and an air freight company.
- At the time of this Phase I ESA, surrounding property usage included a welding company, an automobile repair facility, a construction site, and vacant industrial buildings.

[1] Elevations are with respect to the Borough President of Queens Datum (BPQD) which is 2.725 feet above the U.S. Coast and Geologic Survey Datum (Mean Sea Level at Sandy Hook, New Jersey, 1929) [BPQD = USGS – 2.725]

- A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two underground storage tanks (UST) at the Site. There were no oil fill ports or fuel vents observed at the Site.

November 5, 2006 Phase II ESI Report, Environmental Business Consultants

Environmental Business Consultants conducted a limited Phase II ESI that included the advancement of three soil borings, the installation of three temporary monitoring wells, and the collection and laboratory analysis of six soil and three groundwater samples.

Three soil borings were advanced to 20 feet below grade surface (bgs). Historic urban fill material was observed from surface grade to depths of 2 to 9 feet bgs. Native layers consisting of fine- to medium-grained sand, silt, and peat were observed underlying the fill layer. No evidence of impacts was observed based on photoionization detector (PID) screening of soils. Soil samples were collected from the 7 to 8 and 17 to 18 foot depth intervals in each boring. Soil samples were analyzed for the New York State Department of Environmental Conservation (NYSDEC) Spills Technology and Remediation Series (STARS)-listed volatile organic compounds (VOC) and semivolatile organic compounds (SVOC). One SVOC, pyrene, was detected in the shallow sample in boring SB2; however, the concentration did not exceed the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objective (RSCO). The TAGM RSCOs have subsequently been superseded by Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375. Under Part 375, the pyrene detection would still be below the corresponding Unrestricted Use Soil Cleanup Objective (SCO). There were no other VOC or SVOC detections in soil samples.

Three 1-inch diameter temporary monitoring wells were installed at a depth of 18 feet bgs with 15 feet of 0.010-inch slotted polyvinyl chloride (PVC) screen attached to PVC riser that extended approximately 2 feet above grade surface. Groundwater samples were collected from each well and analyzed for NYSDEC STARS-listed VOCs and SVOCs. No VOCs or SVOCs were detected in groundwater samples.

December 9, 2011 Phase I ESA Report, IVI Assessment Services, Inc.

The Phase I ESA identified the following RECs:

- Historical Site Use: Historical Site uses included a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard. Two gasoline USTs were identified on the 1947 and 1950 Sanborn maps and may be still present. The historic site usage may have negatively impacted soil and/or groundwater at the Site.
- Adjacent Site Use: Properties adjacent and surrounding the Site were previously used for chromium plating, auto body/repair shops, a photochemical warehouse and textile

printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the Site across Purves Street. The adjacent usage may have negatively impacted soil and/or groundwater at the Site.

2.3 Previous Geotechnical Engineering Study

Langan conducted a geotechnical subsurface investigation in February 2008. The subsurface investigation consisted of drilling 17 borings into bedrock, excavating two test pits to investigate the Thomson Avenue and 44th Drive retaining wall foundations, and installing three observation wells in completed borings. The borings were completed to depths of approximately 53 to 75 feet bgs. The borings revealed an approximately 5- to 9-foot-thick layer of historic fill above a 7- to 14-foot-thick layer of sand that overlies a 5- to 27-foot-thick layer of silt, overlying a 10- to 15-foot-thick layer of clay. Decomposed rock was encountered from about 44 to 48 feet bgs in four borings, and bedrock was encountered between approximately 43 and 61 feet bgs in all borings. Groundwater was measured in the three observation wells at depths of 9 to 10 feet bgs. The Geotechnical Engineering Report is included in Attachment A.

2.4 Proposed Development

The proposed development will be separated into two structures. The first is a one-story building with residential amenity space and retail along Thomson Avenue and 44th Street. The second will be a 33-story residential building along Purves Street. There is expected to be one level of approximately at-grade parking spanning approximately 14,000 square feet. The area between the two buildings and above the parking lot will be decked over to provide additional amenity space. The total site area will be about 26,900 square feet.

2.5 Geology

Predominant geological surface features were not observed on the Site. The USGS "Bedrock and Engineering Geologic Maps of New York County and Parts Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey" indicates that the bedrock underlying the site consists of fine- to coarse-grained, gray to tan, weathering quartzofeldspathic, muscovite-biotite-garnet schist.

Based on the February 19, 2008 Geotechnical Engineering Report and this Phase II ESI, the subsurface strata at the Site consists of historic urban fill extending to depths ranging from 1.5 to 11 feet bgs, underlain by sand with varying amounts of silt and gravel. Sandy silt to clayey silt was found underlying the sand layer, and the silt is underlain by clay and/or peat above bedrock. Decomposed and weathered rock was observed at depths ranging from

approximately 44 to 48 feet bgs during the Geotechnical Engineering Study. Gray and white schist bedrock was observed at depths ranging from approximately 43 to 61 feet bgs.

2.6 Hydrogeology

Depth to groundwater at the Site ranged from 4.0 to 6.4 feet bgs. The well casing elevations were not yet surveyed; however, based on previous survey data, the groundwater depths correspond to elevations ranging from approximately el 4.3 to el 3.4. The groundwater elevation is highest in the west and appears to slope downward toward the east. Depth to groundwater during the February 2008 Langan Geotechnical Study was observed to be between 8 and 10 feet bgs. The apparent change between these two excavations may be the result of several precipitation events and snow melt percolation into the water table prior to and during the ESI groundwater sampling event.

Groundwater flow may also be influenced locally by tides and the presence of underground man-made structures (pipes, foundations, etc.). Groundwater in this area of New York City is not used as a potable (drinking) water source. The potable water supply is provided by the City of New York and is derived from surface impoundments in the Croton, Catskill, and Delaware watersheds.

3.0 FIELD INVESTIGATION

3.1 Geophysical Survey

On February 19, 2014, prior to boring activities, Nova Geophysical Services of Douglaston, New York, conducted a geophysical investigation. A Langan field engineer was on-site to document the survey. The survey used ground penetrating radar (GPR) to identify the potential presence of USTs and locate buried utilities. Borings were relocated as necessary to avoid subsurface utilities and anomalies (other subsurface impediments). A geophysical report presenting the findings is included in Appendix B.

3.2 Soil Investigation

The soil investigation included eight environmental soil borings (SB01 through SB08). The borings were completed by Laurel Environmental Associates, Ltd. of Huntington Station, New York, under the supervision of a Langan field engineer. All borings were advanced using a direct-push Geoprobe® 6610DT drill rig. Borings SB01 and SB06 were advanced to a depth of 25 feet bgs, borings SB03, SB04, SB07, and SB08 were advanced to 20 feet bgs, and boring SB02 was advanced to 15 feet bgs. Refusal was encountered at approximately 3 feet bgs in boring SB05. Offset boring SB05A was advanced to 20 feet bgs 3 feet north of SB05. Boring locations are shown on Figure 2.

Soil samples were collected continuously throughout each environmental boring. Samples were collected in 5-foot Macro-Core® sample barrels with new, dedicated acetate liners. Soil samples retrieved from each boring were visually classified for soil type, grain size and texture. Each sample was screened for visual, olfactory and instrumental evidence of anthropogenic impacts. Instrument screening for the presence of VOCs was performed with a PID equipped with a 10.6 electron volt (eV) lamp. Following sample collection, all borings were backfilled with soil cuttings and sand or converted to groundwater monitoring wells. Boring logs documenting these observations are included as Appendix C.

A total of 19 soil grab samples, including one duplicate sample, were collected for laboratory analysis. Samples were collected from the historic fill layer and the interval of the highest observable impact (staining, odor, elevated field instrument readings), if observed. Soil samples were collected into laboratory-supplied containers and were picked up and delivered via courier service to York Analytical Laboratories, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory in Stratford, Connecticut under standard chain-of-custody protocol. Grab soil samples were analyzed for NYSDEC Part 375 List VOCs by EPA Method 8260C, SVOCs by EPA method 8270D, metals (including hexavalent chromium) by EPA methods 6010C/7473/7196A/9014/9010C, pesticides by EPA method 8081B, and PCBs by EPA method 8082A. A sample log showing samples and

sample analysis is provided as Table 1. Analytical reports and chain-of-custody documentation are provided in Appendix D.

3.3 Groundwater Investigation

Four soil borings were converted into groundwater monitoring wells by inserting 10 feet of 2-inch diameter, 0.01-inch slotted, schedule 40 PVC screen, with attached risers, into the boreholes. Each monitoring well number corresponds to the boring where it was installed (SB01/MW01, SB02/MW02, SB03/MW03, and SB04/MW04). The wells were installed to a depth of approximately 14 feet bgs. Three monitoring wells (MW01, MW03, and MW04) were installed with 2.0-inch inner diameter (ID) by 3.4-inch outer diameter (OD) prepacked well screens. Prepacked well screens include a stainless steel wire mesh with a 0.011-inch pore size surrounding the slotted PVC and containing 20/40 mesh silica sand. Prepack screen installation required advancing 4-inch ID steel augers to the desired well depth. Monitoring well MW02 was constructed with a PVC screen with no prepack and was installed by advancing 3-inch OD Macro-Core® sample barrels. The annulus of each well was filled with #2 Morie sand to approximately 1.5 feet above the top of the screen. Hydrated bentonite well seals were installed above the filter sand. Following installation, each well was developed using a submersible Monsoon pump. Well construction logs are included in Appendix E. Monitoring well locations are shown on Figure 2.

Prior to sampling, the wells were allowed to sit for one week after development. Immediately before sample collection, a minimum of three well volumes were purged from each well and groundwater parameters (pH, conductivity, turbidity, dissolved oxygen [DO], temperature, and oxidation-reduction potential [ORP]) had stabilized and turbidity measurements were below 50 Nephelometric Turbidity Units (NTU). Groundwater sampling logs are included in Appendix F.

Five groundwater samples, a sample from each well and one duplicate sample, were collected into laboratory supplied glassware and picked up and delivered via courier service to York. Groundwater samples were analyzed for TCL VOCs by EPA Method 8260C, TCL SVOCs by EPA method 8270D, pesticides by EPA method 8081B, PCBs by EPA method 8082A, TAL metals by EPA methods 6010C/7470, and hexavalent chromium by EPA method 7196A.

3.4 Soil Vapor Investigation

Seven soil vapor probes (SV01 through SV07) were installed using a Geoprobe® 6610 direct-push drill rig with 1.25-inch OD steel probe rods to a depth of 4 to 5 feet bgs. Probe locations are shown on Figure 2. The probes were installed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York and were comprised of a stainless steel screen threaded into polyethylene tubing. A sand filter pack was installed around the

screen implant by pouring No. 2 Morie sand into the annulus to approximately 3 feet above the probe. The remainder of the annulus was filled to grade surface with a bentonite slurry seal.

As a quality assurance/quality control (QA/QC) measure, an inert tracer gas (helium) was introduced into an above-grade sampling chamber to ensure that the soil vapor sampling points were properly sealed above the target sampling depth, thereby preventing subsurface infiltration of ambient air. Direct readings of helium of less than 10 percent prior to sampling were considered sufficient to verify a tight seal. Each sub-slab soil vapor point was purged using a PID at a rate of 0.2 liters per minute (L/min) to evacuate a minimum of three sample tubing volumes prior to sample collection. Soil vapor samples were collected into laboratory-supplied, batch-certified 2.7-Liter Summa® canisters that were calibrated for a sampling rate of approximately 0.0225 L/min for 120 minutes of sampling. The samples collected from soil vapor points SV02 and SV05 were not analyzed due to groundwater infiltration. One ambient air sample was collected and submitted to the lab for analysis for QA/QC purposes. Soil vapor sampling logs are provided in Appendix G.

The Summa® canisters were labeled and picked up by a courier for delivery to Alpha Analytical Laboratories, an NYSDOH ELAP-certified laboratory in Westborough, Massachusetts, under standard chain-of-custody protocol. Soil vapor samples were analyzed for VOCs by EPA Method TO-15.

3.5 Field QA/QC Sample Description

The field quality assurance/quality control (QA/QC) samples consisted of field duplicates, trip blanks, and field blanks.

Two duplicate samples, including one from soil and one from groundwater were collected. The purpose of duplicate samples is to examine the variability of the samples. One trip blank was collected per shipment of VOC samples. The purpose of the trip blank was to examine the potential for cross-contamination of samples during shipping. Two field blanks were collected for non-dedicated soil sampling equipment used. The purpose of the field blank was to examine the cleanliness of the disposable sampling equipment.

Trip blank and field blank samples were collected into laboratory-supplied glassware and picked up and delivered via courier service to York. The trip blanks were analyzed for VOCs by EPA Method 8260C. The field blanks were analyzed for VOCs by EPA Method 8260C, TCL SVOCs by EPA method 8270D, pesticides by EPA method 8081B, PCBs by EPA method 8082A, TAL metals by EPA methods 6010C/7470, and hexavalent chromium by EPA method 7196A.

4.0 OBSERVATIONS AND RESULTS

4.1 Geophysical Survey

The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Several scattered minor anomalies were identified throughout the Site. Due to snow cover at the Site, Nova could not verify the nature of these anomalies.

Boring locations were adjusted prior to drilling to avoid the identified anomalies. The Geophysical Survey Report is included as Appendix B.

4.2 Subsurface Observations

The Site is covered with a weathered concrete slab, and on approximately 50% of the Site, the concrete is covered with a thin (<6-inch) layer of sand, gravel, and vegetation. Beneath the concrete slab, the soil was observed to be historic urban fill material, predominately consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. The fill layer extended to between approximately 1.5 to 11 feet bgs and was deepest in the northwestern portion of the Site (borings SB02 and SB06). The fill layer was underlain by brown, fine- to medium-grained sand. In borings located within the western portion of the Site (SB02, SB03, and SB06), the sand layer was underlain by layers of silt, peat, and clay. In borings located in the southeastern portion of the Site (SB04 and SB05), the sand layer was underlain by silt. In borings located in the northeastern portion of the Site (SB01, SB07, SB08), the sand layer was underlain by a silt layer followed by a clay layer.

Petroleum impacts, including odors, staining, and PID readings above background levels, were observed in borings SB01, SB03, and SB05. Observations are described as follows:

- Boring SB01 (northeastern portion of the Site) – Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 14.9 parts per million (ppm) was observed at depths of approximately 7 to 9 feet bgs, and appeared to straddle the water table. The headspace of monitoring well MW01 did not exhibit elevated PID readings.

- Boring SB03 (southern portion of the Site) – Petroleum-impacted soil exhibiting staining, odor, and PID readings up to 91.7 ppm was observed at depths of approximately 6 to 9 feet bgs, and appeared to straddle the water table. The PID reading in the headspace of monitoring well MW03 was 12.8 ppm.

- Boring SB05 (southern portion of the Site – Near suspected USTs) – Petroleum-impacted soil exhibiting staining, odor and PID readings up to 240 ppm was observed at depths of approximately 2 to 3 feet bgs. Refusal was encountered at 3 feet bgs and the

location was offset 3 feet to the north. There was no evidence of petroleum impacts observed at the offset location.

- All wells were screened for free product with an oil-water interface probe. No evidence of free product was observed. During development purging and sampling, free product was not observed on the purged groundwater.

Based on the visual, olfactory, and instrumental evidence of petroleum contamination of soil at the Site, a spill was called in to NYSDEC and spill number 1310949 was assigned.

4.3 Analytical Results

A summary and discussion of analytical results is provided in the following section by matrix. A sample summary is presented in Table 1. Analytical laboratory reports are provided in Appendix D.

4.3.1 Soil Sample Results

Nineteen soil samples, including one duplicate sample, were submitted for laboratory analysis. Analytical results were compared to 6 NYCRR Part 375 Unrestricted Use SCOs. The analytical results are presented in Table 2. Results exceeding the SCOs are highlighted on Table 2, illustrated spatially on Figure 3 and summarized below.

VOCs

- SB02_11-13: acetone
- SB03_6-8: methylene chloride
- SB06_6-8: acetone

Note: Acetone and methylene chloride are common lab contaminants; as such, the detections may be attributable to interference from laboratory cross-contamination.

SVOCs

- SB02_2-4: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene
- SB02_6-8: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene
- SB04_4-6: benzo(k)fluoranthene
- SB05_1-3: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene

- SB06_3-5: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene
- SB06_6-8: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene
- SB07_1-3: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene
- SB08_0-2: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene

PCBs

- Total PCBs exceeded the SCOs in samples SB03_1-3 and SB04_4-6 due to the presence of Aroclor 1262.

Metals

- Arsenic in SB02_2-4, SB03_1-3, duplicate of SB04_1-3, SB05_1-3, and SB05A_2-4
- Barium in SB02_2-4, SB02_6-8, and SB03_1-3
- Cadmium in SB02_2-4, SB03_1-3, and duplicate of SB04_1-3
- Hexavalent Chromium in SB02_2-4, SB02_6-8, SB04_1-3, duplicate of SB04_1-3, SB06_6-8, and SB08_0-2
- Trivalent Chromium in SB01_4-6, SB02_2-4, SB02_6-8, SB02_11-13, and SB03_1-3
- Copper in all samples, with the exception of SB01_7-9, SB03_6-8, SB05A_11-13, SB07_1-3, SB07_5-7, and SB08_15-17
- Lead in all samples, with the exception of SB01_7-9, SB03_6-8, SB05A_11-13, SB07_5-7, and SB08_15-17
- Mercury in all samples, with the exception of SB01_7-9, SB03_6-8, SB05A_11-13, SB07_5-7, and SB08_15-17
- Nickel in SB01_4-6, SB02_2-4, SB02_11-13, SB03_1-3, duplicate of SB04_1-3, and SB08_0-2
- Zinc in all samples, with the exception of SB03_6-8, SB05A_11-13, SB07_5-7, and SB08_15-17

4.3.2 Groundwater Results

Five groundwater samples, including one duplicate sample, were submitted for laboratory analysis. Analytical results were compared to the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values for class GA groundwater. Analytical exceedances of the AWQS are presented in Table 3, illustrated spatially on Figure 4 and summarized below.

VOCs

- MW01 and duplicate of MW01: 1,1,1-trichloroethane (1,1,1-TCA), cis-1,2-dichloroethene (cis-1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride
- MW04: PCE

Metals

- MW01 and duplicate of MW01: manganese, selenium, sodium
- MW03: manganese
- MW04 manganese, selenium, and sodium

4.3.3 Soil Vapor Results

Soil vapor sample results were compared to the results of the ambient air sample, which was collected simultaneously with the soil vapor samples. Soil vapor sample results are summarized in Table 4 and presented on Figure 5. Thirty-two different VOCs were found in the soil vapor samples that exceeded the ambient air samples, included VOCs related to petroleum and chlorinated solvents.

4.3.4 QA/QC Sample Results

The following compounds were detected in QA/QC samples:

- Acetone was detected in two of the four trip blank samples and both field blank samples submitted for analysis. Acetone is a common lab contaminant; as such, the detections may be attributable to interference from laboratory cross-contamination.

- Methylene chloride was detected in the laboratory method blank for the soil samples; therefore, the detection of methylene chloride in soil samples may be attributable to interference from laboratory cross-contamination.

- PCE was detected in the groundwater field blank sample at 0.5 parts per billion (ppb), which is approximately 34 times lower than the lowest exceedance found in the groundwater samples.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the ESI, we conclude and recommend the following:

Conclusions

- Potential USTs – The geophysical survey identified an anomaly at the location where two USTs are shown on the 1947 and 1950 Sanborn maps; however, it could not verify the presence of USTs. Additionally, refusal encountered during the advancement of boring SB05 may have resulted from contact with a UST-related subsurface structure.
- Soil –
    - *Petroleum-Impacted Soil* – Material exhibiting staining, odor, and elevated VOC concentrations based on field screening with a PID was observed at three boring locations: SB01, SB03, and SB05. Petroleum impacts in borings SB01 and SB03 were observed straddling the water table. Petroleum impacts in boring SB05 were observed at a depth of 2 to 3 feet bgs, above an obstruction that resulted in refusal. Impacts were observed in the northern and southern portions of the Site, included the area adjacent to potential USTs. A spill was reported to NYSDEC.
    - *Historic Fill* – A layer of historic fill extending to between approximately 1.5 and 11 feet bgs was identified throughout the Site. The fill was characterized as predominately consisting of brown, fine- to coarse-grained sand with varying amounts of gravel, brick, silt, rock fragments, slag, ash, and wood. Anomalously high concentrations of metals, particularly lead, were identified in the borings indicated below. Fill from the area around these borings may potentially be hazardous or require a premium cost to dispose.
        - Barium – Boring SB02
        - Trivalent chromium – Boring SB02
        - Lead – Borings SB02, SB05, SB06, and SB08
        - Mercury – Borings SB03 and SB04
- Groundwater –
    - Measurements collected during the ESI found groundwater ranged from 4.0 to 6.4 feet bgs. Depth to groundwater during the February 2008 Langan Geotechnical Study was observed to be between 8 and 10 feet bgs. The apparent change between these two excavations may be the result of several

precipitation events and snow melt percolation into the water table prior to and during the ESI groundwater sampling event.

- *Chlorinated Solvent-Impacted Groundwater* – Chlorinated VOCs (CVOC) including 1,1,1-TCA, cis-1,2-DCE, PCE, TCE, and vinyl chloride were identified in groundwater at concentrations exceeding the Class GA TOGS AWQS. Groundwater exceedances were observed in the eastern portion of the Site.

- Soil Vapor – Soil vapor results revealed concentrations of VOCs, included those related to petroleum and chlorinated solvents, above concentrations found in the ambient air sample.

Recommendations

A plan should be prepared and implemented during development of the Site that describes potential remediation and/or mitigation measures for the impacts identified by this report that are protective of human health and the environment. The plan should include procedures for materials management and disposal, contingencies for additional impacts that can be reasonably anticipated, and a construction health and safety plan. To the extent that the Site is still an active spill site or in another regulatory program (e.g., New York State Brownfield Cleanup Program), the plan should be tailored to the applicable remedial program.

6.0 LIMITATIONS

This Phase II ESI report was prepared expressly for Purves Street Owners, LLC for the proposed development at the properties located at 44-30 Purves Street, Long Island City, New York and for the objectives defined herein. Langan cannot assume responsibility for the use of this Report for any property other than the specific site addressed in this report, or by any third party without specific written authorization from Langan.

The conclusions, opinions, and recommendations provided in this report are based on subsurface conditions ascertained from the analysis of a limited number of samples and from environmental reports prepared by other professionals that were provided by "the Client". Recommendations provided are contingent upon one another and no recommendation should be followed independent of the others. Actual conditions encountered may differ substantially from those presented herein and should be brought to our attention whereby we may determine how such changes may affect our conclusions, opinions and recommendations.

TABLES

Table 1
Sample Summary Table
Phase II ESI Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample Name	Depth Interval (feet bgs)	Date	Observations	Maximum PID Reading (ppm)	Sample Analyses
Soil Samples					
SB01_4-6	4 to 6	19-Feb-14	FILL	0.0	VOCs, SVOCs, Pesticides, PCBs, and Metals
SB01_7-9	7 to 9	19-Feb-14	PETROLEUM IMPACTS	14.9	
SB02_2-4	2 to 4	21-Feb-14	FILL	0.0	
SB02_6-8	6 to 8	21-Feb-14	FILL	0.0	
SB02_11-13	11 to 13	21-Feb-14	ORGANIC CLAY	0.0	
SB03_1-3	1 to 3	20-Feb-14	FILL	0.0	
SB03_6-8	6 to 8	20-Feb-14	PETROLEUM IMPACTS	91.7	
SB04_1-3	1 to 3	20-Feb-14	FILL	0.0	
DUP01_022014	1 to 3	20-Feb-14	FILL	0.0	
SB04_4-6	4 to 6	20-Feb-14	FILL	0.0	
SB05_1-3	1 to 3	20-Feb-14	PETROLEUM IMPACTS	240	
SB05A_2-4	2 to 4	20-Feb-14	FILL	0.0	
SB05A_11-13	11 to 13	20-Feb-14	SAND	0.0	
SB06_3-5	3 to 5	19-Feb-14	FILL	0.0	
SB06_6-8	6 to 8	19-Feb-14	FILL	0.0	
SB07_1-3	1 to 3	19-Feb-14	FILL	0.0	
SB07_5-7	5 to 7	19-Feb-14	SANDY SILT	0.0	
SB08_0-2	0 to 2	19-Feb-14	FILL	0.4	
SB08_15-17	15 to 17	19-Feb-14	SILT	0.0	
Groundwater Samples					
MW01_022814	NA	28-Feb-14	GROUNDWATER	0.0	VOCs, SVOCs, Pesticides, PCBs, and Metals
DUP02_022814	NA	28-Feb-14	GROUNDWATER	0.0	
MW02_022814	NA	28-Feb-14	GROUNDWATER	0.0	
MW03_022814	NA	28-Feb-14	GROUNDWATER	12.8	
MW04_022814	NA	28-Feb-14	GROUNDWATER	0.0	
Soil Vapor Samples					
SV01_022114	NA	21-Feb-14	SOIL VAPOR	0.0	VOCs
SV03_022114	NA	21-Feb-14	SOIL VAPOR	0.0	
SV04_022114	NA	21-Feb-14	SOIL VAPOR	0.0	
SV06_022114	NA	21-Feb-14	SOIL VAPOR	0.0	
SV07_022114	NA	21-Feb-14	SOIL VAPOR	0.0	
AA01_022114	NA	21-Feb-14	AMBIENT AIR	0.0	
QA/QC SAMPLES					
FB_022014	NA	20-Feb-14	FIELD BLANK	NA	VOCs, SVOCs, Pesticides, PCBs, and Metals
FB02_022814	NA	28-Feb-14	FIELD BLANK	NA	
TB_022014	NA	20-Feb-14	TRIP BLANK	NA	VOCs
TB_022114	NA	21-Feb-14	TRIP BLANK	NA	
TB02_022114	NA	21-Feb-14	TRIP BLANK	NA	
TB04_022814	NA	28-Feb-14	TRIP BLANK	NA	

Notes:
1) bgs = below grade surface
2) ppm = parts per million
3) PID = photoionization detector
4) DUP01_022014 is a duplicate of sample SB04_1-3
5) DUP01_022814 is a duplicate of sample MW01_022814
6) NA = Not applicable
7) VOCs = volatile organic compounds
8) SVOCs = semivolatile organic compounds
9) PCBs = polychlorinated biphenyls
10) Soil types based on field observations.

Table 2
Summary of Detected VOCs, SVOCs, Metals, Pesticides, and PCBs in Soil Samples
Phase II ESI Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet)	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	SB01_4-6 2/19/2014 14B0504-01 4 - 6	SB01_7-9 2/19/2014 14B0504-02 7 - 9	SB02_2-4 2/21/2014 14B0579-01 2 - 4	SB02_6-8 2/21/2014 14B0579-02 6 - 8	SB02_11-13 2/21/2014 14B0579-03 11 - 13	SB03_1-3 2/20/2014 14B0543-01 1 - 3	SB03_6-8 2/20/2014 14B0543-02 6 - 8	SB04_1-3 2/20/2014 14B0504-11 1 - 3	DUP01_022014 2/20/2014 14B0504-13 1 - 3	SB04_4-6 2/20/2014 14B0504-12 4 - 6
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	0.68	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	0.35 U	0.026	0.0052	0.017
1,2,4-Trimethylbenzene	3.6	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	0.35 U	0.0025 U	0.0019 U	0.0035 U
1,3,5-Trimethylbenzene	8.4	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	0.35 U	0.0025 U	0.0019 U	0.0035 U
2-Butanone	0.12	0.0027 U	0.0072	0.0057 J	0.0039 J	0.018	0.0027 U	*0.35* U	0.0025 U	0.0019 U	0.0035 U
Acetone	0.05	0.0089 J	0.032	0.042 B	0.017	**0.06**	0.0089 J	*0.35* U	0.0025 U	0.0055 J	0.011 J
Methylene chloride	0.05	0.011 B	0.0061 JB	0.006 JB	0.0021 JB	0.003 UB	0.0042 JB	**0.53** JBD^{200}	0.0032 JB	0.0044 JB	0.0066 JB
n-Butylbenzene	12	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	2.50 D^{200}	0.0025 U	0.0019 U	0.0035 U
sec-Butylbenzene	11	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	3.10 D^{200}	0.0025 U	0.0019 U	0.0035 U
Tetrachloroethylene	1.3	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	0.35 U	0.210 E	0.0210	0.034
Trichloroethylene	0.47	0.0027 U	0.003 U	0.0044 U	0.0021 U	0.003 U	0.0027 U	0.35 U	0.033	0.0042	0.0061 J
Semivolatile Organic Compounds (mg/kg)											
Acenaphthene	20	0.25 U	0.052 U	0.828 U	0.235 JD^{2}	0.095 U	0.048 U	2.34 JD^{20}	0.052 U	0.069 J	0.052 J
Anthracene	100	0.25 U	0.052 U	1.07 JD^{10}	0.662 JD^{2}	0.095 U	0.048 U	0.99 U	0.134 J	0.149 J	0.106 J
Benzo(a)anthracene	1	0.31 JD^{5}	0.052 U	**2.06** JD^{10}	**1.61** D^{2}	0.095 U	0.156 J	0.99 U	0.393	0.464	0.905
Benzo(a)pyrene	1	0.25 U	0.052 U	**2.52** JD^{10}	**1.98** D^{2}	0.095 U	0.2 J	0.99 U	0.482	0.516	0.976
Benzo(b)fluoranthene	1	0.25 U	0.052 U	**2.62** JD^{10}	**1.56** D^{2}	0.095 U	0.145 J	0.99 U	0.494	0.397	0.843
Benzo(g,h,i)perylene	100	0.51 U	0.1 U	1.66 U	0.72 JD^{2}	0.19 U	0.1 U	1.98 U	0.15 J	0.12 J	0.28
Benzo(k)fluoranthene	0.8	0.25 U	0.052 U	**2.62** JD^{10}	**1.41** D^{2}	0.095 U	0.165 J	*0.99* U	0.324	0.585	**0.922**
Chrysene	1	0.29 JD^{5}	0.052 U	**2.32** JD^{10}	**1.62** D^{2}	0.095 U	0.176 J	0.99 U	0.466	0.511	0.983
Dibenzo(a,h)anthracene	0.33	0.25 U	0.052 U	*0.828* U	0.313 JD^{2}	0.095 U	0.048 U	*0.99* U	0.062 J	0.064 J	0.131 J
Dibenzofuran	7	0.25 U	0.052 U	0.828 U	0.184 U	0.095 U	0.048 U	0.99 U	0.052 U	0.054 U	0.048 U
Fluoranthene	100	0.92 JD^{5}	0.052 U	5.25 D^{10}	3.68 D^{2}	0.095 U	0.278	1.59 JD^{20}	0.924	1.05	1.18
Fluorene	30	0.25 U	0.052 U	0.828 U	0.267 JD^{2}	0.095 U	0.048 U	2.89 JD^{20}	0.052 U	0.067 J	0.068 J
Indeno(1,2,3-cd)pyrene	0.5	0.25 U	0.052 U	**1.2** JD^{10}	**0.764** D^{2}	0.095 U	0.075 J	*0.99* U	0.165 J	0.135 J	0.319
Naphthalene	12	0.25 U	0.052 U	0.828 U	0.195 JD^{2}	0.095 U	0.048 U	0.99 U	0.052 U	0.054 U	0.048 U
Phenanthrene	100	0.74 JD^{5}	0.052 U	4.13 D^{10}	2.780 D^{2}	0.095 U	0.143 J	5.2 D^{20}	0.408	0.681	0.622
Pyrene	100	0.56 JD^{5}	0.052 U	3.4 D^{10}	2.83 D^{2}	0.095 U	0.283	1.56 JD^{20}	0.798	0.959	1.24
Pesticides (mg/kg)											
Total Pesticides	~	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)											
Total PCBs	0.1	0.021 U	0.021 U	0.022 U	0.025 U	0.026 U	**0.201**	0.02 U	0.021 U	0.022 U	**0.118**
Metals (mg/kg)											
Arsenic	13	7.92	2.9	**25.5**	12.9	6.34	**17**	1.37	8.73	**20.3**	6.54
Barium	350	136	46.5	**4,340**	**900**	120	**505**	26.2	330	191	162
Cadmium	2.5	1.03	0.37 U	**5.62**	1.23	0.76	**3.99**	0.35 U	0.89	**3.8**	0.85
Chromium, Hexavalent	1	0.72	0.62 U	**1.42**	**1.52**	0.76 U	0.58 U	0.59 U	**2.55**	**1.86**	0.74
Chromium, Trivalent	30	**33.0**	17.4	**251**	**32.9**	**31.6**	**61.7**	14.9	16.9	14.5	20.2
Copper	50	**699**	41.1	**434**	**310**	**50.5**	**730**	12.9	**172**	**860**	**202**
Lead	63	**410**	8.67	**7,380**	**7,010**	**105**	**609**	5.92	**508**	**630**	**387**
Manganese	1600	431	106	271	104	797	254	60	318	327	269
Mercury	0.18	**0.29**	0.037 U	**2.13**	**2.42**	**1.26**	**3.03**	0.117	**1.86**	**14.9**	**1.97**
Nickel	30	**48**	22.9	**40.6**	13.3	**30.1**	**41.2**	11.5	18.6	**34.0**	18.2
Zinc	109	**532**	**121**	**3,260**	**414**	**140**	**806**	21	**399**	**1,410**	**467**
Cyanide											
Total Cyanide	27	NA	NA	4.93	0.73 U	0.76 U	0.58 U	0.59 U	NA	NA	NA

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO).
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are highlighted and in bold.
4. Method Detection Limits Exceeding SCO Criteria are italicized.
5. DUP01_022014 is a duplicate of sample SB04_1-3
6. mg/kg = milligrams per kilogram
7. ND = not detected
8. NA = not analyzed
9. ~ = No corresponding comparison criteria

Qualifiers:
U = Analyte included in the analysis, but not detected
J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration
B = Analyte is found in the associated laboratory analysis batch blank
D$^{\#}$ = Results for a diluted sample, # indicates the dilution factor

Table 2
Summary of Detected VOCs, SVOCs, Metals, Pesticides, and PCBs in Soil Samples
Phase II ESI Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet)	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	SB05_1-3 2/20/2014 14B0543-03 1 - 3	SB05A_2-4 2/20/2014 14B0543-04 2 - 4	SB05A_11-13 2/20/2014 14B0543-05 11 - 13	SB06_3-5 2/19/2014 14B0504-03 3 - 5	SB06_6-8 2/19/2014 14B0504-04 6 - 8	SB07_1-3 2/19/2014 14B0504-05 1 - 3	SB07_5-7 2/19/2014 14B0504-06 5 - 7	SB08_0-2 2/19/2014 14B0504-07 0 - 2	SB08_15-17 2/19/2014 14B0504-08 15 - 17
Volatile Organic Compounds (mg/kg)										
1,1,1-Trichloroethane	0.68	0.19 U	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0022 U
1,2,4-Trimethylbenzene	3.6	0.55 D^{100}	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0022 U
1,3,5-Trimethylbenzene	8.4	0.48 D^{100}	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0022 U
2-Butanone	0.12	*0.19* U	0.0029 U	0.0014 U	0.0022 U	0.062	0.0024 U	0.0021 U	0.0017 U	0.0022 U
Acetone	0.05	*0.19* U	0.011 J	0.0089	0.011	**0.170**	0.0024 U	0.0086	0.0084	0.004 J
Methylene chloride	0.05	*0.19* U	0.0034 JB	0.0028 JB	0.0067 JB	0.0060 JB	0.0043 JB	0.0087 B	0.0032 JB	0.0049 JB
n-Butylbenzene	12	0.19 U	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0022 U
sec-Butylbenzene	11	0.19 U	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0022 U
Tetrachloroethylene	1.3	0.19 U	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.048
Trichloroethylene	0.47	0.19 U	0.0029 U	0.0014 U	0.0022 U	0.0036 U	0.0024 U	0.0021 U	0.0017 U	0.0027 J
Semivolatile Organic Compounds (mg/kg)										
Acenaphthene	20	0.388 D^{2}	0.058 J	0.051 U	0.458 JD^{5}	1.5 JD^{10}	0.232 U	0.05 U	0.466 U	0.054 U
Anthracene	100	0.95 D^{2}	0.147 J	0.051 U	0.887 JD^{5}	3.35 D^{10}	0.613 JD^{5}	0.05 U	0.577 JD^{10}	0.054 U
Benzo(a)anthracene	1	**1.79** D^{2}	0.459	0.051 U	**2.04** D^{5}	**4.16** D^{10}	**1.49** D^{5}	0.05 U	**3.02** D^{10}	0.054 U
Benzo(a)pyrene	1	**1.71** D^{2}	0.522	0.051 U	0.498 JD^{5}	**3.34** D^{10}	**1.14** D^{5}	0.05 U	**1.93** D^{10}	0.054 U
Benzo(b)fluoranthene	1	**1.28** D^{2}	0.364	0.051 U	**1.47** D^{5}	**3.82** D^{10}	**1.56** D^{5}	0.05 U	**3.84** D^{10}	0.054 U
Benzo(g,h,i)perylene	100	0.46 D^{2}	0.16 J	0.10 U	0.5 U	1.48 U	0.46 U	0.10 U	0.93 U	0.11 U
Benzo(k)fluoranthene	0.8	**1.5** D^{2}	0.426	0.051 U	**1.68** D^{5}	**6.29** D^{10}	**1.22** D^{5}	0.05 U	**2.52** D^{10}	0.054 U
Chrysene	1	**1.7** D^{2}	0.484	0.051 U	**2.53** D^{5}	**5.72** D^{10}	**1.43** D^{5}	0.05 U	**3.38** D^{10}	0.054 U
Dibenzo(a,h)anthracene	0.33	0.122 JD^{2}	0.056 J	0.051 U	0.249 U	*0.739* U	0.232 U	0.05 U	*0.466* U	0.054 U
Dibenzofuran	7	0.333 JD^{2}	0.050 U	0.051 U	0.332 JD^{5}	0.915 JD^{10}	0.232 U	0.05 U	0.466 U	0.054 U
Fluoranthene	100	3.28 D^{2}	0.915	0.051 U	4.64 D^{5}	12.0 D	3.22 D^{5}	0.05 U	5.26 D^{10}	0.054 U
Fluorene	30	0.384 D^{2}	0.059 J	0.051 U	0.626 JD^{5}	2.21 JD^{10}	0.232 U	0.05 U	0.466 U	0.054 U
Indeno(1,2,3-cd)pyrene	0.5	0.481 D^{2}	0.151 J	0.051 U	0.488 JD^{5}	**1.24** JD^{10}	0.41 JD^{5}	0.05 U	**0.692** JD^{10}	0.054 U
Naphthalene	12	0.209 JD^{2}	0.05 U	0.051 U	0.249 U	0.739 U	0.232 U	0.05 U	0.466 U	0.054 U
Phenanthrene	100	3.23 D^{2}	0.671	0.051 U	4.59 D^{5}	10.0 D^{10}	1.73 D^{5}	0.05 U	2.54 D^{10}	0.054 U
Pyrene	100	2.96 D^{2}	0.876	0.051 U	3.54 D^{5}	6.67 D^{10}	1.73 D^{5}	0.05 U	5.84 D^{10}	0.054 U
Pesticides (mg/kg)										
Total Pesticides	~	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)										
Total PCBs	0.1	0.035	0.02 U	0.021 U	0.020 U	0.03 U	0.019 U	0.02 U	0.019 U	0.022 U
Metals (mg/kg)										
Arsenic	13	**14.1**	**35.8**	1.21 U	9.01	12.5	4.21	1.72	8.0	2.3
Barium	350	104	102	17.9	253	306	90.2	25.2	258	69.1
Cadmium	2.5	0.76	1.48	0.36 U	1.52	1.38	1.21	0.36 U	1.3	0.38 U
Chromium, Hexavalent	1	0.57 U	0.60 U	0.61 U	0.71	**8.52**	0.55 U	0.60 U	**1.29**	0.64 U
Chromium, Trivalent	30	17.0	13.3	15.1	16.3	22.1	15.7	21.4	10.6	18.5
Copper	50	**82**	**111**	7.5	**334**	**86.6**	49.9	13.7	**484**	22.8
Lead	63	**258**	**2,460**	3.31	**240**	**1,090**	**168**	5.57	**61,000** D^{100}	20.4
Manganese	1600	145	164	48	156	189	345	243	220	487
Mercury	0.18	**0.809**	**0.428**	0.036 U	**0.452**	**1.29**	**0.569**	0.036 U	**0.63**	0.038 U
Nickel	30	24.9	21	9.48	21.8	22.8	15.4	15.2	**54.7**	22.4
Zinc	109	**313**	**220**	14	**655**	**897**	**173**	30	**197**	44.8
Cyanide										
Total Cyanide	27	0.57 U	0.60 U	0.61 U	NA	NA	NA	NA	NA	NA

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO).
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are highlighted and in bold.
4. Method Detection Limits Exceeding SCO Criteria are italicized.
5. DUP01_022014 is a duplicate of sample SB04_1-3
6. mg/kg = milligrams per kilogram
7. ND = not detected
8. NA = not analyzed
9. ~ = No corresponding comparison criteria

Qualifiers:
U = Analyte included in the analysis, but not detected
J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration
B = Analyte is found in the associated laboratory analysis batch blank
$D^{\#}$ = Results for a diluted sample. # indicates the dilution factor

Table 3
Summary of Detected VOCs, SVOCs, Pesticides, PCBs and Metals in Groundwater Samples
Phase II ESI Report
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID	NYSDEC TOGS Standards and Guidance Values - Class GA	MW01_022814 2/28/2014 14B0822-01		DUP01_022814 2/28/2014 14B0822-05		MW02_022814 2/28/2014 14B0822-02		MW03_022814 2/28/2014 14B0822-03		MW04_022814 2/28/2014 14B0822-04	
Volatile Organic Compounds (µg/L)											
1,1,1-Trichloroethane	5	**26**		**26**		0.20	U	0.20	U	1.80	
1,1-Dichloroethane	5	1.20		1.20		0.20	U	0.20	U	0.64	
1,1-Dichloroethylene	5	1.80		2.0		0.20	U	0.20	U	0.39	J
1,2,4-Trichlorobenzene	5	0.46	J	0.45	J	0.20	U	0.20	U	0.20	U
2-Butanone	50	0.71		0.50	U	0.50	U	0.50	U	0.50	U
Acetone	50	3.0		2.50		1.00	U	1.50	J	2.30	
Chloroform	7	0.23	J	0.22	J	0.20	U	0.20	U	0.20	U
cis-1,2-Dichloroethylene	5	**62**	D^{25}	**64**	D^{20}	0.20	U	0.20	U	4.40	
Isopropylbenzene	5	0.20	U	0.20	U	0.20	U	0.64		0.20	U
Methyl tert-butyl ether (MTBE)	10	0.20	U	0.20	U	0.20	U	0.24	J	0.20	U
Tetrachloroethylene	5	**580**	D^{25}	**620**	D^{20}	0.20	U	0.41	J	**17**	
trans-1,2-Dichloroethylene	5	0.49	J	0.43	J	0.20	U	0.20	U	0.20	U
Trichloroethylene	5	**72**	D^{25}	**77**	D^{20}	0.20	U	0.20	U	4.10	
Vinyl Chloride	2	**3.60**		**3.40**		0.50	U	0.50	U	0.50	U
Semivolatile Organic Compounds (µg/L)											
Acenaphthene	20	0.12		0.14		0.05	U	2.86		0.053	U
Acenaphthylene	~	0.051	U	0.053	U	0.051	U	0.70		0.053	U
Anthracene	50	0.051	U	0.053	U	0.051	U	0.43		0.053	U
Fluoranthene	50	0.051		0.084		0.051	U	0.25		0.053	U
Fluorene	50	0.072		0.084		0.051	U	2.86		0.053	U
Naphthalene	10	0.30		0.32		0.05	U	0.14		0.053	U
Phenanthrene	50	0.14		0.18		0.05	U	1.23		0.053	U
Pyrene	50	0.051	U	0.084		0.051	U	0.18		0.053	U
Pesticides (µg/L)											
Total Pesticides	~	ND		ND		ND		ND		ND	
PCBs (µg/L)											
Total PCBs	0.09	ND		ND		ND		ND		ND	
Metals (µg/L)											
Aluminum	~	782		890		10	U	88		100	
Arsenic	25	4	U	4	U	9		4	U	4	U
Barium	1000	75		83		54		73		104	
Calcium	~	199,000		196,000		64,900		107,000		135,000	
Cobalt	~	8		7		5	U	5	U	5	U
Copper	200	12		15		3	U	3	U	3	U
Iron	~	633		805		115		3,120		331	
Lead	25	8		11		7		3	U	4	
Magnesium	35000	22,100		21,400		4,750		11,000		13,800	
Manganese	300	**9,220**		**9,260**		97		**361**		**3,250**	
Nickel	100	26		23		5	U	5	U	6	
Potassium	~	10,300		10,200		5,220		11,400		15,100	
Selenium	10	**12**		**13**		10	U	10	U	**17**	
Sodium	20000	**57,100**		**56,600**		12,700		18,700		**31,100**	
Zinc	2000	357		320		51		17		29	

Notes:
1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. Only detected compounds are shown in the table
3. Concentrations exceeding the NYSDEC TOGS AWQS Criteria are highlighted and in bold
4. DUP01_022814 is a duplicate of sample MW01_022814
5. µg/L = micrograms per liter
6. PCBs = polychlorinated biphenyls
7. ~ = no corresponding comparison criteria
8. ND = not detected

Qualifiers:
U = Analyte included in the analysis, but not detectec
J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, the reported result is an estimated concentration
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor

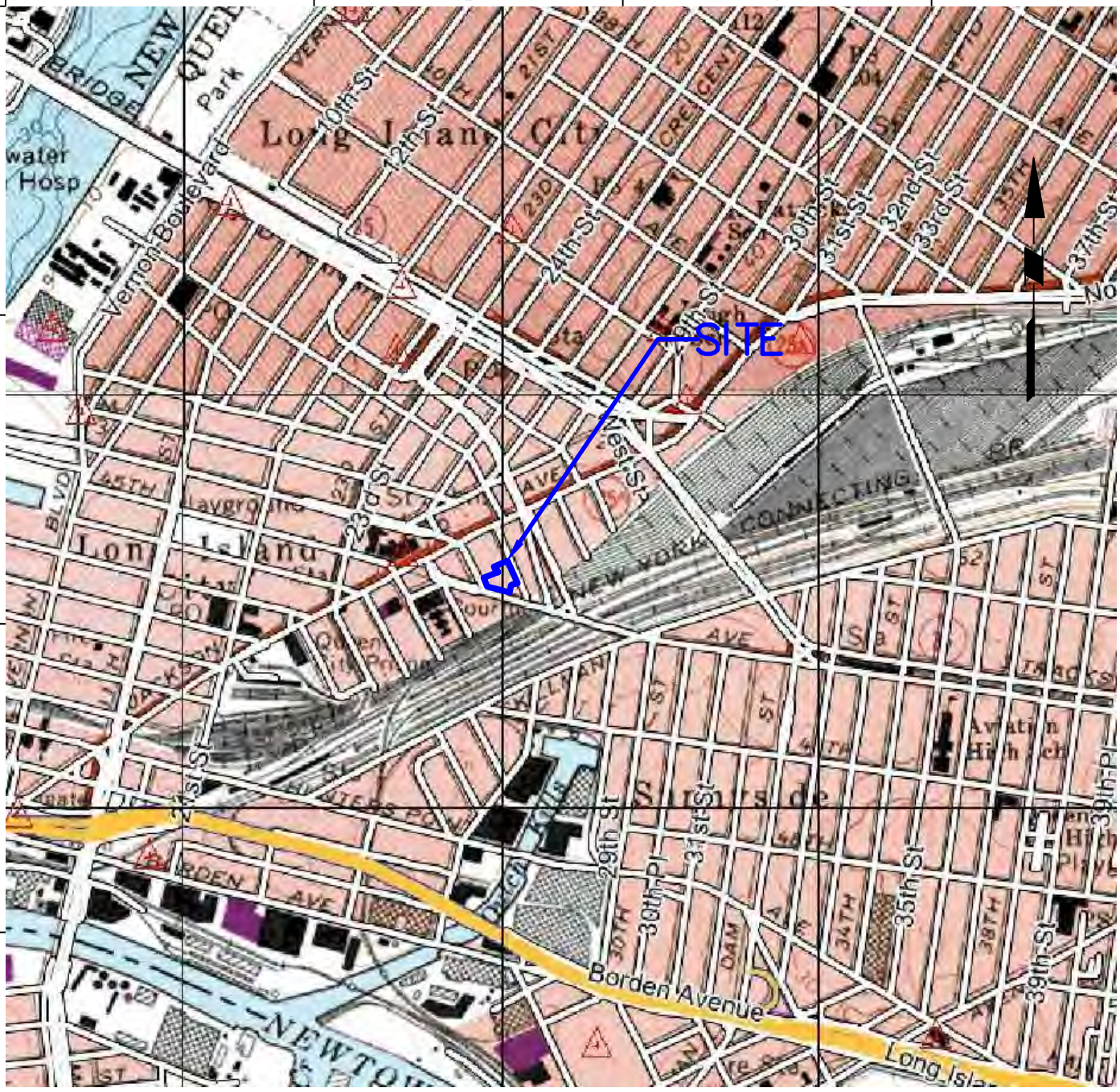
Table 4
Summary of Detected VOCs in Soil Vapor and Ambient Air Samples
Phase II ESI
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample Name	AA01_022114		SV01_022114		SV03_022114		SV04_022114		SV06_022114		SV07_022114	
Lab Sample ID	L1403948-06		L1403948-01		L1403948-02		L1403948-03		L1403948-04		L1403948-05	
Sample Date	2/21/2014		2/21/2014		2/21/2014		2/21/2014		2/21/2014		2/21/2014	
Volatile Organic Compounds (µg/m³)												
1,1,1-Trichloroethane	1.09	U	**34.7**		**465**		1.09	U	**67.1**		**12.5**	
1,1-Dichloroethane	0.809	U	**2.02**		**5.06**		0.809	U	0.809	U	**1.62**	
1,2,4-Trimethylbenzene	0.983	U	0.983	U	1.97	U	**2.66**		0.983	U	0.983	U
1,2-Dichloroethane	0.809	U	**7.97**		1.62	U	0.809	U	0.809	U	0.809	U
1,3-Butadiene	0.442	U	**5.4**		**2.54**		0.442	U	**0.655**		0.442	U
2-Butanone	0.902		**6.78**		**7.31**		**3.07**		**6.55**		**5.66**	
2-Hexanone	0.82	U	0.82	U	1.64	U	0.82	U	0.82	U	**0.885**	
4-Methyl-2-pentanone	0.82	U	0.82	U	1.64	U	0.82	U	0.82	U	**0.926**	
Acetone	6.6		**323**		**232**		**11.2**		**234**		**114**	
Benzene	0.987		**10.3**		**1.39**		**1.16**		0.642		**1.12**	
Carbon disulfide	0.623	U	**7.35**		**153**		0.623	U	**1.01**		**30.1**	
Carbon tetrachloride	1.26	U	**37.6**		2.52	U	1.26	U	**2.22**		**1.72**	
Chloroform	0.977	U	**37.6**		**4.53**		**1.37**		**4.54**		**11.6**	
Chloromethane	1.15		0.413	U	0.826	U	**1.22**		0.413	U	0.413	U
cis-1,2-Dichloroethene	0.793	U	**1.05**		**7.49**		0.793	U	**1.07**		**4.2**	
Cyclohexane	0.688	U	**2.57**		1.38	U	0.688	U	0.688	U	0.688	U
Dichlorodifluoromethane	2.26		**6.33**		**2.49**		2.03		1.69		1.23	
Ethanol	8.37		**10.1**		9.42	U	**12.1**		**9.31**		**25.1**	
Ethyl Acetate	1.8	U	**1.88**		3.6	U	1.8	U	**2.1**		1.8	U
Ethylbenzene	0.869	U	**0.916**		1.74	U	**1.19**		**0.96**		**1.09**	
Freon-113	1.53	U	1.53	U	**3.07**		1.53	U	1.53	U	1.53	U
Heptane	0.82	U	**13.8**		1.64	U	**0.914**		0.82	U	**1.13**	
Isopropanol	1.44		1.23	U	2.46	U	**4.94**		1.23		1.23	U
n-Hexane	0.796		**39.5**		1.41	U	**0.966**		0.705	U	**0.895**	
o-Xylene	0.869	U	**0.969**		1.74	U	**1.46**		**1.28**		**1.24**	
p/m-Xylene	1.74	U	**2.77**		3.47	U	**4.28**		**3.33**		**3.41**	
Tetrachloroethene	2.7		**94.9**		**612**		**5.99**		**634**		**298**	
Toluene	3.73		**11.9**		**6.48**		**6.86**		**7.46**		**8.52**	
trans-1,2-Dichloroethene	0.793	U	0.793	U	1.59	U	0.793	U	0.793	U	**1.34**	
Trichloroethene	1.07	U	**142**		**65**		1.07	U	**75.2**		**198**	
Trichlorofluoromethane	1.31		**14.5**		2.25	U	1.3		**2.64**		**1.42**	
Vinyl chloride	0.511	U	**0.562**		1.02	U	0.511	U	0.511	U	0.511	U

Notes and Qualifiers:

1. Only detected compounds are shown in table.
2. AA01_022114 is an ambient air sample.
3. Soil vapor sample concentrations above the ambient air conentration are in bold.
3. VOC = volatile organic compound
4. µg/m³ = micrograms per cubic meter
5. ~ = This indicates that no regulatory limit has been established for this analyte
6. U = Analyte included in the analysis, but not detected

FIGURES



LEGEND:

SITE BOUNDARY

NOTES:

1. BASE MAP TAKEN FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 1927 NORTH AMERICAN DATUM, REVISED IN 1979.

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Project	44-30 PURVES STREET BLOCK No. 268, LOT Nos. 1, 24, 25, 26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	SITE LOCATION MAP
Project No.	170282501
Date	2/24/2014
Scale	NTS
Drawn By	PM
Submission Date	–
Figure No.	1
Sheet	1 of 5

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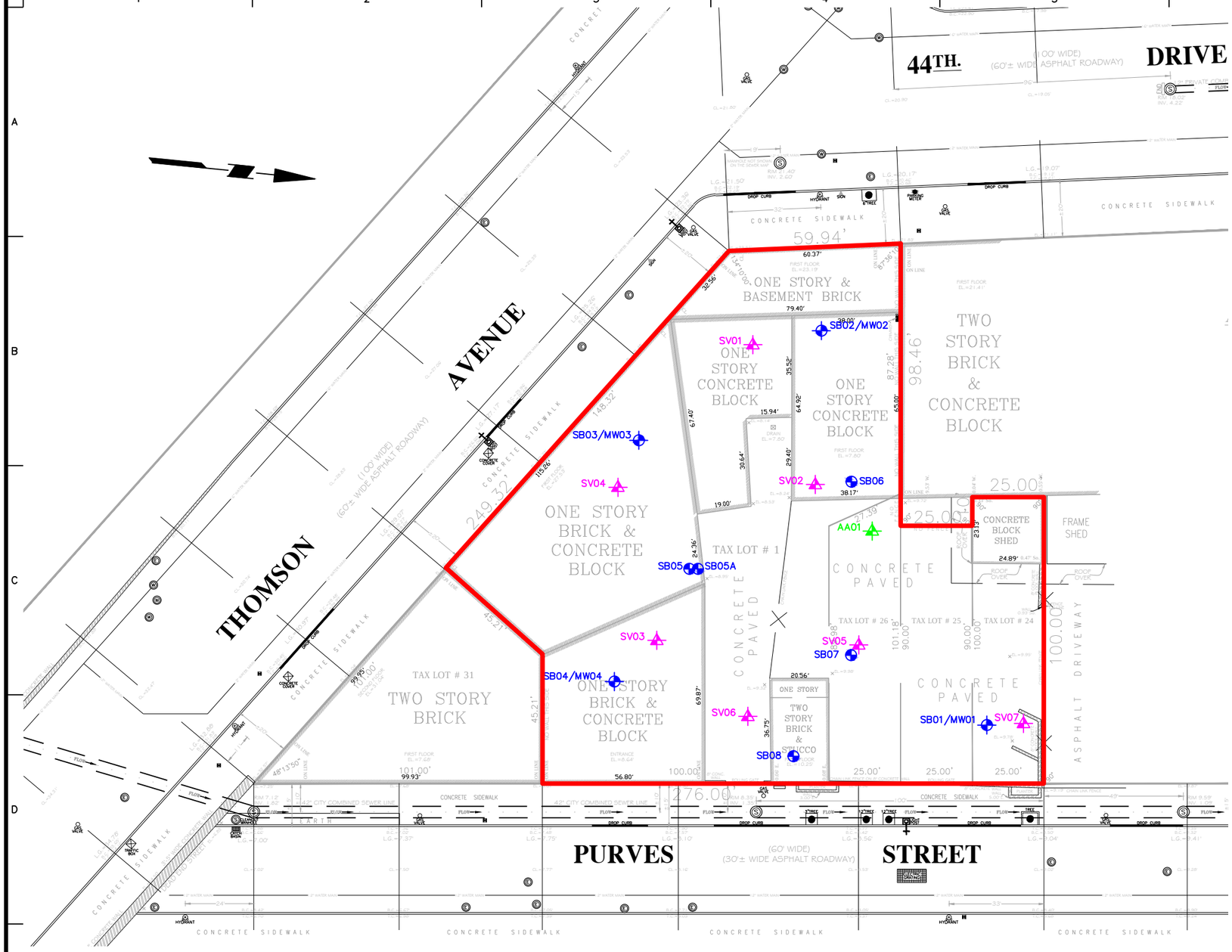
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 1 - Site Location Map.dwg Date: 3/7/2014 Time: 16:40 User: pmcmahon Style Table: Langan.stb Layout: ANSIA-BP



LEGEND

- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- SV01 — SOIL VAPOR SAMPLE LOCATION
- AA01 — AMBIENT AIR SAMPLE LOCATION
- SITE BOUNDARY

NOTES:

1. DRAWING BASED ON JANUARY 4, 2005 SURVEY BY BIG APPLE LAND SURVEYORS, P.C. FORMER BUILDING FOOTPRINTS SHOWN FOR REFERENCE; NO STRUCTURES ABOVE THE FORMER SLAB EXIST ON THE SITE.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
3. BORINGS, WELLS AND SOIL VAPOR POINTS WERE INSTALLED AND SAMPLED BETWEEN FEBRUARY 19 AND 28, 2014.

40 0 10 25 40
SCALE IN FEET

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Project
44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
SAMPLE LOCATION PLAN

Project No. 170282501	Drawing No. 2
Date 02/24/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By JJH	
Submission Date 3/14/2014	Sheet 2 of 5

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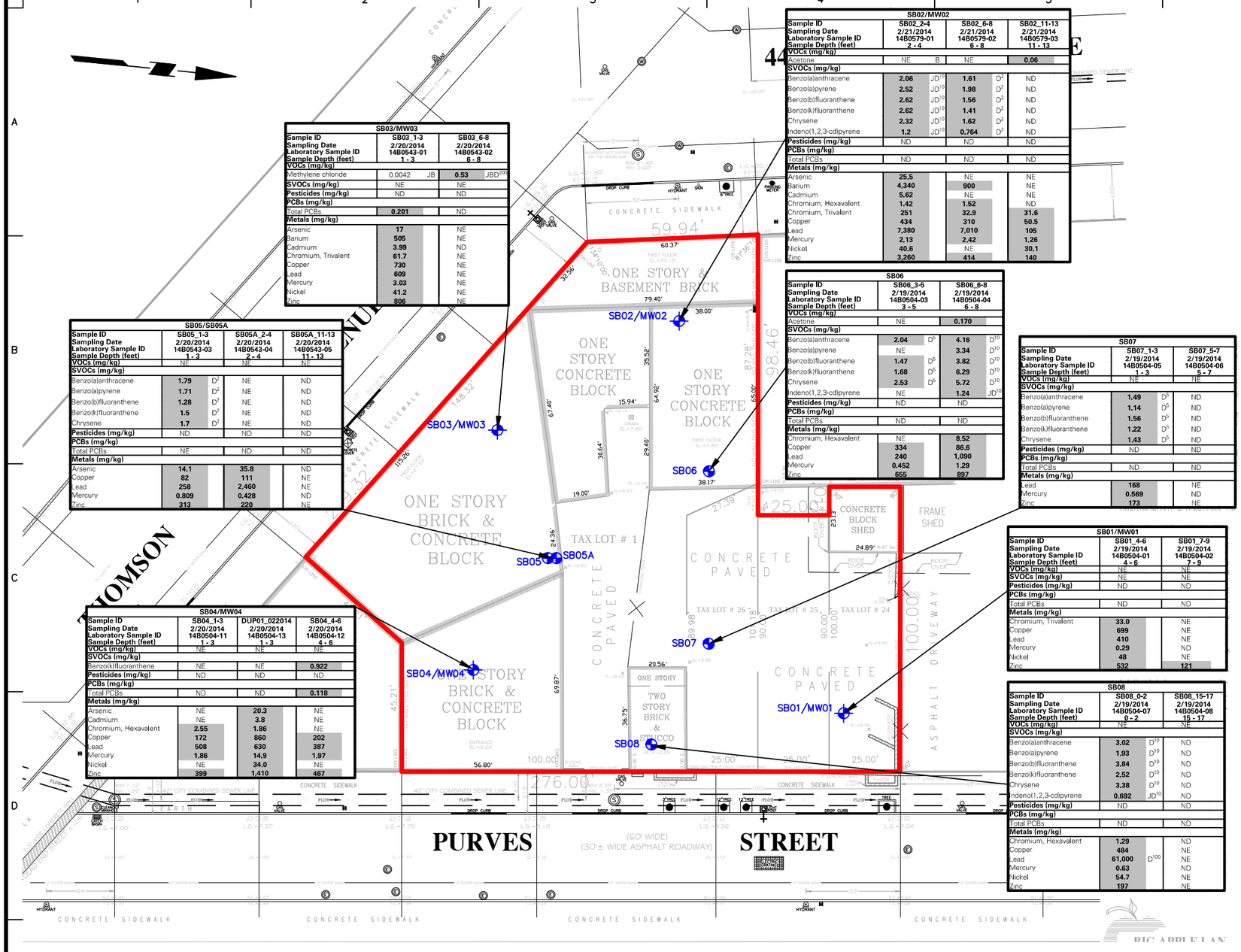
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 2 - Site Plan.dwg Date: 3/13/2014 Time: 14:23 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL



SB02/MW02

Sample ID	SB02_2-4		SB02_6-8		SB02_11-13	
Sampling Date	2/21/2014		2/21/2014		2/21/2014	
Laboratory Sample ID	14B0579-01		14B0579-02		14B0579-03	
Sample Depth (feet)	2 - 4		6 - 8		11 - 13	
VOCs (mg/kg)						
Acetone	NE	B	NE		**0.06**	
SVOCs (mg/kg)						
Benzo(a)anthracene	**2.06**	JD[10]	**1.61**	D[2]	ND	
Benzo(a)pyrene	**2.52**	JD[10]	**1.98**	D[2]	ND	
Benzo(b)fluoranthene	**2.62**	JD[10]	**1.56**	D[2]	ND	
Benzo(k)fluoranthene	**2.62**	JD[10]	**1.41**	D[2]	ND	
Chrysene	**2.32**	JD[10]	**1.62**	D[2]	ND	
Indeno(1,2,3-cd)pyrene	**1.2**	JD[10]	**0.764**	D[2]	ND	
Pesticides (mg/kg)	ND		ND		ND	
PCBs (mg/kg)						
Total PCBs	ND		ND		ND	
Metals (mg/kg)						
Arsenic	**25.5**		NE		NE	
Barium	**4,340**		**900**		NE	
Cadmium	**5.62**		NE		NE	
Chromium, Hexavalent	**1.42**		**1.52**		ND	
Chromium, Trivalent	**251**		**32.9**		**31.6**	
Copper	**434**		**310**		**50.5**	
Lead	**7,380**		**7,010**		**105**	
Mercury	**2.13**		**2.42**		**1.26**	
Nickel	**40.6**		NE		**30.1**	
Zinc	**3,260**		**414**		**140**	

SB03/MW03

Sample ID	SB03_1-3		SB03_6-8	
Sampling Date	2/20/2014		2/20/2014	
Laboratory Sample ID	14B0543-01		14B0543-02	
Sample Depth (feet)	1 - 3		6 - 8	
VOCs (mg/kg)				
Methylene chloride	0.0042	JB	**0.53**	JBD[200]
SVOCs (mg/kg)	NE		NE	
Pesticides (mg/kg)	ND		ND	
PCBs (mg/kg)				
Total PCBs	**0.201**		ND	
Metals (mg/kg)				
Arsenic	**17**		NE	
Barium	**505**		NE	
Cadmium	**3.99**		ND	
Chromium, Trivalent	**61.7**		NE	
Copper	**730**		NE	
Lead	**609**		NE	
Mercury	**3.03**		NE	
Nickel	**41.2**		NE	
Zinc	**806**		NE	

SB06

Sample ID	SB06_3-5		SB06_6-8	
Sampling Date	2/19/2014		2/19/2014	
Laboratory Sample ID	14B0504-03		14B0504-04	
Sample Depth (feet)	3 - 5		6 - 8	
VOCs (mg/kg)				
Acetone	NE		**0.170**	
SVOCs (mg/kg)				
Benzo(a)anthracene	**2.04**	D[5]	**4.16**	D[10]
Benzo(a)pyrene	NE		**3.34**	D[10]
Benzo(b)fluoranthene	**1.47**	D[5]	**3.82**	D[10]
Benzo(k)fluoranthene	**1.68**	D[5]	**6.29**	D[10]
Chrysene	**2.53**	D[5]	**5.72**	D[10]
Indeno(1,2,3-cd)pyrene	NE		**1.24**	JD[10]
Pesticides (mg/kg)	ND		ND	
PCBs (mg/kg)				
Total PCBs	ND		ND	
Metals (mg/kg)				
Chromium, Hexavalent	NE		**8.52**	
Copper	**334**		**86.6**	
Lead	**240**		**1,090**	
Mercury	**0.452**		**1.29**	
Zinc	**655**		**897**	

SB07

Sample ID	SB07_1-3		SB07_5-7	
Sampling Date	2/19/2014		2/19/2014	
Laboratory Sample ID	14B0504-05		14B0504-06	
Sample Depth (feet)	1 - 3		5 - 7	
VOCs (mg/kg)	NE		NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	**1.49**	D[5]	ND	
Benzo(a)pyrene	**1.14**	D[5]	ND	
Benzo(b)fluoranthene	**1.56**	D[5]	ND	
Benzo(k)fluoranthene	**1.22**	D[5]	ND	
Chrysene	**1.43**	D[5]	ND	
Pesticides (mg/kg)	ND		ND	
PCBs (mg/kg)				
Total PCBs	ND		ND	
Metals (mg/kg)				
Lead	**168**		NE	
Mercury	**0.589**		ND	
Zinc	**173**		NE	

SB05/SB05A

Sample ID	SB05_1-3		SB05A_2-4		SB05A_11-13	
Sampling Date	2/20/2014		2/20/2014		2/20/2014	
Laboratory Sample ID	14B0543-03		14B0543-04		14B0543-05	
Sample Depth (feet)	1 - 3		2 - 4		11 - 13	
VOCs (mg/kg)	NE		NE		NE	
SVOCs (mg/kg)						
Benzo(a)anthracene	**1.79**	D[2]	NE		ND	
Benzo(a)pyrene	**1.71**	D[2]	NE		ND	
Benzo(b)fluoranthene	**1.28**	D[2]	NE		ND	
Benzo(k)fluoranthene	**1.5**	D[2]	NE		ND	
Chrysene	**1.7**	D[2]	NE		ND	
Pesticides (mg/kg)	ND		ND		ND	
PCBs (mg/kg)						
Total PCBs	NE		ND		ND	
Metals (mg/kg)						
Arsenic	**14.1**		**35.8**		ND	
Copper	**82**		**111**		NE	
Lead	**258**		**2,460**		NE	
Mercury	**0.809**		**0.428**		ND	
Zinc	**313**		**220**		NE	

SB01/MW01

Sample ID	SB01_4-6		SB01_7-9	
Sampling Date	2/19/2014		2/19/2014	
Laboratory Sample ID	14B0504-01		14B0504-02	
Sample Depth (feet)	4 - 6		7 - 9	
VOCs (mg/kg)	NE		NE	
SVOCs (mg/kg)	NE		NE	
Pesticides (mg/kg)	ND		ND	
PCBs (mg/kg)				
Total PCBs	ND		ND	
Metals (mg/kg)				
Chromium, Trivalent	**33.0**		NE	
Copper	**699**		NE	
Lead	**410**		NE	
Mercury	**0.29**		ND	
Nickel	**48**		NE	
Zinc	**532**		**121**	

SB08

Sample ID	SB08_0-2		SB08_15-17	
Sampling Date	2/19/2014		2/19/2014	
Laboratory Sample ID	14B0504-07		14B0504-08	
Sample Depth (feet)	0 - 2		15 - 17	
VOCs (mg/kg)	NE		NE	
SVOCs (mg/kg)				
Benzo(a)anthracene	**3.02**	D[10]	ND	
Benzo(a)pyrene	**1.93**	D[10]	ND	
Benzo(b)fluoranthene	**3.84**	D[10]	ND	
Benzo(k)fluoranthene	**2.52**	D[10]	ND	
Chrysene	**3.38**	D[10]	ND	
Indeno(1,2,3-cd)pyrene	**0.692**	JD[10]	ND	
Pesticides (mg/kg)	ND		ND	
PCBs (mg/kg)				
Total PCBs	ND		ND	
Metals (mg/kg)				
Chromium, Hexavalent	**1.29**		ND	
Copper	**484**		NE	
Lead	**61,000**	D[100]	NE	
Mercury	**0.63**		ND	
Nickel	**54.7**		NE	
Zinc	**197**		NE	

SB04/MW04

Sample ID	SB04_1-3		DUP01_022014		SB04_4-6	
Sampling Date	2/20/2014		2/20/2014		2/20/2014	
Laboratory Sample ID	14B0504-11		14B0504-13		14B0504-12	
Sample Depth (feet)	1 - 3		1 - 3		4 - 6	
VOCs (mg/kg)	NE		NE		NE	
SVOCs (mg/kg)						
Benzo(k)fluoranthene	NE		NE		**0.922**	
Pesticides (mg/kg)	ND		ND		ND	
PCBs (mg/kg)						
Total PCBs	ND		ND		**0.118**	
Metals (mg/kg)						
Arsenic	NE		**20.3**		NE	
Cadmium	NE		**3.8**		NE	
Chromium, Hexavalent	**2.55**		**1.86**		NE	
Copper	**172**		**860**		**202**	
Lead	**508**		**630**		**387**	
Mercury	**1.86**		**14.9**		**1.97**	
Nickel	NE		**34.0**		NE	
Zinc	**399**		**1,410**		**467**	

LEGEND

- SB05 — BORING LOCATION
- SB01/MW01 — BORING AND MONITORING WELL LOCATION
- SITE BOUNDARY

NOTES:

1. DRAWING BASED ON JANUARY 4, 2005 SURVEY BY BIG APPLE LAND SURVEYORS, P.C. FORMER BUILDING FOOTPRINTS SHOWN FOR REFERENCE; NO STRUCTURES ABOVE THE FORMER SLAB EXIST ON THE SITE.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
3. SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (SCO).
4. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE SCOs ARE SHOWN.
5. NYSDEC PART 375 UNRESTRICTED USE SCO EXCEEDANCES ARE HIGHLIGHTED AND IN BOLD.
6. DUP01_022014 IS A DUPLICATE OF SAMPLE SB04_1-3.
7. mg/kg = MILLIGRAM PER KILOGRAM
8. ND = NOT DETECTED
9. NE = COMPOUND DETECTED AT A CONCENTRATION THAT DID NOT EXCEED THE NYSDEC PART 375 UNRESTRICTED USE SCO.

QUALIFIERS:

J = DETECTED ABOVE THE METHOD DETECTION LIMIT BUT BELOW THE REPORTING LIMIT; THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION
B = ANALYTE WAS DETECTED IN THE ASSOCIATED LABORATORY ANALYSIS BATCH BLANK
D# = RESULT IS FOR A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR

NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	
VOCs (mg/kg)	
Acetone	0.05
Methylene chloride	0.05
SVOCs (mg/kg)	
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(k)fluoranthene	0.8
Chrysene	1
Indeno(1,2,3-cd)pyrene	0.5
PCBs (mg/kg)	
Total PCBs	0.1
Metals (mg/kg)	
Arsenic	13
Barium	350
Cadmium	2.5
Chromium, Hexavalent	1
Chromium, Trivalent	30
Copper	50
Lead	63
Mercury	0.18
Nickel	30
Zinc	109

40 0 10 25 40

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Project
44-30 PURVES STREET
BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
SOIL SAMPLE RESULTS MAP

Project No. 170282501	Drawing No. 3
Date 03/05/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By JJH	
Submission Date 3/14/2014	Sheet 3 of 5

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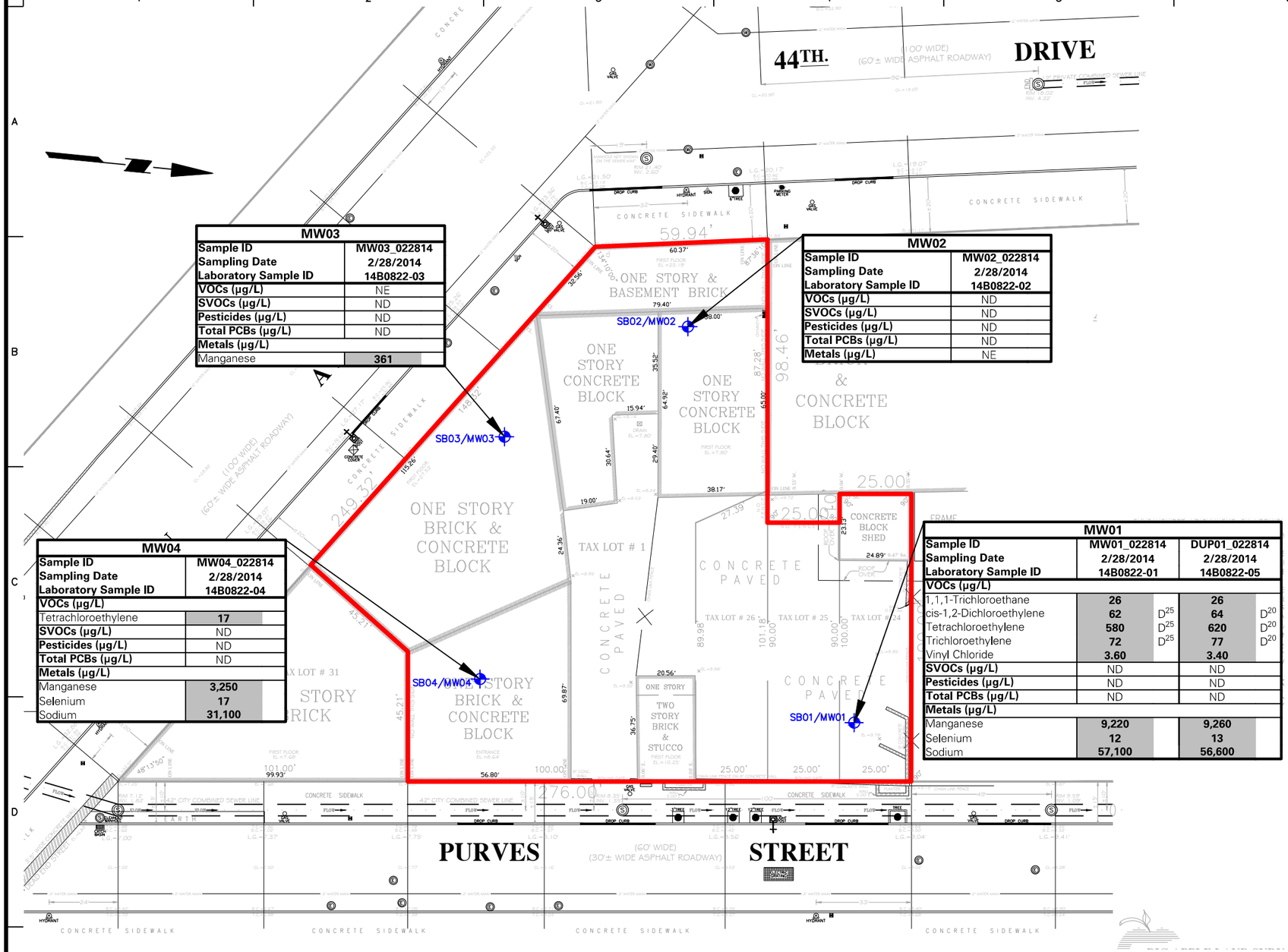
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 3 - Soil Results Tag Map.dwg Date: 3/13/2014 Time: 14:33 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL



MW03	
Sample ID	**MW03_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-03**
VOCs (µg/L)	NE
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	
Manganese	**361**

MW02	
Sample ID	**MW02_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-02**
VOCs (µg/L)	ND
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	NE

MW04	
Sample ID	**MW04_022814**
Sampling Date	**2/28/2014**
Laboratory Sample ID	**14B0822-04**
VOCs (µg/L)	
Tetrachloroethylene	**17**
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Total PCBs (µg/L)	ND
Metals (µg/L)	
Manganese	**3,250**
Selenium	**17**
Sodium	**31,100**

MW01				
Sample ID	**MW01_022814**		**DUP01_022814**	
Sampling Date	**2/28/2014**		**2/28/2014**	
Laboratory Sample ID	**14B0822-01**		**14B0822-05**	
VOCs (µg/L)				
1,1,1-Trichloroethane	**26**		**26**	
cis-1,2-Dichloroethylene	**62**	D^{25}	**64**	D^{20}
Tetrachloroethylene	**580**	D^{25}	**620**	D^{20}
Trichloroethylene	**72**	D^{25}	**77**	D^{20}
Vinyl Chloride	**3.60**		**3.40**	
SVOCs (µg/L)	ND		ND	
Pesticides (µg/L)	ND		ND	
Total PCBs (µg/L)	ND		ND	
Metals (µg/L)				
Manganese	**9,220**		**9,260**	
Selenium	**12**		**13**	
Sodium	**57,100**		**56,600**	

LEGEND

SB01/MW01 — BORING AND MONITORING WELL LOCATION

SITE BOUNDARY

NOTES:

1. DRAWING BASED ON JANUARY 4, 2005 SURVEY BY BIG APPLE LAND SURVEYORS, P.C. FORMER BUILDING FOOTPRINTS SHOWN FOR REFERENCE; NO STRUCTURES ABOVE THE FORMER SLAB EXIST ON THE SITE.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS (AWQS) AND GUIDANCE VALUES FOR CLASS GA - DRINKING WATER.
4. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE NYSDEC TOGS AWQS CRITERIA ARE SHOWN.
5. CONCENTRATIONS EXCEEDING THE CRITERIA ARE HIGHLIGHTED AND IN BOLD.
6. DUP01_022814 IS A DUPLICATE OF SAMPLE MW01_022814.
7. µg/L = MICROGRAM PER LITER
8. VOC = VOLATILE ORGANIC COMPOUND
9. SVOC = SEMIVOLATILE ORGANIC COMPOUND
10. PCB = POLYCHLORINATED BIPHENYLS
11. NE = COMPOUND DETECTED AT A CONCENTRATION THAT DID NOT EXCEED THE NYSDEC TOGS AWQS OR GUIDANCE VALUE FOR CLASS GA - DRINKING WATER.
12. ND = NOT DETECTED

QUALIFIERS:

D# = RESULT IS FROM A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR

NYSDEC TOGS Standards and Guidance Values - Class GA	
VOCs (µg/L)	
1,1,1-Trichloroethane	5
cis-1,2-Dichloroethylene	5
Tetrachloroethylene	5
Trichloroethylene	5
Vinyl Chloride	2
Metals (µg/L)	
Manganese	300
Selenium	10
Sodium	20000

40 0 10 25 40

SCALE IN FEET

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New York, NY 10001
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC

Collectively known as Langan

Project

44-30 PURVES STREET

BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title

GROUNDWATER SAMPLE RESULTS MAP

Project No. 170282501	Drawing No. 4
Date 03/07/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By JJH	
Submission Date 3/14/2014	Sheet 4 of 5

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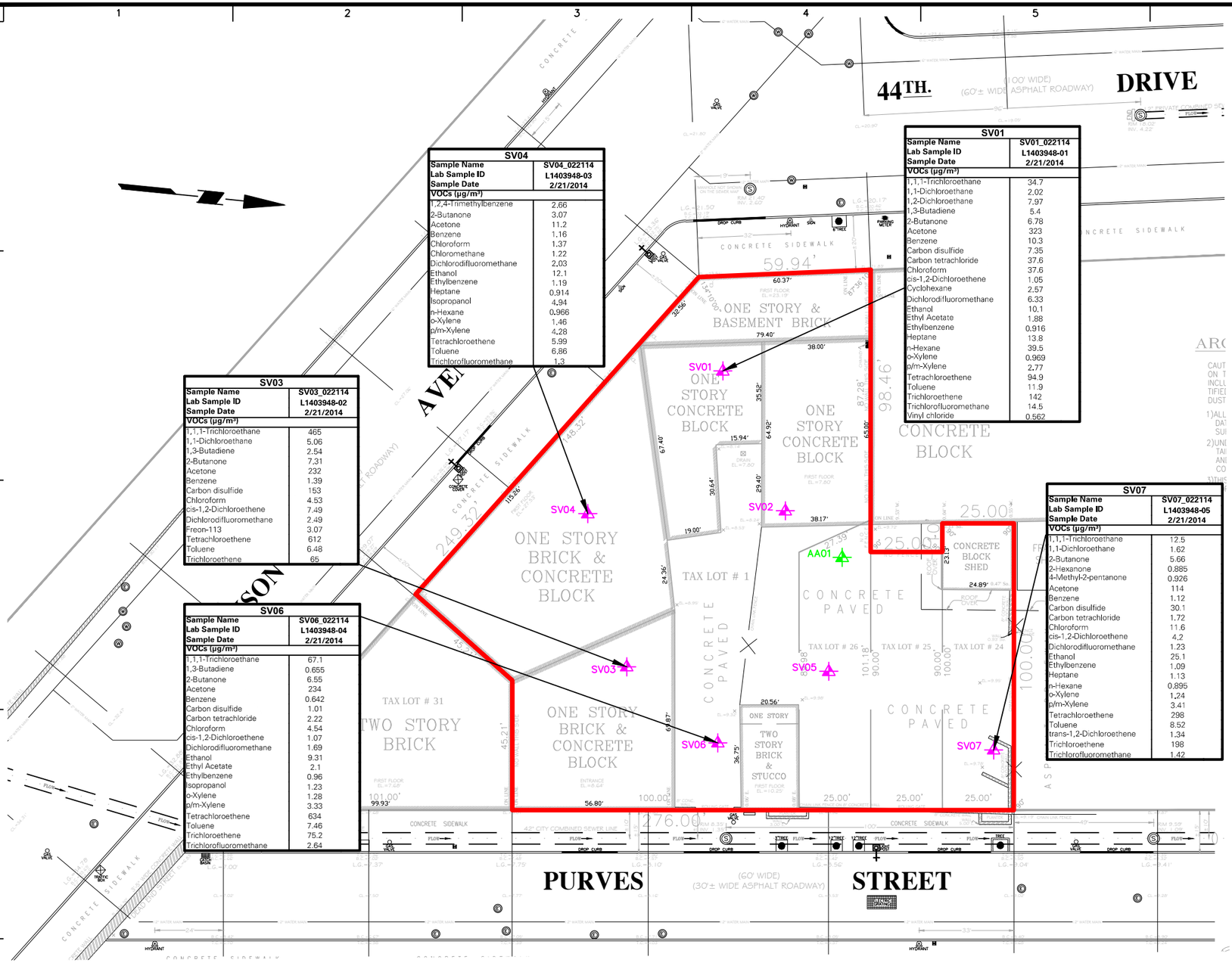
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 4 - GW Results Tag Map.dwg Date: 3/13/2014 Time: 14:42 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL



SV04	
Sample Name	**SV04_022114**
Lab Sample ID	**L1403948-03**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	2.66
2-Butanone	3.07
Acetone	11.2
Benzene	1.16
Chloroform	1.37
Chloromethane	1.22
Dichlorodifluoromethane	2.03
Ethanol	12.1
Ethylbenzene	1.19
Heptane	0.914
Isopropanol	4.94
n-Hexane	0.966
o-Xylene	1.46
p/m-Xylene	4.28
Tetrachloroethene	5.99
Toluene	6.86
Trichlorofluoromethane	1.3

SV01	
Sample Name	**SV01_022114**
Lab Sample ID	**L1403948-01**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	34.7
1,1-Dichloroethane	2.02
1,2-Dichloroethane	7.97
1,3-Butadiene	5.4
2-Butanone	6.78
Acetone	323
Benzene	10.3
Carbon disulfide	7.35
Carbon tetrachloride	37.6
Chloroform	37.6
cis-1,2-Dichloroethene	1.05
Cyclohexane	2.57
Dichlorodifluoromethane	6.33
Ethanol	10.1
Ethyl Acetate	1.88
Ethylbenzene	0.916
Heptane	13.8
n-Hexane	39.5
o-Xylene	0.969
p/m-Xylene	2.77
Tetrachloroethene	94.9
Toluene	11.9
Trichloroethene	142
Trichlorofluoromethane	14.5
Vinyl chloride	0.562

SV03	
Sample Name	**SV03_022114**
Lab Sample ID	**L1403948-02**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	465
1,1-Dichloroethane	5.06
1,3-Butadiene	2.54
2-Butanone	7.31
Acetone	232
Benzene	1.39
Carbon disulfide	153
Chloroform	4.53
cis-1,2-Dichloroethene	7.49
Dichlorodifluoromethane	2.49
Freon-113	3.07
Tetrachloroethene	612
Toluene	6.48
Trichloroethene	65

SV07	
Sample Name	**SV07_022114**
Lab Sample ID	**L1403948-05**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	12.5
1,1-Dichloroethane	1.62
2-Butanone	5.66
2-Hexanone	0.885
4-Methyl-2-pentanone	0.926
Acetone	114
Benzene	1.12
Carbon disulfide	30.1
Carbon tetrachloride	1.72
Chloroform	11.6
cis-1,2-Dichloroethene	4.2
Dichlorodifluoromethane	1.23
Ethanol	25.1
Ethylbenzene	1.09
Heptane	1.13
n-Hexane	0.895
o-Xylene	1.24
p/m-Xylene	3.41
Tetrachloroethene	298
Toluene	8.52
trans-1,2-Dichloroethene	1.34
Trichloroethene	198
Trichlorofluoromethane	1.42

SV06	
Sample Name	**SV06_022114**
Lab Sample ID	**L1403948-04**
Sample Date	**2/21/2014**
VOCs (µg/m³)	
1,1,1-Trichloroethane	67.1
1,3-Butadiene	0.655
2-Butanone	6.55
Acetone	234
Benzene	0.642
Carbon disulfide	1.01
Carbon tetrachloride	2.22
Chloroform	4.54
cis-1,2-Dichloroethene	1.07
Dichlorodifluoromethane	1.69
Ethanol	9.31
Ethyl Acetate	2.1
Ethylbenzene	0.96
Isopropanol	1.23
o-Xylene	1.28
p/m-Xylene	3.33
Tetrachloroethene	634
Toluene	7.46
Trichloroethene	75.2
Trichlorofluoromethane	2.64

LEGEND

SV01 — SOIL VAPOR SAMPLE LOCATION

AA01 — AMBIENT AIR SAMPLE LOCATION

SITE BOUNDARY

NOTES:

1. DRAWING BASED ON JANUARY 4, 2005 SURVEY BY BIG APPLE LAND SURVEYORS, P.C. FORMER BUILDING FOOTPRINTS SHOWN FOR REFERENCE; NO STRUCTURES ABOVE THE FORMER SLAB EXIST ON THE SITE.
2. SAMPLE LOCATIONS ARE APPROXIMATE.
3. AMBIENT AIR SAMPLE (AA01_022114) CONCENTRATIONS ARE SHOWN FOR REFERENCE.
4. µg/m³ = MICROGRAM PER CUBIC METER
5. VOC = VOLATILE ORGANIC COMPOUND
6. ONLY COMPOUNDS EXCEEDING AMBIENT AIR CONCENTRATIONS ARE SHOWN.
7. DUE TO GROUNDWATER INFILTRATION, SAMPLES COLLECTED FROM SV02 AND SV05 WERE NOT ANALYZED.

AA01		
Sample Name	**AA01_022114**	
Lab Sample ID	**L1403948-06**	
Sample Date	**2/21/2014**	
VOCs (µg/m³)		
1,1,1-Trichloroethane	1.09	U
1,1-Dichloroethane	0.809	U
1,2,4-Trimethylbenzene	0.983	U
1,2-Dichloroethane	0.809	U
1,3-Butadiene	0.442	U
2-Butanone	0.902	
2-Hexanone	0.82	U
4-Methyl-2-pentanone	0.82	U
Acetone	6.6	
Benzene	0.987	
Carbon disulfide	0.623	U
Carbon tetrachloride	1.26	U
Chloroform	0.977	U
Chloromethane	1.15	
cis-1,2-Dichloroethene	0.793	U
Cyclohexane	0.688	U
Dichlorodifluoromethane	2.26	
Ethanol	8.37	
Ethyl Acetate	1.8	U
Ethylbenzene	0.869	U
Freon-113	1.53	U
Heptane	0.82	U
Isopropanol	1.44	
n-Hexane	0.796	
o-Xylene	0.869	U
p/m-Xylene	1.74	U
Tetrachloroethene	2.7	
Toluene	3.73	
trans-1,2-Dichloroethene	0.793	U
Trichloroethene	1.07	U
Trichlorofluoromethane	1.31	
Vinyl chloride	0.511	U

40 0 10 25 40

SCALE IN FEET

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Project

44-30 PURVES STREET

BLOCK No. 268, LOT Nos. 1, 24, 25, 26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title

SOIL VAPOR SAMPLE RESULTS MAP

Project No. 170282501	Drawing No. 5
Date 03/05/2014	
Scale 1" = 40'	
Drawn By PMM / Checked By JJH	
Submission Date 3/14/2014	Sheet 5 of 5

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Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\Figure 5 -Soil Vapor Results Tag Map.dwg Date: 3/13/2014 Time: 14:46 User: pmcmahon Style Table: Langan.stb Layout: ANSIB-BL

APPENDIX A

APPENDIX B

GEOPHYSICAL ENGINEERING SURVEY REPORT

COMMERCIAL PROPERTY-

4430 Purves Street

Long Island City, New York 11101

NOVA PROJECT NUMBER
14-0231

DATED
February 27, 2014

PREPARED FOR:
LANGAN
21 Penn Plaza –
360 West 31st Street
New York, NY 10001

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
www.nova-gsi.com

February 27, 2014

Paul McMahon
Staff Engineer
LANGAN
21 Penn Plaza –
360 West 31st Street
New York, NY 10001
Direct: 212.479.5451
Mobile: 914.433.1157
Email: pmcmahon@langan.com

Re: Geophysical Survey Report
Commercial Property-
4430 Purves Street
Long Island City, New York 11101

Dear Mr. McMahon:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical survey at the above referenced project site located at 4430 Purves Street, Long Island City, New York (the "Sites"). Please see attached Geophysical Survey map for more details.

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed a Geophysical survey consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to clear and marked proposed environmental boring areas and to identify any anomalies, and subsurface structures located at the project site on February 19th, 2014.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (a magnetic detector), Ditch-Witch utility locator, Electromagnetic detector (Geonics EM61), Software and Sensor's 250 MHz ground-penetrating radar (GPR).

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

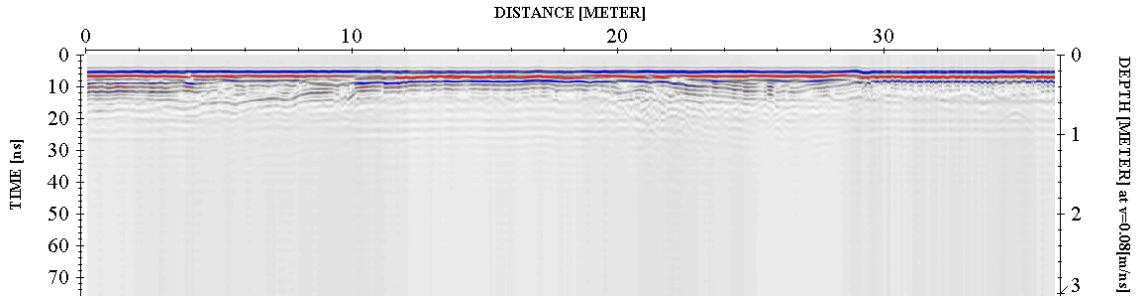
The project site was screened using the GPR by carrying the instrument over the project area at the site in 4' x 4' traverses. When evidence of anomalies were observed, they were clearly marked for further evaluation. A Ditch-witch(tm) utility locator would then be used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved areas with concrete (interior of the site building) and none paved areas.

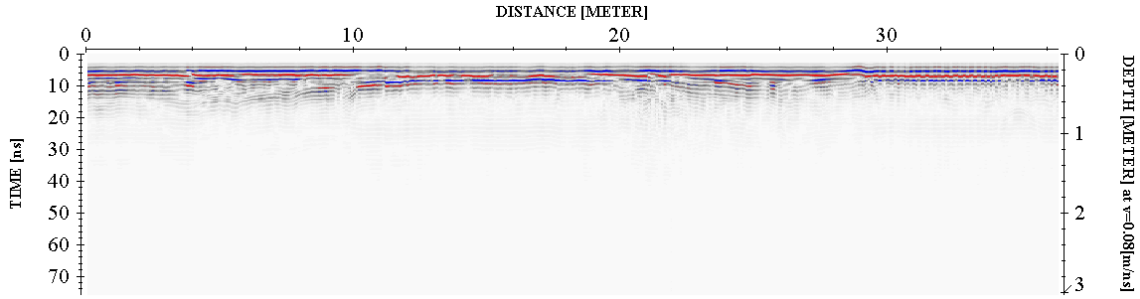
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

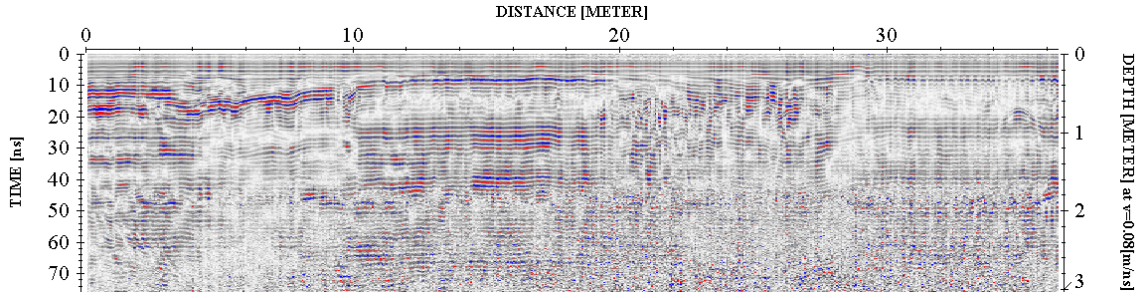
Step 1. Import raw RAMAC data to standard processing format



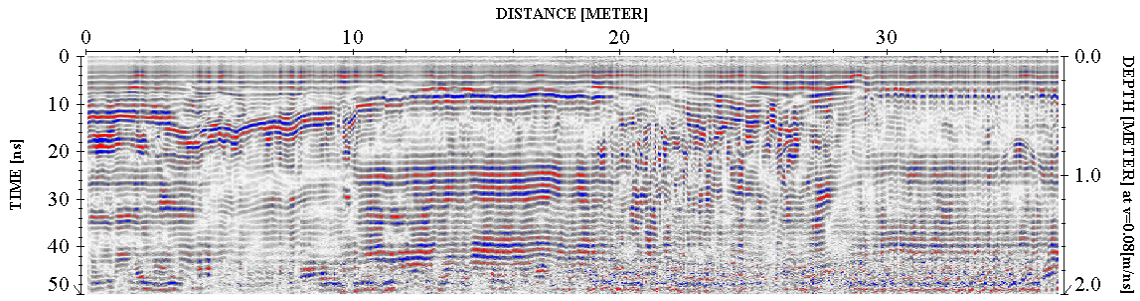
Step 2. Remove instrument noise *(dewow)*



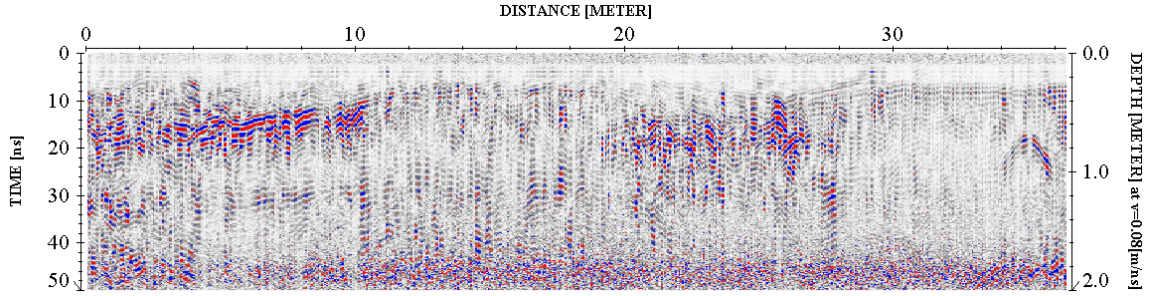
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Mostly sunny
Temp: 22 degrees
Surface: None paved. Covered with approximately 2 feet of snow.
Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) low to medium (existing snow and unseen dumped materials) at the time of the survey.

RESULTS

The results of the geophysical survey identified following at the project Site:

- Geophysical survey identified anomalies with the EM located along the center of the project site. Due to excessive amount of snow and other geophysical noises, Nova could not verify the nature of these anomalies. All of the identified anomalies were clearly marked during the survey.

- Geophysical survey identified minor anomalies located throughout of the project areas.

- Geophysical survey identified scattered anomalies located throughout of the project areas. All of these anomalies were consistent with surficial (approximately 1 feet bgs) metal containing materials (such as nails, jersey barriers, metal sticks, and etc.)

- Geophysical survey identified utilities located throughout of the project area. All of these anomalies (utilities) were clearly marked during the survey.
- Nova cleared and marked all of the proposed boring locations at the time of the survey.
- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.
Sincerely,

NOVA Geophysical Services

Levent Eskicakit, P.G., E.P.
Project Engineer

Attachments:

Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Survey Images

FIGURE 1

SITE LOCATION MAP

NOVA

Geophysical Services

Subsurface Mapping Solutions

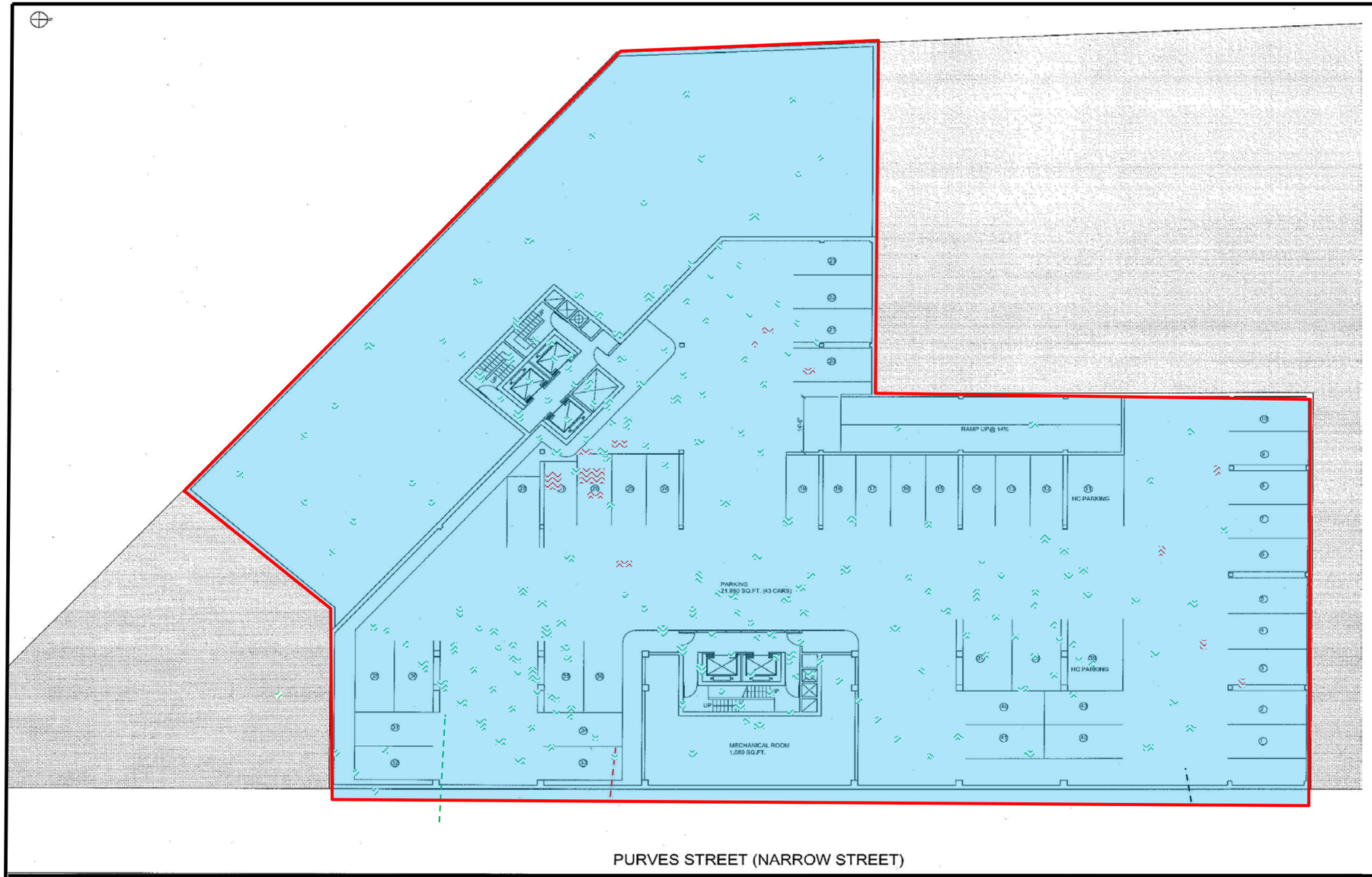
56-01 Marathon Pkwy, # 765, Douglaston, NY11362

(718) 261-1527 Fax (718) 261-1528

www.nova-gsi.com

SITE: **Commercial Property**
4430 Purves Street
Long Island City, New York 11101

SCALE: See Map



N

Note: All anomalies were marked in the field.

NOVA
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Subsurface Mapping Solutions
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Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY PLAN

SITE : **Commercial Property**
4430 Purves Street, Long Island City, NY 11101
CLIENT: Langan Engineering & Environmental Services
DATE: February 19, 2014
Scale See Map

INFORMATION

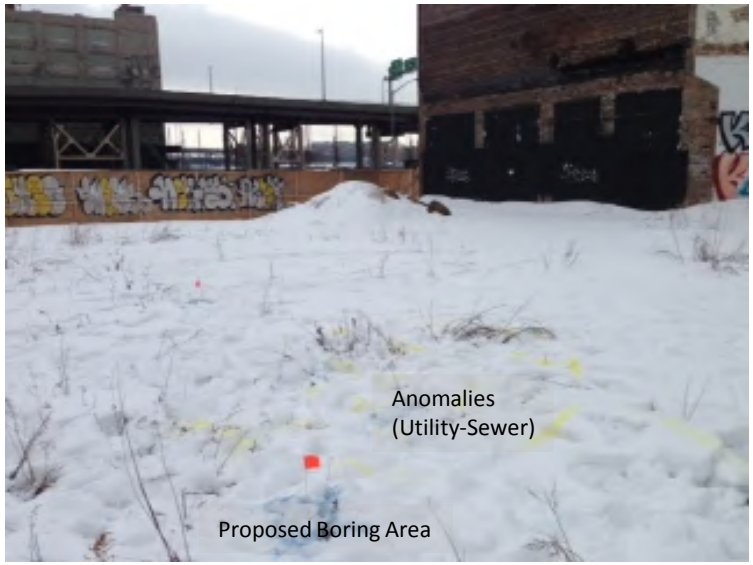
- Project Areas
- Underground Utilities/Pipes
- Scattered Anomalies
- Anomalies detected with EM
- Geophysical Noise Areas (Accumulated Water)

GEOPHYSICAL IMAGES

Commercial Property

4430 Purves Street, Long Island City, New York

February 19, 2014



GEOPHYSICAL IMAGES

Commercial Property

4430 Purves Street, Long Island City, New York

February 19, 2014

APPENDIX C

LANGAN

Log of Boring **SB01/MW01** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9.9 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.9	0-3" - dark brown F-M SAND, some gravel and brick [FILL] 3-10" - pulverized concrete	0						BEGIN AT 08:47
		10-14" - dark brown/black F-M SAND with some brick and gravel [FILL]	1					0.0	
		14-19" - white and green heavily weathered rock	2					0.0	
		19-24" - dark brown F-M SAND with some gravel (wet) [FILL]	3	1	MC	26		0.0	
		0-12" - light to dark brown F-M SAND with some gravel and rock fragments [FILL]	4					0.0	0925: COLLECT SAMPLE SB01_4-6
	+2.9		5						
		12-35" - dark brown and black fine SAND, some silt (saturated)	6					0.0	
			7					5.8	
			8 ▽	2	MC	35		14.9	PETROLEUM ODOR/STAINING 7-9 FEET BGS
			9					1.2	
			10					0.0	0915: COLLECT SAMPLE SB01_7-9
		0-6" - brown fine SAND with some silt (saturated)	11					0.0	
	-2.1		12						
		6-14" - brown M-C SAND (saturated)	13	3	MC	19		0.0	
			14						
	-5.1		15						
		NO RECOVERY	16						
			17						
			18	4	MC	0			
			19						
			20						
	-10.1								

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Log of Boring **SB01/MW01** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 9.9 feet Borough President of Queens Datum (BPQD)

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-4" brown M-C SAND	20						
	-11.1	brown CLAY	21					0.0	
			22					0.1	
	-13.1	18-30" - brown M-C SAND	23	5	MC	30			END OF BORING AT 25 FEET BGS. ATTACH AUGERS FOR WELL INSTALLATION.
			24					0.1	
	-15.1		25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

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Log of Boring **SB02/MW02** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 8.3 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/21/14 — Date Finished: 2/21/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 15 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+8.3	0-24" - dark brown to black F-C SAND, some silt, trace slag/ash [FILL]	0					0.0	
			1					0.0	
		24-32" - black SILT with some wood, some sand [FILL]	2					0.0	1015: COLLECT SAMPLE SB02_2-4
		32-42" - black F-C SAND, some gravel, trace slag/ash [FILL]	3	1	MC	48		0.0	
		42-48" - BRICK	4					0.0	CHEMICAL ODOR APPROX. 2-4 FEET BGS
		0-24" - dark brown and black SANDY SILT with trace brick and gravel [FILL] (saturated)	5 ▽					0.0	
			6					0.0	1025: COLLECT SAMPLE SB02_6-8
			7					0.0	
		24-30" - black CLAY, organic odor (soft)	8	2	MC	32		0.0	ORGANIC ODOR APPROX. 8-15 FEEET BGS
			9					0.0	
		30-32" - black F-C gravelly SAND, some slag/ash [FILL] (wet)	10					0.0	
		0-10" - black F-C gravelly SAND, some slag/ash [FILL] (wet)	11					0.0	1035: COLLECT SAMPLE SB02_11-13
	-2.7	10-18" - black CLAY, strong organic odor	12					0.0	
	-4.2		13	3	MC	36		0.0	
		18-36" - PEAT	14					0.0	
	-6.7		15					0.0	END OF BORING AT 15 FEET. INSTALL WELL TO 14 FEET BGS.
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB03/MW03** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 8.4 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+8.4	0-2" - brown F-C SAND and GRAVEL [FILL] 2-5" CONCRETE 5-27" - dark brown and black F-C SAND, some gravel, some slag/ash, trace silt [FILL]	0					0.0	1010: BEGIN DRILLING
			1					0.0	
			2					0.0	1040: COLLECT SAMPLE SB03_1-3
			3	1	MC	33		0.0	
		27-33" - tan and dark brown F-C SAND and GRAVEL, trace silt (wet) [FILL]	4					0.0	
			5					0.0	
	+2.9	0-3" - same as above	6					4.8	
		3-8" - tan M-C SAND (wet) 8-30" - black M-C SAND (saturated)	7					49.8 79.6	STRONG PETROLEUM-LIKE ODOR/STAINING AT 6 TO 9FEET BGS
		30-54" - grayish brown F-M SAND, trace silt (saturated)	8	2	MC	54		91.7 22.4	1050: COLLECT SAMPLE SB03_6-8
			9					7.0	WEAK PETROLEUM-LIKE ODOR 9 TO 14 FEET BGS
		0-30" - grayish brown F-M SAND, trace silt, trace rock fragments (saturated)	10						
			11					9.5	
	-4.1		12					4.7	
		gray/black PEAT	13	3	MC	60		2.5	
	-5.1		14					1.6	
		grayish brown F-M SAND	15						
	-6.6		16					1.7	
		0-4" - brown SILTY SAND	17						
	-7.6		18	4	MC	24		1.3	
		4-24" - brown SILT, trace fne sand	19						END OF BORING AT 20 FEET BGS INSTALL WELL AT 14 FEET BGS
			20					0.0	
	-11.6								

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Log of Boring **SB04/MW04** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9.2 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 10 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.2	0-2" - tan F-C SAND with some gravel, trace silt [FILL] 2-8" - CONCRETE 8-20" - light to dark brown and black M-C SAND, some gravel, trace slag/ash [FILL]	0					0.0	
			1					0.0	
			2					0.0	
		20-32" - brown SILT, some sand, trace gravel [FILL]	3	1	MC	36		0.0	0825: COLLECT SAMPLE SB04_1-4 AND DUP01_022014
			4					0.0	
		32-36" - light to dark brown and black F-M SAND, some gravel [FILL]	5					0.0	
		0-6" - light to dark brown and black F-M SAND, some gravel [FILL]	6					0.0	
	+3.2	light brown F-M SAND (moist), trace silt	7					0.0	
			8	2	MC	38		0.0	0845: COLLECT SAMPLE SB04_4-6
			9					0.0	
			10					0.0	
		0-30" - brown/dark brown F-M SAND, trace gravel (saturated)	11					0.0	
			12					0.0	
	-3.3	30-48" - brown SANDY SILT, trace mica	13	3	MC	60		0.0	
	-4.8	48-60" - brown fine SAND, trace silt (saturated)	14					0.0	
		0-18" - brown F-M SAND (saturated)	15					0.0	
			16					0.0	
	-7.3	brown SANDY SILT (saturated)	17					0.0	
			18	4	MC	60		0.0	END OF BORING AT 20 FEET BGS INSTALL WELL MW04 AT 14 FEET BGS.
	-9.8	brown SILT, some fine sand (dry)	19					0.0	
	-10.8		20					0.0	

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Log of Boring **SB05** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9.5 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 3 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 1 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First N/A — Completion — 24 HR.
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.5	0-8" - tan SILTY SAND (wet) 8-18" CONCRETE 18-24" - brown/dark brown F-C SAND, some brick and concrete, trace slag/ash, trace silt [FILL] 24-36" - black F-C SAND, some brick and concrete, trace silt [FILL]	0						1352: BEGIN SB05 REFUSAL ENCOUNTERED AT 3 FEET BGS RECOVERED SOIL EXHIBITED STRONG PETRO-LIKE ODOR, STAINING, AND PID READINGS UP TO 240 PPM. 14:15: SAMPLE COLLECTED SB05_1-3. BORING OFFSET APPROX 3 FEET NORTH (SB05A) PETROLEUM STAINING AND ODOR
			1					0.0	
			2	1	MC	36			
	+6.5		3					240	
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB05A** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9.5 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.5	0-8" - tan SILTY SAND (wet) 8-18" CONCRETE 18-36" - brown/dark brown F-C SAND, some brick and concrete, trace slag/ash, trace silt [FILL]	0					1.7	BORING OFFSET APPROX 3 FEET NORTH FROM SB05 DUE TO REFUSAL
			1					0.0	
			2					0.0	
			3	1	MC	36		0.0	
			4					0.0	
	+4.5		5					0.0	
		0-54" - tan F-M SAND (saturated at 6' bgs)	6					0.0	1425: COLLECT SAMPLE SB05A_2-4
			7					0.0	
			8	2	MC	54		0.0	
			9					0.0	
			10					0.0	
		0-54" - gray F-M SAND	11					0.0	1435: COLLECT SAMPLE SB05A_11-13
			12					0.0	
			13	3	MC	60		0.0	
			14					0.0	
	-5.0		15					0.0	
		54-60" - gray SILT, some fine sand 0-36" - gray SILT, trace sand	16					0.0	
			17					0.0	
			18	4	MC	60		0.0	
		36-60" - brown SILT, trace sand	19					0.0	
	-10.5		20					0.0	

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Log of Boring **SB06** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.0	0-14" - tan F-M SAND with some gravel, trace silt, trace brick [FILL]	0					0.0	
		14-23" - pulverized concrete	1					0.0	
		23-37" - dark grey/black F-C SAND with some silt and gravel, trace slag/ash	2					0.0	
			3	1	MC	37		0.0	
			4					0.0	1455: COLLECT SAMPLE SB06_3-5
			5					0.0	
		0-36" - black and dark grey SILT, some sand, some wood, trace ceramic fragments, trace gravel (wet) [FILL]	6					0.0	ORGANIC ODOR 5-9 FEET BGS
			7 ▽					0.0	
			8	2	MC	44		0.0	1505: COLLECT SAMPLE SB06_6-8
	0.0		9					0.0	
		36-44" - greyish brown F-M SAND	10					0.0	
		0-48" - greyish brown F-M SAND	11					0.0	
			12					0.0	
			13	3	MC	60		0.0	
	-5.0		14					0.0	
		48-60" - PEAT	15					0.0	
	-6.0		16					0.0	
		0-42" - grey F-M SAND, trace silt	17					0.0	POSSIBLE SLOUGHING
			18	4	MC	60		0.0	
			19					0.3	
	-9.5		20					1.8	
		42-60" - PEAT							
	-11.0								

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Log of Boring **SB06** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 9 feet Borough President of Queens Datum (BPQD)

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-8" - grey F-M SAND	20						
	-12.0	8-48" - grey SANDY SILT, trace clay	21					0.0	
			22					0.0	
			23	5	MC	54		0.0	
			24					0.0	
	-15.5		25					0.0	
	-16.0	48-54" - brown/tan medium SAND	26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

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Log of Boring **SB07** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9.1 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.1	0-9" - pulverized CONCRETE	0					0.0	1300: BEGIN SB07, HEAVY RAIN
		9-17" - grey-dark grey F-C SAND, trace gravel	1					0.0	
	+7.6	17-29" - brown medium SAND, with trace weathered rock	2					0.0	
		29-44" - brown medium SAND	3	1	MC	46		0.0	1325: COLLECT SAMPLE SB07_1-3
		0-12" - brown medium SAND	4					0.0	
	+2.6	12-38" - brown sandy SILT (saturated)	5					0.0	
			6 ▽					0.0	13:40: COLLECT SAMPLE SB07_5-7
			7	2	MC	38		0.0	
	-0.9	0-54" - brown SILTY SAND (saturated)	8					0.0	
			9					0.0	
			10					0.0	
			11					0.0	
			12					0.0	
			13	3	MC	54		0.0	
			14					0.0	
	-5.9	0-48" - brown SANDY SILT	15					0.0	
			16					0.0	
			17					0.0	
			18	4	MC	54		0.0	
			19					0.0	
	-9.9	48-54" - brown CLAY	20					0.0	
	-10.9								

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Log of Boring **SB08** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 9 feet Borough President of Queens Datum (BPQD)
Drilling Company: Laurel Environmentl Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+9.0	0-16" - dark brown and black F-C SAND, trace gravel and brick, trace slag [FILL]	0					0.4	
			1					0.0	
			2					0.0	
	+6.5	16-32" - brown/orange-brown medium SAND	3	1	MC	32		0.0	
			4					0.0	1400: COLLECT SAMPLE SB08_0-2
		0-26" - brown M-C SAND, trace weathered rock (saturated)	5					0.0	
			6					0.0	
			7					0.0	
	+0.5	26-36" - brown fine SAND, some silt, trace mica (saturated)	8	2	MC	36		0.0	
			9					0.0	
		0-36" - brown fine SAND, some silt, trace mica (saturated)	10					0.0	
			11					0.0	
			12					0.0	
			13	3	MC	46		0.0	
	-4.5	36-46" - brown SANDY SILT	14					0.0	
			15					0.0	
	-6.0	0-16" - brown SILT, some fine sand	16					0.0	1420: COLLECT SAMPLE SB08_15-17
	-7.3	16-34" - grey CLAY	17					0.0	
			18	4	MC	60		0.0	
	-8.8	34-60" - grey CLAYEY SILT	19					0.0	
			20					0.0	
	-11.0								

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APPENDIX D

ANALYTICAL REPORT

Lab Number:	L1403948
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Gerald Nicholls
Phone:	(212) 479-5400
Project Name:	Not Specified
Project Number:	170282501
Report Date:	02/27/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403948-01	SV01_022114	QUEENS, NY	02/21/14 13:05
L1403948-02	SV03_022114	QUEENS, NY	02/21/14 12:35
L1403948-03	SV04_022114	QUEENS, NY	02/21/14 12:55
L1403948-04	SV06_022114	QUEENS, NY	02/21/14 12:20
L1403948-05	SV07_022114	QUEENS, NY	02/21/14 11:40
L1403948-06	AA01_022114	QUEENS, NY	02/21/14 11:10
L1403948-07	SV02_022114	QUEENS, NY	
L1403948-08	SV05_022114	QUEENS, NY	

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on February 20, 2014. The canister certification results are provided as an addendum.

The sample designated SV01_022114 (L1403948-01) had a RPD for the pre- and post-flow controller calibration check (39% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 18 mL/minute; the final flow rate was 12.1 mL/minute. The final pressure recorded by the laboratory of the associated canister was -11.3 inches of mercury.

The sample designated SV04_022114 (L1403948-03) had a RPD for the pre- and post-flow controller calibration check (32% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 18 mL/minute; the final flow rate was 13.1 mL/minute. The final pressure recorded by the laboratory of the associated canister was -3.4 inches of mercury.

There was a note on the chain of custody form to not analyze the samples designated SV02_022114 and SV05_022114.

Sample L1403948-02 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Samples L1403948-03 and -06 results for Acetone should be considered estimated due to co-elution with a non-target peak.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 02/27/14

AIR

Project Name: **Lab Number:** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-01
Client ID: SV01_022114
Sample Location: QUEENS, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 02/26/14 21:30
Analyst: RY

Date Collected: 02/21/14 13:05
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	1.28	0.200	--	6.33	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	0.220	0.200	--	0.562	0.511	--		1
1,3-Butadiene	2.44	0.200	--	5.40	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	5.34	2.50	--	10.1	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	136	1.00	--	323	2.38	--		1
Trichlorofluoromethane	2.58	0.200	--	14.5	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	2.36	0.200	--	7.35	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	0.499	0.200	--	2.02	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	2.30	0.200	--	6.78	0.590	--		1
cis-1,2-Dichloroethene	0.265	0.200	--	1.05	0.793	--		1
Ethyl Acetate	0.521	0.500	--	1.88	1.80	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-01 Date Collected: 02/21/14 13:05
Client ID: SV01_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chloroform	7.70	0.200	--	37.6	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	1.97	0.200	--	7.97	0.809	--		1
n-Hexane	11.2	0.200	--	39.5	0.705	--		1
1,1,1-Trichloroethane	6.36	0.200	--	34.7	1.09	--		1
Benzene	3.23	0.200	--	10.3	0.639	--		1
Carbon tetrachloride	5.98	0.200	--	37.6	1.26	--		1
Cyclohexane	0.748	0.200	--	2.57	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	26.4	0.200	--	142	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	3.36	0.200	--	13.8	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	3.17	0.200	--	11.9	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	14.0	0.200	--	94.9	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.211	0.200	--	0.916	0.869	--		1
p/m-Xylene	0.637	0.400	--	2.77	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-01 Date Collected: 02/21/14 13:05
Client ID: SV01_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.223	0.200	--	0.969	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	83		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	77		60-140

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-02 D
Client ID: SV03_022114
Sample Location: QUEENS, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 02/26/14 22:34
Analyst: RY

Date Collected: 02/21/14 12:35
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.504	0.400	--	2.49	1.98	--		2
Chloromethane	ND	0.400	--	ND	0.826	--		2
Freon-114	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	1.15	0.400	--	2.54	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethanol	ND	5.00	--	ND	9.42	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	97.5	2.00	--	232	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
Isopropanol	ND	1.00	--	ND	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Tertiary butyl Alcohol	ND	1.00	--	ND	3.03	--		2
Methylene chloride	ND	2.00	--	ND	6.95	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	49.2	0.400	--	153	1.25	--		2
Freon-113	ND	0.400	--	ND	3.07	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
1,1-Dichloroethane	1.25	0.400	--	5.06	1.62	--		2
Methyl tert butyl ether	ND	0.400	--	ND	1.44	--		2
2-Butanone	2.48	0.400	--	7.31	1.18	--		2
cis-1,2-Dichloroethene	1.89	0.400	--	7.49	1.59	--		2
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-02 D
Client ID: SV03_022114
Sample Location: QUEENS, NY

Date Collected: 02/21/14 12:35
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	0.928	0.400	--	4.53	1.95	--		2
Tetrahydrofuran	ND	0.400	--	ND	1.18	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	ND	0.400	--	ND	1.41	--		2
1,1,1-Trichloroethane	85.3	0.400	--	465	2.18	--		2
Benzene	0.434	0.400	--	1.39	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	ND	0.400	--	ND	1.38	--		2
1,2-Dichloropropane	ND	0.400	--	ND	1.85	--		2
Bromodichloromethane	ND	0.400	--	ND	2.68	--		2
1,4-Dioxane	ND	0.400	--	ND	1.44	--		2
Trichloroethene	12.1	0.400	--	65.0	2.15	--		2
2,2,4-Trimethylpentane	ND	0.400	--	ND	1.87	--		2
Heptane	ND	0.400	--	ND	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	ND	0.400	--	ND	1.64	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Toluene	1.72	0.400	--	6.48	1.51	--		2
2-Hexanone	ND	0.400	--	ND	1.64	--		2
Dibromochloromethane	ND	0.400	--	ND	3.41	--		2
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	90.3	0.400	--	612	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	ND	0.400	--	ND	1.74	--		2
p/m-Xylene	ND	0.800	--	ND	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2
Styrene	ND	0.400	--	ND	1.70	--		2

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-02 D
Client ID: SV03_022114
Sample Location: QUEENS, NY

Date Collected: 02/21/14 12:35
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	ND	0.400	--	ND	1.74	--		2
4-Ethyltoluene	ND	0.400	--	ND	1.97	--		2
1,3,5-Trimethylbenzene	ND	0.400	--	ND	1.97	--		2
1,2,4-Trimethylbenzene	ND	0.400	--	ND	1.97	--		2
Benzyl chloride	ND	0.400	--	ND	2.07	--		2
1,3-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,4-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2,4-Trichlorobenzene	ND	0.400	--	ND	2.97	--		2
Hexachlorobutadiene	ND	0.400	--	ND	4.27	--		2

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	85		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	81		60-140

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-03
Client ID: SV04_022114
Sample Location: QUEENS, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 02/26/14 23:06
Analyst: RY

Date Collected: 02/21/14 12:55
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.411	0.200	--	2.03	0.989	--		1
Chloromethane	0.591	0.200	--	1.22	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	6.44	2.50	--	12.1	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.72	1.00	--	11.2	2.38	--		1
Trichlorofluoromethane	0.231	0.200	--	1.30	1.12	--		1
Isopropanol	2.01	0.500	--	4.94	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.04	0.200	--	3.07	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-03 Date Collected: 02/21/14 12:55
Client ID: SV04_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	0.281	0.200	--	1.37	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.274	0.200	--	0.966	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.364	0.200	--	1.16	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.223	0.200	--	0.914	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.82	0.200	--	6.86	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	0.884	0.200	--	5.99	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.274	0.200	--	1.19	0.869	--		1
p/m-Xylene	0.986	0.400	--	4.28	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-03 Date Collected: 02/21/14 12:55
Client ID: SV04_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.335	0.200	--	1.46	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.541	0.200	--	2.66	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	79		60-140

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-04
Client ID: SV06_022114
Sample Location: QUEENS, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 02/26/14 23:38
Analyst: RY

Date Collected: 02/21/14 12:20
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.341	0.200	--	1.69	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.296	0.200	--	0.655	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	4.94	2.50	--	9.31	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	98.6	1.00	--	234	2.38	--		1
Trichlorofluoromethane	0.470	0.200	--	2.64	1.12	--		1
Isopropanol	0.501	0.500	--	1.23	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.324	0.200	--	1.01	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	2.22	0.200	--	6.55	0.590	--		1
cis-1,2-Dichloroethene	0.269	0.200	--	1.07	0.793	--		1
Ethyl Acetate	0.583	0.500	--	2.10	1.80	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-04 Date Collected: 02/21/14 12:20
Client ID: SV06_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	0.929	0.200	--	4.54	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	12.3	0.200	--	67.1	1.09	--		1
Benzene	0.201	0.200	--	0.642	0.639	--		1
Carbon tetrachloride	0.353	0.200	--	2.22	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	14.0	0.200	--	75.2	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.98	0.200	--	7.46	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	93.5	0.200	--	634	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.221	0.200	--	0.960	0.869	--		1
p/m-Xylene	0.767	0.400	--	3.33	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-04 Date Collected: 02/21/14 12:20
Client ID: SV06_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.294	0.200	--	1.28	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	82		60-140

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-05
Client ID: SV07_022114
Sample Location: QUEENS, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 02/27/14 00:09
Analyst: RY

Date Collected: 02/21/14 11:40
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.248	0.200	--	1.23	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	13.3	2.50	--	25.1	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	48.2	1.00	--	114	2.38	--		1
Trichlorofluoromethane	0.253	0.200	--	1.42	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	9.66	0.200	--	30.1	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	0.339	0.200	--	1.34	0.793	--		1
1,1-Dichloroethane	0.400	0.200	--	1.62	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.92	0.200	--	5.66	0.590	--		1
cis-1,2-Dichloroethene	1.06	0.200	--	4.20	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-05 Date Collected: 02/21/14 11:40
Client ID: SV07_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	2.37	0.200	--	11.6	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.254	0.200	--	0.895	0.705	--		1
1,1,1-Trichloroethane	2.30	0.200	--	12.5	1.09	--		1
Benzene	0.350	0.200	--	1.12	0.639	--		1
Carbon tetrachloride	0.274	0.200	--	1.72	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	36.9	0.200	--	198	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.275	0.200	--	1.13	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	0.226	0.200	--	0.926	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	2.26	0.200	--	8.52	0.754	--		1
2-Hexanone	0.216	0.200	--	0.885	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	44.0	0.200	--	298	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.250	0.200	--	1.09	0.869	--		1
p/m-Xylene	0.784	0.400	--	3.41	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-05 Date Collected: 02/21/14 11:40
Client ID: SV07_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.286	0.200	--	1.24	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	88		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	83		60-140

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-06
Client ID: AA01_022114
Sample Location: QUEENS, NY
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/26/14 20:59
Analyst: RY

Date Collected: 02/21/14 11:10
Date Received: 02/21/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.458	0.200	--	2.26	0.989	--		1
Chloromethane	0.559	0.200	--	1.15	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	4.44	2.50	--	8.37	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.78	1.00	--	6.60	2.38	--		1
Trichlorofluoromethane	0.233	0.200	--	1.31	1.12	--		1
Isopropanol	0.585	0.500	--	1.44	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.306	0.200	--	0.902	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-06 Date Collected: 02/21/14 11:10
Client ID: AA01_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.226	0.200	--	0.796	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.309	0.200	--	0.987	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.989	0.200	--	3.73	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	0.398	0.200	--	2.70	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: ***Lab Number:*** L1403948

Project Number: 170282501 ***Report Date:*** 02/27/14

SAMPLE RESULTS

Lab ID: L1403948-06 Date Collected: 02/21/14 11:10
Client ID: AA01_022114 Date Received: 02/21/14
Sample Location: QUEENS, NY Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	77		60-140

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 02/26/14 16:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG672490-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 02/26/14 16:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG672490-4								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 02/26/14 16:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG672490-4								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 170282501

Lab Number: L1403948

Report Date: 02/27/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG672490-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	101		-		70-130	-		
Propane	74		-		70-130	-		
Dichlorodifluoromethane	114		-		70-130	-		
Chloromethane	98		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	109		-		70-130	-		
Methanol	90		-		70-130	-		
Vinyl chloride	100		-		70-130	-		
1,3-Butadiene	104		-		70-130	-		
Butane	97		-		70-130	-		
Bromomethane	99		-		70-130	-		
Chloroethane	97		-		70-130	-		
Ethyl Alcohol	95		-		70-130	-		
Dichlorofluoromethane	94		-		70-130	-		
Vinyl bromide	100		-		70-130	-		
Acrolein	91		-		70-130	-		
Acetone	125		-		70-130	-		
Acetonitrile	96		-		70-130	-		
Trichlorofluoromethane	103		-		70-130	-		
iso-Propyl Alcohol	102		-		70-130	-		
Acrylonitrile	98		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 170282501

Lab Number: L1403948

Report Date: 02/27/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG672490-3								
Pentane	99		-		70-130	-		
Ethyl ether	92		-		70-130	-		
1,1-Dichloroethene	102		-		70-130	-		
tert-Butyl Alcohol	96		-		70-130	-		
Methylene chloride	97		-		70-130	-		
3-Chloropropene	102		-		70-130	-		
Carbon disulfide	99		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	103		-		70-130	-		
trans-1,2-Dichloroethene	89		-		70-130	-		
1,1-Dichloroethane	88		-		70-130	-		
Methyl tert butyl ether	86		-		70-130	-		
2-Butanone	92		-		70-130	-		
cis-1,2-Dichloroethene	107		-		70-130	-		
Ethyl Acetate	97		-		70-130	-		
Chloroform	99		-		70-130	-		
Tetrahydrofuran	90		-		70-130	-		
2,2-Dichloropropane	86		-		70-130	-		
1,2-Dichloroethane	96		-		70-130	-		
n-Hexane	94		-		70-130	-		
Isopropyl Ether	92		-		70-130	-		
Ethyl-Tert-Butyl-Ether	89		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 170282501

Lab Number: L1403948

Report Date: 02/27/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG672490-3								
1,1,1-Trichloroethane	98		-		70-130	-		
1,1-Dichloropropene	96		-		70-130	-		
Benzene	95		-		70-130	-		
Carbon tetrachloride	99		-		70-130	-		
Cyclohexane	94		-		70-130	-		
Tertiary-Amyl Methyl Ether	88		-		70-130	-		
Dibromomethane	90		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	95		-		70-130	-		
1,4-Dioxane	93		-		70-130	-		
Trichloroethene	103		-		70-130	-		
2,2,4-Trimethylpentane	97		-		70-130	-		
Methyl methacrylate	86		-		70-130	-		
Heptane	91		-		70-130	-		
cis-1,3-Dichloropropene	100		-		70-130	-		
4-Methyl-2-pentanone	92		-		70-130	-		
trans-1,3-Dichloropropene	84		-		70-130	-		
1,1,2-Trichloroethane	99		-		70-130	-		
Toluene	90		-		70-130	-		
1,3-Dichloropropane	83		-		70-130	-		
2-Hexanone	86		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 170282501

Lab Number: L1403948

Report Date: 02/27/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG672490-3								
Dibromochloromethane	92		-		70-130	-		
1,2-Dibromoethane	95		-		70-130	-		
Butyl Acetate	85		-		70-130	-		
Octane	89		-		70-130	-		
Tetrachloroethene	96		-		70-130	-		
1,1,1,2-Tetrachloroethane	89		-		70-130	-		
Chlorobenzene	95		-		70-130	-		
Ethylbenzene	96		-		70-130	-		
p/m-Xylene	96		-		70-130	-		
Bromoform	88		-		70-130	-		
Styrene	96		-		70-130	-		
1,1,2,2-Tetrachloroethane	98		-		70-130	-		
o-Xylene	94		-		70-130	-		
1,2,3-Trichloropropane	90		-		70-130	-		
Nonane (C9)	87		-		70-130	-		
Isopropylbenzene	92		-		70-130	-		
Bromobenzene	86		-		70-130	-		
o-Chlorotoluene	88		-		70-130	-		
n-Propylbenzene	91		-		70-130	-		
p-Chlorotoluene	90		-		70-130	-		
4-Ethyltoluene	83		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 170282501

Lab Number: L1403948

Report Date: 02/27/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG672490-3								
1,3,5-Trimethylbenzene	94		-		70-130	-		
tert-Butylbenzene	95		-		70-130	-		
1,2,4-Trimethylbenzene	102		-		70-130	-		
Decane (C10)	90		-		70-130	-		
Benzyl chloride	83		-		70-130	-		
1,3-Dichlorobenzene	96		-		70-130	-		
1,4-Dichlorobenzene	97		-		70-130	-		
sec-Butylbenzene	94		-		70-130	-		
p-Isopropyltoluene	87		-		70-130	-		
1,2-Dichlorobenzene	96		-		70-130	-		
n-Butylbenzene	93		-		70-130	-		
1,2-Dibromo-3-chloropropane	93		-		70-130	-		
Undecane	92		-		70-130	-		
Dodecane (C12)	96		-		70-130	-		
1,2,4-Trichlorobenzene	97		-		70-130	-		
Naphthalene	94		-		70-130	-		
1,2,3-Trichlorobenzene	91		-		70-130	-		
Hexachlorobutadiene	94		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG672490-5 QC Sample: L1403948-01 Client ID: SV01_022114						
Dichlorodifluoromethane	1.28	1.25	ppbV	2		25
Chloromethane	ND	0.218	ppbV	NC		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	0.220	0.224	ppbV	2		25
1,3-Butadiene	2.44	2.46	ppbV	1		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	5.34	5.57	ppbV	4		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	136	139	ppbV	2		25
Trichlorofluoromethane	2.58	2.61	ppbV	1		25
Isopropanol	ND	0.519	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	2.36	2.42	ppbV	3		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG672490-5 QC Sample: L1403948-01 Client ID: SV01_022114					
1,1-Dichloroethane	0.499	0.515	ppbV	3	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
2-Butanone	2.30	2.32	ppbV	1	25
cis-1,2-Dichloroethene	0.265	0.228	ppbV	15	25
Ethyl Acetate	0.521	0.568	ppbV	9	25
Chloroform	7.70	7.59	ppbV	1	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	1.97	1.99	ppbV	1	25
n-Hexane	11.2	11.2	ppbV	0	25
1,1,1-Trichloroethane	6.36	6.42	ppbV	1	25
Benzene	3.23	3.27	ppbV	1	25
Carbon tetrachloride	5.98	5.92	ppbV	1	25
Cyclohexane	0.748	0.794	ppbV	6	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	26.4	26.4	ppbV	0	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	3.36	3.31	ppbV	1	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG672490-5 QC Sample: L1403948-01 Client ID: SV01_022114					
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	3.17	3.25	ppbV	2	25
2-Hexanone	ND	ND	ppbV	NC	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	14.0	14.7	ppbV	5	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.211	0.221	ppbV	5	25
p/m-Xylene	0.637	0.643	ppbV	1	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.223	0.243	ppbV	9	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG672490-5 QC Sample: L1403948-01 Client ID: SV01_022114					
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name:

Lab Number: L1403948

Project Number: 170282501

Report Date: 02/27/14

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1403948-01	SV01_022114	0103	#30 SV	02/20/14	99062		-	-	-	Pass	18.0	12.1	39
L1403948-01	SV01_022114	197	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.9	-11.8	-	-	-	-
L1403948-02	SV03_022114	0100	#20 AMB	02/20/14	99062		-	-	-	Pass	17.7	19.6	10
L1403948-02	SV03_022114	382	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.7	-0.3	-	-	-	-
L1403948-03	SV04_022114	0150	#30 SV	02/20/14	99062		-	-	-	Pass	18.0	13.1	32
L1403948-03	SV04_022114	384	2.7L Can	02/20/14	99062	L1403414-01	Pass	-28.8	-3.4	-	-	-	-
L1403948-04	SV06_022114	0647	#30 SV	02/20/14	99062		-	-	-	Pass	18.0	19.2	6
L1403948-04	SV06_022114	396	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.7	-2.0	-	-	-	-
L1403948-05	SV07_022114	0391	#30 SV	02/20/14	99062		-	-	-	Pass	17.8	17.9	1
L1403948-05	SV07_022114	237	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.9	-3.2	-	-	-	-
L1403948-06	AA01_022114	0454	#30 AMB	02/20/14	99062		-	-	-	Pass	17.7	17.5	1
L1403948-06	AA01_022114	1732	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.9	-3.6	-	-	-	-
L1403948-07	SV02_022114	0646	#30 SV	02/20/14	99062		-	-	-	Pass	17.7	0.3	193
L1403948-07	SV02_022114	193	2.7L Can	02/20/14	99062	L1403414-01	Pass	-30.0	-28.6	-	-	-	-
L1403948-08	SV05_022114	0648	#30 SV	02/20/14	99062		-	-	-	Pass	18.0	0.8	183

Project Name:

Lab Number: L1403948

Project Number: 170282501

Report Date: 02/27/14

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1403948-08	SV05_022114	335	2.7L Can	02/20/14	99062	L1403414-01	Pass	-29.8	-28.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/13/14 19:35
Analyst: MB

Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:
Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:

Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:

Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:
Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	95		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/13/14 19:35
Analyst: MB

Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:

Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.038	0.020	--	0.258	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1403414
Report Date: 02/27/14

Air Canister Certification Results

Lab ID: L1403414-01
Client ID: CAN 373 SHELF 4
Sample Location:
Date Collected: 02/12/14 16:58
Date Received: 02/13/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	100		60-140
bromochloromethane	86		60-140
chlorobenzene-d5	99		60-140

Project Name: Not Specified
Project Number: 170282501

Lab Number: L1403948
Report Date: 02/27/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**
Cooler
N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403948-01A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-02A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-03A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-04A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-05A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-06A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1403948-07A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	CLEAN-FEE()
L1403948-08A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	Not Specified	**Lab Number:**	L1403948
Project Number:	170282501	**Report Date:**	02/27/14

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.

Report Format: Data Usability Report

Project Name:	Not Specified	**Lab Number:**	L1403948
Project Number:	170282501	**Report Date:**	02/27/14

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: Not Specified
Project Number: 170282501
Lab Number: L1403948
Report Date: 02/27/14

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 11, 2013

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 2/21/14

ALPHA Job #: L1403948

Client Information

Client: LANGAN ENGINEERING
Address: 360 W. 31st St 7
NY, NY 10001
Phone: 212-479-5400
Fax: PMCMAHON@LANGAN.COM
Email:
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 170282501
Project Location: QUEENS, NY
Project #:
Project Manager: GNICHOLLS@LANGAN.com
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:
Samples SV02_022114 and SV05_022114 should NOT be analyzed.
Humidity = 93%, w/ Fog.

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS: TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
039481	SV02_022114	2/21/14	1105	1305	-29.60	-13.24	SV	PTF	2.7L	197	0103	X							
02	SV03_022114		1038	1235	-29.67	-2.30				382	0100	X							
03	SV04_022114		1055	1255	-28.66	-5.29				384	0150	X							
04	SV06_022114		1020	1220	-29.44	-3.87				396	0647	X							
05	SV07_022114		0940	1140	-29.40	-4.93				237	0391	X							
06	AA02_022114		0910	1110	-29.66	-5.59	AA	PM		1732	0454	X							

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Relinquished By:	Date/Time	Received By:	Date/Time:
	2/21/14 15:25		2-21-14 1525
	2-21-14 1746		2/21/14 1746
	2-22-14 0100		2/22/14 0100
	2/22/14 0400		2/22/14 0400

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Report Date: 02/28/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0579

Report Date: 02/28/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0579

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on February 21, 2014 and listed below. The project was identified as your project: **170282501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
14B0579-01	SB02_2-4	Soil	02/21/2014	02/21/2014
14B0579-02	SB02_6-8	Soil	02/21/2014	02/21/2014
14B0579-03	SB02_11-13	Soil	02/21/2014	02/21/2014
14B0579-04	TB02_022114	Water	02/21/2014	02/21/2014

General Notes for York Project (SDG) No.: 14B0579

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:

Date: 02/28/2014

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB02_2-4 **York Sample ID:** 14B0579-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:15 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.088	0.18	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
78-93-3	2-Butanone	**0.0057**	J	mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
67-64-1	Acetone	**0.042**	B	mg/kg dry	0.0044	0.018	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
71-43-2	Benzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
75-09-2	Methylene chloride	**0.0060**	J, B	mg/kg dry	0.0044	0.018	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0088	0.018	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
108-88-3	Toluene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS

Sample Information

Client Sample ID: SB02_2-4 **York Sample ID:** 14B0579-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:15 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.013	0.026	1	EPA 8260C	02/26/2014 10:36	02/26/2014 13:50	SS

	Surrogate Recoveries	Result		Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*108 %*		*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*172 %*	S-04	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*138 %*	S-04	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3545A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
120-12-7	Anthracene	**1.07**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
56-55-3	Benzo(a)anthracene	**2.06**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
50-32-8	Benzo(a)pyrene	**2.52**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
205-99-2	Benzo(b)fluoranthene	**2.62**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	1.66	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
207-08-9	Benzo(k)fluoranthene	**2.62**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
218-01-9	Chrysene	**2.32**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
206-44-0	Fluoranthene	**5.25**		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
86-73-7	Fluorene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**1.20**	J	mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	1.66	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	1.66	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	1.66	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
85-01-8	Phenanthrene	**4.13**		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
108-95-2	Phenol	ND		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR
129-00-0	Pyrene	**3.40**		mg/kg dry	0.828	3.29	10	EPA 8270D	02/25/2014 07:05	02/25/2014 22:50	SR

	Surrogate Recoveries	Result		Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*53.6 %*		*10-109*

Sample Information

Client Sample ID: SB02_2-4 **York Sample ID:** 14B0579-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:15 am	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3545A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
4165-62-2	*Surrogate: Phenol-d5*	*49.8 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*64.7 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*55.5 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*76.5 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*31.0 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:21	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*41.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*55.3 %*	*30-140*

Sample Information

Client Sample ID: SB02_2-4 **York Sample ID:** 14B0579-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:15 am	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0223	0.0223	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:11	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*56.8 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*55.3 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**25.5**		mg/kg dry	1.31	1.31	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-39-3	Barium	**4340**		mg/kg dry	1.31	1.31	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.131	0.131	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-43-9	Cadmium	**5.62**		mg/kg dry	0.394	0.394	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-47-3	Chromium	**252**		mg/kg dry	0.657	0.657	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-50-8	Copper	**434**		mg/kg dry	0.657	0.657	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7439-92-1	Lead	**7380**		mg/kg dry	0.394	0.394	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7439-96-5	Manganese	**271**		mg/kg dry	0.657	0.657	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-02-0	Nickel	**40.6**		mg/kg dry	0.657	0.657	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7782-49-2	Selenium	**1.42**		mg/kg dry	1.31	1.31	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-22-4	Silver	ND		mg/kg dry	0.657	0.657	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW
7440-66-6	Zinc	**3260**		mg/kg dry	1.31	1.31	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:08	MW

Sample Information

Client Sample ID: SB02_2-4 **York Sample ID:** 14B0579-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:15 am	02/21/2014

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**2.13**		mg/kg dry	0.0394	0.0394	1	EPA 7473	02/25/2014 06:58	02/25/2014 18:03	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**76.1**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:49	02/26/2014 11:17	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**1.42**		mg/kg dry	0.460	0.657	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**251**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	**4.93**		mg/kg dry	0.657	0.657	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: SB02_6-8 **York Sample ID:** 14B0579-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS

Sample Information

Client Sample ID: **SB02_6-8** **York Sample ID:** **14B0579-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.041	0.082	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
78-93-3	2-Butanone	**0.0039**	J	mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
67-64-1	Acetone	**0.017**		mg/kg dry	0.0021	0.0082	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
71-43-2	Benzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
75-09-2	Methylene chloride	**0.0021**	J, B	mg/kg dry	0.0021	0.0082	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0041	0.0082	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
108-88-3	Toluene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0021	0.0041	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0062	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:23	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*72-137*

Sample Information

Client Sample ID: **SB02_6-8** **York Sample ID:** **14B0579-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
460-00-4	*Surrogate: p-Bromofluorobenzene*	*105 %*			*72-138*						
2037-26-5	*Surrogate: Toluene-d8*	*106 %*			*85-118*						

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3545A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.235**	J	mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
120-12-7	Anthracene	**0.662**	J	mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
56-55-3	Benzo(a)anthracene	**1.61**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
50-32-8	Benzo(a)pyrene	**1.98**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
205-99-2	Benzo(b)fluoranthene	**1.56**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
191-24-2	Benzo(g,h,i)perylene	**0.724**	J	mg/kg dry	0.367	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
207-08-9	Benzo(k)fluoranthene	**1.41**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
218-01-9	Chrysene	**1.62**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
53-70-3	Dibenzo(a,h)anthracene	**0.313**	J	mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
206-44-0	Fluoranthene	**3.68**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
86-73-7	Fluorene	**0.267**	J	mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.764**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.367	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.367	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
91-20-3	Naphthalene	**0.195**	J	mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.367	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
85-01-8	Phenanthrene	**2.78**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
108-95-2	Phenol	ND		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
129-00-0	Pyrene	**2.83**		mg/kg dry	0.184	0.729	2	EPA 8270D	02/25/2014 07:05	02/25/2014 23:20	SR
	Surrogate Recoveries	**Result**			**Acceptance Range**						
367-12-4	*Surrogate: 2-Fluorophenol*	*39.6 %*			*10-109*						
4165-62-2	*Surrogate: Phenol-d5*	*61.8 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*64.8 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*55.4 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*95.1 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*46.8 %*			*10-147*						

Sample Information

Client Sample ID: SB02_6-8 **York Sample ID:** 14B0579-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 15:53	JW

	Surrogate Recoveries	Result		Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*27.2 %*	GC-Surr	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*31.2 %*		*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0248	0.0248	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:30	JW

	Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB02_6-8 **York Sample ID:** 14B0579-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*37.7 %*			*30-140*						
2051-24-3	*Surrogate: Decachlorobiphenyl*	*34.7 %*			*30-140*						

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**12.9**		mg/kg dry	1.46	1.46	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-39-3	Barium	**900**		mg/kg dry	1.46	1.46	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.146	0.146	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-43-9	Cadmium	**1.23**		mg/kg dry	0.437	0.437	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-47-3	Chromium	**34.4**		mg/kg dry	0.729	0.729	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-50-8	Copper	**310**		mg/kg dry	0.729	0.729	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7439-92-1	Lead	**7010**		mg/kg dry	0.437	0.437	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7439-96-5	Manganese	**104**		mg/kg dry	0.729	0.729	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-02-0	Nickel	**13.3**		mg/kg dry	0.729	0.729	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7782-49-2	Selenium	**2.54**		mg/kg dry	1.46	1.46	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-22-4	Silver	ND		mg/kg dry	0.729	0.729	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW
7440-66-6	Zinc	**414**		mg/kg dry	1.46	1.46	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:29	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**2.42**		mg/kg dry	0.0437	0.0437	1	EPA 7473	02/25/2014 06:58	02/25/2014 15:51	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**68.6**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:49	02/26/2014 11:17	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**1.52**		mg/kg dry	0.510	0.729	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Sample Information

Client Sample ID: SB02_6-8 **York Sample ID:** 14B0579-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:25 am	02/21/2014

Chromium, Trivalent **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**32.9**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.729	0.729	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: SB02_11-13 **York Sample ID:** 14B0579-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:35 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.060	0.12	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
78-93-3	2-Butanone	**0.018**		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
67-64-1	Acetone	**0.060**		mg/kg dry	0.0030	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
71-43-2	Benzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS

Sample Information

Client Sample ID: SB02_11-13 **York Sample ID:** 14B0579-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:35 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
75-09-2	Methylene chloride	ND	B	mg/kg dry	0.0030	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0060	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
108-88-3	Toluene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0030	0.0060	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0090	0.018	1	EPA 8260C	02/25/2014 09:53	02/25/2014 16:57	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*98.7 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*110 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*108 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3545A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.190	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
218-01-9	Chrysene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR

Sample Information

Client Sample ID: SB02_11-13 **York Sample ID:** 14B0579-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:35 am	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3545A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
206-44-0	Fluoranthene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.190	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.190	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.190	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
85-01-8	Phenanthrene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
108-95-2	Phenol	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR
129-00-0	Pyrene	ND		mg/kg dry	0.0951	0.377	1	EPA 8270D	02/25/2014 07:05	02/25/2014 23:51	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*43.5 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*62.2 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*72.9 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*55.2 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*108 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*65.8 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW

Sample Information

Client Sample ID: **SB02_11-13** **York Sample ID:** **14B0579-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:35 am	02/21/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 16:00	02/26/2014 16:08	JW

	Surrogate Recoveries	Result		Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*24.6 %*	GC-Surr	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*37.4 %*		*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0257	0.0257	1	EPA 8082A	02/24/2014 16:00	02/25/2014 17:50	JW

	Surrogate Recoveries	Result		Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*31.2 %*		*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*29.1 %*	GC-Surr	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**6.34**		mg/kg dry	1.51	1.51	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-39-3	Barium	**120**		mg/kg dry	1.51	1.51	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.151	0.151	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-43-9	Cadmium	**0.761**		mg/kg dry	0.453	0.453	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW

Sample Information

Client Sample ID: SB02_11-13 **York Sample ID:** 14B0579-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Soil	February 21, 2014 10:35 am	02/21/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	Chromium	**31.6**		mg/kg dry	0.755	0.755	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-50-8	Copper	**50.5**		mg/kg dry	0.755	0.755	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7439-92-1	Lead	**105**		mg/kg dry	0.453	0.453	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7439-96-5	Manganese	**797**		mg/kg dry	0.755	0.755	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-02-0	Nickel	**30.1**		mg/kg dry	0.755	0.755	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7782-49-2	Selenium	ND		mg/kg dry	1.51	1.51	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-22-4	Silver	ND		mg/kg dry	0.755	0.755	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW
7440-66-6	Zinc	**140**		mg/kg dry	1.51	1.51	1	EPA 6010C	02/24/2014 12:43	02/24/2014 18:37	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**1.26**		mg/kg dry	0.0453	0.0453	1	EPA 7473	02/25/2014 06:58	02/25/2014 15:58	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**66.2**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:49	02/26/2014 11:17	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.528	0.755	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**31.6**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.755	0.755	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: TB02_022114 **York Sample ID:** 14B0579-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Water	February 21, 2014 12:00 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
78-93-3	2-Butanone	ND		ug/L	0.50	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
67-64-1	Acetone	**2.2**	B	ug/L	1.0	2.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.50	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS

Sample Information

Client Sample ID: TB02_022114 **York Sample ID:** 14B0579-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0579	170282501	Water	February 21, 2014 12:00 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7	Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	02/25/2014 09:46	02/25/2014 16:31	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*105 %*	*79-133*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*98.2 %*	*65-133*
2037-26-5	*Surrogate: Toluene-d8*	*97.5 %*	*80-123*

Analytical Batch Summary

Batch ID: BB40866 **Preparation Method:** EPA 3050B **Prepared By:** MW

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/24/14
14B0579-02	SB02_6-8	02/24/14
14B0579-03	SB02_11-13	02/24/14
BB40866-BLK1	Blank	02/24/14
BB40866-SRM1	Reference	02/24/14

Batch ID: BB40883 **Preparation Method:** EPA 3550C **Prepared By:** SA

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/24/14
14B0579-01	SB02_2-4	02/24/14
14B0579-02	SB02_6-8	02/24/14
14B0579-02	SB02_6-8	02/24/14
14B0579-03	SB02_11-13	02/24/14
14B0579-03	SB02_11-13	02/24/14
BB40883-BLK1	Blank	02/24/14
BB40883-BLK1	Blank	02/24/14
BB40883-BS1	LCS	02/24/14
BB40883-BS2	LCS	02/24/14
BB40883-BSD1	LCS Dup	02/24/14
BB40883-MS1	Matrix Spike	02/24/14

Batch ID: BB40901 **Preparation Method:** EPA 7473 soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/25/14
14B0579-02	SB02_6-8	02/25/14
14B0579-03	SB02_11-13	02/25/14
BB40901-BLK1	Blank	02/25/14
BB40901-SRM1	Reference	02/25/14

Batch ID: BB40902 **Preparation Method:** EPA 3545A **Prepared By:** CC

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/25/14
14B0579-02	SB02_6-8	02/25/14
14B0579-03	SB02_11-13	02/25/14
BB40902-BLK1	Blank	02/25/14
BB40902-BS1	LCS	02/25/14
BB40902-BSD1	LCS Dup	02/25/14

Batch ID: BB40905 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/25/14
14B0579-02	SB02_6-8	02/25/14
14B0579-03	SB02_11-13	02/25/14
BB40905-BLK1	Blank	02/25/14
BB40905-SRM1	Reference	02/25/14

Batch ID: BB40929 **Preparation Method:** % Solids Prep **Prepared By:** KK

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/25/14
14B0579-02	SB02_6-8	02/25/14
14B0579-03	SB02_11-13	02/25/14

Batch ID: BB40945 **Preparation Method:** EPA 5030B **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-04	TB02_022114	02/25/14
BB40945-BLK1	Blank	02/25/14
BB40945-BS1	LCS	02/25/14
BB40945-BSD1	LCS Dup	02/25/14

Batch ID: BB40948 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-02	SB02_6-8	02/25/14
14B0579-03	SB02_11-13	02/25/14
BB40948-BLK1	Blank	02/25/14
BB40948-BS1	LCS	02/25/14
BB40948-BSD1	LCS Dup	02/25/14

Batch ID: BB40966 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/26/14
14B0579-02	SB02_6-8	02/26/14
14B0579-03	SB02_11-13	02/26/14

Batch ID: BB41008 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/26/14
BB41008-BLK1	Blank	02/26/14
BB41008-BS1	LCS	02/26/14
BB41008-BSD1	LCS Dup	02/26/14

Batch ID: BB41039 **Preparation Method:** Analysis Preparation Soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0579-01	SB02_2-4	02/27/14
14B0579-02	SB02_6-8	02/27/14
14B0579-03	SB02_11-13	02/27/14
BB41039-BLK1	Blank	02/27/14
BB41039-SRM1	Reference	02/27/14

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
Blank (BB40945-BLK1)									Prepared & Analyzed: 02/25/2014		
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	1.4	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.2*		*"*	*10.0*		*102*	*79-133*				
Surrogate: p-Bromofluorobenzene	*10.0*		*"*	*10.0*		*100*	*65-133*				
Surrogate: Toluene-d8	*9.86*		*"*	*10.0*		*98.6*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
LCS (BB40945-BS1)							Prepared & Analyzed: 02/25/2014				
1,1,1-Trichloroethane	11		ug/L	10.0		110	80-131				
1,1-Dichloroethane	11		"	10.0		106	79-123				
1,1-Dichloroethylene	11		"	10.0		105	71-123				
1,2,4-Trimethylbenzene	11		"	10.0		110	68-134				
1,2-Dichlorobenzene	10		"	10.0		103	83-110				
1,2-Dichloroethane	9.8		"	10.0		97.6	81-120				
1,3,5-Trimethylbenzene	11		"	10.0		114	74-121				
1,3-Dichlorobenzene	11		"	10.0		106	82-112				
1,4-Dichlorobenzene	11		"	10.0		106	83-110				
1,4-Dioxane	190		"	200		93.9	70-130				
2-Butanone	10		"	10.0		102	64-128				
Acetone	8.0		"	10.0		79.5	54-129				
Benzene	11		"	10.0		105	77-122				
Carbon tetrachloride	11		"	10.0		109	66-152				
Chlorobenzene	10		"	10.0		103	85-113				
Chloroform	10		"	10.0		105	82-119				
cis-1,2-Dichloroethylene	11		"	10.0		106	79-116				
Ethyl Benzene	11		"	10.0		108	85-125				
Methyl tert-butyl ether (MTBE)	9.5		"	10.0		95.4	51-134				
Methylene chloride	8.3		"	10.0		83.4	76-122				
n-Butylbenzene	11		"	10.0		112	69-127				
n-Propylbenzene	11		"	10.0		113	70-129				
o-Xylene	10		"	10.0		105	83-117				
p- & m- Xylenes	22		"	20.0		108	80-126				
sec-Butylbenzene	11		"	10.0		113	72-132				
tert-Butylbenzene	11		"	10.0		112	75-129				
Tetrachloroethylene	11		"	10.0		110	67-118				
Toluene	10		"	10.0		105	82-118				
trans-1,2-Dichloroethylene	10		"	10.0		105	76-119				
Trichloroethylene	11		"	10.0		107	71-122				
Vinyl Chloride	9.7		"	10.0		97.1	49-125				
Surrogate: 1,2-Dichloroethane-d4	*9.34*		*"*	*10.0*		*93.4*	*79-133*				
Surrogate: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*65-133*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
LCS Dup (BB40945-BSD1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	11		ug/L	10.0		109	80-131		1.01	30	
1,1-Dichloroethane	11		"	10.0		106	79-123		0.189	30	
1,1-Dichloroethylene	10		"	10.0		105	71-123		0.381	30	
1,2,4-Trimethylbenzene	10		"	10.0		103	68-134		6.49	30	
1,2-Dichlorobenzene	10		"	10.0		103	83-110		0.485	30	
1,2-Dichloroethane	10		"	10.0		105	81-120		6.92	30	
1,3,5-Trimethylbenzene	11		"	10.0		107	74-121		6.24	30	
1,3-Dichlorobenzene	10		"	10.0		102	82-112		3.57	30	
1,4-Dichlorobenzene	10		"	10.0		103	83-110		2.88	30	
1,4-Dioxane	290		"	200		146	70-130	High Bias	43.5	30	Non-dir.
2-Butanone	11		"	10.0		107	64-128		4.80	30	
Acetone	9.0		"	10.0		90.0	54-129		12.4	30	
Benzene	11		"	10.0		106	77-122		0.944	30	
Carbon tetrachloride	11		"	10.0		108	66-152		1.75	30	
Chlorobenzene	10		"	10.0		104	85-113		0.773	30	
Chloroform	11		"	10.0		107	82-119		2.64	30	
cis-1,2-Dichloroethylene	11		"	10.0		108	79-116		2.34	30	
Ethyl Benzene	11		"	10.0		106	85-125		1.97	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0		105	51-134		9.30	30	
Methylene chloride	8.8		"	10.0		88.4	76-122		5.82	30	
n-Butylbenzene	11		"	10.0		105	69-127		6.44	30	
n-Propylbenzene	11		"	10.0		105	70-129		6.88	30	
o-Xylene	10		"	10.0		104	83-117		0.766	30	
p- & m- Xylenes	21		"	20.0		106	80-126		1.96	30	
sec-Butylbenzene	11		"	10.0		106	72-132		6.41	30	
tert-Butylbenzene	11		"	10.0		105	75-129		5.81	30	
Tetrachloroethylene	11		"	10.0		106	67-118		4.07	30	
Toluene	10		"	10.0		104	82-118		0.669	30	
trans-1,2-Dichloroethylene	11		"	10.0		105	76-119		0.381	30	
Trichloroethylene	10		"	10.0		104	71-122		2.65	30	
Vinyl Chloride	9.8		"	10.0		97.5	49-125		0.411	30	
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*79-133*				
Surrogate: p-Bromofluorobenzene	*9.97*		*"*	*10.0*		*99.7*	*65-133*				
Surrogate: Toluene-d8	*9.88*		*"*	*10.0*		*98.8*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
Blank (BB40948-BLK1)											Prepared & Analyzed: 02/25/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	ND	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0027	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*48.1*		*ug/L*	*50.0*		*96.2*	*72-137*				
Surrogate: p-Bromofluorobenzene	*53.4*		*"*	*50.0*		*107*	*72-138*				
Surrogate: Toluene-d8	*49.9*		*"*	*50.0*		*99.8*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
LCS (BB40948-BS1)							Prepared & Analyzed: 02/25/2014				
1,1,1-Trichloroethane	55		ug/L	50.0		110	76-135				
1,1-Dichloroethane	54		"	50.0		108	80-119				
1,1-Dichloroethylene	50		"	50.0		100	58-139				
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116				
1,2-Dichlorobenzene	51		"	50.0		102	85-114				
1,2-Dichloroethane	55		"	50.0		110	72-136				
1,3,5-Trimethylbenzene	53		"	50.0		106	86-114				
1,3-Dichlorobenzene	52		"	50.0		103	84-114				
1,4-Dichlorobenzene	53		"	50.0		107	82-116				
1,4-Dioxane	650		"	1000		65.3	10-208				
2-Butanone	55		"	50.0		110	60-129				
Acetone	48		"	50.0		95.4	26-119				
Benzene	54		"	50.0		109	81-117				
Carbon tetrachloride	55		"	50.0		111	79-135				
Chlorobenzene	52		"	50.0		104	87-112				
Chloroform	54		"	50.0		108	80-126				
cis-1,2-Dichloroethylene	57		"	50.0		113	80-119				
Ethyl Benzene	52		"	50.0		105	88-117				
Methyl tert-butyl ether (MTBE)	57		"	50.0		113	58-137				
Methylene chloride	52		"	50.0		104	47-140				
n-Butylbenzene	53		"	50.0		105	79-119				
n-Propylbenzene	52		"	50.0		104	82-116				
o-Xylene	54		"	50.0		107	88-111				
p- & m- Xylenes	100		"	100		104	86-117				
sec-Butylbenzene	53		"	50.0		106	85-119				
tert-Butylbenzene	56		"	50.0		113	84-119				
Tetrachloroethylene	49		"	50.0		97.2	74-127				
Toluene	52		"	50.0		103	83-114				
trans-1,2-Dichloroethylene	54		"	50.0		107	68-131				
Trichloroethylene	51		"	50.0		102	84-118				
Vinyl Chloride	53		"	50.0		107	46-133				
Surrogate: 1,2-Dichloroethane-d4	*53.9*		*"*	*50.0*		*108*	*72-137*				
Surrogate: p-Bromofluorobenzene	*52.8*		*"*	*50.0*		*106*	*72-138*				
Surrogate: Toluene-d8	*49.2*		*"*	*50.0*		*98.4*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
LCS Dup (BB40948-BSD1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	53		ug/L	50.0		105	76-135		4.05	30	
1,1-Dichloroethane	52		"	50.0		103	80-119		4.87	30	
1,1-Dichloroethylene	49		"	50.0		98.6	58-139		1.35	30	
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116		0.461	30	
1,2-Dichlorobenzene	51		"	50.0		102	85-114		0.823	30	
1,2-Dichloroethane	51		"	50.0		102	72-136		7.45	30	
1,3,5-Trimethylbenzene	52		"	50.0		104	86-114		2.22	30	
1,3-Dichlorobenzene	52		"	50.0		103	84-114		0.388	30	
1,4-Dichlorobenzene	53		"	50.0		105	82-116		1.34	30	
1,4-Dioxane	520		"	1000		52.0	10-208		22.7	30	
2-Butanone	47		"	50.0		94.7	60-129		15.1	30	
Acetone	44		"	50.0		88.0	26-119		8.09	30	
Benzene	53		"	50.0		106	81-117		2.33	30	
Carbon tetrachloride	53		"	50.0		107	79-135		3.72	30	
Chlorobenzene	51		"	50.0		102	87-112		2.26	30	
Chloroform	52		"	50.0		104	80-126		3.85	30	
cis-1,2-Dichloroethylene	52		"	50.0		104	80-119		8.91	30	
Ethyl Benzene	52		"	50.0		105	88-117		0.363	30	
Methyl tert-butyl ether (MTBE)	52		"	50.0		104	58-137		8.95	30	
Methylene chloride	49		"	50.0		98.7	47-140		5.23	30	
n-Butylbenzene	52		"	50.0		105	79-119		0.744	30	
n-Propylbenzene	52		"	50.0		103	82-116		0.792	30	
o-Xylene	52		"	50.0		103	88-111		3.81	30	
p- & m- Xylenes	110		"	100		106	86-117		1.21	30	
sec-Butylbenzene	52		"	50.0		104	85-119		2.05	30	
tert-Butylbenzene	54		"	50.0		109	84-119		3.62	30	
Tetrachloroethylene	49		"	50.0		97.4	74-127		0.144	30	
Toluene	52		"	50.0		104	83-114		0.270	30	
trans-1,2-Dichloroethylene	52		"	50.0		103	68-131		3.78	30	
Trichloroethylene	50		"	50.0		101	84-118		1.40	30	
Vinyl Chloride	51		"	50.0		102	46-133		4.83	30	
Surrogate: 1,2-Dichloroethane-d4	*48.4*		*"*	*50.0*		*96.7*	*72-137*				
Surrogate: p-Bromofluorobenzene	*50.8*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.7*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
Blank (BB41008-BLK1)											Prepared & Analyzed: 02/26/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	0.0029	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0025	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*48.7*		*ug/L*	*50.0*		*97.4*	*72-137*				
Surrogate: p-Bromofluorobenzene	*52.2*		*"*	*50.0*		*104*	*72-138*				
Surrogate: Toluene-d8	*50.4*		*"*	*50.0*		*101*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
LCS (BB41008-BS1)							Prepared & Analyzed: 02/26/2014				
1,1,1-Trichloroethane	50		ug/L	50.0		99.7	76-135				
1,1-Dichloroethane	48		"	50.0		95.8	80-119				
1,1-Dichloroethylene	48		"	50.0		95.5	58-139				
1,2,4-Trimethylbenzene	53		"	50.0		107	82-116				
1,2-Dichlorobenzene	53		"	50.0		105	85-114				
1,2-Dichloroethane	49		"	50.0		98.7	72-136				
1,3,5-Trimethylbenzene	52		"	50.0		104	86-114				
1,3-Dichlorobenzene	53		"	50.0		107	84-114				
1,4-Dichlorobenzene	55		"	50.0		109	82-116				
1,4-Dioxane	1000		"	1000		101	10-208				
2-Butanone	47		"	50.0		94.7	60-129				
Acetone	43		"	50.0		86.4	26-119				
Benzene	50		"	50.0		100	81-117				
Carbon tetrachloride	50		"	50.0		101	79-135				
Chlorobenzene	53		"	50.0		106	87-112				
Chloroform	50		"	50.0		100	80-126				
cis-1,2-Dichloroethylene	49		"	50.0		97.2	80-119				
Ethyl Benzene	53		"	50.0		106	88-117				
Methyl tert-butyl ether (MTBE)	49		"	50.0		97.9	58-137				
Methylene chloride	46		"	50.0		92.3	47-140				
n-Butylbenzene	54		"	50.0		109	79-119				
n-Propylbenzene	53		"	50.0		106	82-116				
o-Xylene	54		"	50.0		107	88-111				
p- & m- Xylenes	110		"	100		107	86-117				
sec-Butylbenzene	54		"	50.0		108	85-119				
tert-Butylbenzene	58		"	50.0		116	84-119				
Tetrachloroethylene	48		"	50.0		97.0	74-127				
Toluene	51		"	50.0		103	83-114				
trans-1,2-Dichloroethylene	49		"	50.0		98.1	68-131				
Trichloroethylene	51		"	50.0		102	84-118				
Vinyl Chloride	36		"	50.0		72.7	46-133				
Surrogate: 1,2-Dichloroethane-d4	*49.5*		*"*	*50.0*		*99.0*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.1*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*48.9*		*"*	*50.0*		*97.9*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
LCS Dup (BB41008-BSD1)								Prepared & Analyzed: 02/26/2014			
1,1,1-Trichloroethane	51		ug/L	50.0		102	76-135		2.38	30	
1,1-Dichloroethane	50		"	50.0		101	80-119		4.95	30	
1,1-Dichloroethylene	49		"	50.0		97.4	58-139		2.01	30	
1,2,4-Trimethylbenzene	54		"	50.0		108	82-116		1.32	30	
1,2-Dichlorobenzene	54		"	50.0		109	85-114		3.42	30	
1,2-Dichloroethane	50		"	50.0		99.7	72-136		0.988	30	
1,3,5-Trimethylbenzene	55		"	50.0		110	86-114		5.08	30	
1,3-Dichlorobenzene	53		"	50.0		106	84-114		0.488	30	
1,4-Dichlorobenzene	55		"	50.0		109	82-116		0.0733	30	
1,4-Dioxane	1100		"	1000		108	10-208		6.64	30	
2-Butanone	46		"	50.0		91.3	60-129		3.63	30	
Acetone	40		"	50.0		80.8	26-119		6.65	30	
Benzene	51		"	50.0		102	81-117		1.58	30	
Carbon tetrachloride	50		"	50.0		101	79-135		0.238	30	
Chlorobenzene	53		"	50.0		106	87-112		0.415	30	
Chloroform	50		"	50.0		99.1	80-126		0.924	30	
cis-1,2-Dichloroethylene	50		"	50.0		100	80-119		3.36	30	
Ethyl Benzene	54		"	50.0		108	88-117		1.89	30	
Methyl tert-butyl ether (MTBE)	49		"	50.0		98.1	58-137		0.286	30	
Methylene chloride	47		"	50.0		95.0	47-140		2.84	30	
n-Butylbenzene	58		"	50.0		116	79-119		5.92	30	
n-Propylbenzene	54		"	50.0		108	82-116		2.49	30	
o-Xylene	53		"	50.0		106	88-111		1.24	30	
p- & m- Xylenes	110		"	100		110	86-117		2.22	30	
sec-Butylbenzene	55		"	50.0		110	85-119		1.47	30	
tert-Butylbenzene	53		"	50.0		106	84-119		8.73	30	
Tetrachloroethylene	51		"	50.0		101	74-127		4.50	30	
Toluene	52		"	50.0		105	83-114		2.12	30	
trans-1,2-Dichloroethylene	50		"	50.0		99.9	68-131		1.90	30	
Trichloroethylene	53		"	50.0		106	84-118		3.29	30	
Vinyl Chloride	42		"	50.0		84.9	46-133		15.5	30	
Surrogate: 1,2-Dichloroethane-d4	*49.7*		*"*	*50.0*		*99.4*	*72-137*				
Surrogate: p-Bromofluorobenzene	*50.8*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*50.6*		*"*	*50.0*		*101*	*85-118*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40902 - EPA 3545A											
Blank (BB40902-BLK1)											Prepared & Analyzed: 02/25/2014
Acenaphthene	ND	0.250	mg/kg wet								
Acenaphthylene	ND	0.250	"								
Anthracene	ND	0.250	"								
Benzo(a)anthracene	ND	0.250	"								
Benzo(a)pyrene	ND	0.250	"								
Benzo(b)fluoranthene	ND	0.250	"								
Benzo(g,h,i)perylene	ND	0.250	"								
Benzo(k)fluoranthene	ND	0.250	"								
Chrysene	ND	0.250	"								
Dibenzo(a,h)anthracene	ND	0.250	"								
Dibenzofuran	ND	0.250	"								
Fluoranthene	ND	0.250	"								
Fluorene	ND	0.250	"								
Hexachlorobenzene	ND	0.250	"								
Indeno(1,2,3-cd)pyrene	ND	0.250	"								
2-Methylphenol	ND	0.250	"								
3- & 4-Methylphenols	ND	0.250	"								
Naphthalene	ND	0.250	"								
Pentachlorophenol	ND	0.250	"								
Phenanthrene	ND	0.250	"								
Phenol	ND	0.250	"								
Pyrene	ND	0.250	"								
Surrogate: 2-Fluorophenol	*1.46*		*"*	*3.78*		*38.6*	*10-109*				
Surrogate: Phenol-d5	*1.83*		*"*	*3.78*		*48.5*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.32*		*"*	*2.55*		*51.9*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.09*		*"*	*2.54*		*42.8*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*1.71*		*"*	*3.72*		*46.0*	*10-142*				
Surrogate: Terphenyl-d14	*1.21*		*"*	*2.54*		*47.9*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40902 - EPA 3545A											
LCS (BB40902-BS1)								Prepared & Analyzed: 02/25/2014			
Acenaphthene	1.34	0.250	mg/kg wet	2.50		53.8	35-127				
Acenaphthylene	1.29	0.250	"	2.50		51.4	37-121				
Anthracene	1.47	0.250	"	2.50		58.9	38-131				
Benzo(a)anthracene	1.28	0.250	"	2.50		51.2	37-137				
Benzo(a)pyrene	1.62	0.250	"	2.50		64.7	33-162				
Benzo(b)fluoranthene	1.60	0.250	"	2.50		64.0	26-160				
Benzo(g,h,i)perylene	1.56	0.250	"	2.50		62.3	10-154				
Benzo(k)fluoranthene	1.52	0.250	"	2.50		60.8	34-143				
Chrysene	1.15	0.250	"	2.50		45.9	38-132				
Dibenzo(a,h)anthracene	1.75	0.250	"	2.50		70.1	14-153				
Dibenzofuran	1.35	0.250	"	2.50		54.1	39-123				
Fluoranthene	1.52	0.250	"	2.50		60.9	35-136				
Fluorene	1.48	0.250	"	2.50		59.1	33-134				
Hexachlorobenzene	2.08	0.250	"	2.50		83.3	31-139				
Indeno(1,2,3-cd)pyrene	1.77	0.250	"	2.50		70.7	11-155				
2-Methylphenol	1.51	0.250	"	2.50		60.5	30-128				
3- & 4-Methylphenols	1.47	0.250	"	2.50		58.9	30-120				
Naphthalene	1.36	0.250	"	2.50		54.6	28-121				
Pentachlorophenol	0.726	0.250	"	2.50		29.1	15-182				
Phenanthrene	1.48	0.250	"	2.50		59.3	37-132				
Phenol	1.42	0.250	"	2.50		56.7	28-124				
Pyrene	1.16	0.250	"	2.50		46.5	30-147				
Surrogate: 2-Fluorophenol	*2.00*		*"*	*3.78*		*53.0*	*10-109*				
Surrogate: Phenol-d5	*2.16*		*"*	*3.78*		*57.2*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.70*		*"*	*2.55*		*66.8*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.26*		*"*	*2.54*		*49.4*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*3.05*		*"*	*3.72*		*82.1*	*10-142*				
Surrogate: Terphenyl-d14	*1.12*		*"*	*2.54*		*44.0*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40902 - EPA 3545A											
LCS Dup (BB40902-BSD1)								Prepared & Analyzed: 02/25/2014			
Acenaphthene	1.54	0.250	mg/kg wet	2.50		61.7	35-127		13.6	30	
Acenaphthylene	1.40	0.250	"	2.50		56.1	37-121		8.70	30	
Anthracene	1.66	0.250	"	2.50		66.4	38-131		12.1	30	
Benzo(a)anthracene	1.52	0.250	"	2.50		60.9	37-137		17.3	30	
Benzo(a)pyrene	1.90	0.250	"	2.50		76.1	33-162		16.2	30	
Benzo(b)fluoranthene	1.81	0.250	"	2.50		72.4	26-160		12.3	30	
Benzo(g,h,i)perylene	1.82	0.250	"	2.50		72.8	10-154		15.4	30	
Benzo(k)fluoranthene	1.72	0.250	"	2.50		68.9	34-143		12.4	30	
Chrysene	1.32	0.250	"	2.50		52.8	38-132		13.9	30	
Dibenzo(a,h)anthracene	2.05	0.250	"	2.50		82.1	14-153		15.7	30	
Dibenzofuran	1.58	0.250	"	2.50		63.2	39-123		15.6	30	
Fluoranthene	1.76	0.250	"	2.50		70.3	35-136		14.3	30	
Fluorene	1.71	0.250	"	2.50		68.2	33-134		14.3	30	
Hexachlorobenzene	2.51	0.250	"	2.50		100	31-139		18.5	30	
Indeno(1,2,3-cd)pyrene	2.06	0.250	"	2.50		82.3	11-155		15.2	30	
2-Methylphenol	1.69	0.250	"	2.50		67.6	30-128		11.2	30	
3- & 4-Methylphenols	1.66	0.250	"	2.50		66.2	30-120		11.7	30	
Naphthalene	1.52	0.250	"	2.50		60.6	28-121		10.4	30	
Pentachlorophenol	1.12	0.250	"	2.50		45.0	15-182		43.0	30	Non-dir.
Phenanthrene	1.72	0.250	"	2.50		68.7	37-132		14.6	30	
Phenol	1.62	0.250	"	2.50		64.6	28-124		13.0	30	
Pyrene	1.30	0.250	"	2.50		52.1	30-147		11.4	30	
Surrogate: 2-Fluorophenol	*1.98*		*"*	*3.78*		*52.4*	*10-109*				
Surrogate: Phenol-d5	*2.30*		*"*	*3.78*		*60.9*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.83*		*"*	*2.55*		*71.8*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.38*		*"*	*2.54*		*54.3*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*3.40*		*"*	*3.72*		*91.3*	*10-142*				
Surrogate: Terphenyl-d14	*1.19*		*"*	*2.54*		*46.8*	*10-147*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40883 - EPA 3550C											
Blank (BB40883-BLK1)										Prepared: 02/24/2014 Analyzed: 02/26/2014	
4,4'-DDD	ND	0.000330	mg/kg wet								
4,4'-DDE	ND	0.000330	"								
4,4'-DDT	ND	0.000330	"								
Aldrin	ND	0.000330	"								
alpha-BHC	ND	0.000330	"								
beta-BHC	ND	0.000330	"								
delta-BHC	ND	0.000330	"								
Dieldrin	ND	0.000330	"								
Endosulfan I	ND	0.000330	"								
Endosulfan II	ND	0.000330	"								
Endosulfan sulfate	ND	0.000330	"								
Endrin	ND	0.000330	"								
gamma-BHC (Lindane)	ND	0.000330	"								
Heptachlor	ND	0.000330	"								
alpha-Chlordane	ND	0.000330	"								
Surrogate: Decachlorobiphenyl	*0.0392*		*"*	*0.0663*		*59.1*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0412*		*"*	*0.0663*		*62.1*	*30-140*				
LCS (BB40883-BS1)										Prepared: 02/24/2014 Analyzed: 02/26/2014	
4,4'-DDD	0.0309	0.000330	mg/kg wet	0.0333		92.6	40-140				
4,4'-DDE	0.0259	0.000330	"	0.0333		77.6	40-140				
4,4'-DDT	0.0328	0.000330	"	0.0333		98.5	40-140				
Aldrin	0.0261	0.000330	"	0.0333		78.4	40-140				
alpha-BHC	0.0280	0.000330	"	0.0333		84.1	40-140				
beta-BHC	0.0261	0.000330	"	0.0333		78.2	40-140				
delta-BHC	0.0273	0.000330	"	0.0333		81.8	40-140				
Dieldrin	0.0311	0.000330	"	0.0333		93.2	40-140				
Endosulfan I	0.0273	0.000330	"	0.0333		81.8	40-140				
Endosulfan II	0.0302	0.000330	"	0.0333		90.7	40-140				
Endosulfan sulfate	0.0297	0.000330	"	0.0333		89.0	40-140				
Endrin	0.0302	0.000330	"	0.0333		90.5	40-140				
gamma-BHC (Lindane)	0.0271	0.000330	"	0.0333		81.3	40-140				
Heptachlor	0.0284	0.000330	"	0.0333		85.1	40-140				
alpha-Chlordane	0.0242	0.000330	"	0.0333		72.6	40-140				
Surrogate: Decachlorobiphenyl	*0.0403*		*"*	*0.0663*		*60.8*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0453*		*"*	*0.0663*		*68.2*	*30-140*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40883 - EPA 3550C											
LCS Dup (BB40883-BSD1)								Prepared: 02/24/2014 Analyzed: 02/26/2014			
4,4'-DDD	0.0327	0.000330	mg/kg wet	0.0333		98.2	40-140		5.89	30	
4,4'-DDE	0.0277	0.000330	"	0.0333		83.1	40-140		6.83	30	
4,4'-DDT	0.0299	0.000330	"	0.0333		89.7	40-140		9.29	30	
Aldrin	0.0278	0.000330	"	0.0333		83.5	40-140		6.36	30	
alpha-BHC	0.0300	0.000330	"	0.0333		90.1	40-140		6.85	30	
beta-BHC	0.0278	0.000330	"	0.0333		83.3	40-140		6.38	30	
delta-BHC	0.0292	0.000330	"	0.0333		87.5	40-140		6.80	30	
Dieldrin	0.0324	0.000330	"	0.0333		97.2	40-140		4.26	30	
Endosulfan I	0.0284	0.000330	"	0.0333		85.3	40-140		4.20	30	
Endosulfan II	0.0314	0.000330	"	0.0333		94.1	40-140		3.60	30	
Endosulfan sulfate	0.0311	0.000330	"	0.0333		93.4	40-140		4.86	30	
Endrin	0.0320	0.000330	"	0.0333		96.0	40-140		5.86	30	
gamma-BHC (Lindane)	0.0291	0.000330	"	0.0333		87.3	40-140		7.04	30	
Heptachlor	0.0306	0.000330	"	0.0333		91.8	40-140		7.53	30	
alpha-Chlordane	0.0256	0.000330	"	0.0333		76.7	40-140		5.53	30	
Surrogate: Decachlorobiphenyl	*0.0482*		*"*	*0.0663*		*72.7*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0550*		*"*	*0.0663*		*82.8*	*30-140*				
Matrix Spike (BB40883-MS1)	*Source sample: 14B0579-01 (SB02_2-4)							Prepared: 02/24/2014 Analyzed: 02/26/2014			
4,4'-DDD	0.0247	0.00165	mg/kg dry	0.0438	ND	56.3	30-150				
4,4'-DDE	0.0256	0.00165	"	0.0438	ND	58.4	30-150				
4,4'-DDT	0.0247	0.00165	"	0.0438	ND	56.5	30-150				
Aldrin	0.0332	0.00165	"	0.0438	ND	75.8	30-150				
alpha-BHC	0.0306	0.00165	"	0.0438	ND	69.9	30-150				
beta-BHC	0.0306	0.00165	"	0.0438	ND	69.8	30-150				
delta-BHC	0.0257	0.00165	"	0.0438	ND	58.7	30-150				
Dieldrin	0.0236	0.00165	"	0.0438	ND	53.9	30-150				
Endosulfan I	0.0264	0.00165	"	0.0438	ND	60.3	30-150				
Endosulfan II	0.0254	0.00165	"	0.0438	ND	58.0	30-150				
Endosulfan sulfate	0.0240	0.00165	"	0.0438	ND	54.7	30-150				
Endrin	0.0313	0.00165	"	0.0438	ND	71.4	30-150				
gamma-BHC (Lindane)	0.0302	0.00165	"	0.0438	ND	68.9	30-150				
Heptachlor	0.0182	0.00165	"	0.0438	ND	41.6	30-150				
alpha-Chlordane	0.0247	0.00165	"	0.0438	ND	56.3	30-150				
Surrogate: Decachlorobiphenyl	*0.0330*		*"*	*0.0872*		*37.8*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0471*		*"*	*0.0872*		*54.0*	*30-140*				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40883 - EPA 3550C											
Blank (BB40883-BLK1)									Prepared: 02/24/2014 Analyzed: 02/25/2014		
Aroclor 1016	ND	0.0170	mg/kg wet								
Aroclor 1221	ND	0.0170	"								
Aroclor 1232	ND	0.0170	"								
Aroclor 1242	ND	0.0170	"								
Aroclor 1248	ND	0.0170	"								
Aroclor 1254	ND	0.0170	"								
Aroclor 1260	ND	0.0170	"								
Total PCBs	ND	0.0170	"								
Surrogate: Tetrachloro-m-xylene	*0.0430*		*"*	*0.0663*		*64.8*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0413*		*"*	*0.0663*		*62.3*	*30-140*				
LCS (BB40883-BS2)									Prepared: 02/24/2014 Analyzed: 02/25/2014		
Aroclor 1016	0.190	0.0170	mg/kg wet	0.333		56.9	40-130				
Aroclor 1260	0.171	0.0170	"	0.333		51.4	40-130				
Surrogate: Tetrachloro-m-xylene	*0.0207*		*"*	*0.0663*		*31.2*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0200*		*"*	*0.0663*		*30.2*	*30-140*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40866 - EPA 3050B											
Blank (BB40866-BLK1)										Prepared & Analyzed: 02/24/2014	
Arsenic	ND	1.00	mg/kg wet								
Barium	ND	1.00	"								
Beryllium	ND	0.100	"								
Cadmium	ND	0.300	"								
Chromium	ND	0.500	"								
Copper	ND	0.500	"								
Lead	ND	0.300	"								
Manganese	ND	0.500	"								
Nickel	ND	0.500	"								
Selenium	ND	1.00	"								
Silver	ND	0.500	"								
Zinc	ND	1.00	"								
Reference (BB40866-SRM1)										Prepared & Analyzed: 02/24/2014	
Arsenic	98.1	1.00	mg/kg wet	99.6		98.5	69.3-131				
Barium	299	1.00	"	310		96.4	74.2-126				
Beryllium	68.1	0.100	"	72.3		94.1	73.8-126				
Cadmium	167	0.300	"	182		91.5	73.6-126				
Chromium	130	0.500	"	136		95.6	70.4-130				
Copper	104	0.500	"	102		102	74.3-126				
Lead	106	0.300	"	115		92.2	72.1-129				
Manganese	306	0.500	"	323		94.6	74.9-125				
Nickel	160	0.500	"	153		104	73.2-126				
Selenium	148	1.00	"	150		98.7	67.3-133				
Silver	36.5	0.500	"	40.4		90.4	65.8-134				
Zinc	152	1.00	"	161		94.3	68.3-132				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40901 - EPA 7473 soil											
Blank (BB40901-BLK1)									Prepared & Analyzed: 02/25/2014		
Mercury	ND	0.0300	mg/kg wet								
Reference (BB40901-SRM1)									Prepared & Analyzed: 02/25/2014		
Mercury	3.73		mg/kg	3.73		100	0-200				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40905 - EPA SW846-3060											
Blank (BB40905-BLK1)									Prepared: 02/25/2014 Analyzed: 02/26/2014		
Chromium, Hexavalent	ND	0.500	mg/kg wet								
Reference (BB40905-SRM1)									Prepared: 02/25/2014 Analyzed: 02/26/2014		
Chromium, Hexavalent	61.7		mg/L	76.7		80.4	20.2-180				
Batch BB41039 - Analysis Preparation Soil											
Blank (BB41039-BLK1)									Prepared & Analyzed: 02/27/2014		
Cyanide, total	ND	0.500	mg/kg wet								
Reference (BB41039-SRM1)									Prepared & Analyzed: 02/27/2014		
Cyanide, total	80.5		ug/mL	59.3		136	38.4-202				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
14B0579-01	SB02_2-4	40mL Vial with Stir Bar-Cool 4° C
14B0579-02	SB02_6-8	40mL Vial with Stir Bar-Cool 4° C
14B0579-03	SB02_11-13	40mL Vial with Stir Bar-Cool 4° C
14B0579-04	TB02_022114	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
GC-Surr	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the alternate surrogate.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.

ND	Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
MDL	METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the MDL, with values between the MDL and the RL being "J" flagged as estimated results.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR,
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 14B05579

YOUR Information

Company: LANGAN
Address: 360 W 31st
NY, NY 10001
Phone No. 212 479 5400
Contact Person: PMcMahon@
E-Mail Address: Langan.com

Report To:

Company: SAME
Address:
Phone No.
Attention: GNicholls@
E-Mail Address: Langan.com

Invoice To:

Company: SAME
Address:
Phone No.
Attention:
E-Mail Address:

YOUR Project ID

170282501

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package X
- NY ASP B Package
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel X
- NYSDEC EQuIS
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other

York-Regulatory-Comparison
Excel Spreadsheet
Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxin/Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB02_2-4	2/21/14 10:15	S	Part 375 VOC/SVOC/Metals/Pest/PCB (Hex Chrom - CN)	3 VOA + 8oz
SB02_6-8	" 10:25	"	"	"
SB02_11-13	" 10:35	"	"	"
TB02_022114	2/21/14	Water	VOC	

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Comments

Preservation
Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other

Samples Relinquished By — Date/Time: 2/21/14 15:32
Samples Relinquished By — Date/Time:

Samples Received By — Date/Time: 2/21 3:32
Samples Received in LAB by — Date/Time: 2/21/14 820

Temperature on Receipt: 4.1 °C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Report Date: 02/28/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0543

Report Date: 02/28/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0543

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on February 21, 2014 and listed below. The project was identified as your project: **170282501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
14B0543-01	SB03_1-3	Soil	02/20/2014	02/21/2014
14B0543-02	SB03_6-8	Soil	02/20/2014	02/21/2014
14B0543-03	SB05_1-3	Soil	02/20/2014	02/21/2014
14B0543-04	SB05A_2-4	Soil	02/20/2014	02/21/2014
14B0543-05	SB05A_11-13	Soil	02/20/2014	02/21/2014
14B0543-06	TB_022114	Water	02/21/2014	02/21/2014

General Notes for York Project (SDG) No.: 14B0543

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:

Date: 02/28/2014

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB03_1-3 **York Sample ID:** 14B0543-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:40 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.054	0.11	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
67-64-1	Acetone	**0.0089**	J	mg/kg dry	0.0027	0.011	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
71-43-2	Benzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
75-09-2	Methylene chloride	**0.0042**	J, B	mg/kg dry	0.0027	0.011	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0054	0.011	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
108-88-3	Toluene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS

Sample Information

Client Sample ID: **SB03_1-3** **York Sample ID:** **14B0543-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:40 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0027	0.0054	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0080	0.016	1	EPA 8260C	02/24/2014 09:05	02/24/2014 18:25	SS
	Surrogate Recoveries	**Result**		**Acceptance Range**							
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*108 %*		*72-137*							
460-00-4	*Surrogate: p-Bromofluorobenzene*	*102 %*		*72-138*							
2037-26-5	*Surrogate: Toluene-d8*	*111 %*		*85-118*							

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
56-55-3	Benzo(a)anthracene	**0.156**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
50-32-8	Benzo(a)pyrene	**0.190**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
205-99-2	Benzo(b)fluoranthene	**0.145**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.0969	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
207-08-9	Benzo(k)fluoranthene	**0.165**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
218-01-9	Chrysene	**0.176**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
206-44-0	Fluoranthene	**0.278**		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.0750**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.0969	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.0969	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.0969	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
85-01-8	Phenanthrene	**0.143**	J	mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
108-95-2	Phenol	ND		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
129-00-0	Pyrene	**0.283**		mg/kg dry	0.0484	0.192	1	EPA 8270D	02/24/2014 07:03	02/24/2014 17:13	SR
	Surrogate Recoveries	**Result**		**Acceptance Range**							

Sample Information

Client Sample ID: SB03_1-3 **York Sample ID:** 14B0543-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:40 am	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
367-12-4	*Surrogate: 2-Fluorophenol*	*54.5 %*			*10-109*						
4165-62-2	*Surrogate: Phenol-d5*	*57.5 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*56.6 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*58.4 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*94.7 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*81.8 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:38	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*48.6 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*69.7 %*	*30-140*

Sample Information

Client Sample ID: SB03_1-3 **York Sample ID:** 14B0543-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:40 am	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW
1336-36-3	Total PCBs	**0.201**		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/24/2014 12:45	02/25/2014 13:45	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*70.4 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*62.8 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**17.0**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-39-3	Barium	**505**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.115	0.115	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-43-9	Cadmium	**3.99**		mg/kg dry	0.346	0.346	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-47-3	Chromium	**61.7**		mg/kg dry	0.577	0.577	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-50-8	Copper	**730**		mg/kg dry	0.577	0.577	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7439-92-1	Lead	**609**		mg/kg dry	0.346	0.346	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7439-96-5	Manganese	**254**		mg/kg dry	0.577	0.577	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-02-0	Nickel	**41.2**		mg/kg dry	0.577	0.577	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7782-49-2	Selenium	ND		mg/kg dry	1.15	1.15	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-22-4	Silver	ND		mg/kg dry	0.577	0.577	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW
7440-66-6	Zinc	**806**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/24/2014 12:43	02/24/2014 16:52	MW

Sample Information

Client Sample ID: SB03_1-3 **York Sample ID:** 14B0543-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:40 am	02/21/2014

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**3.03**		mg/kg dry	0.0346	0.0346	1	EPA 7473	02/27/2014 07:05	02/27/2014 13:10	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**86.7**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:41	02/26/2014 11:01	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.404	0.577	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**61.7**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.577	0.577	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:** Rep-01

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes: Rep-01

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	7.1	14	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
67-64-1	Acetone	ND		mg/kg dry	0.35	1.4	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
71-43-2	Benzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
67-66-3	Chloroform	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
75-09-2	Methylene chloride	**0.53**	J, B	mg/kg dry	0.35	1.4	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
104-51-8	n-Butylbenzene	**2.5**		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.71	1.4	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
135-98-8	sec-Butylbenzene	**3.1**		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
108-88-3	Toluene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.35	0.71	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	1.1	2.1	200	EPA 8260C	02/24/2014 09:05	02/24/2014 19:00	SS

Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:** Rep-01

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*105 %*			*72-137*						
460-00-4	*Surrogate: p-Bromofluorobenzene*	*87.7 %*			*72-138*						
2037-26-5	*Surrogate: Toluene-d8*	*103 %*			*85-118*						

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**2.34**	J	mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
120-12-7	Anthracene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	1.98	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
218-01-9	Chrysene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
206-44-0	Fluoranthene	**1.59**	J	mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
86-73-7	Fluorene	**2.89**	J	mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	1.98	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	1.98	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	1.98	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
85-01-8	Phenanthrene	**5.20**		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
108-95-2	Phenol	ND		mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR
129-00-0	Pyrene	**1.56**	J	mg/kg dry	0.990	3.93	20	EPA 8270D	02/24/2014 07:03	02/25/2014 18:12	SR

	Surrogate Recoveries	Result		Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*11.4 %*		*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*39.2 %*		*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*182 %*	S-06	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*69.7 %*		*10-111*

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*71.5 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*78.9 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 05:53	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*56.1 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*79.9 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0200	0.0200	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:15	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*93.5 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*79.4 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**1.37**		mg/kg dry	1.18	1.18	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-39-3	Barium	**26.2**		mg/kg dry	1.18	1.18	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.118	0.118	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.354	0.354	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-47-3	Chromium	**14.9**		mg/kg dry	0.589	0.589	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-50-8	Copper	**12.9**		mg/kg dry	0.589	0.589	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7439-92-1	Lead	**5.92**		mg/kg dry	0.354	0.354	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7439-96-5	Manganese	**60.3**		mg/kg dry	0.589	0.589	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-02-0	Nickel	**11.5**		mg/kg dry	0.589	0.589	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7782-49-2	Selenium	ND		mg/kg dry	1.18	1.18	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-22-4	Silver	ND		mg/kg dry	0.589	0.589	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW
7440-66-6	Zinc	**20.5**		mg/kg dry	1.18	1.18	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:00	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.117**		mg/kg dry	0.0354	0.0354	1	EPA 7473	02/27/2014 07:05	02/27/2014 13:31	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**84.8**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:41	02/26/2014 11:01	KK

Sample Information

Client Sample ID: SB03_6-8 **York Sample ID:** 14B0543-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 10:50 am	02/21/2014

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.413	0.589	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**14.9**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.589	0.589	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: SB05_1-3 **York Sample ID:** 14B0543-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
95-63-6	1,2,4-Trimethylbenzene	**0.55**		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
108-67-8	1,3,5-Trimethylbenzene	**0.48**		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	3.7	7.4	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS

Sample Information

Client Sample ID: SB05_1-3 **York Sample ID:** 14B0543-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	ND		mg/kg dry	0.19	0.74	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
71-43-2	Benzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
67-66-3	Chloroform	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
75-09-2	Methylene chloride	ND	B	mg/kg dry	0.19	0.74	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.37	0.74	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
108-88-3	Toluene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.19	0.37	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.56	1.1	100	EPA 8260C	02/26/2014 10:36	02/26/2014 14:59	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*87.9 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*104 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*103 %*	*85-118*

Sample Information

Client Sample ID: **SB05_1-3** **York Sample ID:** **14B0543-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.388**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
120-12-7	Anthracene	**0.950**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
56-55-3	Benzo(a)anthracene	**1.79**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
50-32-8	Benzo(a)pyrene	**1.71**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
205-99-2	Benzo(b)fluoranthene	**1.28**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
191-24-2	Benzo(g,h,i)perylene	**0.458**		mg/kg dry	0.190	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
207-08-9	Benzo(k)fluoranthene	**1.50**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
218-01-9	Chrysene	**1.70**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
53-70-3	Dibenzo(a,h)anthracene	**0.122**	J	mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
132-64-9	Dibenzofuran	**0.333**	J	mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
206-44-0	Fluoranthene	**3.28**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
86-73-7	Fluorene	**0.384**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.481**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.190	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.190	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
91-20-3	Naphthalene	**0.209**	J	mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.190	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
85-01-8	Phenanthrene	**3.23**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
108-95-2	Phenol	ND		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR
129-00-0	Pyrene	**2.96**		mg/kg dry	0.0952	0.378	2	EPA 8270D	02/24/2014 07:03	02/24/2014 18:21	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*50.3 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*53.0 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*50.6 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*55.9 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*83.6 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*81.8 %*	*10-147*

Sample Information

Client Sample ID: SB05_1-3 **York Sample ID:** 14B0543-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:09	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*62.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*68.1 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW
1336-36-3	Total PCBs	**0.0345**		mg/kg dry	0.0193	0.0193	1	EPA 8082A	02/24/2014 12:45	02/25/2014 14:44	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*71.9 %*	*30-140*

Sample Information

Client Sample ID: SB05_1-3 **York Sample ID:** 14B0543-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
2051-24-3	*Surrogate: Decachlorobiphenyl*	*65.8 %*			*30-140*						

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**14.1**		mg/kg dry	1.13	1.13	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-39-3	Barium	**104**		mg/kg dry	1.13	1.13	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.113	0.113	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-43-9	Cadmium	**0.758**		mg/kg dry	0.340	0.340	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-47-3	Chromium	**17.0**		mg/kg dry	0.567	0.567	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-50-8	Copper	**82.0**		mg/kg dry	0.567	0.567	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7439-92-1	Lead	**258**		mg/kg dry	0.340	0.340	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7439-96-5	Manganese	**145**		mg/kg dry	0.567	0.567	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-02-0	Nickel	**24.9**		mg/kg dry	0.567	0.567	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7782-49-2	Selenium	ND		mg/kg dry	1.13	1.13	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-22-4	Silver	ND		mg/kg dry	0.567	0.567	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW
7440-66-6	Zinc	**313**		mg/kg dry	1.13	1.13	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:18	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.809**		mg/kg dry	0.0340	0.0340	1	EPA 7473	02/27/2014 07:05	02/27/2014 15:16	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**88.3**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:41	02/26/2014 11:01	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.397	0.567	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Sample Information

Client Sample ID: SB05_1-3 **York Sample ID:** 14B0543-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:15 pm	02/21/2014

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**17.0**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.567	0.567	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: SB05A_2-4 **York Sample ID:** 14B0543-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:25 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.058	0.12	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
67-64-1	Acetone	**0.011**	J	mg/kg dry	0.0029	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
71-43-2	Benzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS

Sample Information

Client Sample ID: SB05A_2-4 **York Sample ID:** 14B0543-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:25 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
75-09-2	Methylene chloride	**0.0034**	J, B	mg/kg dry	0.0029	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0058	0.012	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
108-88-3	Toluene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0029	0.0058	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0088	0.018	1	EPA 8260C	02/25/2014 09:53	02/25/2014 13:31	SS

	Surrogate Recoveries	Result		Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*99.1 %*		*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*96.9 %*		*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*123 %*	S-04	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.0583**	J	mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
120-12-7	Anthracene	**0.147**	J	mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
56-55-3	Benzo(a)anthracene	**0.459**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
50-32-8	Benzo(a)pyrene	**0.522**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
205-99-2	Benzo(b)fluoranthene	**0.364**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
191-24-2	Benzo(g,h,i)perylene	**0.161**	J	mg/kg dry	0.101	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
207-08-9	Benzo(k)fluoranthene	**0.426**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
218-01-9	Chrysene	**0.484**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
53-70-3	Dibenzo(a,h)anthracene	**0.0555**	J	mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR

Sample Information

Client Sample ID: SB05A_2-4 **York Sample ID:** 14B0543-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:25 pm	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
206-44-0	Fluoranthene	**0.915**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
86-73-7	Fluorene	**0.0591**	J	mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.151**	J	mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.101	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.101	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.101	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
85-01-8	Phenanthrene	**0.671**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
108-95-2	Phenol	ND		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR
129-00-0	Pyrene	**0.876**		mg/kg dry	0.0503	0.200	1	EPA 8270D	02/24/2014 07:03	02/24/2014 18:55	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*46.2 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*49.1 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*48.7 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*44.3 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*77.6 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*74.3 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW

Sample Information

Client Sample ID: SB05A_2-4 **York Sample ID:** 14B0543-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:25 pm	02/21/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:25	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*39.9 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*56.0 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0204	0.0204	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:14	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*58.3 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*55.3 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**35.8**		mg/kg dry	1.20	1.20	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-39-3	Barium	**102**		mg/kg dry	1.20	1.20	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.120	0.120	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-43-9	Cadmium	**1.48**		mg/kg dry	0.360	0.360	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-47-3	Chromium	**13.3**		mg/kg dry	0.599	0.599	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-50-8	Copper	**111**		mg/kg dry	0.599	0.599	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW

Sample Information

Client Sample ID: SB05A_2-4 **York Sample ID:** 14B0543-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:25 pm	02/21/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	**2460**		mg/kg dry	0.360	0.360	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7439-96-5	Manganese	**164**		mg/kg dry	0.599	0.599	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-02-0	Nickel	**21.0**		mg/kg dry	0.599	0.599	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7782-49-2	Selenium	ND		mg/kg dry	1.20	1.20	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-22-4	Silver	ND		mg/kg dry	0.599	0.599	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW
7440-66-6	Zinc	**220**		mg/kg dry	1.20	1.20	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:23	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.428**		mg/kg dry	0.0360	0.0360	1	EPA 7473	02/27/2014 07:05	02/27/2014 14:03	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**83.4**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:41	02/26/2014 11:01	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.420	0.599	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**13.3**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.599	0.599	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: **SB05A_11-13** **York Sample ID:** **14B0543-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:35 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.028	0.055	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
67-64-1	Acetone	**0.0089**		mg/kg dry	0.0014	0.0055	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
71-43-2	Benzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
75-09-2	Methylene chloride	**0.0028**	J, B	mg/kg dry	0.0014	0.0055	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0028	0.0055	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
108-88-3	Toluene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0014	0.0028	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS

Sample Information

Client Sample ID: SB05A_11-13 **York Sample ID:** 14B0543-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:35 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0041	0.0083	1	EPA 8260C	02/24/2014 09:05	02/24/2014 20:46	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*108 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*98.6 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*99.7 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.102	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
218-01-9	Chrysene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
206-44-0	Fluoranthene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.102	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.102	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.102	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
85-01-8	Phenanthrene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
108-95-2	Phenol	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR
129-00-0	Pyrene	ND		mg/kg dry	0.0510	0.202	1	EPA 8270D	02/24/2014 07:03	02/24/2014 19:29	SR

	Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB05A_11-13 **York Sample ID:** 14B0543-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:35 pm	02/21/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
367-12-4	*Surrogate: 2-Fluorophenol*	*55.9 %*			*10-109*						
4165-62-2	*Surrogate: Phenol-d5*	*57.0 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*52.2 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*56.9 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*89.4 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*86.2 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/24/2014 12:45	02/26/2014 06:41	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*54.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*74.5 %*	*30-140*

Sample Information

Client Sample ID: SB05A_11-13 **York Sample ID:** 14B0543-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:35 pm	02/21/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0206	0.0206	1	EPA 8082A	02/24/2014 12:45	02/25/2014 15:43	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*77.4 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*72.4 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		mg/kg dry	1.21	1.21	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-39-3	Barium	**17.9**		mg/kg dry	1.21	1.21	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.121	0.121	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.364	0.364	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-47-3	Chromium	**15.1**		mg/kg dry	0.607	0.607	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-50-8	Copper	**7.50**		mg/kg dry	0.607	0.607	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7439-92-1	Lead	**3.31**		mg/kg dry	0.364	0.364	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7439-96-5	Manganese	**48.1**		mg/kg dry	0.607	0.607	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-02-0	Nickel	**9.48**		mg/kg dry	0.607	0.607	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7782-49-2	Selenium	ND		mg/kg dry	1.21	1.21	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-22-4	Silver	ND		mg/kg dry	0.607	0.607	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW
7440-66-6	Zinc	**13.5**		mg/kg dry	1.21	1.21	1	EPA 6010C	02/24/2014 12:43	02/24/2014 17:31	MW

Sample Information

Client Sample ID: SB05A_11-13 **York Sample ID:** 14B0543-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Soil	February 20, 2014 2:35 pm	02/21/2014

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0364	0.0364	1	EPA 7473	02/27/2014 07:05	02/27/2014 14:12	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**82.3**		%	0.100	0.100	1	SM 2540G	02/25/2014 11:41	02/26/2014 11:01	KK

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.425	0.607	1	EPA 7196A	02/25/2014 07:48	02/26/2014 16:19	KK

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**15.1**		mg/kg	0.250	0.500	1	Calculation	02/26/2014 07:32	02/26/2014 07:40	SC

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.607	0.607	1	EPA 9014/9010C	02/27/2014 09:00	02/27/2014 14:42	ALD

Sample Information

Client Sample ID: TB_022114 **York Sample ID:** 14B0543-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Water	February 21, 2014 3:00 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS

Sample Information

Client Sample ID: TB_022114 **York Sample ID:** 14B0543-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Water	February 21, 2014 3:00 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
78-93-3	2-Butanone	ND		ug/L	0.50	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.50	0.50	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS
1330-20-7	Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	02/25/2014 09:46	02/25/2014 12:45	SS

Sample Information

Client Sample ID: TB_022114 **York Sample ID:** 14B0543-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0543	170282501	Water	February 21, 2014 3:00 pm	02/21/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**			**Acceptance Range**						
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*101 %*			*79-133*						
460-00-4	*Surrogate: p-Bromofluorobenzene*	*98.8 %*			*65-133*						
2037-26-5	*Surrogate: Toluene-d8*	*97.5 %*			*80-123*						

Analytical Batch Summary

Batch ID: BB40840 **Preparation Method:** EPA 3550C **Prepared By:** CC

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/24/14
14B0543-02	SB03_6-8	02/24/14
14B0543-03	SB05_1-3	02/24/14
14B0543-04	SB05A_2-4	02/24/14
14B0543-05	SB05A_11-13	02/24/14
BB40840-BLK1	Blank	02/24/14
BB40840-BS1	LCS	02/24/14
BB40840-BSD1	LCS Dup	02/24/14

Batch ID: BB40841 **Preparation Method:** EPA 3550C **Prepared By:** CC

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/24/14
14B0543-01	SB03_1-3	02/24/14
14B0543-02	SB03_6-8	02/24/14
14B0543-02	SB03_6-8	02/24/14
14B0543-03	SB05_1-3	02/24/14
14B0543-03	SB05_1-3	02/24/14
14B0543-04	SB05A_2-4	02/24/14
14B0543-04	SB05A_2-4	02/24/14
14B0543-05	SB05A_11-13	02/24/14
14B0543-05	SB05A_11-13	02/24/14
BB40841-BLK1	Blank	02/24/14
BB40841-BLK1	Blank	02/24/14
BB40841-BS1	LCS	02/24/14
BB40841-BS2	LCS	02/24/14
BB40841-BSD1	LCS Dup	02/24/14

Batch ID: BB40866 **Preparation Method:** EPA 3050B **Prepared By:** MW

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/24/14
14B0543-02	SB03_6-8	02/24/14
14B0543-03	SB05_1-3	02/24/14
14B0543-04	SB05A_2-4	02/24/14
14B0543-05	SB05A_11-13	02/24/14
BB40866-BLK1	Blank	02/24/14
BB40866-SRM1	Reference	02/24/14

Batch ID: BB40905 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/25/14
14B0543-02	SB03_6-8	02/25/14

14B0543-03	SB05_1-3	02/25/14
14B0543-04	SB05A_2-4	02/25/14
14B0543-05	SB05A_11-13	02/25/14
BB40905-BLK1	Blank	02/25/14
BB40905-SRM1	Reference	02/25/14

Batch ID: BB40913 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/24/14
14B0543-02	SB03_6-8	02/24/14
14B0543-05	SB05A_11-13	02/24/14
BB40913-BLK1	Blank	02/24/14
BB40913-BS1	LCS	02/24/14
BB40913-BSD1	LCS Dup	02/24/14

Batch ID: BB40927 **Preparation Method:** % Solids Prep **Prepared By:** KK

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/25/14
14B0543-02	SB03_6-8	02/25/14
14B0543-03	SB05_1-3	02/25/14
14B0543-04	SB05A_2-4	02/25/14
14B0543-05	SB05A_11-13	02/25/14

Batch ID: BB40945 **Preparation Method:** EPA 5030B **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-06	TB_022114	02/25/14
BB40945-BLK1	Blank	02/25/14
BB40945-BS1	LCS	02/25/14
BB40945-BSD1	LCS Dup	02/25/14

Batch ID: BB40948 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-04	SB05A_2-4	02/25/14
BB40948-BLK1	Blank	02/25/14
BB40948-BS1	LCS	02/25/14
BB40948-BSD1	LCS Dup	02/25/14

Batch ID: BB40966 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/26/14
14B0543-02	SB03_6-8	02/26/14
14B0543-03	SB05_1-3	02/26/14
14B0543-04	SB05A_2-4	02/26/14

14B0543-05	SB05A_11-13	02/26/14

Batch ID: BB41008 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-03	SB05_1-3	02/26/14
BB41008-BLK1	Blank	02/26/14
BB41008-BS1	LCS	02/26/14
BB41008-BSD1	LCS Dup	02/26/14

Batch ID: BB41030 **Preparation Method:** EPA 7473 soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/27/14
14B0543-02	SB03_6-8	02/27/14
14B0543-03	SB05_1-3	02/27/14
14B0543-04	SB05A_2-4	02/27/14
14B0543-05	SB05A_11-13	02/27/14
BB41030-BLK1	Blank	02/27/14
BB41030-SRM1	Reference	02/27/14

Batch ID: BB41039 **Preparation Method:** Analysis Preparation Soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0543-01	SB03_1-3	02/27/14
14B0543-02	SB03_6-8	02/27/14
14B0543-03	SB05_1-3	02/27/14
14B0543-04	SB05A_2-4	02/27/14
14B0543-05	SB05A_11-13	02/27/14
BB41039-BLK1	Blank	02/27/14
BB41039-SRM1	Reference	02/27/14

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40913 - EPA 5035A											
Blank (BB40913-BLK1)											Prepared & Analyzed: 02/24/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	ND	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0039	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*57.3*		*ug/L*	*50.0*		*115*	*72-137*				
Surrogate: p-Bromofluorobenzene	*49.6*		*"*	*50.0*		*99.2*	*72-138*				
Surrogate: Toluene-d8	*52.2*		*"*	*50.0*		*104*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40913 - EPA 5035A											
LCS (BB40913-BS1)							Prepared & Analyzed: 02/24/2014				
1,1,1-Trichloroethane	50		ug/L	50.0		100	76-135				
1,1-Dichloroethane	53		"	50.0		106	80-119				
1,1-Dichloroethylene	46		"	50.0		91.2	58-139				
1,2,4-Trimethylbenzene	51		"	50.0		102	82-116				
1,2-Dichlorobenzene	49		"	50.0		98.3	85-114				
1,2-Dichloroethane	52		"	50.0		105	72-136				
1,3,5-Trimethylbenzene	50		"	50.0		100	86-114				
1,3-Dichlorobenzene	49		"	50.0		98.7	84-114				
1,4-Dichlorobenzene	50		"	50.0		101	82-116				
1,4-Dioxane	980		"	1000		98.5	10-208				
2-Butanone	57		"	50.0		114	60-129				
Acetone	51		"	50.0		102	26-119				
Benzene	51		"	50.0		102	81-117				
Carbon tetrachloride	50		"	50.0		99.8	79-135				
Chlorobenzene	49		"	50.0		98.3	87-112				
Chloroform	50		"	50.0		100	80-126				
cis-1,2-Dichloroethylene	47		"	50.0		93.9	80-119				
Ethyl Benzene	52		"	50.0		103	88-117				
Methyl tert-butyl ether (MTBE)	55		"	50.0		111	58-137				
Methylene chloride	55		"	50.0		109	47-140				
n-Butylbenzene	54		"	50.0		108	79-119				
n-Propylbenzene	53		"	50.0		105	82-116				
o-Xylene	52		"	50.0		104	88-111				
p- & m- Xylenes	100		"	100		104	86-117				
sec-Butylbenzene	51		"	50.0		102	85-119				
tert-Butylbenzene	51		"	50.0		102	84-119				
Tetrachloroethylene	49		"	50.0		97.9	74-127				
Toluene	51		"	50.0		101	83-114				
trans-1,2-Dichloroethylene	51		"	50.0		103	68-131				
Trichloroethylene	52		"	50.0		103	84-118				
Vinyl Chloride	51		"	50.0		102	46-133				
Surrogate: 1,2-Dichloroethane-d4	*50.9*		*"*	*50.0*		*102*	*72-137*				
Surrogate: p-Bromofluorobenzene	*49.4*		*"*	*50.0*		*98.9*	*72-138*				
Surrogate: Toluene-d8	*50.0*		*"*	*50.0*		*100*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40913 - EPA 5035A											
LCS Dup (BB40913-BSD1)								Prepared & Analyzed: 02/24/2014			
1,1,1-Trichloroethane	52		ug/L	50.0		104	76-135		3.50	30	
1,1-Dichloroethane	55		"	50.0		109	80-119		3.27	30	
1,1-Dichloroethylene	47		"	50.0		93.7	58-139		2.66	30	
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116		1.92	30	
1,2-Dichlorobenzene	51		"	50.0		101	85-114		2.93	30	
1,2-Dichloroethane	55		"	50.0		110	72-136		5.15	30	
1,3,5-Trimethylbenzene	52		"	50.0		103	86-114		3.17	30	
1,3-Dichlorobenzene	51		"	50.0		101	84-114		2.66	30	
1,4-Dichlorobenzene	50		"	50.0		101	82-116		0.377	30	
1,4-Dioxane	980		"	1000		97.6	10-208		0.872	30	
2-Butanone	61		"	50.0		121	60-129		5.80	30	
Acetone	51		"	50.0		102	26-119		0.196	30	
Benzene	51		"	50.0		102	81-117		0.0589	30	
Carbon tetrachloride	51		"	50.0		102	79-135		2.06	30	
Chlorobenzene	50		"	50.0		99.5	87-112		1.17	30	
Chloroform	52		"	50.0		103	80-126		2.89	30	
cis-1,2-Dichloroethylene	48		"	50.0		97.0	80-119		3.19	30	
Ethyl Benzene	52		"	50.0		104	88-117		0.656	30	
Methyl tert-butyl ether (MTBE)	56		"	50.0		112	58-137		1.11	30	
Methylene chloride	57		"	50.0		114	47-140		4.07	30	
n-Butylbenzene	54		"	50.0		107	79-119		0.298	30	
n-Propylbenzene	54		"	50.0		108	82-116		2.80	30	
o-Xylene	52		"	50.0		105	88-111		0.727	30	
p- & m- Xylenes	110		"	100		106	86-117		2.06	30	
sec-Butylbenzene	51		"	50.0		102	85-119		0.470	30	
tert-Butylbenzene	50		"	50.0		100	84-119		1.60	30	
Tetrachloroethylene	48		"	50.0		96.4	74-127		1.46	30	
Toluene	52		"	50.0		103	83-114		1.82	30	
trans-1,2-Dichloroethylene	52		"	50.0		104	68-131		1.41	30	
Trichloroethylene	52		"	50.0		103	84-118		0.271	30	
Vinyl Chloride	52		"	50.0		103	46-133		1.03	30	
Surrogate: 1,2-Dichloroethane-d4	*52.8*		*"*	*50.0*		*106*	*72-137*				
Surrogate: p-Bromofluorobenzene	*50.2*		*"*	*50.0*		*100*	*72-138*				
Surrogate: Toluene-d8	*49.6*		*"*	*50.0*		*99.1*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
Blank (BB40945-BLK1)											Prepared & Analyzed: 02/25/2014
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	1.4	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.2*		*"*	*10.0*		*102*	*79-133*				
Surrogate: p-Bromofluorobenzene	*10.0*		*"*	*10.0*		*100*	*65-133*				
Surrogate: Toluene-d8	*9.86*		*"*	*10.0*		*98.6*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
LCS (BB40945-BS1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	11		ug/L	10.0		110	80-131				
1,1-Dichloroethane	11		"	10.0		106	79-123				
1,1-Dichloroethylene	11		"	10.0		105	71-123				
1,2,4-Trimethylbenzene	11		"	10.0		110	68-134				
1,2-Dichlorobenzene	10		"	10.0		103	83-110				
1,2-Dichloroethane	9.8		"	10.0		97.6	81-120				
1,3,5-Trimethylbenzene	11		"	10.0		114	74-121				
1,3-Dichlorobenzene	11		"	10.0		106	82-112				
1,4-Dichlorobenzene	11		"	10.0		106	83-110				
1,4-Dioxane	190		"	200		93.9	70-130				
2-Butanone	10		"	10.0		102	64-128				
Acetone	8.0		"	10.0		79.5	54-129				
Benzene	11		"	10.0		105	77-122				
Carbon tetrachloride	11		"	10.0		109	66-152				
Chlorobenzene	10		"	10.0		103	85-113				
Chloroform	10		"	10.0		105	82-119				
cis-1,2-Dichloroethylene	11		"	10.0		106	79-116				
Ethyl Benzene	11		"	10.0		108	85-125				
Methyl tert-butyl ether (MTBE)	9.5		"	10.0		95.4	51-134				
Methylene chloride	8.3		"	10.0		83.4	76-122				
n-Butylbenzene	11		"	10.0		112	69-127				
n-Propylbenzene	11		"	10.0		113	70-129				
o-Xylene	10		"	10.0		105	83-117				
p- & m- Xylenes	22		"	20.0		108	80-126				
sec-Butylbenzene	11		"	10.0		113	72-132				
tert-Butylbenzene	11		"	10.0		112	75-129				
Tetrachloroethylene	11		"	10.0		110	67-118				
Toluene	10		"	10.0		105	82-118				
trans-1,2-Dichloroethylene	10		"	10.0		105	76-119				
Trichloroethylene	11		"	10.0		107	71-122				
Vinyl Chloride	9.7		"	10.0		97.1	49-125				
Surrogate: 1,2-Dichloroethane-d4	*9.34*		*"*	*10.0*		*93.4*	*79-133*				
Surrogate: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*65-133*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40945 - EPA 5030B											
LCS Dup (BB40945-BSD1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	11		ug/L	10.0		109	80-131		1.01	30	
1,1-Dichloroethane	11		"	10.0		106	79-123		0.189	30	
1,1-Dichloroethylene	10		"	10.0		105	71-123		0.381	30	
1,2,4-Trimethylbenzene	10		"	10.0		103	68-134		6.49	30	
1,2-Dichlorobenzene	10		"	10.0		103	83-110		0.485	30	
1,2-Dichloroethane	10		"	10.0		105	81-120		6.92	30	
1,3,5-Trimethylbenzene	11		"	10.0		107	74-121		6.24	30	
1,3-Dichlorobenzene	10		"	10.0		102	82-112		3.57	30	
1,4-Dichlorobenzene	10		"	10.0		103	83-110		2.88	30	
1,4-Dioxane	290		"	200		146	70-130	High Bias	43.5	30	Non-dir.
2-Butanone	11		"	10.0		107	64-128		4.80	30	
Acetone	9.0		"	10.0		90.0	54-129		12.4	30	
Benzene	11		"	10.0		106	77-122		0.944	30	
Carbon tetrachloride	11		"	10.0		108	66-152		1.75	30	
Chlorobenzene	10		"	10.0		104	85-113		0.773	30	
Chloroform	11		"	10.0		107	82-119		2.64	30	
cis-1,2-Dichloroethylene	11		"	10.0		108	79-116		2.34	30	
Ethyl Benzene	11		"	10.0		106	85-125		1.97	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0		105	51-134		9.30	30	
Methylene chloride	8.8		"	10.0		88.4	76-122		5.82	30	
n-Butylbenzene	11		"	10.0		105	69-127		6.44	30	
n-Propylbenzene	11		"	10.0		105	70-129		6.88	30	
o-Xylene	10		"	10.0		104	83-117		0.766	30	
p- & m- Xylenes	21		"	20.0		106	80-126		1.96	30	
sec-Butylbenzene	11		"	10.0		106	72-132		6.41	30	
tert-Butylbenzene	11		"	10.0		105	75-129		5.81	30	
Tetrachloroethylene	11		"	10.0		106	67-118		4.07	30	
Toluene	10		"	10.0		104	82-118		0.669	30	
trans-1,2-Dichloroethylene	11		"	10.0		105	76-119		0.381	30	
Trichloroethylene	10		"	10.0		104	71-122		2.65	30	
Vinyl Chloride	9.8		"	10.0		97.5	49-125		0.411	30	
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*79-133*				
Surrogate: p-Bromofluorobenzene	*9.97*		*"*	*10.0*		*99.7*	*65-133*				
Surrogate: Toluene-d8	*9.88*		*"*	*10.0*		*98.8*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
Blank (BB40948-BLK1)											Prepared & Analyzed: 02/25/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	ND	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0027	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*48.1*		*ug/L*	*50.0*		*96.2*	*72-137*				
Surrogate: p-Bromofluorobenzene	*53.4*		*"*	*50.0*		*107*	*72-138*				
Surrogate: Toluene-d8	*49.9*		*"*	*50.0*		*99.8*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
LCS (BB40948-BS1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	55		ug/L	50.0		110	76-135				
1,1-Dichloroethane	54		"	50.0		108	80-119				
1,1-Dichloroethylene	50		"	50.0		100	58-139				
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116				
1,2-Dichlorobenzene	51		"	50.0		102	85-114				
1,2-Dichloroethane	55		"	50.0		110	72-136				
1,3,5-Trimethylbenzene	53		"	50.0		106	86-114				
1,3-Dichlorobenzene	52		"	50.0		103	84-114				
1,4-Dichlorobenzene	53		"	50.0		107	82-116				
1,4-Dioxane	650		"	1000		65.3	10-208				
2-Butanone	55		"	50.0		110	60-129				
Acetone	48		"	50.0		95.4	26-119				
Benzene	54		"	50.0		109	81-117				
Carbon tetrachloride	55		"	50.0		111	79-135				
Chlorobenzene	52		"	50.0		104	87-112				
Chloroform	54		"	50.0		108	80-126				
cis-1,2-Dichloroethylene	57		"	50.0		113	80-119				
Ethyl Benzene	52		"	50.0		105	88-117				
Methyl tert-butyl ether (MTBE)	57		"	50.0		113	58-137				
Methylene chloride	52		"	50.0		104	47-140				
n-Butylbenzene	53		"	50.0		105	79-119				
n-Propylbenzene	52		"	50.0		104	82-116				
o-Xylene	54		"	50.0		107	88-111				
p- & m- Xylenes	100		"	100		104	86-117				
sec-Butylbenzene	53		"	50.0		106	85-119				
tert-Butylbenzene	56		"	50.0		113	84-119				
Tetrachloroethylene	49		"	50.0		97.2	74-127				
Toluene	52		"	50.0		103	83-114				
trans-1,2-Dichloroethylene	54		"	50.0		107	68-131				
Trichloroethylene	51		"	50.0		102	84-118				
Vinyl Chloride	53		"	50.0		107	46-133				
Surrogate: 1,2-Dichloroethane-d4	*53.9*		*"*	*50.0*		*108*	*72-137*				
Surrogate: p-Bromofluorobenzene	*52.8*		*"*	*50.0*		*106*	*72-138*				
Surrogate: Toluene-d8	*49.2*		*"*	*50.0*		*98.4*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40948 - EPA 5035A											
LCS Dup (BB40948-BSD1)								Prepared & Analyzed: 02/25/2014			
1,1,1-Trichloroethane	53		ug/L	50.0		105	76-135		4.05	30	
1,1-Dichloroethane	52		"	50.0		103	80-119		4.87	30	
1,1-Dichloroethylene	49		"	50.0		98.6	58-139		1.35	30	
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116		0.461	30	
1,2-Dichlorobenzene	51		"	50.0		102	85-114		0.823	30	
1,2-Dichloroethane	51		"	50.0		102	72-136		7.45	30	
1,3,5-Trimethylbenzene	52		"	50.0		104	86-114		2.22	30	
1,3-Dichlorobenzene	52		"	50.0		103	84-114		0.388	30	
1,4-Dichlorobenzene	53		"	50.0		105	82-116		1.34	30	
1,4-Dioxane	520		"	1000		52.0	10-208		22.7	30	
2-Butanone	47		"	50.0		94.7	60-129		15.1	30	
Acetone	44		"	50.0		88.0	26-119		8.09	30	
Benzene	53		"	50.0		106	81-117		2.33	30	
Carbon tetrachloride	53		"	50.0		107	79-135		3.72	30	
Chlorobenzene	51		"	50.0		102	87-112		2.26	30	
Chloroform	52		"	50.0		104	80-126		3.85	30	
cis-1,2-Dichloroethylene	52		"	50.0		104	80-119		8.91	30	
Ethyl Benzene	52		"	50.0		105	88-117		0.363	30	
Methyl tert-butyl ether (MTBE)	52		"	50.0		104	58-137		8.95	30	
Methylene chloride	49		"	50.0		98.7	47-140		5.23	30	
n-Butylbenzene	52		"	50.0		105	79-119		0.744	30	
n-Propylbenzene	52		"	50.0		103	82-116		0.792	30	
o-Xylene	52		"	50.0		103	88-111		3.81	30	
p- & m- Xylenes	110		"	100		106	86-117		1.21	30	
sec-Butylbenzene	52		"	50.0		104	85-119		2.05	30	
tert-Butylbenzene	54		"	50.0		109	84-119		3.62	30	
Tetrachloroethylene	49		"	50.0		97.4	74-127		0.144	30	
Toluene	52		"	50.0		104	83-114		0.270	30	
trans-1,2-Dichloroethylene	52		"	50.0		103	68-131		3.78	30	
Trichloroethylene	50		"	50.0		101	84-118		1.40	30	
Vinyl Chloride	51		"	50.0		102	46-133		4.83	30	
Surrogate: 1,2-Dichloroethane-d4	*48.4*		*"*	*50.0*		*96.7*	*72-137*				
Surrogate: p-Bromofluorobenzene	*50.8*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.7*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
Blank (BB41008-BLK1)											Prepared & Analyzed: 02/26/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	0.0029	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0025	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*48.7*		*ug/L*	*50.0*		*97.4*	*72-137*				
Surrogate: p-Bromofluorobenzene	*52.2*		*"*	*50.0*		*104*	*72-138*				
Surrogate: Toluene-d8	*50.4*		*"*	*50.0*		*101*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
LCS (BB41008-BS1)								Prepared & Analyzed: 02/26/2014			
1,1,1-Trichloroethane	50		ug/L	50.0		99.7	76-135				
1,1-Dichloroethane	48		"	50.0		95.8	80-119				
1,1-Dichloroethylene	48		"	50.0		95.5	58-139				
1,2,4-Trimethylbenzene	53		"	50.0		107	82-116				
1,2-Dichlorobenzene	53		"	50.0		105	85-114				
1,2-Dichloroethane	49		"	50.0		98.7	72-136				
1,3,5-Trimethylbenzene	52		"	50.0		104	86-114				
1,3-Dichlorobenzene	53		"	50.0		107	84-114				
1,4-Dichlorobenzene	55		"	50.0		109	82-116				
1,4-Dioxane	1000		"	1000		101	10-208				
2-Butanone	47		"	50.0		94.7	60-129				
Acetone	43		"	50.0		86.4	26-119				
Benzene	50		"	50.0		100	81-117				
Carbon tetrachloride	50		"	50.0		101	79-135				
Chlorobenzene	53		"	50.0		106	87-112				
Chloroform	50		"	50.0		100	80-126				
cis-1,2-Dichloroethylene	49		"	50.0		97.2	80-119				
Ethyl Benzene	53		"	50.0		106	88-117				
Methyl tert-butyl ether (MTBE)	49		"	50.0		97.9	58-137				
Methylene chloride	46		"	50.0		92.3	47-140				
n-Butylbenzene	54		"	50.0		109	79-119				
n-Propylbenzene	53		"	50.0		106	82-116				
o-Xylene	54		"	50.0		107	88-111				
p- & m- Xylenes	110		"	100		107	86-117				
sec-Butylbenzene	54		"	50.0		108	85-119				
tert-Butylbenzene	58		"	50.0		116	84-119				
Tetrachloroethylene	48		"	50.0		97.0	74-127				
Toluene	51		"	50.0		103	83-114				
trans-1,2-Dichloroethylene	49		"	50.0		98.1	68-131				
Trichloroethylene	51		"	50.0		102	84-118				
Vinyl Chloride	36		"	50.0		72.7	46-133				
Surrogate: 1,2-Dichloroethane-d4	*49.5*		*"*	*50.0*		*99.0*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.1*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*48.9*		*"*	*50.0*		*97.9*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41008 - EPA 5035A											
LCS Dup (BB41008-BSD1)								Prepared & Analyzed: 02/26/2014			
1,1,1-Trichloroethane	51		ug/L	50.0		102	76-135		2.38	30	
1,1-Dichloroethane	50		"	50.0		101	80-119		4.95	30	
1,1-Dichloroethylene	49		"	50.0		97.4	58-139		2.01	30	
1,2,4-Trimethylbenzene	54		"	50.0		108	82-116		1.32	30	
1,2-Dichlorobenzene	54		"	50.0		109	85-114		3.42	30	
1,2-Dichloroethane	50		"	50.0		99.7	72-136		0.988	30	
1,3,5-Trimethylbenzene	55		"	50.0		110	86-114		5.08	30	
1,3-Dichlorobenzene	53		"	50.0		106	84-114		0.488	30	
1,4-Dichlorobenzene	55		"	50.0		109	82-116		0.0733	30	
1,4-Dioxane	1100		"	1000		108	10-208		6.64	30	
2-Butanone	46		"	50.0		91.3	60-129		3.63	30	
Acetone	40		"	50.0		80.8	26-119		6.65	30	
Benzene	51		"	50.0		102	81-117		1.58	30	
Carbon tetrachloride	50		"	50.0		101	79-135		0.238	30	
Chlorobenzene	53		"	50.0		106	87-112		0.415	30	
Chloroform	50		"	50.0		99.1	80-126		0.924	30	
cis-1,2-Dichloroethylene	50		"	50.0		100	80-119		3.36	30	
Ethyl Benzene	54		"	50.0		108	88-117		1.89	30	
Methyl tert-butyl ether (MTBE)	49		"	50.0		98.1	58-137		0.286	30	
Methylene chloride	47		"	50.0		95.0	47-140		2.84	30	
n-Butylbenzene	58		"	50.0		116	79-119		5.92	30	
n-Propylbenzene	54		"	50.0		108	82-116		2.49	30	
o-Xylene	53		"	50.0		106	88-111		1.24	30	
p- & m- Xylenes	110		"	100		110	86-117		2.22	30	
sec-Butylbenzene	55		"	50.0		110	85-119		1.47	30	
tert-Butylbenzene	53		"	50.0		106	84-119		8.73	30	
Tetrachloroethylene	51		"	50.0		101	74-127		4.50	30	
Toluene	52		"	50.0		105	83-114		2.12	30	
trans-1,2-Dichloroethylene	50		"	50.0		99.9	68-131		1.90	30	
Trichloroethylene	53		"	50.0		106	84-118		3.29	30	
Vinyl Chloride	42		"	50.0		84.9	46-133		15.5	30	
Surrogate: 1,2-Dichloroethane-d4	*49.7*		*"*	*50.0*		*99.4*	*72-137*				
Surrogate: p-Bromofluorobenzene	*50.8*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*50.6*		*"*	*50.0*		*101*	*85-118*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40840 - EPA 3550C											
Blank (BB40840-BLK1)											Prepared & Analyzed: 02/24/2014
Acenaphthene	ND	0.167	mg/kg wet								
Acenaphthylene	ND	0.167	"								
Anthracene	ND	0.167	"								
Benzo(a)anthracene	ND	0.167	"								
Benzo(a)pyrene	ND	0.167	"								
Benzo(b)fluoranthene	ND	0.167	"								
Benzo(g,h,i)perylene	ND	0.167	"								
Benzo(k)fluoranthene	ND	0.167	"								
Chrysene	ND	0.167	"								
Dibenzo(a,h)anthracene	ND	0.167	"								
Dibenzofuran	ND	0.167	"								
Fluoranthene	ND	0.167	"								
Fluorene	ND	0.167	"								
Hexachlorobenzene	ND	0.167	"								
Indeno(1,2,3-cd)pyrene	ND	0.167	"								
2-Methylphenol	ND	0.167	"								
3- & 4-Methylphenols	ND	0.167	"								
Naphthalene	ND	0.167	"								
Pentachlorophenol	ND	0.167	"								
Phenanthrene	ND	0.167	"								
Phenol	ND	0.167	"								
Pyrene	ND	0.167	"								
Surrogate: 2-Fluorophenol	*1.39*		*"*	*2.52*		*55.0*	*10-109*				
Surrogate: Phenol-d5	*1.42*		*"*	*2.52*		*56.6*	*10-124*				
Surrogate: Nitrobenzene-d5	*0.949*		*"*	*1.70*		*55.8*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.14*		*"*	*1.69*		*67.3*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*2.07*		*"*	*2.48*		*83.3*	*10-142*				
Surrogate: Terphenyl-d14	*1.46*		*"*	*1.69*		*86.5*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40840 - EPA 3550C											
LCS (BB40840-BS1)								Prepared & Analyzed: 02/24/2014			
Acenaphthene	1.32	0.167	mg/kg wet	1.67		79.2	35-127				
Acenaphthylene	1.26	0.167	"	1.67		75.5	37-121				
Anthracene	1.39	0.167	"	1.67		83.2	38-131				
Benzo(a)anthracene	1.42	0.167	"	1.67		85.1	37-137				
Benzo(a)pyrene	1.78	0.167	"	1.67		107	33-162				
Benzo(b)fluoranthene	1.43	0.167	"	1.67		86.0	26-160				
Benzo(g,h,i)perylene	2.09	0.167	"	1.67		126	10-154				
Benzo(k)fluoranthene	1.49	0.167	"	1.67		89.4	34-143				
Chrysene	1.22	0.167	"	1.67		73.1	38-132				
Dibenzo(a,h)anthracene	1.70	0.167	"	1.67		102	14-153				
Dibenzofuran	1.40	0.167	"	1.67		84.3	39-123				
Fluoranthene	1.46	0.167	"	1.67		87.3	35-136				
Fluorene	1.28	0.167	"	1.67		76.7	33-134				
Hexachlorobenzene	1.22	0.167	"	1.67		73.4	31-139				
Indeno(1,2,3-cd)pyrene	1.87	0.167	"	1.67		112	11-155				
2-Methylphenol	1.14	0.167	"	1.67		68.4	30-128				
3- & 4-Methylphenols	1.06	0.167	"	1.67		63.6	30-120				
Naphthalene	1.16	0.167	"	1.67		69.5	28-121				
Pentachlorophenol	1.30	0.167	"	1.67		78.2	15-182				
Phenanthrene	1.36	0.167	"	1.67		81.5	37-132				
Phenol	0.992	0.167	"	1.67		59.5	28-124				
Pyrene	1.45	0.167	"	1.67		86.9	30-147				
Surrogate: 2-Fluorophenol	*1.78*		*"*	*2.52*		*70.8*	*10-109*				
Surrogate: Phenol-d5	*1.78*		*"*	*2.52*		*70.7*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.22*		*"*	*1.70*		*71.5*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.43*		*"*	*1.69*		*84.5*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*3.00*		*"*	*2.48*		*121*	*10-142*				
Surrogate: Terphenyl-d14	*1.69*		*"*	*1.69*		*100*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40840 - EPA 3550C											
LCS Dup (BB40840-BSD1)								Prepared & Analyzed: 02/24/2014			
Acenaphthene	1.27	0.167	mg/kg wet	1.67		76.2	35-127		3.78	30	
Acenaphthylene	1.22	0.167	"	1.67		73.0	37-121		3.29	30	
Anthracene	1.36	0.167	"	1.67		81.7	38-131		1.75	30	
Benzo(a)anthracene	1.42	0.167	"	1.67		85.1	37-137		0.00	30	
Benzo(a)pyrene	1.75	0.167	"	1.67		105	33-162		1.51	30	
Benzo(b)fluoranthene	1.61	0.167	"	1.67		96.8	26-160		11.8	30	
Benzo(g,h,i)perylene	2.05	0.167	"	1.67		123	10-154		1.91	30	
Benzo(k)fluoranthene	1.50	0.167	"	1.67		89.9	34-143		0.558	30	
Chrysene	1.20	0.167	"	1.67		72.1	38-132		1.35	30	
Dibenzo(a,h)anthracene	1.69	0.167	"	1.67		101	14-153		1.10	30	
Dibenzofuran	1.38	0.167	"	1.67		82.5	39-123		2.06	30	
Fluoranthene	1.43	0.167	"	1.67		85.8	35-136		1.83	30	
Fluorene	1.24	0.167	"	1.67		74.5	33-134		2.91	30	
Hexachlorobenzene	1.20	0.167	"	1.67		71.7	31-139		2.23	30	
Indeno(1,2,3-cd)pyrene	1.85	0.167	"	1.67		111	11-155		1.04	30	
2-Methylphenol	1.08	0.167	"	1.67		64.7	30-128		5.56	30	
3- & 4-Methylphenols	1.02	0.167	"	1.67		61.0	30-120		4.14	30	
Naphthalene	1.10	0.167	"	1.67		65.8	28-121		5.35	30	
Pentachlorophenol	1.25	0.167	"	1.67		74.8	15-182		4.37	30	
Phenanthrene	1.35	0.167	"	1.67		80.9	37-132		0.739	30	
Phenol	0.929	0.167	"	1.67		55.7	28-124		6.63	30	
Pyrene	1.42	0.167	"	1.67		85.4	30-147		1.74	30	
Surrogate: 2-Fluorophenol	*1.60*		*"*	*2.52*		*63.6*	*10-109*				
Surrogate: Phenol-d5	*1.62*		*"*	*2.52*		*64.4*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.12*		*"*	*1.70*		*66.2*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.32*		*"*	*1.69*		*78.2*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*2.87*		*"*	*2.48*		*116*	*10-142*				
Surrogate: Terphenyl-d14	*1.64*		*"*	*1.69*		*97.0*	*10-147*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40841 - EPA 3550C											
Blank (BB40841-BLK1)										Prepared: 02/24/2014 Analyzed: 02/26/2014	
4,4'-DDD	ND	0.000330	mg/kg wet								
4,4'-DDE	ND	0.000330	"								
4,4'-DDT	ND	0.000330	"								
Aldrin	ND	0.000330	"								
alpha-BHC	ND	0.000330	"								
beta-BHC	ND	0.000330	"								
delta-BHC	ND	0.000330	"								
Dieldrin	ND	0.000330	"								
Endosulfan I	ND	0.000330	"								
Endosulfan II	ND	0.000330	"								
Endosulfan sulfate	ND	0.000330	"								
Endrin	ND	0.000330	"								
gamma-BHC (Lindane)	ND	0.000330	"								
Heptachlor	ND	0.000330	"								
alpha-Chlordane	ND	0.000330	"								
Surrogate: Decachlorobiphenyl	*0.0403*		*"*	*0.0663*		*60.8*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0459*		*"*	*0.0663*		*69.1*	*30-140*				
LCS (BB40841-BS1)										Prepared: 02/24/2014 Analyzed: 02/26/2014	
4,4'-DDD	0.0243	0.000330	mg/kg wet	0.0333		73.0	40-140				
4,4'-DDE	0.0210	0.000330	"	0.0333		62.9	40-140				
4,4'-DDT	0.0253	0.000330	"	0.0333		75.8	40-140				
Aldrin	0.0212	0.000330	"	0.0333		63.5	40-140				
alpha-BHC	0.0234	0.000330	"	0.0333		70.2	40-140				
beta-BHC	0.0213	0.000330	"	0.0333		63.8	40-140				
delta-BHC	0.0222	0.000330	"	0.0333		66.5	40-140				
Dieldrin	0.0249	0.000330	"	0.0333		74.6	40-140				
Endosulfan I	0.0219	0.000330	"	0.0333		65.6	40-140				
Endosulfan II	0.0237	0.000330	"	0.0333		71.2	40-140				
Endosulfan sulfate	0.0229	0.000330	"	0.0333		68.6	40-140				
Endrin	0.0243	0.000330	"	0.0333		72.9	40-140				
gamma-BHC (Lindane)	0.0227	0.000330	"	0.0333		68.2	40-140				
Heptachlor	0.0229	0.000330	"	0.0333		68.6	40-140				
alpha-Chlordane	0.0199	0.000330	"	0.0333		59.8	40-140				
Surrogate: Decachlorobiphenyl	*0.0412*		*"*	*0.0663*		*62.1*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0496*		*"*	*0.0663*		*74.8*	*30-140*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40841 - EPA 3550C											
LCS Dup (BB40841-BSD1)									Prepared: 02/24/2014 Analyzed: 02/26/2014		
4,4'-DDD	0.0293	0.000330	mg/kg wet	0.0333		88.0	40-140		18.6	30	
4,4'-DDE	0.0250	0.000330	"	0.0333		74.9	40-140		17.4	30	
4,4'-DDT	0.0304	0.000330	"	0.0333		91.3	40-140		18.5	30	
Aldrin	0.0248	0.000330	"	0.0333		74.4	40-140		15.8	30	
alpha-BHC	0.0275	0.000330	"	0.0333		82.5	40-140		16.0	30	
beta-BHC	0.0251	0.000330	"	0.0333		75.4	40-140		16.6	30	
delta-BHC	0.0265	0.000330	"	0.0333		79.5	40-140		17.8	30	
Dieldrin	0.0293	0.000330	"	0.0333		87.8	40-140		16.3	30	
Endosulfan I	0.0257	0.000330	"	0.0333		77.0	40-140		16.0	30	
Endosulfan II	0.0280	0.000330	"	0.0333		84.0	40-140		16.5	30	
Endosulfan sulfate	0.0274	0.000330	"	0.0333		82.3	40-140		18.1	30	
Endrin	0.0287	0.000330	"	0.0333		86.0	40-140		16.6	30	
gamma-BHC (Lindane)	0.0266	0.000330	"	0.0333		79.8	40-140		15.7	30	
Heptachlor	0.0269	0.000330	"	0.0333		80.6	40-140		16.2	30	
alpha-Chlordane	0.0233	0.000330	"	0.0333		69.9	40-140		15.6	30	
Surrogate: Decachlorobiphenyl	*0.0492*		*"*	*0.0663*		*74.2*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0576*		*"*	*0.0663*		*86.9*	*30-140*				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40841 - EPA 3550C											
Blank (BB40841-BLK1)											Prepared: 02/24/2014 Analyzed: 02/25/2014
Aroclor 1016	ND	0.0170	mg/kg wet								
Aroclor 1221	ND	0.0170	"								
Aroclor 1232	ND	0.0170	"								
Aroclor 1242	ND	0.0170	"								
Aroclor 1248	ND	0.0170	"								
Aroclor 1254	ND	0.0170	"								
Aroclor 1260	ND	0.0170	"								
Total PCBs	ND	0.0170	"								
Surrogate: Tetrachloro-m-xylene	*0.0420*		*"*	*0.0663*		*63.3*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0440*		*"*	*0.0663*		*66.3*	*30-140*				
LCS (BB40841-BS2)											Prepared: 02/24/2014 Analyzed: 02/25/2014
Aroclor 1016	0.285	0.0170	mg/kg wet	0.333		85.5	40-130				
Aroclor 1260	0.289	0.0170	"	0.333		86.7	40-130				
Surrogate: Tetrachloro-m-xylene	*0.0573*		*"*	*0.0663*		*86.4*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0593*		*"*	*0.0663*		*89.4*	*30-140*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40866 - EPA 3050B											
Blank (BB40866-BLK1)											Prepared & Analyzed: 02/24/2014
Arsenic	ND	1.00	mg/kg wet								
Barium	ND	1.00	"								
Beryllium	ND	0.100	"								
Cadmium	ND	0.300	"								
Chromium	ND	0.500	"								
Copper	ND	0.500	"								
Lead	ND	0.300	"								
Manganese	ND	0.500	"								
Nickel	ND	0.500	"								
Selenium	ND	1.00	"								
Silver	ND	0.500	"								
Zinc	ND	1.00	"								
Reference (BB40866-SRM1)											Prepared & Analyzed: 02/24/2014
Arsenic	98.1	1.00	mg/kg wet	99.6		98.5	69.3-131				
Barium	299	1.00	"	310		96.4	74.2-126				
Beryllium	68.1	0.100	"	72.3		94.1	73.8-126				
Cadmium	167	0.300	"	182		91.5	73.6-126				
Chromium	130	0.500	"	136		95.6	70.4-130				
Copper	104	0.500	"	102		102	74.3-126				
Lead	106	0.300	"	115		92.2	72.1-129				
Manganese	306	0.500	"	323		94.6	74.9-125				
Nickel	160	0.500	"	153		104	73.2-126				
Selenium	148	1.00	"	150		98.7	67.3-133				
Silver	36.5	0.500	"	40.4		90.4	65.8-134				
Zinc	152	1.00	"	161		94.3	68.3-132				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB41030 - EPA 7473 soil											
Blank (BB41030-BLK1)									Prepared & Analyzed: 02/27/2014		
Mercury	ND	0.0300	mg/kg wet								
Reference (BB41030-SRM1)									Prepared & Analyzed: 02/27/2014		
Mercury	4.63		mg/kg	3.73		124	68.6-131				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40905 - EPA SW846-3060											
Blank (BB40905-BLK1)										Prepared: 02/25/2014 Analyzed: 02/26/2014	
Chromium, Hexavalent	ND	0.500	mg/kg wet								
Reference (BB40905-SRM1)										Prepared: 02/25/2014 Analyzed: 02/26/2014	
Chromium, Hexavalent	61.7		mg/L	76.7		80.4	20.2-180				
Batch BB41039 - Analysis Preparation Soil											
Blank (BB41039-BLK1)										Prepared & Analyzed: 02/27/2014	
Cyanide, total	ND	0.500	mg/kg wet								
Reference (BB41039-SRM1)										Prepared & Analyzed: 02/27/2014	
Cyanide, total	80.5		ug/mL	59.3		136	38.4-202				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
14B0543-01	SB03_1-3	40mL Vial with Stir Bar-Cool 4° C
14B0543-02	SB03_6-8	40mL Vial with Stir Bar-Cool 4° C
14B0543-03	SB05_1-3	40mL Vial with Stir Bar-Cool 4° C
14B0543-04	SB05A_2-4	40mL Vial with Stir Bar-Cool 4° C
14B0543-05	SB05A_11-13	40mL Vial with Stir Bar-Cool 4° C
14B0543-06	TB_022114	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interferences.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
Rep-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.

ND	Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
MDL	METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the MDL, with values between the MDL and the RL being "J" flagged as estimated results.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 14B0543

YOUR Information

Company: LANGAN
Address: 360 W 31st St 8th fl
NY, NY 10001
Phone No. 212 479 5400
Contact Person: PMcMahon
E-Mail Address: Lanyan.com

Report To:

Company: SAME
Address:
Phone No.
Attention: GNicholls@
E-Mail Address: Lanyan.com

Invoice To:

Company: SAME
Address:
Phone No.
Attention:
E-Mail Address:

YOUR Project ID

170282501

Purchase Order No.

Samples from: CT__ NY X NJ__

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) X

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package C
- NY ASP B Package
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel X
- NYSDEC EQuIS
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other
- **York Regulatory Comparison**
- **Excel Spreadsheet**

Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dissolved Comp.	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Haleg.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB03_1-3	2/20/14 10:40	S	Part 375 VOC/SVOC/Metals/Pest/PCB, Ignitability, TCN	4 VOA 4 SOC
SB03_6-8	2/20/14 10:30			
SB05_1-3	2/20/14 14:15			
SB05A_2-4	2/20/14 14:25			
SB05A_11-13	2/20/14 14:35		VOC	2 VOA
TB_02214	2/20/14	WW		

Preservation Check those Applicable: 4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___ Other ___ ZnAc ___ Ascorbic Acid ___

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Comments

Samples Relinquished By — Date/Time 2/21/14 9:00

Samples Relinquished By — Date/Time

Samples Received By K Barker 2/21/14 9AM — Date/Time

Samples Received in LAB by Grace 2-21-14 1600 — Date/Time

Temperature on Receipt 3.8 °C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Report Date: 02/27/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0504

Report Date: 02/27/2014
Client Project ID: 170282501
York Project (SDG) No.: 14B0504

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on February 20, 2014 and listed below. The project was identified as your project: **170282501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
14B0504-01	SB01_4-6	Soil	02/19/2014	02/20/2014
14B0504-02	SB01_7-9	Soil	02/19/2014	02/20/2014
14B0504-03	SB06_3-5	Soil	02/19/2014	02/20/2014
14B0504-04	SB06_6-8	Soil	02/19/2014	02/20/2014
14B0504-05	SB07_1-3	Soil	02/19/2014	02/20/2014
14B0504-06	SB07_5-7	Soil	02/19/2014	02/20/2014
14B0504-07	SB08_0-2	Soil	02/19/2014	02/20/2014
14B0504-08	SB08_15-17	Soil	02/19/2014	02/20/2014
14B0504-09	FB_022014	Water	02/20/2014	02/20/2014
14B0504-10	TB_022014	Water	02/20/2014	02/20/2014
14B0504-11	SB04_1-3	Soil	02/20/2014	02/20/2014
14B0504-12	SB04_4-6	Soil	02/20/2014	02/20/2014
14B0504-13	DUP01_022014	Soil	02/20/2014	02/20/2014

General Notes for York Project (SDG) No.: 14B0504

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:

Date: 02/27/2014

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB01_4-6 **York Sample ID:** 14B0504-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:25 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.055	0.11	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
67-64-1	Acetone	**0.0089**	J	mg/kg dry	0.0027	0.011	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
71-43-2	Benzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
75-09-2	Methylene chloride	**0.011**	CCV-E, B	mg/kg dry	0.0027	0.011	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0055	0.011	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
108-88-3	Toluene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS

Sample Information

Client Sample ID: SB01_4-6 **York Sample ID:** 14B0504-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:25 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0027	0.0055	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0082	0.016	1	EPA 8260C	02/21/2014 12:54	02/21/2014 15:59	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*111 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*99.1 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*103 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
120-12-7	Anthracene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
56-55-3	Benzo(a)anthracene	**0.314**	J	mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.506	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
218-01-9	Chrysene	**0.287**	J	mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
206-44-0	Fluoranthene	**0.923**	J	mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
86-73-7	Fluorene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.506	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.506	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.506	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
85-01-8	Phenanthrene	**0.742**	J	mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
108-95-2	Phenol	ND		mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR
129-00-0	Pyrene	**0.559**	J	mg/kg dry	0.253	1.00	5	EPA 8270D	02/21/2014 18:00	02/24/2014 12:40	SR

	Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB01_4-6 **York Sample ID:** 14B0504-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:25 am	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
367-12-4	*Surrogate: 2-Fluorophenol*	*75.4 %*			*10-109*						
4165-62-2	*Surrogate: Phenol-d5*	*84.6 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*65.2 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*84.5 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*109 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*99.8 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 10:54	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*45.7 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*77.0 %*	*30-140*

Sample Information

Client Sample ID: SB01_4-6 **York Sample ID:** 14B0504-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:25 am	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0205	0.0205	1	EPA 8082A	02/21/2014 12:15	02/24/2014 11:35	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*73.9 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*58.8 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**7.92**		mg/kg dry	1.21	1.21	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-39-3	Barium	**136**		mg/kg dry	1.21	1.21	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.121	0.121	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-43-9	Cadmium	**1.03**		mg/kg dry	0.362	0.362	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-47-3	Chromium	**33.6**		mg/kg dry	0.603	0.603	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-50-8	Copper	**699**		mg/kg dry	0.603	0.603	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7439-92-1	Lead	**410**		mg/kg dry	0.362	0.362	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7439-96-5	Manganese	**431**		mg/kg dry	0.603	0.603	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-02-0	Nickel	**48.0**		mg/kg dry	0.603	0.603	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7782-49-2	Selenium	ND		mg/kg dry	1.21	1.21	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-22-4	Silver	ND		mg/kg dry	0.603	0.603	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW
7440-66-6	Zinc	**532**		mg/kg dry	1.21	1.21	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:23	MW

Sample Information

Client Sample ID: SB01_4-6 **York Sample ID:** 14B0504-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:25 am	02/20/2014

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.285**		mg/kg dry	0.0362	0.0362	1	EPA 7473	02/24/2014 07:19	02/24/2014 14:14	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**82.9**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**0.724**		mg/kg dry	0.422	0.603	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**33.0**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.059	0.12	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
78-93-3	2-Butanone	**0.0072**	CCV-E	mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
67-64-1	Acetone	**0.032**		mg/kg dry	0.0030	0.012	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
71-43-2	Benzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
75-09-2	Methylene chloride	**0.0061**	CCV-E, J, B	mg/kg dry	0.0030	0.012	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0059	0.012	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
108-88-3	Toluene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0030	0.0059	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0089	0.018	1	EPA 8260C	02/21/2014 12:54	02/21/2014 16:35	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*112 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*100 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*104 %*	*85-118*

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.104	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
218-01-9	Chrysene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
206-44-0	Fluoranthene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.104	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.104	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.104	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
85-01-8	Phenanthrene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
108-95-2	Phenol	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR
129-00-0	Pyrene	ND		mg/kg dry	0.0519	0.206	1	EPA 8270D	02/21/2014 18:00	02/24/2014 13:11	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*52.2 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*62.9 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*65.1 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*83.2 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*81.6 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*82.9 %*	*10-147*

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:10	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*66.1 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*95.1 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0210	0.0210	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:04	JW

	Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*107 %*			*30-140*						
2051-24-3	*Surrogate: Decachlorobiphenyl*	*111 %*			*30-140*						

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**2.90**		mg/kg dry	1.24	1.24	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-39-3	Barium	**46.5**		mg/kg dry	1.24	1.24	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.124	0.124	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.371	0.371	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-47-3	Chromium	**17.4**		mg/kg dry	0.618	0.618	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-50-8	Copper	**41.1**		mg/kg dry	0.618	0.618	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7439-92-1	Lead	**8.67**		mg/kg dry	0.371	0.371	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7439-96-5	Manganese	**106**		mg/kg dry	0.618	0.618	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-02-0	Nickel	**22.9**		mg/kg dry	0.618	0.618	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7782-49-2	Selenium	ND		mg/kg dry	1.24	1.24	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-22-4	Silver	ND		mg/kg dry	0.618	0.618	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW
7440-66-6	Zinc	**121**		mg/kg dry	1.24	1.24	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:31	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0371	0.0371	1	EPA 7473	02/25/2014 06:58	02/25/2014 09:28	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**80.9**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.433	0.618	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Sample Information

Client Sample ID: SB01_7-9 **York Sample ID:** 14B0504-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 9:15 am	02/20/2014

Chromium, Trivalent **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**17.4**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB06_3-5 **York Sample ID:** 14B0504-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:55 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.044	0.087	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
67-64-1	Acetone	**0.011**		mg/kg dry	0.0022	0.0087	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
71-43-2	Benzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
75-09-2	Methylene chloride	**0.0067**	CCV-E, J, B	mg/kg dry	0.0022	0.0087	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS

Sample Information

Client Sample ID: SB06_3-5 **York Sample ID:** 14B0504-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:55 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0044	0.0087	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
108-88-3	Toluene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0065	0.013	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:11	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*116 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*95.4 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*107 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.458**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
120-12-7	Anthracene	**0.887**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
56-55-3	Benzo(a)anthracene	**2.04**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
50-32-8	Benzo(a)pyrene	**0.498**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
205-99-2	Benzo(b)fluoranthene	**1.47**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.498	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
207-08-9	Benzo(k)fluoranthene	**1.68**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
218-01-9	Chrysene	**2.53**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
132-64-9	Dibenzofuran	**0.332**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
206-44-0	Fluoranthene	**4.64**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
86-73-7	Fluorene	**0.626**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR

Sample Information

Client Sample ID: SB06_3-5 **York Sample ID:** 14B0504-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:55 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.488**	J	mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.498	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.498	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.498	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
85-01-8	Phenanthrene	**4.59**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
108-95-2	Phenol	ND		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR
129-00-0	Pyrene	**3.54**		mg/kg dry	0.249	0.988	5	EPA 8270D	02/21/2014 18:00	02/24/2014 18:20	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*37.4 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*51.2 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*79.9 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*82.2 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*42.1 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*50.8 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW

Sample Information

Client Sample ID: SB06_3-5 **York Sample ID:** 14B0504-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:55 pm	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:26	JW

	Surrogate Recoveries	Result		Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*27.2 %*	GC-Surr	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*39.1 %*		*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 12:34	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*55.8 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*55.8 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**9.01**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-39-3	Barium	**253**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.119	0.119	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-43-9	Cadmium	**1.52**		mg/kg dry	0.356	0.356	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-47-3	Chromium	**17.0**		mg/kg dry	0.593	0.593	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-50-8	Copper	**334**		mg/kg dry	0.593	0.593	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7439-92-1	Lead	**240**		mg/kg dry	0.356	0.356	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7439-96-5	Manganese	**156**		mg/kg dry	0.593	0.593	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-02-0	Nickel	**21.8**		mg/kg dry	0.593	0.593	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW

Sample Information

Client Sample ID: SB06_3-5 **York Sample ID:** 14B0504-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:55 pm	02/20/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7782-49-2	Selenium	ND		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-22-4	Silver	ND		mg/kg dry	0.593	0.593	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW
7440-66-6	Zinc	**655**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:49	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.452**		mg/kg dry	0.0356	0.0356	1	EPA 7473	02/25/2014 06:58	02/25/2014 10:33	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**84.4**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**0.711**		mg/kg dry	0.415	0.593	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**16.3**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.073	0.15	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
78-93-3	2-Butanone	**0.062**	CCV-E	mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
67-64-1	Acetone	**0.17**		mg/kg dry	0.0036	0.015	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
71-43-2	Benzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
75-09-2	Methylene chloride	**0.0060**	CCV-E, B, J	mg/kg dry	0.0036	0.015	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0073	0.015	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
108-88-3	Toluene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0036	0.0073	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.011	0.022	1	EPA 8260C	02/21/2014 12:54	02/21/2014 17:47	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*115 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*106 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*107 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**1.50**	J	mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
120-12-7	Anthracene	**3.35**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
56-55-3	Benzo(a)anthracene	**4.16**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
50-32-8	Benzo(a)pyrene	**3.34**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
205-99-2	Benzo(b)fluoranthene	**3.82**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	1.48	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
207-08-9	Benzo(k)fluoranthene	**6.29**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
218-01-9	Chrysene	**5.72**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
132-64-9	Dibenzofuran	**0.915**	J	mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
206-44-0	Fluoranthene	**12.0**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
86-73-7	Fluorene	**2.21**	J	mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**1.24**	J	mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	1.48	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	1.48	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	1.48	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
85-01-8	Phenanthrene	**10.0**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
108-95-2	Phenol	ND		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR
129-00-0	Pyrene	**6.67**		mg/kg dry	0.739	2.93	10	EPA 8270D	02/21/2014 18:00	02/24/2014 18:51	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*33.3 %*	*10-109*

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
4165-62-2	*Surrogate: Phenol-d5*	*57.7 %*			*10-124*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*62.4 %*			*10-148*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*72.6 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*56.6 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*47.5 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:42	JW

	Surrogate Recoveries	Result		Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*13.9 %*	GC-Surr	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*31.0 %*		*30-140*

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0299	0.0299	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:03	JW

	Surrogate Recoveries	Result		Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*34.2 %*		*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*26.1 %*	GC-Surr	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**12.5**		mg/kg dry	1.76	1.76	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-39-3	Barium	**306**		mg/kg dry	1.76	1.76	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.176	0.176	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-43-9	Cadmium	**1.38**		mg/kg dry	0.528	0.528	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-47-3	Chromium	**22.2**		mg/kg dry	0.880	0.880	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-50-8	Copper	**86.6**		mg/kg dry	0.880	0.880	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7439-92-1	Lead	**1090**		mg/kg dry	0.528	0.528	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7439-96-5	Manganese	**189**		mg/kg dry	0.880	0.880	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-02-0	Nickel	**22.8**		mg/kg dry	0.880	0.880	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7782-49-2	Selenium	ND		mg/kg dry	1.76	1.76	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-22-4	Silver	ND		mg/kg dry	0.880	0.880	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW
7440-66-6	Zinc	**897**		mg/kg dry	1.76	1.76	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:54	MW

Sample Information

Client Sample ID: SB06_6-8 **York Sample ID:** 14B0504-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 3:05 pm	02/20/2014

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**1.29**		mg/kg dry	0.0528	0.0528	1	EPA 7473	02/25/2014 06:58	02/25/2014 16:53	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**56.8**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**8.52**		mg/kg dry	0.616	0.880	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**22.1**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.047	0.095	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
67-64-1	Acetone	ND		mg/kg dry	0.0024	0.0095	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
71-43-2	Benzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
75-09-2	Methylene chloride	**0.0043**	CCV-E, B, J	mg/kg dry	0.0024	0.0095	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0047	0.0095	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
108-88-3	Toluene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0024	0.0047	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0071	0.014	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:23	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*117 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*95.2 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*106 %*	*85-118*

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
120-12-7	Anthracene	**0.613**	J	mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
56-55-3	Benzo(a)anthracene	**1.49**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
50-32-8	Benzo(a)pyrene	**1.14**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
205-99-2	Benzo(b)fluoranthene	**1.56**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.464	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
207-08-9	Benzo(k)fluoranthene	**1.22**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
218-01-9	Chrysene	**1.43**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
206-44-0	Fluoranthene	**3.22**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
86-73-7	Fluorene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.410**	J	mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.464	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.464	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.464	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
85-01-8	Phenanthrene	**1.73**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
108-95-2	Phenol	ND		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR
129-00-0	Pyrene	**1.73**		mg/kg dry	0.232	0.920	5	EPA 8270D	02/21/2014 18:00	02/24/2014 14:43	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*52.2 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*72.4 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*79.9 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*67.5 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*65.7 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*79.2 %*	*10-147*

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 11:58	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*54.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*81.3 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0188	0.0188	1	EPA 8082A	02/21/2014 12:15	02/24/2014 13:33	JW

	Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*88.4 %*			*30-140*						
2051-24-3	*Surrogate: Decachlorobiphenyl*	*78.4 %*			*30-140*						

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**4.21**		mg/kg dry	1.10	1.10	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-39-3	Barium	**90.2**		mg/kg dry	1.10	1.10	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.110	0.110	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-43-9	Cadmium	**1.21**		mg/kg dry	0.331	0.331	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-47-3	Chromium	**15.7**		mg/kg dry	0.552	0.552	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-50-8	Copper	**49.9**		mg/kg dry	0.552	0.552	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7439-92-1	Lead	**168**		mg/kg dry	0.331	0.331	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7439-96-5	Manganese	**345**		mg/kg dry	0.552	0.552	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-02-0	Nickel	**15.4**		mg/kg dry	0.552	0.552	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7782-49-2	Selenium	ND		mg/kg dry	1.10	1.10	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-22-4	Silver	ND		mg/kg dry	0.552	0.552	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW
7440-66-6	Zinc	**173**		mg/kg dry	1.10	1.10	1	EPA 6010C	02/21/2014 14:04	02/21/2014 16:59	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.569**		mg/kg dry	0.0331	0.0331	1	EPA 7473	02/25/2014 06:58	02/25/2014 17:02	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**90.6**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.386	0.552	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Sample Information

Client Sample ID: SB07_1-3 **York Sample ID:** 14B0504-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:25 pm	02/20/2014

Chromium, Trivalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**15.7**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB07_5-7 **York Sample ID:** 14B0504-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:40 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.042	0.084	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
67-64-1	Acetone	**0.0086**		mg/kg dry	0.0021	0.0084	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
71-43-2	Benzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
75-09-2	Methylene chloride	**0.0087**	CCV-E, B	mg/kg dry	0.0021	0.0084	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS

Sample Information

Client Sample ID: SB07_5-7 **York Sample ID:** 14B0504-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:40 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0042	0.0084	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
108-88-3	Toluene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0021	0.0042	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0063	0.013	1	EPA 8260C	02/21/2014 12:54	02/21/2014 18:58	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*106 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*101 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*105 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.100	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
218-01-9	Chrysene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
206-44-0	Fluoranthene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR

Sample Information

Client Sample ID: SB07_5-7 **York Sample ID:** 14B0504-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:40 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-73-7	Fluorene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.100	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.100	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.100	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
85-01-8	Phenanthrene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
108-95-2	Phenol	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR
129-00-0	Pyrene	ND		mg/kg dry	0.0500	0.199	1	EPA 8270D	02/21/2014 18:00	02/24/2014 15:14	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*58.0 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*68.0 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*61.2 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*69.0 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*73.3 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*57.3 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW

Sample Information

Client Sample ID: SB07_5-7 **York Sample ID:** 14B0504-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:40 pm	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:14	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*61.3 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*104 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0202	0.0202	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:03	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*105 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*84.9 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**1.72**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-39-3	Barium	**25.2**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.119	0.119	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.357	0.357	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-47-3	Chromium	**21.4**		mg/kg dry	0.596	0.596	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-50-8	Copper	**13.7**		mg/kg dry	0.596	0.596	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7439-92-1	Lead	**5.57**		mg/kg dry	0.357	0.357	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7439-96-5	Manganese	**243**		mg/kg dry	0.596	0.596	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW

Sample Information

Client Sample ID: SB07_5-7 **York Sample ID:** 14B0504-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 1:40 pm	02/20/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	Nickel	**15.2**		mg/kg dry	0.596	0.596	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7782-49-2	Selenium	ND		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-22-4	Silver	ND		mg/kg dry	0.596	0.596	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW
7440-66-6	Zinc	**30.1**		mg/kg dry	1.19	1.19	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:17	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0357	0.0357	1	EPA 7473	02/25/2014 06:58	02/25/2014 12:49	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**84.0**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:15	02/22/2014 11:31	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.417	0.596	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**21.4**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.035	0.069	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
67-64-1	Acetone	**0.0084**		mg/kg dry	0.0017	0.0069	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
71-43-2	Benzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
75-09-2	Methylene chloride	**0.0032**	CCV-E, J, B	mg/kg dry	0.0017	0.0069	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0035	0.0069	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
127-18-4	Tetrachloroethylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
108-88-3	Toluene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
79-01-6	Trichloroethylene	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0017	0.0035	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0052	0.010	1	EPA 8260C	02/21/2014 12:54	02/21/2014 19:34	SS

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**							
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*111 %*		*72-137*							
460-00-4	*Surrogate: p-Bromofluorobenzene*	*93.3 %*		*72-138*							
2037-26-5	*Surrogate: Toluene-d8*	*104 %*		*85-118*							

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
120-12-7	Anthracene	**0.577**	J	mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
56-55-3	Benzo(a)anthracene	**3.02**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
50-32-8	Benzo(a)pyrene	**1.93**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
205-99-2	Benzo(b)fluoranthene	**3.84**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.933	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
207-08-9	Benzo(k)fluoranthene	**2.52**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
218-01-9	Chrysene	**3.38**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
206-44-0	Fluoranthene	**5.26**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
86-73-7	Fluorene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.692**	J	mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.933	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.933	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.933	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
85-01-8	Phenanthrene	**2.54**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
108-95-2	Phenol	ND		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
129-00-0	Pyrene	**5.84**		mg/kg dry	0.466	1.85	10	EPA 8270D	02/21/2014 18:00	02/24/2014 19:21	SR
	Surrogate Recoveries	**Result**		**Acceptance Range**							
367-12-4	*Surrogate: 2-Fluorophenol*	*30.3 %*		*10-109*							
4165-62-2	*Surrogate: Phenol-d5*	*52.7 %*		*10-124*							
4165-60-0	*Surrogate: Nitrobenzene-d5*	*92.0 %*		*10-148*							

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*44.3 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*52.6 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*70.6 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:30	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*67.0 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*85.8 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0189	0.0189	1	EPA 8082A	02/21/2014 12:15	02/24/2014 14:32	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*94.0 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*86.9 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**8.00**		mg/kg dry	1.11	1.11	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-39-3	Barium	**258**		mg/kg dry	1.11	1.11	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.111	0.111	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-43-9	Cadmium	**1.30**		mg/kg dry	0.333	0.333	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-47-3	Chromium	**11.9**		mg/kg dry	0.555	0.555	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-50-8	Copper	**484**		mg/kg dry	0.555	0.555	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7439-92-1	Lead	**61000**		mg/kg dry	33.3	33.3	100	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7439-96-5	Manganese	**220**		mg/kg dry	0.555	0.555	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-02-0	Nickel	**54.7**		mg/kg dry	0.555	0.555	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7782-49-2	Selenium	ND		mg/kg dry	1.11	1.11	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-22-4	Silver	**1.34**		mg/kg dry	0.555	0.555	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW
7440-66-6	Zinc	**197**		mg/kg dry	1.11	1.11	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:21	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**0.630**		mg/kg dry	0.0333	0.0333	1	EPA 7473	02/25/2014 06:58	02/25/2014 12:58	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**90.1**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:17	02/22/2014 11:35	ALD

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 14B0504-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:00 pm	02/20/2014

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**1.29**		mg/kg dry	0.389	0.555	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**10.6**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB08_15-17 **York Sample ID:** 14B0504-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:20 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.044	0.088	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
67-64-1	Acetone	**0.0040**	J	mg/kg dry	0.0022	0.0088	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
71-43-2	Benzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS

Sample Information

Client Sample ID: SB08_15-17 **York Sample ID:** 14B0504-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:20 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
75-09-2	Methylene chloride	**0.0049**	CCV-E, B, J	mg/kg dry	0.0022	0.0088	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0044	0.0088	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
127-18-4	Tetrachloroethylene	**0.048**		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
108-88-3	Toluene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
79-01-6	Trichloroethylene	**0.0027**	J	mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0022	0.0044	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0066	0.013	1	EPA 8260C	02/21/2014 12:54	02/21/2014 20:10	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*107 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*97.8 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*106 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
120-12-7	Anthracene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
56-55-3	Benzo(a)anthracene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
50-32-8	Benzo(a)pyrene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
205-99-2	Benzo(b)fluoranthene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
191-24-2	Benzo(g,h,i)perylene	ND		mg/kg dry	0.108	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
207-08-9	Benzo(k)fluoranthene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR

Sample Information

Client Sample ID: SB08_15-17 **York Sample ID:** 14B0504-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:20 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
218-01-9	Chrysene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
53-70-3	Dibenzo(a,h)anthracene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
206-44-0	Fluoranthene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.108	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.108	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.108	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
85-01-8	Phenanthrene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
108-95-2	Phenol	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR
129-00-0	Pyrene	ND		mg/kg dry	0.0538	0.214	1	EPA 8270D	02/21/2014 18:00	02/24/2014 16:15	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*40.0 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*67.1 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*69.1 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*71.6 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*68.6 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*42.1 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW

Sample Information

Client Sample ID: SB08_15-17 **York Sample ID:** 14B0504-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:20 pm	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 12:46	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*49.5 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*89.5 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0218	0.0218	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:02	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*94.0 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*77.9 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**2.30**		mg/kg dry	1.28	1.28	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-39-3	Barium	**69.1**		mg/kg dry	1.28	1.28	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.128	0.128	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.384	0.384	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW

Sample Information

Client Sample ID: SB08_15-17 **York Sample ID:** 14B0504-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 19, 2014 2:20 pm	02/20/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	Chromium	**18.5**		mg/kg dry	0.641	0.641	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-50-8	Copper	**22.8**		mg/kg dry	0.641	0.641	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7439-92-1	Lead	**20.4**		mg/kg dry	0.384	0.384	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7439-96-5	Manganese	**487**		mg/kg dry	0.641	0.641	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-02-0	Nickel	**22.4**		mg/kg dry	0.641	0.641	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7782-49-2	Selenium	ND		mg/kg dry	1.28	1.28	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-22-4	Silver	ND		mg/kg dry	0.641	0.641	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW
7440-66-6	Zinc	**44.8**		mg/kg dry	1.28	1.28	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:29	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0384	0.0384	1	EPA 7473	02/25/2014 06:58	02/25/2014 13:22	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**78.0**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:17	02/22/2014 11:35	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.448	0.641	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**18.5**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: FB_022014 **York Sample ID:** 14B0504-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 7:35 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
78-93-3	2-Butanone	ND		ug/L	0.50	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
67-64-1	Acetone	**1.8**	CCV-E, J	ug/L	1.0	2.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS

Sample Information

Client Sample ID: FB_022014 **York Sample ID:** 14B0504-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 7:35 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/L	0.50	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS
1330-20-7	Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	02/21/2014 11:09	02/21/2014 19:59	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*79-133*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*99.9 %*	*65-133*
2037-26-5	*Surrogate: Toluene-d8*	*101 %*	*80-123*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
208-96-8	Acenaphthylene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
120-12-7	Anthracene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
56-55-3	Benzo(a)anthracene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
218-01-9	Chrysene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
132-64-9	Dibenzofuran	ND		ug/L	2.56	5.13	1	EPA 8270D	02/24/2014 10:04	02/24/2014 18:49	SR
206-44-0	Fluoranthene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
86-73-7	Fluorene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
118-74-1	Hexachlorobenzene	ND		ug/L	0.0410	0.0410	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
95-48-7	2-Methylphenol	ND		ug/L	2.56	5.13	1	EPA 8270D	02/24/2014 10:04	02/24/2014 18:49	SR
65794-96-9	3- & 4-Methylphenols	ND		ug/L	2.56	5.13	1	EPA 8270D	02/24/2014 10:04	02/24/2014 18:49	SR
91-20-3	Naphthalene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
87-86-5	Pentachlorophenol	ND		ug/L	1.03	1.03	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
85-01-8	Phenanthrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR
108-95-2	Phenol	ND		ug/L	2.56	5.13	1	EPA 8270D	02/24/2014 10:04	02/24/2014 18:49	SR
129-00-0	Pyrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	02/24/2014 10:04	02/24/2014 17:05	SR

Sample Information

Client Sample ID: FB_022014 **York Sample ID:** 14B0504-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 7:35 am	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**							
367-12-4	*Surrogate: 2-Fluorophenol*	*20.3 %*		*10-52*							
4165-62-2	*Surrogate: Phenol-d5*	*11.5 %*		*10-117*							
4165-60-0	*Surrogate: Nitrobenzene-d5*	*54.5 %*		*12-112*							
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*50.6 %*		*14-101*							
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*79.6 %*		*17-127*							
1718-51-0	*Surrogate: Terphenyl-d14*	*63.9 %*		*10-151*							

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3510C Low Level

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
72-55-9	4,4'-DDE	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
50-29-3	4,4'-DDT	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
309-00-2	Aldrin	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
319-84-6	alpha-BHC	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
319-85-7	beta-BHC	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
319-86-8	delta-BHC	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
60-57-1	Dieldrin	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
959-98-8	Endosulfan I	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
33213-65-9	Endosulfan II	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
1031-07-8	Endosulfan sulfate	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
72-20-8	Endrin	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
76-44-8	Heptachlor	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
5103-71-9	alpha-Chlordane	ND		ug/L	0.00105	0.00105	1	EPA 8081B	02/25/2014 08:02	02/26/2014 16:24	JW
	Surrogate Recoveries	**Result**		**Acceptance Range**							
2051-24-3	*Surrogate: Decachlorobiphenyl*	*66.0 %*		*30-120*							
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*53.2 %*		*30-120*							

Sample Information

Client Sample ID: FB_022014 **York Sample ID:** 14B0504-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 7:35 am	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3510C Low Level

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
11104-28-2	Aroclor 1221	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
11141-16-5	Aroclor 1232	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
53469-21-9	Aroclor 1242	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
12672-29-6	Aroclor 1248	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
11097-69-1	Aroclor 1254	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
11096-82-5	Aroclor 1260	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW
1336-36-3	Total PCBs	ND		ug/L	0.0526	0.0526	1	EPA 8082A	02/25/2014 08:02	02/25/2014 13:20	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*54.3 %*	*30-120*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*60.3 %*	*30-120*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		ug/L	4	4	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-39-3	Barium	ND		ug/L	10	10	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-41-7	Beryllium	ND		ug/L	1	1	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-43-9	Cadmium	ND		ug/L	3	3	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-47-3	Chromium	ND		ug/L	5	5	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-50-8	Copper	ND		ug/L	3	3	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7439-92-1	Lead	ND		ug/L	3	3	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7439-96-5	Manganese	ND		ug/L	5	5	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-02-0	Nickel	ND		ug/L	5	5	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7782-49-2	Selenium	ND		ug/L	10	10	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-22-4	Silver	ND		ug/L	5	5	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW
7440-66-6	Zinc	ND		ug/L	10	10	1	EPA 6010C	02/21/2014 14:09	02/24/2014 22:02	MW

Sample Information

Client Sample ID: FB_022014 **York Sample ID:** 14B0504-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 7:35 am	02/20/2014

Mercury by 7470/7471

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-7470

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.0002	0.0002	1	EPA 7470	02/25/2014 11:19	02/25/2014 16:46	AA

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		ug/L	10.0	10.0	1	EPA 7196A	02/21/2014 07:19	02/21/2014 07:19	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: *** DEFAULT PREP ***

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	ND		mg/L	0.00800	0.0100	1	Calculation	02/26/2014 07:35	02/26/2014 07:38	SC

Sample Information

Client Sample ID: TB_022014 **York Sample ID:** 14B0504-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 3:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS

Sample Information

Client Sample ID: **TB_022014** **York Sample ID:** **14B0504-10**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Water	February 20, 2014 3:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
78-93-3	2-Butanone	ND		ug/L	0.50	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.50	0.50	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS
1330-20-7	Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	02/21/2014 11:09	02/21/2014 20:32	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*99.6 %*	*79-133*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*98.8 %*	*65-133*
2037-26-5	*Surrogate: Toluene-d8*	*99.8 %*	*80-123*

Sample Information

Client Sample ID: **SB04_1-3** **York Sample ID:** **14B0504-11**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Sample Information

Client Sample ID: SB04_1-3 **York Sample ID:** 14B0504-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	**0.026**		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.050	0.10	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
67-64-1	Acetone	ND		mg/kg dry	0.0025	0.010	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
71-43-2	Benzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
75-09-2	Methylene chloride	**0.0032**	J, B	mg/kg dry	0.0025	0.010	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0050	0.010	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
127-18-4	Tetrachloroethylene	**0.21**	E	mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
108-88-3	Toluene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
79-01-6	Trichloroethylene	**0.033**		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0025	0.0050	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0075	0.015	1	EPA 8260C	02/24/2014 13:18	02/25/2014 00:48	SS

Sample Information

Client Sample ID: **SB04_1-3** **York Sample ID:** **14B0504-11**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**							
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*103 %*		*72-137*							
460-00-4	*Surrogate: p-Bromofluorobenzene*	*128 %*		*72-138*							
2037-26-5	*Surrogate: Toluene-d8*	*138 %*	S-04	*85-118*							

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
120-12-7	Anthracene	**0.134**	J	mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
56-55-3	Benzo(a)anthracene	**0.393**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
50-32-8	Benzo(a)pyrene	**0.482**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
205-99-2	Benzo(b)fluoranthene	**0.494**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
191-24-2	Benzo(g,h,i)perylene	**0.146**	J	mg/kg dry	0.103	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
207-08-9	Benzo(k)fluoranthene	**0.324**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
218-01-9	Chrysene	**0.466**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
53-70-3	Dibenzo(a,h)anthracene	**0.0621**	J	mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
206-44-0	Fluoranthene	**0.924**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
86-73-7	Fluorene	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.165**	J	mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.103	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.103	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.103	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
85-01-8	Phenanthrene	**0.408**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
108-95-2	Phenol	ND		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
129-00-0	Pyrene	**0.798**		mg/kg dry	0.0515	0.204	1	EPA 8270D	02/21/2014 19:00	02/24/2014 16:46	SR
	Surrogate Recoveries	**Result**		**Acceptance Range**							
367-12-4	*Surrogate: 2-Fluorophenol*	*72.2 %*		*10-109*							
4165-62-2	*Surrogate: Phenol-d5*	*91.9 %*		*10-124*							
4165-60-0	*Surrogate: Nitrobenzene-d5*	*53.5 %*		*10-148*							
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*73.8 %*		*10-111*							

Sample Information

Client Sample ID: SB04_1-3 **York Sample ID:** 14B0504-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*76.9 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*72.8 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:02	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*63.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*86.3 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW

Sample Information

Client Sample ID: SB04_1-3 **York Sample ID:** 14B0504-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0209	0.0209	1	EPA 8082A	02/21/2014 12:15	02/24/2014 15:31	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*86.9 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*79.4 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**8.73**		mg/kg dry	1.23	1.23	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-39-3	Barium	**330**		mg/kg dry	1.23	1.23	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.123	0.123	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-43-9	Cadmium	**0.891**		mg/kg dry	0.368	0.368	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-47-3	Chromium	**19.5**		mg/kg dry	0.613	0.613	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-50-8	Copper	**172**		mg/kg dry	0.613	0.613	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7439-92-1	Lead	**508**		mg/kg dry	0.368	0.368	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7439-96-5	Manganese	**318**		mg/kg dry	0.613	0.613	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-02-0	Nickel	**18.6**		mg/kg dry	0.613	0.613	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7782-49-2	Selenium	ND		mg/kg dry	1.23	1.23	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-22-4	Silver	ND		mg/kg dry	0.613	0.613	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW
7440-66-6	Zinc	**399**		mg/kg dry	1.23	1.23	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:34	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**1.86**		mg/kg dry	0.0368	0.0368	1	EPA 7473	02/25/2014 06:58	02/25/2014 17:11	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**81.5**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:17	02/22/2014 11:35	ALD

Sample Information

Client Sample ID: SB04_1-3 **York Sample ID:** 14B0504-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:25 am	02/20/2014

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**2.55**		mg/kg dry	0.429	0.613	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**16.9**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: SB04_4-6 **York Sample ID:** 14B0504-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:45 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	**0.017**		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.071	0.14	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
67-64-1	Acetone	**0.011**	J	mg/kg dry	0.0035	0.014	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
71-43-2	Benzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS

Sample Information

Client Sample ID: SB04_4-6 **York Sample ID:** 14B0504-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:45 am	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
75-09-2	Methylene chloride	**0.0066**	CCV-E, B, J	mg/kg dry	0.0035	0.014	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0071	0.014	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
127-18-4	Tetrachloroethylene	**0.034**		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
108-88-3	Toluene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
79-01-6	Trichloroethylene	**0.0061**	J	mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0035	0.0071	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.011	0.021	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:21	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*111 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.1 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*103 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.0518**	J	mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
208-96-8	Acenaphthylene	**0.0522**	J	mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
120-12-7	Anthracene	**0.106**	J	mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
56-55-3	Benzo(a)anthracene	**0.905**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
50-32-8	Benzo(a)pyrene	**0.976**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
205-99-2	Benzo(b)fluoranthene	**0.843**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
191-24-2	Benzo(g,h,i)perylene	**0.283**		mg/kg dry	0.0966	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
207-08-9	Benzo(k)fluoranthene	**0.922**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
218-01-9	Chrysene	**0.983**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR

Sample Information

Client Sample ID: SB04_4-6 **York Sample ID:** 14B0504-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:45 am	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
53-70-3	Dibenzo(a,h)anthracene	**0.131**	J	mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
206-44-0	Fluoranthene	**1.18**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
86-73-7	Fluorene	**0.0675**	J	mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.319**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.0966	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.0966	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.0966	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
85-01-8	Phenanthrene	**0.622**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
108-95-2	Phenol	ND		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR
129-00-0	Pyrene	**1.24**		mg/kg dry	0.0483	0.192	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:17	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*43.4 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*69.1 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*56.9 %*	*10-148*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*43.3 %*	*10-111*
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*35.9 %*	*10-142*
1718-51-0	*Surrogate: Terphenyl-d14*	*68.9 %*	*10-147*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW

Sample Information

Client Sample ID: SB04_4-6 **York Sample ID:** 14B0504-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:45 am	02/20/2014

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:18	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*59.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*75.8 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW
1336-36-3	Total PCBs	**0.118**		mg/kg dry	0.0196	0.0196	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:01	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*79.9 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*74.9 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**6.54**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-39-3	Barium	**162**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.115	0.115	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-43-9	Cadmium	**0.854**		mg/kg dry	0.345	0.345	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-47-3	Chromium	**20.9**		mg/kg dry	0.575	0.575	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-50-8	Copper	**202**		mg/kg dry	0.575	0.575	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW

Sample Information

Client Sample ID: SB04_4-6 **York Sample ID:** 14B0504-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 8:45 am	02/20/2014

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	Lead	**387**		mg/kg dry	0.345	0.345	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7439-96-5	Manganese	**269**		mg/kg dry	0.575	0.575	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-02-0	Nickel	**18.2**		mg/kg dry	0.575	0.575	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7782-49-2	Selenium	ND		mg/kg dry	1.15	1.15	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-22-4	Silver	ND		mg/kg dry	0.575	0.575	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW
7440-66-6	Zinc	**467**		mg/kg dry	1.15	1.15	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:39	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**1.97**		mg/kg dry	0.0345	0.0345	1	EPA 7473	02/25/2014 06:58	02/25/2014 13:54	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**86.9**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:17	02/22/2014 11:35	ALD

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**0.736**		mg/kg dry	0.403	0.575	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**20.2**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	**0.0052**		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
75-34-3	1,1-Dichloroethane	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
75-35-4	1,1-Dichloroethylene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
95-63-6	1,2,4-Trimethylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
95-50-1	1,2-Dichlorobenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
107-06-2	1,2-Dichloroethane	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
108-67-8	1,3,5-Trimethylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
541-73-1	1,3-Dichlorobenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
106-46-7	1,4-Dichlorobenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
123-91-1	1,4-Dioxane	ND		mg/kg dry	0.039	0.077	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
78-93-3	2-Butanone	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
67-64-1	Acetone	**0.0055**	J	mg/kg dry	0.0019	0.0077	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
71-43-2	Benzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
56-23-5	Carbon tetrachloride	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
108-90-7	Chlorobenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
67-66-3	Chloroform	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
156-59-2	cis-1,2-Dichloroethylene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
100-41-4	Ethyl Benzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
75-09-2	Methylene chloride	**0.0044**	CCV-E, J, B	mg/kg dry	0.0019	0.0077	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
104-51-8	n-Butylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
103-65-1	n-Propylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
95-47-6	o-Xylene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
179601-23-1	p- & m- Xylenes	ND		mg/kg dry	0.0039	0.0077	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
135-98-8	sec-Butylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
98-06-6	tert-Butylbenzene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
127-18-4	Tetrachloroethylene	**0.021**		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
108-88-3	Toluene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
156-60-5	trans-1,2-Dichloroethylene	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
79-01-6	Trichloroethylene	**0.0042**		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS
75-01-4	Vinyl Chloride	ND		mg/kg dry	0.0019	0.0039	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7	Xylenes, Total	ND		mg/kg dry	0.0058	0.012	1	EPA 8260C	02/21/2014 12:54	02/21/2014 21:56	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*119 %*	*72-137*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*89.6 %*	*72-138*
2037-26-5	*Surrogate: Toluene-d8*	*109 %*	*85-118*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	**0.0690**	J	mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
208-96-8	Acenaphthylene	ND		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
120-12-7	Anthracene	**0.149**	J	mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
56-55-3	Benzo(a)anthracene	**0.464**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
50-32-8	Benzo(a)pyrene	**0.516**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
205-99-2	Benzo(b)fluoranthene	**0.397**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
191-24-2	Benzo(g,h,i)perylene	**0.118**	J	mg/kg dry	0.109	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
207-08-9	Benzo(k)fluoranthene	**0.585**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
218-01-9	Chrysene	**0.511**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
53-70-3	Dibenzo(a,h)anthracene	**0.0638**	J	mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
132-64-9	Dibenzofuran	ND		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
206-44-0	Fluoranthene	**1.05**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
86-73-7	Fluorene	**0.0668**	J	mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
118-74-1	Hexachlorobenzene	ND		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
193-39-5	Indeno(1,2,3-cd)pyrene	**0.135**	J	mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
95-48-7	2-Methylphenol	ND		mg/kg dry	0.109	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
65794-96-9	3- & 4-Methylphenols	ND		mg/kg dry	0.109	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
91-20-3	Naphthalene	ND		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
87-86-5	Pentachlorophenol	ND		mg/kg dry	0.109	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
85-01-8	Phenanthrene	**0.681**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
108-95-2	Phenol	ND		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR
129-00-0	Pyrene	**0.959**		mg/kg dry	0.0543	0.216	1	EPA 8270D	02/21/2014 19:00	02/24/2014 17:48	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*66.4 %*	*10-109*
4165-62-2	*Surrogate: Phenol-d5*	*85.3 %*	*10-124*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*51.2 %*	*10-148*

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*71.5 %*			*10-111*						
5175-83-7	*Surrogate: 2,4,6-Tribromophenol*	*50.2 %*			*10-142*						
1718-51-0	*Surrogate: Terphenyl-d14*	*65.5 %*			*10-147*						

Pesticides, NYSDEC Part 375 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
309-00-2	Aldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
319-84-6	alpha-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
319-85-7	beta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
319-86-8	delta-BHC	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
60-57-1	Dieldrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
959-98-8	Endosulfan I	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
72-20-8	Endrin	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
76-44-8	Heptachlor	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00165	0.00165	5	EPA 8081B	02/21/2014 12:15	02/25/2014 13:34	JW

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*34.2 %*	*30-140*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*62.8 %*	*30-140*

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Polychlorinated Biphenyls (PCB)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW
1336-36-3	Total PCBs	ND		mg/kg dry	0.0220	0.0220	1	EPA 8082A	02/21/2014 12:15	02/24/2014 16:33	JW

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*70.9 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*55.3 %*	*30-140*

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	**20.3**		mg/kg dry	1.29	1.29	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-39-3	Barium	**191**		mg/kg dry	1.29	1.29	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.129	0.129	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-43-9	Cadmium	**3.80**		mg/kg dry	0.388	0.388	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-47-3	Chromium	**16.4**		mg/kg dry	0.647	0.647	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-50-8	Copper	**860**		mg/kg dry	0.647	0.647	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7439-92-1	Lead	**630**		mg/kg dry	0.388	0.388	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7439-96-5	Manganese	**327**		mg/kg dry	0.647	0.647	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-02-0	Nickel	**34.0**		mg/kg dry	0.647	0.647	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7782-49-2	Selenium	ND		mg/kg dry	1.29	1.29	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-22-4	Silver	ND		mg/kg dry	0.647	0.647	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW
7440-66-6	Zinc	**1410**		mg/kg dry	1.29	1.29	1	EPA 6010C	02/21/2014 14:04	02/21/2014 17:44	MW

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	**14.9**		mg/kg dry	0.0388	0.0388	1	EPA 7473	02/25/2014 06:58	02/25/2014 17:20	ALD

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	**77.3**		%	0.100	0.100	1	SM 2540G	02/21/2014 14:17	02/22/2014 11:35	ALD

Sample Information

Client Sample ID: DUP01_022014 **York Sample ID:** 14B0504-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14B0504	170282501	Soil	February 20, 2014 3:00 pm	02/20/2014

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	**1.86**		mg/kg dry	0.453	0.647	1	EPA 7196A	02/21/2014 09:23	02/24/2014 15:02	SC

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	Chromium, Trivalent	**14.5**		mg/kg	0.250	0.500	1	Calculation	02/24/2014 15:11	02/25/2014 15:46	SC

Analytical Batch Summary

Batch ID: BB40771 **Preparation Method:** EPA 3550C **Prepared By:** CC

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-07	SB08_0-2	02/21/14
14B0504-07	SB08_0-2	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14
14B0504-13	DUP01_022014	02/21/14
BB40771-BLK1	Blank	02/21/14
BB40771-BLK1	Blank	02/21/14
BB40771-BS1	LCS	02/21/14
BB40771-BS2	LCS	02/21/14
BB40771-BSD1	LCS Dup	02/21/14

Batch ID: BB40780 **Preparation Method:** Analysis Preparation **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/21/14
BB40780-BLK1	Blank	02/21/14
BB40780-BS1	LCS	02/21/14

Batch ID: BB40782 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-07	SB08_0-2	02/21/14

14B0504-08	SB08_15-17	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14
BB40782-BLK1	Blank	02/21/14
BB40782-SRM1	Reference	02/21/14

Batch ID: BB40797 **Preparation Method:** EPA 3050B **Prepared By:** MW

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-07	SB08_0-2	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14
BB40797-BLK1	Blank	02/21/14
BB40797-DUP1	Duplicate	02/21/14
BB40797-MS1	Matrix Spike	02/21/14
BB40797-SRM1	Reference	02/21/14

Batch ID: BB40798 **Preparation Method:** EPA 3550C **Prepared By:** SA

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-07	SB08_0-2	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14
BB40798-BLK1	Blank	02/21/14
BB40798-BS1	LCS	02/21/14
BB40798-BSD1	LCS Dup	02/21/14
BB40798-MS1	Matrix Spike	02/21/14

Batch ID: BB40799 **Preparation Method:** EPA 3010A **Prepared By:** MW

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/21/14
BB40799-BLK1	Blank	02/21/14
BB40799-SRM1	Reference	02/21/14

Batch ID: BB40804 **Preparation Method:** % Solids Prep **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14

Batch ID: BB40805 **Preparation Method:** % Solids Prep **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-07	SB08_0-2	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-11	SB04_1-3	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14

Batch ID: BB40810 **Preparation Method:** EPA 5035A **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/21/14
14B0504-02	SB01_7-9	02/21/14
14B0504-03	SB06_3-5	02/21/14
14B0504-04	SB06_6-8	02/21/14
14B0504-05	SB07_1-3	02/21/14
14B0504-06	SB07_5-7	02/21/14
14B0504-07	SB08_0-2	02/21/14
14B0504-08	SB08_15-17	02/21/14
14B0504-12	SB04_4-6	02/21/14
14B0504-13	DUP01_022014	02/21/14
BB40810-BLK1	Blank	02/21/14
BB40810-BS1	LCS	02/21/14
BB40810-BSD1	LCS Dup	02/21/14

Batch ID: BB40817 **Preparation Method:** EPA 5030B **Prepared By:** BGS

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/21/14
14B0504-10	TB_022014	02/21/14
BB40817-BLK1	Blank	02/21/14
BB40817-BS1	LCS	02/21/14
BB40817-BSD1	LCS Dup	02/21/14

Batch ID: BB40845 **Preparation Method:** EPA 7473 soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/24/14
BB40845-BLK1	Blank	02/24/14
BB40845-SRM1	Reference	02/24/14

Batch ID: BB40851 **Preparation Method:** EPA 3510C **Prepared By:** KAT

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/24/14
BB40851-BLK1	Blank	02/24/14
BB40851-BLK2	Blank	02/24/14
BB40851-BS1	LCS	02/24/14
BB40851-BS2	LCS	02/24/14
BB40851-BSD1	LCS Dup	02/24/14

Batch ID: BB40888 **Preparation Method:** EPA SW846-3060 **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-01	SB01_4-6	02/24/14
14B0504-02	SB01_7-9	02/24/14
14B0504-03	SB06_3-5	02/24/14
14B0504-04	SB06_6-8	02/24/14
14B0504-05	SB07_1-3	02/24/14
14B0504-06	SB07_5-7	02/24/14
14B0504-07	SB08_0-2	02/24/14
14B0504-08	SB08_15-17	02/24/14
14B0504-11	SB04_1-3	02/24/14
14B0504-12	SB04_4-6	02/24/14
14B0504-13	DUP01_022014	02/24/14

Batch ID: BB40891 **Preparation Method:** EPA 5035A **Prepared By:** BK

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-11	SB04_1-3	02/24/14
BB40891-BLK1	Blank	02/24/14
BB40891-BS1	LCS	02/24/14
BB40891-BSD1	LCS Dup	02/24/14

Batch ID: BB40901 **Preparation Method:** EPA 7473 soil **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-02	SB01_7-9	02/25/14
14B0504-03	SB06_3-5	02/25/14
14B0504-04	SB06_6-8	02/25/14
14B0504-05	SB07_1-3	02/25/14
14B0504-06	SB07_5-7	02/25/14
14B0504-07	SB08_0-2	02/25/14
14B0504-08	SB08_15-17	02/25/14
14B0504-11	SB04_1-3	02/25/14

14B0504-12	SB04_4-6	02/25/14
14B0504-13	DUP01_022014	02/25/14
BB40901-BLK1	Blank	02/25/14
BB40901-DUP1	Duplicate	02/25/14
BB40901-MS1	Matrix Spike	02/25/14
BB40901-SRM1	Reference	02/25/14

Batch ID: BB40911 **Preparation Method:** EPA SW846-3510C Low Level **Prepared By:** KAT

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/25/14
14B0504-09	FB_022014	02/25/14
BB40911-BLK1	Blank	02/25/14
BB40911-BLK1	Blank	02/25/14
BB40911-BS1	LCS	02/25/14
BB40911-BS2	LCS	02/25/14
BB40911-BSD1	LCS Dup	02/25/14
BB40911-BSD2	LCS Dup	02/25/14

Batch ID: BB40925 **Preparation Method:** EPA SW846-7470 **Prepared By:** AA

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/25/14
BB40925-BLK1	Blank	02/25/14
BB40925-BS1	LCS	02/25/14
BB40925-BS2	LCS	02/25/14

Batch ID: BB40950 **Preparation Method:** EPA 5035A **Prepared By:** BK

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-11RE1	SB04_1-3	02/25/14
BB40950-BLK1	Blank	02/25/14
BB40950-BS1	LCS	02/25/14
BB40950-BSD1	LCS Dup	02/25/14

Batch ID: BB40967 **Preparation Method:** *** DEFAULT PREP *** **Prepared By:** SC

YORK Sample ID	Client Sample ID	Preparation Date
14B0504-09	FB_022014	02/26/14

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40810 - EPA 5035A											
Blank (BB40810-BLK1)									Prepared & Analyzed: 02/21/2014		
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	ND	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0092	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*54.3*		*ug/L*	*50.0*		*109*	*72-137*				
Surrogate: p-Bromofluorobenzene	*49.7*		*"*	*50.0*		*99.3*	*72-138*				
Surrogate: Toluene-d8	*51.8*		*"*	*50.0*		*104*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40810 - EPA 5035A											
LCS (BB40810-BS1)								Prepared & Analyzed: 02/21/2014			
1,1,1-Trichloroethane	52		ug/L	50.0		105	76-135				
1,1-Dichloroethane	56		"	50.0		112	80-119				
1,1-Dichloroethylene	47		"	50.0		93.8	58-139				
1,2,4-Trimethylbenzene	59		"	50.0		117	82-116	High Bias			
1,2-Dichlorobenzene	53		"	50.0		106	85-114				
1,2-Dichloroethane	55		"	50.0		110	72-136				
1,3,5-Trimethylbenzene	57		"	50.0		114	86-114				
1,3-Dichlorobenzene	53		"	50.0		105	84-114				
1,4-Dichlorobenzene	54		"	50.0		109	82-116				
1,4-Dioxane	1100		"	1000		108	10-208				
2-Butanone	79		"	50.0		158	60-129	High Bias			
Acetone	75		"	50.0		151	26-119	High Bias			
Benzene	52		"	50.0		104	81-117				
Carbon tetrachloride	51		"	50.0		102	79-135				
Chlorobenzene	54		"	50.0		107	87-112				
Chloroform	52		"	50.0		105	80-126				
cis-1,2-Dichloroethylene	49		"	50.0		97.4	80-119				
Ethyl Benzene	55		"	50.0		111	88-117				
Methyl tert-butyl ether (MTBE)	58		"	50.0		117	58-137				
Methylene chloride	66		"	50.0		131	47-140				
n-Butylbenzene	59		"	50.0		118	79-119				
n-Propylbenzene	58		"	50.0		116	82-116				
o-Xylene	56		"	50.0		112	88-111	High Bias			
p- & m- Xylenes	110		"	100		112	86-117				
sec-Butylbenzene	57		"	50.0		114	85-119				
tert-Butylbenzene	57		"	50.0		114	84-119				
Tetrachloroethylene	53		"	50.0		105	74-127				
Toluene	55		"	50.0		110	83-114				
trans-1,2-Dichloroethylene	53		"	50.0		106	68-131				
Trichloroethylene	57		"	50.0		114	84-118				
Vinyl Chloride	53		"	50.0		106	46-133				
Surrogate: 1,2-Dichloroethane-d4	*51.6*		*"*	*50.0*		*103*	*72-137*				
Surrogate: p-Bromofluorobenzene	*48.9*		*"*	*50.0*		*97.8*	*72-138*				
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.8*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40810 - EPA 5035A											
LCS Dup (BB40810-BSD1)								Prepared & Analyzed: 02/21/2014			
1,1,1-Trichloroethane	50		ug/L	50.0		99.3	76-135		5.24	30	
1,1-Dichloroethane	53		"	50.0		106	80-119		5.44	30	
1,1-Dichloroethylene	46		"	50.0		92.4	58-139		1.48	30	
1,2,4-Trimethylbenzene	56		"	50.0		112	82-116		4.74	30	
1,2-Dichlorobenzene	51		"	50.0		101	85-114		4.44	30	
1,2-Dichloroethane	50		"	50.0		101	72-136		8.90	30	
1,3,5-Trimethylbenzene	55		"	50.0		110	86-114		3.26	30	
1,3-Dichlorobenzene	52		"	50.0		104	84-114		1.13	30	
1,4-Dichlorobenzene	53		"	50.0		106	82-116		2.63	30	
1,4-Dioxane	930		"	1000		92.6	10-208		15.8	30	
2-Butanone	78		"	50.0		157	60-129	High Bias	0.648	30	
Acetone	84		"	50.0		168	26-119	High Bias	10.6	30	
Benzene	50		"	50.0		100	81-117		4.06	30	
Carbon tetrachloride	50		"	50.0		99.7	79-135		2.16	30	
Chlorobenzene	50		"	50.0		101	87-112		6.25	30	
Chloroform	50		"	50.0		99.9	80-126		4.77	30	
cis-1,2-Dichloroethylene	46		"	50.0		91.9	80-119		5.85	30	
Ethyl Benzene	53		"	50.0		106	88-117		4.36	30	
Methyl tert-butyl ether (MTBE)	52		"	50.0		104	58-137		11.2	30	
Methylene chloride	63		"	50.0		125	47-140		4.67	30	
n-Butylbenzene	58		"	50.0		117	79-119		1.28	30	
n-Propylbenzene	56		"	50.0		112	82-116		3.77	30	
o-Xylene	55		"	50.0		109	88-111		2.78	30	
p- & m- Xylenes	100		"	100		105	86-117		6.20	30	
sec-Butylbenzene	54		"	50.0		109	85-119		4.54	30	
tert-Butylbenzene	55		"	50.0		110	84-119		4.13	30	
Tetrachloroethylene	50		"	50.0		99.7	74-127		5.60	30	
Toluene	53		"	50.0		106	83-114		3.24	30	
trans-1,2-Dichloroethylene	52		"	50.0		105	68-131		1.57	30	
Trichloroethylene	55		"	50.0		109	84-118		4.76	30	
Vinyl Chloride	50		"	50.0		99.8	46-133		5.89	30	
Surrogate: 1,2-Dichloroethane-d4	*49.8*		*"*	*50.0*		*99.5*	*72-137*				
Surrogate: p-Bromofluorobenzene	*49.2*		*"*	*50.0*		*98.3*	*72-138*				
Surrogate: Toluene-d8	*51.6*		*"*	*50.0*		*103*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40817 - EPA 5030B											
Blank (BB40817-BLK1)											Prepared & Analyzed: 02/21/2014
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	680	80	"								
2-Butanone	ND	0.50	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*79-133*				
Surrogate: p-Bromofluorobenzene	*10.0*		*"*	*10.0*		*100*	*65-133*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40817 - EPA 5030B											
LCS (BB40817-BS1)								Prepared & Analyzed: 02/21/2014			
1,1,1-Trichloroethane	10		ug/L	10.0		104	80-131				
1,1-Dichloroethane	10		"	10.0		103	79-123				
1,1-Dichloroethylene	10		"	10.0		104	71-123				
1,2,4-Trimethylbenzene	10		"	10.0		102	68-134				
1,2-Dichlorobenzene	10		"	10.0		102	83-110				
1,2-Dichloroethane	10		"	10.0		101	81-120				
1,3,5-Trimethylbenzene	11		"	10.0		106	74-121				
1,3-Dichlorobenzene	10		"	10.0		101	82-112				
1,4-Dichlorobenzene	10		"	10.0		101	83-110				
1,4-Dioxane	760		"	200		379	70-130	High Bias			
2-Butanone	11		"	10.0		106	64-128				
Acetone	7.2		"	10.0		72.2	54-129				
Benzene	10		"	10.0		102	77-122				
Carbon tetrachloride	11		"	10.0		105	66-152				
Chlorobenzene	10		"	10.0		101	85-113				
Chloroform	10		"	10.0		103	82-119				
cis-1,2-Dichloroethylene	10		"	10.0		103	79-116				
Ethyl Benzene	10		"	10.0		102	85-125				
Methyl tert-butyl ether (MTBE)	10		"	10.0		103	51-134				
Methylene chloride	9.9		"	10.0		99.0	76-122				
n-Butylbenzene	10		"	10.0		103	69-127				
n-Propylbenzene	10		"	10.0		104	70-129				
o-Xylene	10		"	10.0		101	83-117				
p- & m- Xylenes	20		"	20.0		102	80-126				
sec-Butylbenzene	10		"	10.0		104	72-132				
tert-Butylbenzene	10		"	10.0		104	75-129				
Tetrachloroethylene	10		"	10.0		103	67-118				
Toluene	10		"	10.0		101	82-118				
trans-1,2-Dichloroethylene	10		"	10.0		102	76-119				
Trichloroethylene	10		"	10.0		101	71-122				
Vinyl Chloride	10		"	10.0		103	49-125				
Surrogate: 1,2-Dichloroethane-d4	*10.2*		*"*	*10.0*		*102*	*79-133*				
Surrogate: p-Bromofluorobenzene	*9.93*		*"*	*10.0*		*99.3*	*65-133*				
Surrogate: Toluene-d8	*9.91*		*"*	*10.0*		*99.1*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40817 - EPA 5030B											
LCS Dup (BB40817-BSD1)								Prepared & Analyzed: 02/21/2014			
1,1,1-Trichloroethane	10		ug/L	10.0		105	80-131		0.766	30	
1,1-Dichloroethane	10		"	10.0		104	79-123		0.776	30	
1,1-Dichloroethylene	10		"	10.0		101	71-123		2.64	30	
1,2,4-Trimethylbenzene	10		"	10.0		102	68-134		0.196	30	
1,2-Dichlorobenzene	12		"	10.0		121	83-110	High Bias	16.5	30	
1,2-Dichloroethane	10		"	10.0		101	81-120		0.198	30	
1,3,5-Trimethylbenzene	11		"	10.0		106	74-121		0.659	30	
1,3-Dichlorobenzene	10		"	10.0		102	82-112		0.296	30	
1,4-Dichlorobenzene	10		"	10.0		102	83-110		0.493	30	
1,4-Dioxane	680		"	200		342	70-130	High Bias	10.3	30	
2-Butanone	10		"	10.0		104	64-128		2.48	30	
Acetone	8.2		"	10.0		81.5	54-129		12.1	30	
Benzene	10		"	10.0		102	77-122		0.588	30	
Carbon tetrachloride	10		"	10.0		104	66-152		1.53	30	
Chlorobenzene	10		"	10.0		104	85-113		2.74	30	
Chloroform	10		"	10.0		103	82-119		0.292	30	
cis-1,2-Dichloroethylene	10		"	10.0		103	79-116		0.486	30	
Ethyl Benzene	10		"	10.0		104	85-125		2.24	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0		101	51-134		1.97	30	
Methylene chloride	9.9		"	10.0		99.0	76-122		0.00	30	
n-Butylbenzene	10		"	10.0		104	69-127		0.387	30	
n-Propylbenzene	10		"	10.0		104	70-129		0.00	30	
o-Xylene	10		"	10.0		103	83-117		2.15	30	
p- & m- Xylenes	21		"	20.0		105	80-126		2.60	30	
sec-Butylbenzene	10		"	10.0		104	72-132		0.00	30	
tert-Butylbenzene	10		"	10.0		104	75-129		0.865	30	
Tetrachloroethylene	11		"	10.0		105	67-118		2.50	30	
Toluene	10		"	10.0		103	82-118		2.16	30	
trans-1,2-Dichloroethylene	10		"	10.0		101	76-119		0.394	30	
Trichloroethylene	10		"	10.0		104	71-122		3.31	30	
Vinyl Chloride	10		"	10.0		102	49-125		1.56	30	
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*79-133*				
Surrogate: p-Bromofluorobenzene	*9.99*		*"*	*10.0*		*99.9*	*65-133*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*80-123*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40891 - EPA 5035A											
Blank (BB40891-BLK1)											Prepared: 02/24/2014 Analyzed: 02/25/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	0.0025	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0027	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*52.4*		*ug/L*	*50.0*		*105*	*72-137*				
Surrogate: p-Bromofluorobenzene	*49.9*		*"*	*50.0*		*99.9*	*72-138*				
Surrogate: Toluene-d8	*50.5*		*"*	*50.0*		*101*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40891 - EPA 5035A											
LCS (BB40891-BS1)								Prepared & Analyzed: 02/24/2014			
1,1,1-Trichloroethane	54		ug/L	50.0		108	76-135				
1,1-Dichloroethane	52		"	50.0		104	80-119				
1,1-Dichloroethylene	50		"	50.0		101	58-139				
1,2,4-Trimethylbenzene	51		"	50.0		101	82-116				
1,2-Dichlorobenzene	51		"	50.0		102	85-114				
1,2-Dichloroethane	53		"	50.0		105	72-136				
1,3,5-Trimethylbenzene	51		"	50.0		102	86-114				
1,3-Dichlorobenzene	51		"	50.0		103	84-114				
1,4-Dichlorobenzene	53		"	50.0		105	82-116				
1,4-Dioxane	660		"	1000		66.5	10-208				
2-Butanone	50		"	50.0		101	60-129				
Acetone	48		"	50.0		96.4	26-119				
Benzene	53		"	50.0		107	81-117				
Carbon tetrachloride	53		"	50.0		106	79-135				
Chlorobenzene	52		"	50.0		103	87-112				
Chloroform	51		"	50.0		103	80-126				
cis-1,2-Dichloroethylene	52		"	50.0		103	80-119				
Ethyl Benzene	52		"	50.0		105	88-117				
Methyl tert-butyl ether (MTBE)	54		"	50.0		107	58-137				
Methylene chloride	49		"	50.0		98.9	47-140				
n-Butylbenzene	53		"	50.0		107	79-119				
n-Propylbenzene	51		"	50.0		102	82-116				
o-Xylene	51		"	50.0		103	88-111				
p- & m- Xylenes	110		"	100		106	86-117				
sec-Butylbenzene	52		"	50.0		104	85-119				
tert-Butylbenzene	51		"	50.0		101	84-119				
Tetrachloroethylene	50		"	50.0		100	74-127				
Toluene	52		"	50.0		103	83-114				
trans-1,2-Dichloroethylene	52		"	50.0		104	68-131				
Trichloroethylene	51		"	50.0		101	84-118				
Vinyl Chloride	51		"	50.0		101	46-133				
Surrogate: 1,2-Dichloroethane-d4	*49.7*		*"*	*50.0*		*99.4*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.0*		*"*	*50.0*		*102*	*72-138*				
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.9*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40891 - EPA 5035A											
LCS Dup (BB40891-BSD1)								Prepared & Analyzed: 02/24/2014			
1,1,1-Trichloroethane	54		ug/L	50.0		107	76-135		0.650	30	
1,1-Dichloroethane	53		"	50.0		105	80-119		1.26	30	
1,1-Dichloroethylene	52		"	50.0		104	58-139		3.36	30	
1,2,4-Trimethylbenzene	53		"	50.0		106	82-116		4.61	30	
1,2-Dichlorobenzene	53		"	50.0		105	85-114		3.05	30	
1,2-Dichloroethane	53		"	50.0		106	72-136		0.928	30	
1,3,5-Trimethylbenzene	53		"	50.0		106	86-114		3.97	30	
1,3-Dichlorobenzene	53		"	50.0		107	84-114		4.09	30	
1,4-Dichlorobenzene	55		"	50.0		109	82-116		3.84	30	
1,4-Dioxane	610		"	1000		61.1	10-208		8.47	30	
2-Butanone	49		"	50.0		97.0	60-129		3.80	30	
Acetone	45		"	50.0		90.1	26-119		6.80	30	
Benzene	53		"	50.0		106	81-117		0.319	30	
Carbon tetrachloride	54		"	50.0		107	79-135		1.67	30	
Chlorobenzene	52		"	50.0		104	87-112		0.212	30	
Chloroform	52		"	50.0		104	80-126		1.31	30	
cis-1,2-Dichloroethylene	53		"	50.0		106	80-119		2.01	30	
Ethyl Benzene	52		"	50.0		104	88-117		0.903	30	
Methyl tert-butyl ether (MTBE)	52		"	50.0		105	58-137		2.59	30	
Methylene chloride	49		"	50.0		97.4	47-140		1.47	30	
n-Butylbenzene	54		"	50.0		108	79-119		0.784	30	
n-Propylbenzene	53		"	50.0		106	82-116		3.68	30	
o-Xylene	53		"	50.0		106	88-111		2.99	30	
p- & m- Xylenes	100		"	100		104	86-117		1.50	30	
sec-Butylbenzene	53		"	50.0		107	85-119		2.29	30	
tert-Butylbenzene	56		"	50.0		112	84-119		10.1	30	
Tetrachloroethylene	52		"	50.0		104	74-127		3.14	30	
Toluene	52		"	50.0		105	83-114		1.42	30	
trans-1,2-Dichloroethylene	53		"	50.0		106	68-131		1.12	30	
Trichloroethylene	52		"	50.0		103	84-118		1.70	30	
Vinyl Chloride	50		"	50.0		100	46-133		0.794	30	
Surrogate: 1,2-Dichloroethane-d4	*50.6*		*"*	*50.0*		*101*	*72-137*				
Surrogate: p-Bromofluorobenzene	*52.8*		*"*	*50.0*		*106*	*72-138*				
Surrogate: Toluene-d8	*48.4*		*"*	*50.0*		*96.9*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40950 - EPA 5035A											
Blank (BB40950-BLK1)											Prepared: 02/25/2014 Analyzed: 02/26/2014
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet								
1,1-Dichloroethane	ND	0.0050	"								
1,1-Dichloroethylene	ND	0.0050	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,2-Dichlorobenzene	ND	0.0050	"								
1,2-Dichloroethane	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
1,3-Dichlorobenzene	ND	0.0050	"								
1,4-Dichlorobenzene	ND	0.0050	"								
1,4-Dioxane	ND	0.10	"								
2-Butanone	ND	0.0050	"								
Acetone	ND	0.010	"								
Benzene	ND	0.0050	"								
Carbon tetrachloride	ND	0.0050	"								
Chlorobenzene	ND	0.0050	"								
Chloroform	ND	0.0050	"								
cis-1,2-Dichloroethylene	ND	0.0050	"								
Ethyl Benzene	ND	0.0050	"								
Methyl tert-butyl ether (MTBE)	ND	0.0050	"								
Methylene chloride	0.0026	0.010	"								
n-Butylbenzene	ND	0.0050	"								
n-Propylbenzene	ND	0.0050	"								
o-Xylene	ND	0.0050	"								
p- & m- Xylenes	ND	0.010	"								
sec-Butylbenzene	ND	0.0050	"								
tert-Butylbenzene	ND	0.0050	"								
Tetrachloroethylene	ND	0.0050	"								
Toluene	ND	0.0050	"								
trans-1,2-Dichloroethylene	ND	0.0050	"								
Trichloroethylene	ND	0.0050	"								
Vinyl Chloride	ND	0.0050	"								
Xylenes, Total	ND	0.015	"								
Surrogate: 1,2-Dichloroethane-d4	*50.4*		*ug/L*	*50.0*		*101*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.5*		*"*	*50.0*		*103*	*72-138*				
Surrogate: Toluene-d8	*51.6*		*"*	*50.0*		*103*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40950 - EPA 5035A											
LCS (BB40950-BS1)									Prepared: 02/25/2014 Analyzed: 02/26/2014		
1,1,1-Trichloroethane	51		ug/L	50.0		101	76-135				
1,1-Dichloroethane	51		"	50.0		102	80-119				
1,1-Dichloroethylene	49		"	50.0		98.4	58-139				
1,2,4-Trimethylbenzene	51		"	50.0		102	82-116				
1,2-Dichlorobenzene	53		"	50.0		106	85-114				
1,2-Dichloroethane	50		"	50.0		99.3	72-136				
1,3,5-Trimethylbenzene	53		"	50.0		106	86-114				
1,3-Dichlorobenzene	51		"	50.0		102	84-114				
1,4-Dichlorobenzene	52		"	50.0		103	82-116				
1,4-Dioxane	630		"	1000		62.9	10-208				
2-Butanone	48		"	50.0		95.5	60-129				
Acetone	43		"	50.0		86.6	26-119				
Benzene	50		"	50.0		101	81-117				
Carbon tetrachloride	51		"	50.0		102	79-135				
Chlorobenzene	53		"	50.0		106	87-112				
Chloroform	50		"	50.0		101	80-126				
cis-1,2-Dichloroethylene	50		"	50.0		99.6	80-119				
Ethyl Benzene	53		"	50.0		106	88-117				
Methyl tert-butyl ether (MTBE)	51		"	50.0		102	58-137				
Methylene chloride	48		"	50.0		96.6	47-140				
n-Butylbenzene	54		"	50.0		107	79-119				
n-Propylbenzene	53		"	50.0		105	82-116				
o-Xylene	53		"	50.0		106	88-111				
p- & m- Xylenes	110		"	100		108	86-117				
sec-Butylbenzene	55		"	50.0		109	85-119				
tert-Butylbenzene	51		"	50.0		102	84-119				
Tetrachloroethylene	56		"	50.0		111	74-127				
Toluene	53		"	50.0		107	83-114				
trans-1,2-Dichloroethylene	51		"	50.0		101	68-131				
Trichloroethylene	55		"	50.0		109	84-118				
Vinyl Chloride	48		"	50.0		95.7	46-133				
Surrogate: 1,2-Dichloroethane-d4	*49.5*		*"*	*50.0*		*99.0*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.8*		*"*	*50.0*		*104*	*72-138*				
Surrogate: Toluene-d8	*52.1*		*"*	*50.0*		*104*	*85-118*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40950 - EPA 5035A											
LCS Dup (BB40950-BSD1)									Prepared: 02/25/2014 Analyzed: 02/26/2014		
1,1,1-Trichloroethane	50		ug/L	50.0		100	76-135		1.11	30	
1,1-Dichloroethane	51		"	50.0		101	80-119		1.36	30	
1,1-Dichloroethylene	48		"	50.0		96.7	58-139		1.72	30	
1,2,4-Trimethylbenzene	52		"	50.0		104	82-116		1.71	30	
1,2-Dichlorobenzene	53		"	50.0		105	85-114		1.00	30	
1,2-Dichloroethane	50		"	50.0		100	72-136		1.16	30	
1,3,5-Trimethylbenzene	52		"	50.0		105	86-114		1.42	30	
1,3-Dichlorobenzene	52		"	50.0		105	84-114		2.90	30	
1,4-Dichlorobenzene	52		"	50.0		103	82-116		0.329	30	
1,4-Dioxane	630		"	1000		62.8	10-208		0.170	30	
2-Butanone	47		"	50.0		93.4	60-129		2.22	30	
Acetone	49		"	50.0		98.5	26-119		12.9	30	
Benzene	50		"	50.0		99.8	81-117		0.719	30	
Carbon tetrachloride	51		"	50.0		102	79-135		0.157	30	
Chlorobenzene	54		"	50.0		107	87-112		0.524	30	
Chloroform	49		"	50.0		98.4	80-126		2.49	30	
cis-1,2-Dichloroethylene	51		"	50.0		102	80-119		2.18	30	
Ethyl Benzene	54		"	50.0		108	88-117		1.23	30	
Methyl tert-butyl ether (MTBE)	50		"	50.0		99.7	58-137		2.44	30	
Methylene chloride	48		"	50.0		95.9	47-140		0.790	30	
n-Butylbenzene	53		"	50.0		106	79-119		1.11	30	
n-Propylbenzene	52		"	50.0		104	82-116		1.30	30	
o-Xylene	53		"	50.0		105	88-111		1.00	30	
p- & m- Xylenes	110		"	100		108	86-117		0.176	30	
sec-Butylbenzene	53		"	50.0		105	85-119		4.01	30	
tert-Butylbenzene	57		"	50.0		113	84-119		10.5	30	
Tetrachloroethylene	54		"	50.0		108	74-127		2.50	30	
Toluene	53		"	50.0		106	83-114		0.319	30	
trans-1,2-Dichloroethylene	51		"	50.0		101	68-131		0.138	30	
Trichloroethylene	53		"	50.0		106	84-118		2.71	30	
Vinyl Chloride	48		"	50.0		95.9	46-133		0.188	30	
Surrogate: 1,2-Dichloroethane-d4	*49.0*		*"*	*50.0*		*97.9*	*72-137*				
Surrogate: p-Bromofluorobenzene	*51.4*		*"*	*50.0*		*103*	*72-138*				
Surrogate: Toluene-d8	*51.9*		*"*	*50.0*		*104*	*85-118*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40798 - EPA 3550C											
Blank (BB40798-BLK1)											
Prepared: 02/21/2014 Analyzed: 02/24/2014											
Acenaphthene	ND	0.167	mg/kg wet								
Acenaphthylene	ND	0.167	"								
Anthracene	ND	0.167	"								
Benzo(a)anthracene	ND	0.167	"								
Benzo(a)pyrene	ND	0.167	"								
Benzo(b)fluoranthene	ND	0.167	"								
Benzo(g,h,i)perylene	ND	0.167	"								
Benzo(k)fluoranthene	ND	0.167	"								
Chrysene	ND	0.167	"								
Dibenzo(a,h)anthracene	ND	0.167	"								
Dibenzofuran	ND	0.167	"								
Fluoranthene	ND	0.167	"								
Fluorene	ND	0.167	"								
Hexachlorobenzene	ND	0.167	"								
Indeno(1,2,3-cd)pyrene	ND	0.167	"								
2-Methylphenol	ND	0.167	"								
3- & 4-Methylphenols	ND	0.167	"								
Naphthalene	ND	0.167	"								
Pentachlorophenol	ND	0.167	"								
Phenanthrene	ND	0.167	"								
Phenol	ND	0.167	"								
Pyrene	ND	0.167	"								
Surrogate: 2-Fluorophenol	*2.02*		"	*2.52*		*80.3*	*10-109*				
Surrogate: Phenol-d5	*2.13*		"	*2.52*		*84.5*	*10-124*				
Surrogate: Nitrobenzene-d5	*0.778*		"	*1.70*		*45.8*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.03*		"	*1.69*		*60.6*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*1.79*		"	*2.48*		*72.0*	*10-142*				
Surrogate: Terphenyl-d14	*0.792*		"	*1.69*		*46.9*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40798 - EPA 3550C											
LCS (BB40798-BS1)									Prepared: 02/21/2014 Analyzed: 02/24/2014		
Acenaphthene	1.05	0.167	mg/kg wet	1.67		63.0	35-127				
Acenaphthylene	1.15	0.167	"	1.67		68.8	37-121				
Anthracene	1.18	0.167	"	1.67		70.8	38-131				
Benzo(a)anthracene	0.816	0.167	"	1.67		49.0	37-137				
Benzo(a)pyrene	1.51	0.167	"	1.67		90.7	33-162				
Benzo(b)fluoranthene	1.22	0.167	"	1.67		73.3	26-160				
Benzo(g,h,i)perylene	1.69	0.167	"	1.67		102	10-154				
Benzo(k)fluoranthene	1.31	0.167	"	1.67		78.7	34-143				
Chrysene	1.51	0.167	"	1.67		90.6	38-132				
Dibenzo(a,h)anthracene	1.70	0.167	"	1.67		102	14-153				
Dibenzofuran	1.60	0.167	"	1.67		95.8	39-123				
Fluoranthene	1.43	0.167	"	1.67		85.7	35-136				
Fluorene	1.08	0.167	"	1.67		65.0	33-134				
Hexachlorobenzene	1.07	0.167	"	1.67		64.4	31-139				
Indeno(1,2,3-cd)pyrene	1.71	0.167	"	1.67		103	11-155				
2-Methylphenol	1.13	0.167	"	1.67		67.5	30-128				
3- & 4-Methylphenols	1.11	0.167	"	1.67		66.5	30-120				
Naphthalene	1.38	0.167	"	1.67		83.0	28-121				
Pentachlorophenol	1.29	0.167	"	1.67		77.4	15-182				
Phenanthrene	1.12	0.167	"	1.67		67.1	37-132				
Phenol	1.12	0.167	"	1.67		67.1	28-124				
Pyrene	1.54	0.167	"	1.67		92.6	30-147				
Surrogate: 2-Fluorophenol	*1.56*		*"*	*2.52*		*61.8*	*10-109*				
Surrogate: Phenol-d5	*1.55*		*"*	*2.52*		*61.6*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.26*		*"*	*1.70*		*74.0*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.11*		*"*	*1.69*		*65.6*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*2.64*		*"*	*2.48*		*106*	*10-142*				
Surrogate: Terphenyl-d14	*1.49*		*"*	*1.69*		*88.3*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40798 - EPA 3550C											
LCS Dup (BB40798-BSD1)									Prepared: 02/21/2014 Analyzed: 02/24/2014		
Acenaphthene	0.884	0.167	mg/kg wet	1.67		53.1	35-127		17.1	30	
Acenaphthylene	0.997	0.167	"	1.67		59.8	37-121		14.1	30	
Anthracene	1.27	0.167	"	1.67		76.4	38-131		7.60	30	
Benzo(a)anthracene	1.43	0.167	"	1.67		85.6	37-137		54.4	30	Non-dir.
Benzo(a)pyrene	1.56	0.167	"	1.67		93.4	33-162		3.00	30	
Benzo(b)fluoranthene	1.62	0.167	"	1.67		97.5	26-160		28.3	30	
Benzo(g,h,i)perylene	1.59	0.167	"	1.67		95.2	10-154		6.50	30	
Benzo(k)fluoranthene	1.30	0.167	"	1.67		78.2	34-143		0.637	30	
Chrysene	1.67	0.167	"	1.67		100	38-132		10.1	30	
Dibenzo(a,h)anthracene	1.70	0.167	"	1.67		102	14-153		0.275	30	
Dibenzofuran	1.12	0.167	"	1.67		66.9	39-123		35.6	30	Non-dir.
Fluoranthene	1.30	0.167	"	1.67		78.3	35-136		9.07	30	
Fluorene	1.16	0.167	"	1.67		69.5	33-134		6.69	30	
Hexachlorobenzene	1.07	0.167	"	1.67		64.4	31-139		0.0621	30	
Indeno(1,2,3-cd)pyrene	1.74	0.167	"	1.67		104	11-155		1.78	30	
2-Methylphenol	0.981	0.167	"	1.67		58.9	30-128		13.7	30	
3- & 4-Methylphenols	0.977	0.167	"	1.67		58.6	30-120		12.5	30	
Naphthalene	0.862	0.167	"	1.67		51.7	28-121		46.5	30	Non-dir.
Pentachlorophenol	1.11	0.167	"	1.67		66.9	15-182		14.6	30	
Phenanthrene	1.14	0.167	"	1.67		68.7	37-132		2.27	30	
Phenol	1.13	0.167	"	1.67		67.7	28-124		0.920	30	
Pyrene	1.51	0.167	"	1.67		90.5	30-147		2.34	30	
Surrogate: 2-Fluorophenol	*1.51*		*"*	*2.52*		*59.8*	*10-109*				
Surrogate: Phenol-d5	*1.48*		*"*	*2.52*		*58.6*	*10-124*				
Surrogate: Nitrobenzene-d5	*0.898*		*"*	*1.70*		*52.8*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*1.02*		*"*	*1.69*		*60.5*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*2.16*		*"*	*2.48*		*87.0*	*10-142*				
Surrogate: Terphenyl-d14	*1.16*		*"*	*1.69*		*68.9*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40798 - EPA 3550C											
Matrix Spike (BB40798-MS1)	*Source sample: 14B0504-01 (SB01_4-6)							Prepared: 02/21/2014 Analyzed: 02/24/2014			
Acenaphthene	2.06	1.00	mg/kg dry	2.01	ND	102	10-143				
Acenaphthylene	2.09	1.00	"	2.01	ND	104	10-137				
Anthracene	2.42	1.00	"	2.01	ND	120	18-140				
Benzo(a)anthracene	2.04	1.00	"	2.01	0.314	85.8	10-154				
Benzo(a)pyrene	2.25	1.00	"	2.01	ND	112	12-172				
Benzo(b)fluoranthene	2.33	1.00	"	2.01	ND	116	18-163				
Benzo(g,h,i)perylene	0.882	1.00	"	2.01	ND	43.9	10-158				
Benzo(k)fluoranthene	2.86	1.00	"	2.01	ND	142	14-157				
Chrysene	2.50	1.00	"	2.01	0.287	110	22-140				
Dibenzo(a,h)anthracene	1.22	1.00	"	2.01	ND	60.7	10-146				
Dibenzofuran	2.37	1.00	"	2.01	ND	118	15-136				
Fluoranthene	2.66	1.00	"	2.01	0.923	86.6	10-155				
Fluorene	2.53	1.00	"	2.01	ND	126	18-139				
Hexachlorobenzene	1.94	1.00	"	2.01	ND	96.6	16-150				
Indeno(1,2,3-cd)pyrene	1.18	1.00	"	2.01	ND	58.8	10-158				
2-Methylphenol	1.67	1.00	"	2.01	ND	83.2	10-160				
3- & 4-Methylphenols	1.94	1.00	"	2.01	ND	96.5	10-130				
Naphthalene	2.17	1.00	"	2.01	ND	108	10-143				
Pentachlorophenol	1.19	1.00	"	2.01	ND	59.3	10-189				
Phenanthrene	2.26	1.00	"	2.01	0.742	75.3	12-151				
Phenol	2.00	1.00	"	2.01	ND	99.6	10-134				
Pyrene	2.58	1.00	"	2.01	0.559	100	10-156				
Surrogate: 2-Fluorophenol	*2.24*		"	*3.04*		*73.7*	*10-109*				
Surrogate: Phenol-d5	*2.45*		"	*3.03*		*80.7*	*10-124*				
Surrogate: Nitrobenzene-d5	*1.55*		"	*2.05*		*75.7*	*10-148*				
Surrogate: 2-Fluorobiphenyl	*2.22*		"	*2.04*		*109*	*10-111*				
Surrogate: 2,4,6-Tribromophenol	*2.98*		"	*2.99*		*99.6*	*10-142*				
Surrogate: Terphenyl-d14	*2.00*		"	*2.04*		*98.3*	*10-147*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40851 - EPA 3510C											
Blank (BB40851-BLK1)											
Prepared & Analyzed: 02/24/2014											
Acenaphthene	ND	0.0500	ug/L								
Acenaphthylene	ND	0.0500	"								
Anthracene	ND	0.0500	"								
Benzo(a)anthracene	ND	0.0500	"								
Benzo(a)pyrene	ND	0.0500	"								
Benzo(b)fluoranthene	ND	0.0500	"								
Benzo(g,h,i)perylene	ND	0.0500	"								
Benzo(k)fluoranthene	ND	0.0500	"								
Chrysene	ND	0.0500	"								
Dibenzo(a,h)anthracene	ND	0.0500	"								
Dibenzofuran	ND	5.00	"								
Fluoranthene	ND	0.0500	"								
Fluorene	ND	0.0500	"								
Hexachlorobenzene	ND	0.0400	"								
Indeno(1,2,3-cd)pyrene	ND	0.0500	"								
2-Methylphenol	ND	5.00	"								
3- & 4-Methylphenols	ND	5.00	"								
Naphthalene	ND	0.0500	"								
Pentachlorophenol	ND	1.00	"								
Phenanthrene	ND	0.0500	"								
Phenol	ND	5.00	"								
Pyrene	ND	0.0500	"								
Surrogate: 2-Fluorophenol	*16.3*		"	*75.6*		*21.6*	*10-52*				
Surrogate: Phenol-d5	*10.5*		"	*75.5*		*13.9*	*10-117*				
Surrogate: Nitrobenzene-d5	*24.4*		"	*51.0*		*47.8*	*12-112*				
Surrogate: 2-Fluorobiphenyl	*26.2*		"	*50.8*		*51.6*	*14-101*				
Surrogate: 2,4,6-Tribromophenol	*50.7*		"	*74.4*		*68.1*	*17-127*				
Surrogate: Terphenyl-d14	*30.3*		"	*50.7*		*59.7*	*10-151*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40851 - EPA 3510C											
Blank (BB40851-BLK2)											Prepared & Analyzed: 02/24/2014
Acenaphthene	ND	0.100	ug/L								
Acenaphthylene	ND	0.100	"								
Anthracene	ND	0.100	"								
Benzo(a)anthracene	ND	0.100	"								
Benzo(a)pyrene	ND	0.100	"								
Benzo(b)fluoranthene	ND	0.100	"								
Benzo(g,h,i)perylene	ND	0.100	"								
Benzo(k)fluoranthene	ND	0.100	"								
Chrysene	ND	0.100	"								
Dibenzo(a,h)anthracene	ND	0.100	"								
Dibenzofuran	ND	10.0	"								
Fluoranthene	ND	0.100	"								
Fluorene	ND	0.100	"								
Hexachlorobenzene	ND	0.0800	"								
Indeno(1,2,3-cd)pyrene	ND	0.100	"								
2-Methylphenol	ND	10.0	"								
3- & 4-Methylphenols	ND	10.0	"								
Naphthalene	ND	0.100	"								
Pentachlorophenol	ND	2.00	"								
Phenanthrene	ND	0.100	"								
Phenol	ND	10.0	"								
Pyrene	ND	0.100	"								
Surrogate: 2-Fluorophenol	*59.5*		"	*151*		*39.3*	*10-52*				
Surrogate: Phenol-d5	*39.3*		"	*151*		*26.0*	*10-117*				
Surrogate: Nitrobenzene-d5	*56.6*		"	*102*		*55.5*	*12-112*				
Surrogate: 2-Fluorobiphenyl	*53.1*		"	*102*		*52.2*	*14-101*				
Surrogate: 2,4,6-Tribromophenol	*101*		"	*149*		*68.1*	*17-127*				
Surrogate: Terphenyl-d14	*58.8*		"	*101*		*58.0*	*10-151*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40851 - EPA 3510C											
LCS (BB40851-BS1)								Prepared & Analyzed: 02/24/2014			
Acenaphthene	29.4	0.0500	ug/L	50.0		58.9	10-116				
Acenaphthylene	28.9	0.0500	"	50.0		57.8	10-115				
Anthracene	29.9	0.0500	"	50.0		59.8	10-118				
Benzo(a)anthracene	32.8	0.0500	"	50.0		65.7	10-137				
Benzo(a)pyrene	35.5	0.0500	"	50.0		71.0	10-136				
Benzo(b)fluoranthene	32.1	0.0500	"	50.0		64.2	10-141				
Benzo(g,h,i)perylene	33.7	0.0500	"	50.0		67.3	10-152				
Benzo(k)fluoranthene	31.8	0.0500	"	50.0		63.6	10-137				
Chrysene	31.3	0.0500	"	50.0		62.5	10-132				
Dibenzo(a,h)anthracene	34.6	0.0500	"	50.0		69.3	10-159				
Dibenzofuran	30.7	5.00	"	50.0		61.4	36-96				
Fluoranthene	29.6	0.0500	"	50.0		59.2	10-126				
Fluorene	28.7	0.0500	"	50.0		57.4	10-126				
Hexachlorobenzene	32.4	0.0400	"	50.0		64.8	16-127				
Indeno(1,2,3-cd)pyrene	34.9	0.0500	"	50.0		69.8	10-158				
2-Methylphenol	19.9	5.00	"	50.0		39.8	10-88				
3- & 4-Methylphenols	16.2	5.00	"	50.0		32.5	10-71				
Naphthalene	28.3	0.0500	"	50.0		56.6	12-103				
Pentachlorophenol	37.3	1.00	"	50.0		74.6	15-150				
Phenanthrene	30.4	0.0500	"	50.0		60.9	10-119				
Phenol	10.3	5.00	"	50.0		20.6	10-57				
Pyrene	33.4	0.0500	"	50.0		66.9	10-159				
Surrogate: 2-Fluorophenol	*15.2*		"	*75.6*		*20.1*	*10-52*				
Surrogate: Phenol-d5	*11.7*		"	*75.5*		*15.5*	*10-117*				
Surrogate: Nitrobenzene-d5	*28.7*		"	*51.0*		*56.3*	*12-112*				
Surrogate: 2-Fluorobiphenyl	*24.5*		"	*50.8*		*48.3*	*14-101*				
Surrogate: 2,4,6-Tribromophenol	*51.3*		"	*74.4*		*69.0*	*17-127*				
Surrogate: Terphenyl-d14	*30.8*		"	*50.7*		*60.8*	*10-151*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40851 - EPA 3510C											
LCS (BB40851-BS2)							Prepared & Analyzed: 02/24/2014				
Acenaphthene	0.560	0.0500	ug/L	1.00		56.0	10-116				
Acenaphthylene	0.680	0.0500	"	1.00		68.0	10-115				
Anthracene	0.700	0.0500	"	1.00		70.0	10-118				
Benzo(a)anthracene	0.680	0.0500	"	1.00		68.0	10-137				
Benzo(a)pyrene	0.640	0.0500	"	1.00		64.0	10-136				
Benzo(b)fluoranthene	0.710	0.0500	"	1.00		71.0	10-141				
Benzo(g,h,i)perylene	0.790	0.0500	"	1.00		79.0	10-152				
Benzo(k)fluoranthene	0.690	0.0500	"	1.00		69.0	10-137				
Chrysene	0.620	0.0500	"	1.00		62.0	10-132				
Dibenzo(a,h)anthracene	0.830	0.0500	"	1.00		83.0	10-159				
Dibenzofuran	ND	5.00	"				36-96				
Fluoranthene	0.710	0.0500	"	1.00		71.0	10-126				
Fluorene	0.580	0.0500	"	1.00		58.0	10-126				
Hexachlorobenzene	ND	0.0400	"				16-127				
Indeno(1,2,3-cd)pyrene	0.780	0.0500	"	1.00		78.0	10-158				
2-Methylphenol	ND	5.00	"				10-88				
3- & 4-Methylphenols	ND	5.00	"				10-71				
Naphthalene	0.570	0.0500	"	1.00		57.0	12-103				
Pentachlorophenol	ND	1.00	"				15-150				
Phenanthrene	0.600	0.0500	"	1.00		60.0	10-119				
Phenol	ND	5.00	"				10-57				
Pyrene	0.680	0.0500	"	1.00		68.0	10-159				
Surrogate: 2-Fluorophenol	*0.00*		"	*75.6*			*10-52*				
Surrogate: Phenol-d5	*0.00*		"	*75.5*			*10-117*				
Surrogate: Nitrobenzene-d5	*0.240*		"	*51.0*		*0.471*	*12-112*				
Surrogate: 2-Fluorobiphenyl	*0.00*		"	*50.8*			*14-101*				
Surrogate: 2,4,6-Tribromophenol	*0.00*		"	*74.4*			*17-127*				
Surrogate: Terphenyl-d14	*0.00*		"	*50.7*			*10-151*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40851 - EPA 3510C											
LCS Dup (BB40851-BSD1)								Prepared & Analyzed: 02/24/2014			
Acenaphthene	28.1	0.0500	ug/L	50.0		56.3	10-116		4.58	30	
Acenaphthylene	27.4	0.0500	"	50.0		54.8	10-115		5.33	30	
Anthracene	28.8	0.0500	"	50.0		57.6	10-118		3.65	30	
Benzo(a)anthracene	29.6	0.0500	"	50.0		59.3	10-137		10.2	30	
Benzo(a)pyrene	34.8	0.0500	"	50.0		69.7	10-136		1.85	30	
Benzo(b)fluoranthene	31.7	0.0500	"	50.0		63.4	10-141		1.22	30	
Benzo(g,h,i)perylene	32.7	0.0500	"	50.0		65.4	10-152		2.86	30	
Benzo(k)fluoranthene	29.0	0.0500	"	50.0		58.1	10-137		9.10	30	
Chrysene	28.1	0.0500	"	50.0		56.2	10-132		10.6	30	
Dibenzo(a,h)anthracene	33.3	0.0500	"	50.0		66.7	10-159		3.85	30	
Dibenzofuran	29.4	5.00	"	50.0		58.7	36-96		4.46	20	
Fluoranthene	29.3	0.0500	"	50.0		58.6	10-126		1.12	30	
Fluorene	28.2	0.0500	"	50.0		56.4	10-126		1.79	30	
Hexachlorobenzene	33.8	0.0400	"	50.0		67.6	16-127		4.23	20	
Indeno(1,2,3-cd)pyrene	34.3	0.0500	"	50.0		68.5	10-158		1.79	30	
2-Methylphenol	20.5	5.00	"	50.0		41.0	10-88		2.87	20	
3- & 4-Methylphenols	16.9	5.00	"	50.0		33.7	10-71		3.75	20	
Naphthalene	26.8	0.0500	"	50.0		53.6	12-103		5.55	30	
Pentachlorophenol	42.1	1.00	"	50.0		84.1	15-150		12.0	20	
Phenanthrene	29.7	0.0500	"	50.0		59.4	10-119		2.53	30	
Phenol	11.0	5.00	"	50.0		21.9	10-57		6.49	20	
Pyrene	28.9	0.0500	"	50.0		57.8	10-159		14.6	30	
Surrogate: 2-Fluorophenol	*19.8*		"	*75.6*		*26.2*	*10-52*				
Surrogate: Phenol-d5	*13.3*		"	*75.5*		*17.6*	*10-117*				
Surrogate: Nitrobenzene-d5	*30.7*		"	*51.0*		*60.3*	*12-112*				
Surrogate: 2-Fluorobiphenyl	*24.7*		"	*50.8*		*48.7*	*14-101*				
Surrogate: 2,4,6-Tribromophenol	*60.2*		"	*74.4*		*80.9*	*17-127*				
Surrogate: Terphenyl-d14	*27.3*		"	*50.7*		*53.8*	*10-151*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40771 - EPA 3550C											
Blank (BB40771-BLK1)											Prepared: 02/21/2014 Analyzed: 02/25/2014
4,4'-DDD	ND	0.000330	mg/kg wet								
4,4'-DDE	ND	0.000330	"								
4,4'-DDT	ND	0.000330	"								
Aldrin	ND	0.000330	"								
alpha-BHC	ND	0.000330	"								
beta-BHC	ND	0.000330	"								
delta-BHC	ND	0.000330	"								
Dieldrin	ND	0.000330	"								
Endosulfan I	ND	0.000330	"								
Endosulfan II	ND	0.000330	"								
Endosulfan sulfate	ND	0.000330	"								
Endrin	ND	0.000330	"								
gamma-BHC (Lindane)	ND	0.000330	"								
Heptachlor	ND	0.000330	"								
alpha-Chlordane	ND	0.000330	"								
Surrogate: Decachlorobiphenyl	*0.0456*		*"*	*0.0663*		*68.7*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0530*		*"*	*0.0663*		*79.9*	*30-140*				
LCS (BB40771-BS1)											Prepared: 02/21/2014 Analyzed: 02/25/2014
4,4'-DDD	0.0259	0.000330	mg/kg wet	0.0333		77.7	40-140				
4,4'-DDE	0.0245	0.000330	"	0.0333		73.4	40-140				
4,4'-DDT	0.0275	0.000330	"	0.0333		82.5	40-140				
Aldrin	0.0252	0.000330	"	0.0333		75.7	40-140				
alpha-BHC	0.0276	0.000330	"	0.0333		82.7	40-140				
beta-BHC	0.0256	0.000330	"	0.0333		76.9	40-140				
delta-BHC	0.0279	0.000330	"	0.0333		83.8	40-140				
Dieldrin	0.0278	0.000330	"	0.0333		83.5	40-140				
Endosulfan I	0.0254	0.000330	"	0.0333		76.2	40-140				
Endosulfan II	0.0266	0.000330	"	0.0333		79.8	40-140				
Endosulfan sulfate	0.0253	0.000330	"	0.0333		75.8	40-140				
Endrin	0.0258	0.000330	"	0.0333		77.3	40-140				
gamma-BHC (Lindane)	0.0266	0.000330	"	0.0333		79.7	40-140				
Heptachlor	0.0268	0.000330	"	0.0333		80.3	40-140				
alpha-Chlordane	0.0232	0.000330	"	0.0333		69.5	40-140				
Surrogate: Decachlorobiphenyl	*0.0447*		*"*	*0.0663*		*67.4*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0584*		*"*	*0.0663*		*88.1*	*30-140*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40771 - EPA 3550C											
LCS Dup (BB40771-BSD1)								Prepared: 02/21/2014 Analyzed: 02/25/2014			
4,4'-DDD	0.0247	0.000330	mg/kg wet	0.0333		74.0	40-140		4.88	30	
4,4'-DDE	0.0235	0.000330	"	0.0333		70.6	40-140		3.88	30	
4,4'-DDT	0.0262	0.000330	"	0.0333		78.7	40-140		4.67	30	
Aldrin	0.0250	0.000330	"	0.0333		75.0	40-140		0.925	30	
alpha-BHC	0.0274	0.000330	"	0.0333		82.1	40-140		0.701	30	
beta-BHC	0.0256	0.000330	"	0.0333		76.9	40-140		0.0585	30	
delta-BHC	0.0278	0.000330	"	0.0333		83.5	40-140		0.356	30	
Dieldrin	0.0274	0.000330	"	0.0333		82.3	40-140		1.44	30	
Endosulfan I	0.0250	0.000330	"	0.0333		75.0	40-140		1.54	30	
Endosulfan II	0.0259	0.000330	"	0.0333		77.8	40-140		2.61	30	
Endosulfan sulfate	0.0245	0.000330	"	0.0333		73.6	40-140		2.97	30	
Endrin	0.0249	0.000330	"	0.0333		74.8	40-140		3.31	30	
gamma-BHC (Lindane)	0.0262	0.000330	"	0.0333		78.6	40-140		1.31	30	
Heptachlor	0.0265	0.000330	"	0.0333		79.4	40-140		1.05	30	
alpha-Chlordane	0.0228	0.000330	"	0.0333		68.3	40-140		1.81	30	
Surrogate: Decachlorobiphenyl	*0.0424*		*"*	*0.0663*		*63.9*	*30-140*				
Surrogate: Tetrachloro-m-xylene	*0.0580*		*"*	*0.0663*		*87.4*	*30-140*				
Batch BB40911 - EPA SW846-3510C Low Level											
Blank (BB40911-BLK1)								Prepared: 02/25/2014 Analyzed: 02/26/2014			
4,4'-DDD	ND	0.00100	ug/L								
4,4'-DDE	ND	0.00100	"								
4,4'-DDT	ND	0.00100	"								
Aldrin	ND	0.00100	"								
alpha-BHC	ND	0.00100	"								
beta-BHC	ND	0.00100	"								
delta-BHC	ND	0.00100	"								
Dieldrin	ND	0.00100	"								
Endosulfan I	ND	0.00100	"								
Endosulfan sulfate	ND	0.00100	"								
Endosulfan II	ND	0.00100	"								
Endrin	ND	0.00100	"								
gamma-BHC (Lindane)	ND	0.00100	"								
Heptachlor	ND	0.00100	"								
alpha-Chlordane	ND	0.00100	"								
Surrogate: Decachlorobiphenyl	*0.0798*		*"*	*0.199*		*40.1*	*30-120*				
Surrogate: Tetrachloro-m-xylene	*0.0855*		*"*	*0.199*		*43.0*	*30-120*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40911 - EPA SW846-3510C Low Level											
LCS (BB40911-BS1)								Prepared: 02/25/2014 Analyzed: 02/26/2014			
4,4'-DDD	0.0734	0.00100	ug/L	0.100		73.4	40-120				
4,4'-DDE	0.0617	0.00100	"	0.100		61.7	40-120				
4,4'-DDT	0.0726	0.00100	"	0.100		72.6	40-120				
Aldrin	0.0512	0.00100	"	0.100		51.2	40-120				
alpha-BHC	0.0609	0.00100	"	0.100		60.9	40-120				
beta-BHC	0.0643	0.00100	"	0.100		64.3	40-120				
delta-BHC	0.0469	0.00100	"	0.100		46.9	40-120				
Dieldrin	0.0730	0.00100	"	0.100		73.0	40-120				
Endosulfan I	0.0632	0.00100	"	0.100		63.2	40-120				
Endosulfan II	0.0734	0.00100	"	0.100		73.4	40-120				
Endosulfan sulfate	0.0701	0.00100	"	0.100		70.1	40-120				
Endrin	0.0729	0.00100	"	0.100		72.9	40-120				
gamma-BHC (Lindane)	0.0611	0.00100	"	0.100		61.1	40-120				
Heptachlor	0.0572	0.00100	"	0.100		57.2	40-120				
alpha-Chlordane	0.0577	0.00100	"	0.100		57.7	40-120				
Surrogate: Decachlorobiphenyl	*0.111*		*"*	*0.199*		*55.8*	*30-120*				
Surrogate: Tetrachloro-m-xylene	*0.125*		*"*	*0.199*		*62.8*	*30-120*				
LCS Dup (BB40911-BSD1)								Prepared: 02/25/2014 Analyzed: 02/26/2014			
4,4'-DDD	0.0644	0.00100	ug/L	0.100		64.4	40-120		13.1	30	
4,4'-DDE	0.0546	0.00100	"	0.100		54.6	40-120		12.1	30	
4,4'-DDT	0.0633	0.00100	"	0.100		63.3	40-120		13.7	30	
Aldrin	0.0475	0.00100	"	0.100		47.5	40-120		7.51	30	
alpha-BHC	0.0556	0.00100	"	0.100		55.6	40-120		9.10	30	
beta-BHC	0.0579	0.00100	"	0.100		57.9	40-120		10.5	30	
delta-BHC	0.0442	0.00100	"	0.100		44.2	40-120		6.01	30	
Dieldrin	0.0650	0.00100	"	0.100		65.0	40-120		11.7	30	
Endosulfan I	0.0563	0.00100	"	0.100		56.3	40-120		11.7	30	
Endosulfan II	0.0665	0.00100	"	0.100		66.5	40-120		9.86	30	
Endosulfan sulfate	0.0652	0.00100	"	0.100		65.2	40-120		7.33	30	
Endrin	0.0652	0.00100	"	0.100		65.2	40-120		11.1	30	
gamma-BHC (Lindane)	0.0552	0.00100	"	0.100		55.2	40-120		10.1	30	
Heptachlor	0.0521	0.00100	"	0.100		52.1	40-120		9.34	30	
alpha-Chlordane	0.0521	0.00100	"	0.100		52.1	40-120		10.2	30	
Surrogate: Decachlorobiphenyl	*0.100*		*"*	*0.199*		*50.5*	*30-120*				
Surrogate: Tetrachloro-m-xylene	*0.112*		*"*	*0.199*		*56.5*	*30-120*				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40771 - EPA 3550C											
Blank (BB40771-BLK1)											Prepared: 02/21/2014 Analyzed: 02/24/2014
Aroclor 1016	ND	0.0170	mg/kg wet								
Aroclor 1221	ND	0.0170	"								
Aroclor 1232	ND	0.0170	"								
Aroclor 1242	ND	0.0170	"								
Aroclor 1248	ND	0.0170	"								
Aroclor 1254	ND	0.0170	"								
Aroclor 1260	ND	0.0170	"								
Total PCBs	ND	0.0170	"								
Surrogate: Tetrachloro-m-xylene	*0.0523*		*"*	*0.0663*		*78.9*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0560*		*"*	*0.0663*		*84.4*	*30-140*				
LCS (BB40771-BS2)											Prepared: 02/21/2014 Analyzed: 02/24/2014
Aroclor 1016	0.317	0.0170	mg/kg wet	0.333		95.2	40-130				
Aroclor 1260	0.317	0.0170	"	0.333		95.0	40-130				
Surrogate: Tetrachloro-m-xylene	*0.0643*		*"*	*0.0663*		*97.0*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0637*		*"*	*0.0663*		*96.0*	*30-140*				
Batch BB40911 - EPA SW846-3510C Low Level											
Blank (BB40911-BLK1)											Prepared & Analyzed: 02/25/2014
Aroclor 1016	ND	0.0500	ug/L								
Aroclor 1221	ND	0.0500	"								
Aroclor 1232	ND	0.0500	"								
Aroclor 1242	ND	0.0500	"								
Aroclor 1248	ND	0.0500	"								
Aroclor 1254	ND	0.0500	"								
Aroclor 1260	ND	0.0500	"								
Total PCBs	ND	0.0500	"								
Surrogate: Tetrachloro-m-xylene	*0.0920*		*"*	*0.199*		*46.2*	*30-120*				
Surrogate: Decachlorobiphenyl	*0.101*		*"*	*0.199*		*50.8*	*30-120*				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40911 - EPA SW846-3510C Low Level											
LCS (BB40911-BS2)							Prepared & Analyzed: 02/25/2014				
Aroclor 1016	0.924	0.0500	ug/L	1.00		92.4	40-120				
Aroclor 1260	0.970	0.0500	"	1.00		97.0	40-120				
Surrogate: Tetrachloro-m-xylene	*0.115*		*"*	*0.199*		*57.8*	*30-120*				
Surrogate: Decachlorobiphenyl	*0.128*		*"*	*0.199*		*64.3*	*30-120*				
LCS Dup (BB40911-BSD2)							Prepared & Analyzed: 02/25/2014				
Aroclor 1016	0.940	0.0500	ug/L	1.00		94.0	40-120		1.67	30	
Aroclor 1260	0.995	0.0500	"	1.00		99.5	40-120		2.52	30	
Surrogate: Tetrachloro-m-xylene	*0.119*		*"*	*0.199*		*59.8*	*30-120*				
Surrogate: Decachlorobiphenyl	*0.133*		*"*	*0.199*		*66.8*	*30-120*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40797 - EPA 3050B											
Blank (BB40797-BLK1)									Prepared & Analyzed: 02/21/2014		
Arsenic	ND	1.00	mg/kg wet								
Barium	ND	1.00	"								
Beryllium	ND	0.100	"								
Cadmium	ND	0.300	"								
Chromium	ND	0.500	"								
Copper	ND	0.500	"								
Lead	ND	0.300	"								
Manganese	ND	0.500	"								
Nickel	ND	0.500	"								
Selenium	ND	1.00	"								
Silver	ND	0.500	"								
Zinc	ND	1.00	"								
Duplicate (BB40797-DUP1)	*Source sample: 14B0504-02 (SB01_7-9)								Prepared & Analyzed: 02/21/2014		
Arsenic	2.76	1.24	mg/kg dry		2.90				4.95	35	
Barium	46.3	1.24	"		46.5				0.387	35	
Beryllium	ND	0.124	"		ND					35	
Cadmium	ND	0.371	"		ND					35	
Chromium	17.3	0.618	"		17.4				0.773	35	
Copper	41.1	0.618	"		41.1				0.0764	35	
Lead	8.58	0.371	"		8.67				1.05	35	
Manganese	111	0.618	"		106				4.10	35	
Nickel	22.6	0.618	"		22.9				1.15	35	
Selenium	ND	1.24	"		ND					35	
Silver	ND	0.618	"		ND					35	
Zinc	121	1.24	"		121				0.143	35	
Matrix Spike (BB40797-MS1)	*Source sample: 14B0504-02 (SB01_7-9)								Prepared & Analyzed: 02/21/2014		
Arsenic	242	1.24	mg/kg dry	247	2.90	96.7	75-125				
Barium	298	1.24	"	247	46.5	101	75-125				
Beryllium	4.38	0.124	"	6.18	ND	70.8	75-125	Low Bias			
Cadmium	6.36	0.371	"	6.18	ND	103	75-125				
Chromium	41.6	0.618	"	24.7	17.4	98.0	75-125				
Copper	73.0	0.618	"	30.9	41.1	103	75-125				
Lead	68.5	0.371	"	61.8	8.67	96.7	75-125				
Manganese	173	0.618	"	61.8	106	108	75-125				
Nickel	87.2	0.618	"	61.8	22.9	104	75-125				
Silver	2.74	0.618	"	6.18	ND	44.4	75-125	Low Bias			
Zinc	180	1.24	"	61.8	121	94.4	75-125				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40797 - EPA 3050B											
Reference (BB40797-SRM1)											Prepared & Analyzed: 02/21/2014
Arsenic	97.3	1.00	mg/kg wet	99.6		97.7	69.3-131				
Barium	298	1.00	"	310		96.2	74.2-126				
Beryllium	67.7	0.100	"	72.3		93.7	73.8-126				
Cadmium	165	0.300	"	182		90.8	73.6-126				
Chromium	129	0.500	"	136		94.7	70.4-130				
Copper	102	0.500	"	102		100	74.3-126				
Lead	106	0.300	"	115		91.8	72.1-129				
Manganese	310	0.500	"	323		95.8	74.9-125				
Nickel	159	0.500	"	153		104	73.2-126				
Selenium	151	1.00	"	150		100	67.3-133				
Silver	36.5	0.500	"	40.4		90.3	65.8-134				
Zinc	146	1.00	"	161		90.6	68.3-132				
Batch BB40799 - EPA 3010A											
Blank (BB40799-BLK1)											Prepared: 02/21/2014 Analyzed: 02/24/2014
Arsenic	ND	4	ug/L								
Barium	ND	10	"								
Beryllium	ND	1	"								
Cadmium	ND	3	"								
Chromium	ND	5	"								
Copper	ND	3	"								
Lead	ND	3	"								
Manganese	ND	5	"								
Nickel	ND	5	"								
Selenium	ND	10	"								
Silver	ND	5	"								
Zinc	ND	10	"								

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40799 - EPA 3010A											
Reference (BB40799-SRM1)											Prepared: 02/21/2014 Analyzed: 02/24/2014
Arsenic	318	4	ug/L	341		93.1	83.3-118				
Barium	1250	10	"	1180		106	86.4-113				
Beryllium	71	1	"	74.9		95.1	83.3-113				
Cadmium	82	3	"	85.4		96.2	84.4-115				
Chromium	654	5	"	644		102	87.1-113				
Copper	504	3	"	521		96.7	90-110				
Lead	529	3	"	517		102	87-113				
Manganese	1810	5	"	1730		104	90.2-111				
Nickel	1510	5	"	1520		99.3	90.1-112				
Selenium	336	10	"	362		92.9	78.7-116				
Silver	197	5	"	210		94.0	85.7-115				
Zinc	1700	10	"	1690		100	85.8-114				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40845 - EPA 7473 soil											
Blank (BB40845-BLK1)								Prepared & Analyzed: 02/24/2014			
Mercury	ND	0.0300	mg/kg wet								
Reference (BB40845-SRM1)								Prepared & Analyzed: 02/24/2014			
Mercury	3.46		mg/kg	3.73		92.8	68.6-131				
Batch BB40901 - EPA 7473 soil											
Blank (BB40901-BLK1)								Prepared & Analyzed: 02/25/2014			
Mercury	ND	0.0300	mg/kg wet								
Duplicate (BB40901-DUP1)	*Source sample: 14B0504-02 (SB01_7-9)							Prepared & Analyzed: 02/25/2014			
Mercury	ND	0.0371	mg/kg dry		ND					35	
Matrix Spike (BB40901-MS1)	*Source sample: 14B0504-02 (SB01_7-9)							Prepared & Analyzed: 02/25/2014			
Mercury	0.460		mg/kg	0.500	0.00660	90.6	75-125				
Reference (BB40901-SRM1)								Prepared & Analyzed: 02/25/2014			
Mercury	3.73		mg/kg	3.73		100	0-200				
Batch BB40925 - EPA SW846-7470											
Blank (BB40925-BLK1)								Prepared & Analyzed: 02/25/2014			
Mercury	ND	0.0002	mg/L								
LCS (BB40925-BS1)								Prepared & Analyzed: 02/25/2014			
Mercury	0.002148	0.0002	mg/L	0.00200		107	80-120				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40925 - EPA SW846-7470											
LCS (BB40925-BS2)									Prepared & Analyzed: 02/25/2014		
Mercury	0.002046	0.0002	mg/L	0.00200		102	80-120				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BB40780 - Analysis Preparation											
Blank (BB40780-BLK1)								Prepared & Analyzed: 02/21/2014			
Chromium, Hexavalent	ND	10.0	ug/L								
LCS (BB40780-BS1)								Prepared & Analyzed: 02/21/2014			
Chromium, Hexavalent	542	10.0	ug/L	500		108	80-120				
Batch BB40782 - EPA SW846-3060											
Blank (BB40782-BLK1)								Prepared: 02/21/2014 Analyzed: 02/24/2014			
Chromium, Hexavalent	ND	0.500	mg/kg wet								
Reference (BB40782-SRM1)								Prepared: 02/21/2014 Analyzed: 02/24/2014			
Chromium, Hexavalent	65.9		mg/L	76.7		85.9	20.2-180				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
14B0504-01	SB01_4-6	40mL Vial with Stir Bar-Cool 4° C
14B0504-02	SB01_7-9	40mL Vial with Stir Bar-Cool 4° C
14B0504-03	SB06_3-5	40mL Vial with Stir Bar-Cool 4° C
14B0504-04	SB06_6-8	40mL Vial with Stir Bar-Cool 4° C
14B0504-05	SB07_1-3	40mL Vial with Stir Bar-Cool 4° C
14B0504-06	SB07_5-7	40mL Vial with Stir Bar-Cool 4° C
14B0504-07	SB08_0-2	40mL Vial with Stir Bar-Cool 4° C
14B0504-08	SB08_15-17	40mL Vial with Stir Bar-Cool 4° C
14B0504-09	FB_022014	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
14B0504-10	TB_022014	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
14B0504-11	SB04_1-3	40mL Vial with Stir Bar-Cool 4° C
14B0504-12	SB04_4-6	40mL Vial with Stir Bar-Cool 4° C
14B0504-13	DUP01_022014	40mL Vial with Stir Bar-Cool 4° C

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
M-MISpk	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The SRM was within acceptance limits, therefore data are acceptable.
M-BCCB	Analyte in CCB > MDL. Sample conc. >10 X blank conc.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
GC-Surr	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the alternate surrogate.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for averge Rf or >20% Drift for quadratic fit).
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.

ND	Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
MDL	METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis

Low Bias — Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

High Bias — High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

Non-Dir. — Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the MDL, with values between the MDL and the RL being "J" flagged as estimated results.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 14B0504

YOUR Information

Company: Langan
Address: 360 W 31st St
NY, NY 10001
Phone No. 212 479-5400
Contact Person: PMcMahon@
E-Mail Address: Langan.com

Report To:

Company: SAME
Address:
Phone No.
Attention: GNicholls@
E-Mail Address: Langan.com

Invoice To:

Company: SAME
Address:
Phone No.
Attention:
E-Mail Address:

YOUR Project ID

170282501

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary ____
- CT RCP Package ____
- CTRCP DQA/DUE Pkg ____
- NY ASP A Package X
- NY ASP B Package ____
- NJDEP Red. Deliv. ____

Electronic Data Deliverables (EDD)

- Simple Excel X
- NYSDEC EQuIS ____
- EQuIS (std) ____
- EZ-EDD (EQuIS) ____
- NJDEP SRP HazSite EDD ____
- GIS/KEY (std) ____
- Other ____
- **York Regulatory Comparison**
- **Excel Spreadsheet**

Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins/Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEPSewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDECSewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB01_4-6	2/19/14 9:25	S	Part 375 List VOL/SVOL/Metals/Pest/PCB	4 VOA, 1 8oz.
SB01_7-4	9:15			
SB06_3-5	14:55			
SB06_6-8	15:05			
SB07_1-3	13:25			
SB07_5-7	13:40			
SB08_0-2	14:00			
SB08_15-17	1420			
FB-022014	2/20/14 7:35	Water		3 1L 3 .25L 2 VOA
TB-022014	2/20/14	Water	VOC	2 VOA

Comments

Preservation Check those Applicable
4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc Ascorbic Acid Other

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By — Date/Time 2/20/14 940
Samples Relinquished By — Date/Time

Samples Received By — Date/Time 2/20/14
Samples Received in LAB by — Date/Time 2-20-14 1615

Temperature on Receipt 3.3 °C

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 14B0504

YOUR Information	**Report To:**	**Invoice To:**
Company: LANGAN	Company: SAME	Company: SAME
Address: 360 W 31st St NY, NY 10001	Address:	Address:
Phone No. 212 479-5400	Phone No.	Phone No.
Contact Person: PMcMahon	Attention: GNicholls @	Attention:
E-Mail Address: Langan.com	E-Mail Address: Langan.com	E-Mail Address:

YOUR Project ID: 170282501

Purchase Order No.

Samples from: CT ___ NY ___ NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package X
- NY ASP B Package
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel X
- NYSDEC EQuIS
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other
- York Regulatory Comparison
- Excel Spreadsheet

Compare to the following Regs. (please fill in):

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Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins/Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv.Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB04_1-3	2/20/14 8:25	S	Part 375 VOC/SVOC/Metals/Pest/PCB	4 VOA 1 8oz.
SB04_4-6	2/20/14 8:45	S	↓	↓
~~DUP_022014~~	~~2/20/14 00:00~~	~~S~~		
DUP01_022014	2/20/14 00:00	S		

Page 101 of 101

Comments

Preservation Check those Applicable

Special Instructions

Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other ___

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
	2/20/14 940 AM		2/20/14 940 AM
Samples Relinquished By	Date/Time	Samples Received in LAB by	Date/Time
		Place	2-20-14 1615

Temperature on Receipt 3.3 °C

APPENDIX E

WELL CONSTRUCTION SUMMARY

Well No. MW01

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** Approx. 9.9 feet BPQD
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/19/2014 **DATE FINISHED** 2/19/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear. Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	9.9	0
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	8.9	1
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	7.4	2.5
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	5.9	4
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-4.1	14

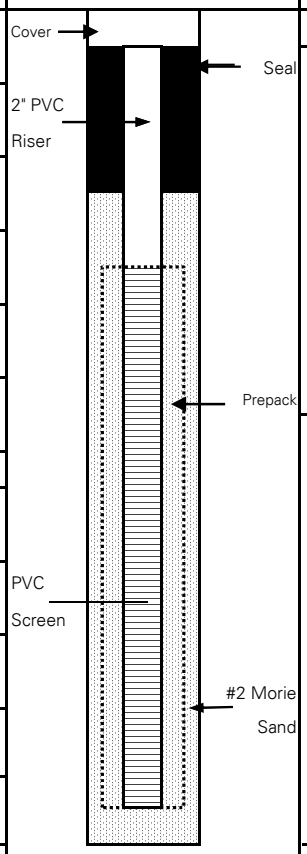
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
3.46	2/28/2014	6.44 feet
3.43	2/28/2014	6.47

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	1.0
FILL	2.5
	4.0
	7.0
SAND some silt	14.0

LANGAN Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

WELL CONSTRUCTION SUMMARY

Well No. MW02

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** Approx. 8.3 feet BPQD
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/21/2014 **DATE FINISHED** 2/21/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 30 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	8.3	0
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	7.3	1
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	5.8	2.5
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	4.3	4
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-5.7	14

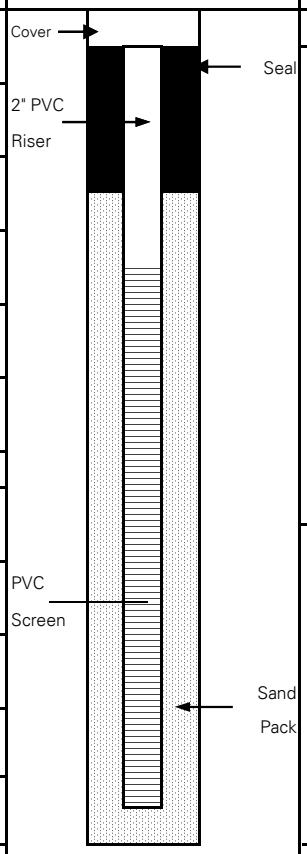
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.78	2/21/2014	3.52 feet
4.28	2/28/2014	4.02

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	1.0
FILL	2.5
	4.0
	9.0
Clay and Peat	
	14.0

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

WELL CONSTRUCTION SUMMARY

Well No. MW03

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** Approx. 8.4 feet BPQD
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/20/2014 **DATE FINISHED** 2/20/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear. Total purge volume = 10 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION** 8.4	**DEPTH (ft)** 0
TOP OF SEAL	**ELEVATION** 7.4	**DEPTH (ft)** 1
TOP OF FILTER	**ELEVATION** 5.9	**DEPTH (ft)** 2.5
TOP OF SCREEN	**ELEVATION** 4.4	**DEPTH (ft)** 4
BOTTOM OF BORING	**ELEVATION** -5.6	**DEPTH (ft)** 14

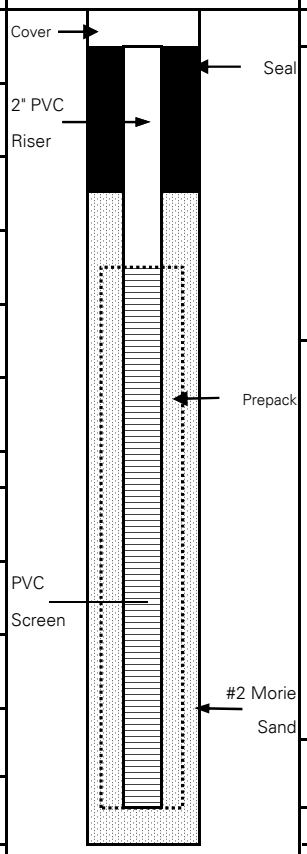
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
3.48	2/28/2014	4.92 feet
3.46	2/28/2014	4.94

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL	1.0 2.5 4.0 5.0
SAND	
PEAT	12.5 13.5
SAND	14.0

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WELL CONSTRUCTION SUMMARY

Well No. MW04

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** Approx. 9.2 feet BPQD
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/20/2014 **DATE FINISHED** 2/20/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 48 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION** 9.2	**DEPTH (ft)** 0
TOP OF SEAL	**ELEVATION** 8.2	**DEPTH (ft)** 1
TOP OF FILTER	**ELEVATION** 6.7	**DEPTH (ft)** 2.5
TOP OF SCREEN	**ELEVATION** 5.2	**DEPTH (ft)** 4
BOTTOM OF BORING	**ELEVATION** -4.8	**DEPTH (ft)** 14

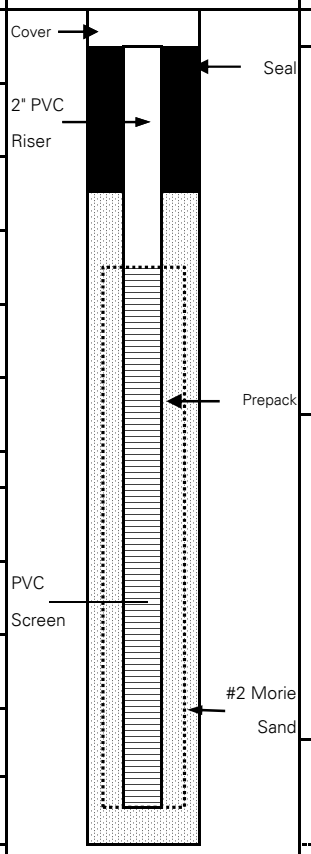
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
3.47	2/21/2014	5.73 feet
3.43	2/28/2014	5.77

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL	1.0 2.5 4.0
SAND	6.0 12.5
SANDY SILT	14.0

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APPENDIX F

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW01	**Date:**	2/28/2014	**Total Depth (ft):**	14.29
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	10.65
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	6.47	**Purge Volume (gal):**	5.50

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
9:30								6.47	
9:32	6.12	2.660	337.0	3.01	10.76	113	1000	6.37	
9:39	6.66	1.810	59.6	2.21	12.24	105	660	7.01	
9:44	6.71	1.710	34.4	1.80	11.41	106	500	6.90	
9:49	6.74	1.640	20.5	1.48	12.72	104	800	6.91	
9:54	6.75	1.590	10.9	1.32	12.64	104	800	6.40	Average Purge Rate ~ 600 mL/min
9:56									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW02	**Date:**	2/28/2014	**Total Depth (ft):**	13.80
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	10.90
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	4.02	**Purge Volume (gal):**	5.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
10:54								4.02	
10:55	7.67	0.505	460.0	4.01	6.00	31	2000	4.06	
11:00	7.70	0.494	0.0	2.00	6.08	0	1200	4.08	
11:05	7.71	0.496	0.0	1.66	6.14	-2	800	4.07	
11:10	7.72	0.494	0.0	1.46	5.98	-3	500	4.04	
11:15	7.72	0.494	0.0	1.42	6.18	-2	500	4.05	
11:16									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

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MONITORING WELL SAMPLING FORM

Well No:	MW03	**Date:**	2/28/2014	**Total Depth (ft):**	14.09
Project Number:	170282501	**PID Headspace Reading:**	12.8	**Pump Intake Depth (ft):**	11.69
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	4.93	**Purge Volume (gal):**	5.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
11:45								4.94	
12:00	7.37	0.799	231.0	2.93	9.28	-19	750	5.14	
12:05	7.23	0.786	40.5	1.79	8.93	-49	600	5.24	
12:10	7.21	0.795	9.1	1.60	8.66	-70	600	5.21	
12:15	7.20	0.802	1.8	1.38	8.84	-78	600	5.29	
12:20	7.20	0.805	0.0	1.29	8.69	-86	600	5.32	
12:20									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

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MONITORING WELL SAMPLING FORM

Well No:	MW04	**Date:**	2/28/2014	**Total Depth (ft):**	14.01
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	11.20
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	5.77	**Purge Volume (gal):**	4.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
12:44								5.77	
12:55	7.17	1.000	93.8	3.07	8.36	83	500	5.88	
13:00	7.07	1.030	49.4	1.58	10.01	40	800	5.93	
13:05	7.08	1.030	5.3	1.33	9.99	38	1200	5.91	
13:10	7.08	1.030	0.0	1.36	9.92	39	800	5.94	
13:10									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

APPENDIX G

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV01

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 8.3 feet BPQD
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

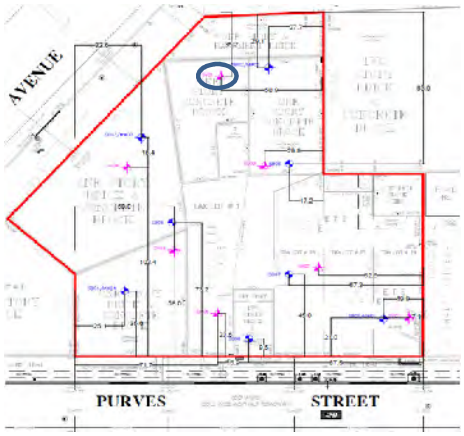
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 14.1 After Sample: 20.9
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	11:05
SAMPLE STOP TIME:	13:05
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	197
REGULATOR SERIAL NUMBER:	0103
CAN START VACUUM PRESS. (" HG):	-29.6
CAN STOP VACUUM PRESS. (" HG):	-13.24

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

Vacuum did not equalize at expected rate, no water in tubing

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV03

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 9.5 feet BPQD
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

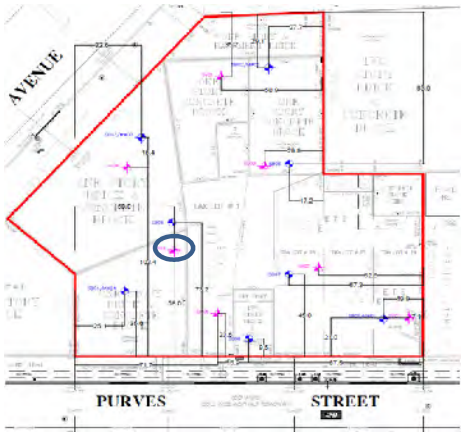
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 8.2 After Sample: 14.4
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:38
SAMPLE STOP TIME:	12:35
TOTAL SAMPLE TIME (MIN):	117
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	382
REGULATOR SERIAL NUMBER:	0100
CAN START VACUUM PRESS. (" HG):	-29.67
CAN STOP VACUUM PRESS. (" HG):	-2.3

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV04

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 8.4 feet BPQD
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

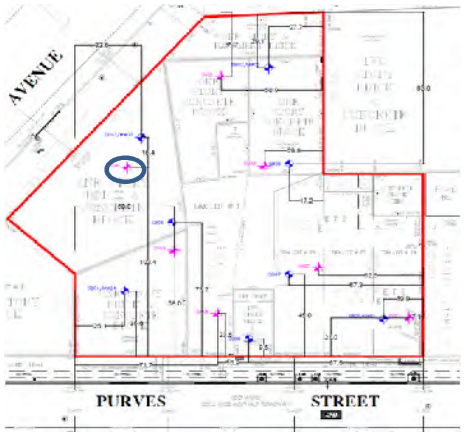
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 16.4 After Sample: 15.4
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:55
SAMPLE STOP TIME:	12:55
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	384
REGULATOR SERIAL NUMBER:	0150
CAN START VACUUM PRESS. (" HG):	-28.66
CAN STOP VACUUM PRESS. (" HG):	-5.29

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV06

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 9.0 feet BPQD
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

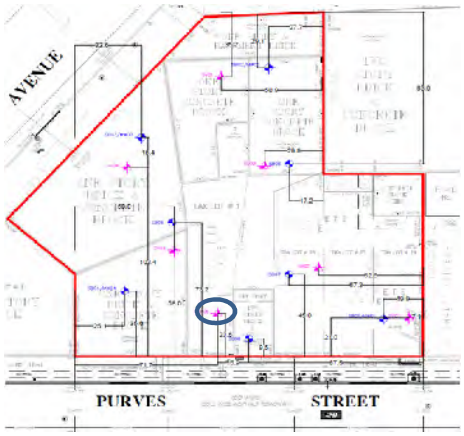
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 7.4 After Sample: 12.2
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:20
SAMPLE STOP TIME:	12:20
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	396
REGULATOR SERIAL NUMBER:	0697
CAN START VACUUM PRESS. (" HG):	-29.44
CAN STOP VACUUM PRESS. (" HG):	-3.87

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV07

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 9.9 feet BPQD
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

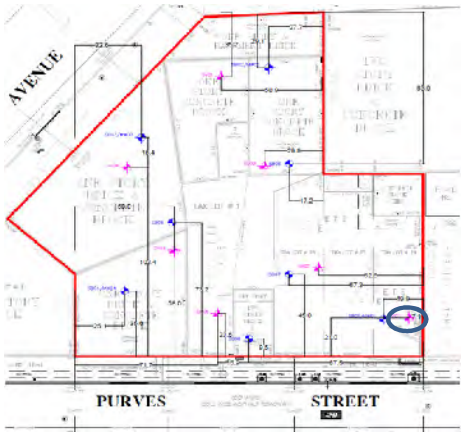
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 11.7 After Sample: 11.3
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	9:40
SAMPLE STOP TIME:	23:40
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	237
REGULATOR SERIAL NUMBER:	0391
CAN START VACUUM PRESS. (" HG):	-29.4
CAN STOP VACUUM PRESS. (" HG):	-4.93

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	5	

SAMPLE LOCATION SKETCH



NOTES

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

APPENDIX C
GEOTECHNICAL ENGINEERING REPORT

GEOTECHNICAL ENGINEERING STUDY

for

4430 Purves Street
Long Island City, New York

Prepared For:

Purves Street Owners LLC
c/o Brause Realty Inc.
52 Vanderbilt Avenue
New York, NY 10017

Prepared By:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza
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N.Y. Professional Engineer License No. 085383-1

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12 May 2014
170282501

LANGAN

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Appendix B – Langan Boring and Well Construction Logs
Appendix C – Test Pit Descriptions, Sketches, and Photographs
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INTRODUCTION

This geotechnical engineering study was prepared by Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) to provide recommendations for the foundation design and construction for the proposed residential/commercial building at 4430 Purves Street in Long Island City, NY. All services were performed in accordance with our original proposal dated 5 December 2012 and subsequent proposal dated 1 May 2014.

Elevations presented herein, are taken from a topographic and boundary survey prepared by Apple surveying dated 11 April 2014, and are with respect to the North American Vertical Datum of 1988 (NAVD88[1]).

The evaluation and recommendations presented herein are based on a review of conceptual plans received from FXFOWLE Architects and Gotham, borings performed by Soil Mechanics Drilling Corp in 2006, and results of our field investigation in 2008. Proposed building elevations were taken from the schematic architectural drawings dated 14 March 2014, which are reference to BPQD and project datum.

The following sections provide a description of the project and subsurface conditions, and an evaluation of the conditions with respect to the geotechnical aspects of the proposed construction. Analyses and recommendations presented herein are in accordance with the New York City Construction Codes, LL33/2007 and LL99/2005, that became effective in July 2008 (the Building Code).

PROJECT DESCRIPTION

Existing Conditions

The irregular-shaped site is located in the southern part of the city block bordered by Purves Street on the east, Thomson Avenue on the south, Jackson Avenue on the north, and 44th Drive on the west. The site is currently a vacant lot with a total footprint of about 26,800 square feet. The sidewalk grades drop south from about el 11 to el 9.5 NAVD88 along Purves Street, and about el. 31 to el. 23.5 NAVD88 along Thomson Avenue and 44th Drive, dipping north. The site grade is generally at about el 11 NAVD88. A site location map is presented as Drawing No. 1.

[1] North American Vertical Datum (NAVD88), which is 1.095 feet above National Geodetic Vertical Datum (NGVD29) at Sandy Hook, New Jersey (NAVD 88 = NGVD1929 - 1.095).

Adjacent Structures

The site is abutted on the northwest by a 2-story building (27-21 44th Drive), on the northeast by an open vacant lot, on the southeast by a 3-story building (44-46 Purves Street), on the southwest and west by existing retaining walls.

From the test pit excavation findings, the bottom of foundation at the 27-21 44th Drive building was at about el 4.5 NAVD88. The bottom of foundation at the 44-46 Purves Street building was between about el 4.5 and el 6 NAVD88. Along the southwest retaining wall, a 1-foot-thick remnant building foundation, which extended 4 feet perpendicularly from the retaining wall, was encountered; the bottom of this remnant was at about el 2.5 NAVD88. Along the west retaining wall, a 2.5-foot-thick remnant building pile cap, which extended 3 to 5 feet perpendicularly from the retaining wall, was encountered. Below the bottom of this remnant, timber piles of about 10- to 12-inch-diameter were exposed. The bottom elevation of this remnant was at about el 5.5 NAVD88. The bottom of the retaining walls was not exposed and not determined during the test pit excavation.

From the historical record drawings prepared by Pennsylvania Tunnel & Terminal Railroad Company dated 31 December 1910, which showed the bottom elevation of the retaining walls along Thomson Avenue and 44th Drive to be at el 297 (Pennsylvania Railroad Tunnels Datum[2]), corresponding to el -1.5 NAVD88. Three to five rows of timber piles, which were about 3-foot center-to-center, were shown below the retaining walls. The historical contract and record drawings are presented in Appendix A.

FEMA Flood Maps

In December 2013, FEMA released preliminary Flood Insurance Rate maps (FIRM) which incorporate updated flood hazard models. In January 2014 Local law 96/2013 from the New York City Department of Buildings (DOB) went into effect and allows the base flood elevation to be designed from the worst case between the FEMA FIRM 2007 and preliminary FIRM. According to the FIRM, the site is within Flood Zone X, which is an area with a 0.2% chance of having the 100-year flood (every year). The base flood elevation (BFE) for the nearby Zone AE (about 1 block southwest of the site) was shown to be at el 10 NAVD88. Considering this proximity, we recommend that the Design Flood Elevation (DFE) for this site is equal to the BFE at el 10 NAVD88. A copy of the FIRM is presented as Drawing No. 2.

[2] Pennsylvania Railroad Tunnels Datum (PRTD), which is 298.375 feet above North American Vertical Datum of 1988 (NAVD88) (NAVD88 = PRTD - 298.375).

Proposed Construction

According to the schematic design, the proposed development will consist of two buildings – Building A, a 33-story tower facing Purves Street, and Building B, a 3-story building facing Thomson Avenue and 44th Drive. The two buildings will be connected by an enclosed passageway and outdoor terrace. The buildings will not have cellar levels. The ground floor elevation is about el 10.625 NAVD88.

According to the schematic design sketch of the foundation plan, updated 3 March 2014, the column loads for Building A range between 1,600 and 2,800 kips. The shear wall loads have not been determined for Building A. The column loads for Building B range between 400 and 800 kips. The shear wall loads have not been determined for Building B, but these are smaller areas comparing to the Building B footprint. We estimate total load for Building B is about 200,000 kips and averaged pressure of about 1.2 kips per square feet (ksf).

Site Geology

The site is located in the Borough of Queens which lies within the Atlantic Coastal lowlands physiographic province of New York State, an area which includes all of Long Island. The last glacial advance and retreat in New York City are primarily responsible for the present day surface features and topography. The southern most advance of the glacial ice sheet through Queens County is marked by the Harbor Hill moraine, a ridge or mound composed of unsorted, unstratified glacial drift, formed by the direct action of the glacial ice. The area to the north of the moraine is underlain by deposits known as ground moraine that consists of glacial outwash till, a mixture of rock debris ranging in size from clay to boulders.

The USGS "Bedrock and Engineering Geologic Maps of New York County and Parts Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey" indicates that the bedrock underlying the site consists of fine to coarse grained, gray to tan-weathering, quartzofeldspathic, muscovite-biotite-garnet schist. A site geology map is presented as Drawing No. 3.

SUBSURFACE INVESTIGATION

The following sections describe the subsurface investigation consisted of drilling borings, installing observation wells, excavating test pits, performing seismic cone penetration tests, and laboratory tests on selected soil samples. A subsurface investigation plan is presented as Drawing No. 4.

Borings

2006 – Soil Mechanics Drilling Corp.

Three borings, identified as SB-1, SB-2 and SB-3, were performed in 2006 by Soil Mechanics Drilling Corp. The borings were advanced to a depth of 47 to 52 feet below existing grade. Groundwater level was measured inside the drill casing at the completion of each borehole.

2008 – Langan

Langan's 2008 investigation consisted of drilling 17 borings, and installing 3 observation wells.

Soil samples were examined visually and classified in the field in accordance with the Unified Soil Classification System (USCS), and assigned classification numbers in accordance with the 2008 New York City Building Code (Building Code). Soil classifications, Standard Penetration Resistances (N-values), and other field observations were recorded on field logs. Langan's borings logs are presented in Appendix B.

Seventeen borings, identified as B-1 through B-17 were drilled with Mobile B-61 truck-mounted drill rigs. Standard Penetration Tests (SPT)[3] and split spoon sampling (ASTM D1586-99) were performed continuously in the upper 12 feet (or through the fill layer) and at 5-foot intervals thereafter to the termination depth of the borings. Boring depths ranged between 53 and 75 feet below existing ground surface. A subsurface investigation location is presented as Drawing No. 4.

Rock was cored in all borings using an NX-sized double core barrel with a diamond cutting bit. Rock type, percent core recoveries (REC)[4], and Rock Quality Designation (RQD)[5] values were determined based on the length and quality of the rock core retrieved from each core run.

Observation Wells

Three groundwater observation wells were installed in completed borings B-4 (OW), B-10 (OW) and B-16 (OW). The observation wells consisted of a 10-foot-long section of 2-inch-diameter PVC screen and about 18- to 25-foot-long section of solid 2-inch-diameter PVC riser pipe. The completed wells were backfilled with No. 1 sand, and sealed with a 2-foot-long bentonite plug

[3] The Standard Penetration Test is a measure of the soil density and consistency. The SPT N-value is defined as the number of blows required to drive a 2-inch-outer-diameter split-spoon sampler 12 inches, after an initial penetration of 6 inches, using a 140-pound hammer free falling from a height of 30 inches.

[4] The core recovery is the ratio of the length of rock recovered to the total core run length, expressed as a percent.

[5] The RQD is defined as the ratio of the summation of each rock piece greater than 4 inches for NX-cores to the total core run length, expressed as a percent.

to prevent surface runoff from influencing the wells. The remaining sections of the wells were backfilled with soil cuttings. Well construction logs are also presented in Appendix B.

Test Pit Investigation

In 2008, two test pits, TP-1 and TP-2, were excavated to determine the type, condition and depth of the Thomson Avenue and 44th Drive retaining wall or remnant building foundations. Test pit locations are shown on Drawing No. 4. The conditions were documented in the field with sketches and photographs.

In 2014, eight additional test pits, TP-3 through TP-10, were excavated to determine the type, condition and depth of the remnant building foundation along Thomson Avenue and 44th Drive retaining wall, as well as adjacent building foundations. The conditions were documented in the field with sketches and photographs.

The test pit locations are shown on Drawing No. 4. Refer to Appendix C for test pit descriptions, sketches, and photographs.

Laboratory Testing

Ten selected soil samples from the borings were sent to the laboratory to determine their engineering properties. The laboratory testing program consisted of:

- Six sieve analyses (ASTM D6913)
- Ten water-content determinations (ASTM D2216)
- Four liquid and plastic limit determination - Atterberg Limits (ASTM D4318).

The laboratory data is presented in Appendix D.

Seismic Cone Penetration Tests

Seismic cone penetration tests (SCPT[6]) and cone penetration tests (CPT[7]) were performed at six locations to evaluate the in situ geotechnical criteria of the soils underlying the proposed new building. The tests are denoted as SCPT-1 through SCPT-4, CPT-5, and CPT-6. All tests were performed in accordance with ASTM 5778 by ConeTec, Inc. on 15 April 2013. The test locations were pushed to refusal to depths ranging from 44.6 to 49.5 feet below existing grade.

[6] Seismic testing to measure shear wave velocity (V_s) was performed at CPT locations at 3.3-foot intervals by generating vibrations at the ground surface and recording seismic signals at a geophone mounted with the cone apparatus.

[7] Cone penetration testing consists of pushing an instrumented stainless-steel cone through soil using hydraulic pressure, while collecting data continuously. Data collected includes tip resistance, side friction along the cone, and pore water pressure.

CPT and SCPT locations are shown on Drawing No. 4. The ConeTec SCPT data report is provided in Appendix E.

SUBSURFACE CONDITIONS

The general subsurface stratigraphy consists of a layer of sandy fill, overlaying successive strata of silty sands, silts, clays, decomposed rock, and finally bedrock. The 2008 Langan borings were all terminated in bedrock. Representative subsurface profiles are provided in Drawings No. 5 through 8. A detailed description of each stratum is given below in order of increasing depth.

Fill [Class 7][8]

A layer of the uncontrolled fill, generally consisting of black coarse sand, some gravel with varying amounts of brick and concrete covered the site. The thickness of the fill layer varies from about 5 to 9 feet. N-values for the fill varied from about 3 to 72 blows per foot (bpf), averaging 7 bpf. The large N-values are due to the variable nature of the uncontrolled fill, and the presence of obstructions that impeded the split spoon sampler (i.e., gravel, concrete, brick, etc.).

Shear-wave velocities were not recorded in the top part of the fill layer because the cone tip is not able to advance past obstructions. The measured shear wave velocities in the bottom part of the fill layer varied from about 270 to about 450 feet per second (fps) with an average of about 400 fps.

The uncontrolled fill is designated as Building Code Class 7 material, controlled and uncontrolled fills (formerly Class 11-65).

Sand [Classes 3b and 6]

Underlying the fill is a layer of brown loose to medium-dense sand with varying amounts of silt and gravel. This stratum is about 7- to 14-foot thick. N-values vary from about 0 to 17 bpf, with an averaged N-value of about 5 bpf, indicating a loose to medium dense deposit. Shear wave velocities recorded in this layer varied from about 400 to 550 fps with an average of about 475 fps.

[8] Numbers in brackets that follow the material designation indicate classification of soil and rock materials in accordance with the NYC Building Code.

Sieve analysis and water content determination were performed on representative samples. Based on the sieve tests, the silty fine sand has a fine content averaging about 19%. The water content ranges from 14% to 25%, averaging about 21%.

The sand is classified as SM, in accordance with USCS and is designated as Building Code Classes 3b and 6, medium to loose granular soil (formerly Class 7-65).

Silt [Classes 5b and 6]

Brown silt to clayey silt was found underlying the sand. This stratum is about 5- to 27-foot thick, with an average thickness of about 20 feet. N-values range from about 2 to 27 bpf, with an averaged N-value of about 8 bpf, which is indicative of a soft to medium-stiff deposit. Shear wave velocities recorded in this layer varied from about 490 to 930 fps with an average of about 710 fps.

Water content determination and sieve analysis were performed on a representative sample. The water content was about 30%. Based on the sieve tests, the silt has a fine content averaging about 40%.

The soil is classified as ML, clayey silt to silt in accordance with USCS and is designated as Building Code Classes 5b and 6, Medium to loose silt (formerly Class 10-65).

Clay [Classes 4b, 4c, and 6]

Underlying the silt and above the rock a layer of brown clay was encountered. This stratum is about 10- to 15-foot thick and was encountered in all borings except B-17. N-values varied from 1 to 24 bpf, with an averaged N-value about 9 bpf, indicating a soft to medium stiff deposit. Shear wave velocities recorded in this layer varied from about 670 to 1300 fps with an average of about 830 fps.

Water content determination and liquid and plastic limits performed on representative samples. Water content ranged from 22% to 31%, averaging about 26%. The liquid limit values ranges from 25 to 39, averaging about 33 and plastic index values ranged from 5 to 15, averaging about 8.

The clay is classified as CL, clay, in accordance with USCS and is designated as Building Code Classes 4b to 6, stiff to soft clay (formerly Class 9-65).

Decomposed Rock [Class 1d]

Decomposed rock was encountered in borings B-9, B-10 (OW), B-11 and B-14 from about 44 to 48 feet below grade. The decomposed rock is a very dense fine to medium sand and mica residual soil that results from weathered of the rock mass. The weathered rock displays the visual characteristics of the parent rock (color, grain size, etc.), but easily breaks down to soil type material. The thickness of the decomposed rock varied from 4 to 10 feet. Shear-wave velocities were not recorded in the till layer because the cone tip could not advance through this layer.

The decomposed and weathered rock stratum is designated as Building Code Class 1d, soft rock (formerly Class 4-65).

Bedrock [Classes 1a, 1b, 1c]

Gray white schist bedrock was encountered at depths ranging between about 43 and 61 feet below the ground surface. The top of rock elevation roughly ranged between about el -35 and el -55 NAVD88. A rock contour plan is presented as Drawing No. 9. The rock core recovery ranged between 35 and 100%, with an average of 97% and the associated RQD values ranged between 25 and 100%, with an average of 94%.

The bedrock is designated as Building Code Classes 1a, 1b and 1c material, Hard sound rock to intermediate rock (formerly Classes 1-65, 2-65 and 3-65).

Groundwater

The groundwater level was measured in borings B-4 (OW), B-10 (OW), and B-16 (OW). The measured groundwater depths ranged between 8 and 10 feet below the sidewalk grade, corresponding to el 3 and el 1 NAVD 88.

RECOMMENDATIONS

The following sections discuss the subsurface conditions identified by the geotechnical investigation as they relate to, or impacted by, the proposed foundation design and construction. Our recommendations for foundation systems, seismicity, foundation walls, and groundwater control are presented herein.

Seismic Evaluation

This section presents the results of our seismic evaluation for the site relative to the provisions outlined in the Building Code. The following subsections provide recommended parameters for use in seismic design of the propose structure.

Mapped Spectral Accelerations

Per section 1615.1 of the Building Code, the mapped maximum considered earthquake response spectra for the short period (Ss) is 0.365g and the 1-second period (S1) is 0.071g.

Site Class

The shear wave velocities ranged between 275 and 1306 feet per second (fps), with averaged shear wave velocities of 744 to 807 fps. These average shear wave velocities correspond to site class D in accordance with Table 1615.1.1 of the Building Code, and the site coefficients for short period (F_a) is 1.51 and for 1-second period (F_v) is 2.4. It's our judgment that the SCPTs data reflects the actual seismic condition more than that of the SPTs result. Therefore, site class D should be used for seismic design.

Design Spectral Response Accelerations and Seismic Design Category

Design spectral accelerations were determined in accordance with section 1615.1.3 of the Building Code. The design spectral acceleration at short periods (S_{DS}) is 0.367g and 1-second period (S_{D1}) is 0.114g.

Based on the above design spectral acceleration and the use group/occupancy category of the structure (identified as Seismic Use Group I and Structural Occupancy Category II by the Design Team), the correspondent Seismic Design Category (SDC) is identified as "C", in accordance with section 1616.3 of the Building Code.

Liquefaction Potential

The Building Code requires that non-cohesive soils below the groundwater table and less than 50 feet below the ground surface be assessed for potential soil liquefaction. The uncorrected SPT N-values versus depth were plotted on the Building Code liquefaction assessment diagram presented as Drawing No. 10. More than half of the applicable SPT N-values fall within the Building Code "Liquefaction Probable" category.

The potential for soil liquefaction was then evaluated using the procedure outlined by Youd et al. (2001). The Youd et al. evaluation is currently considered to be the state-of-practice procedure for liquefaction evaluation, as recommended by the National Earthquake Hazard Reduction Program (NEHRP). This evaluation employs an empirical relationship between the earthquake demand, represented by the Cyclic Stress Ratio (CSR), and the soil's resistance to dynamic loading, represented by the Cyclic Resistance Ratio (CRR). The CSR is correlated to the Peak Ground Acceleration (PGA) of the design earthquake event, as well as the in-situ soil stresses, whereas the CRR is correlated to SPT N-values obtained in the field and corrected as required. The field N-values are converted to $N_{1,60,cs}$ by applying various correction factors to account for soil overburden pressure, hammer energy efficiency, borehole diameter, rod length, sampler lining, and percent fines.

Our analysis parameters included a Magnitude 5.71 earthquake event, a Peak Ground Acceleration of 0.147g, and a Magnitude Scaling Factor of 2.0. A plot of the factor of safety with depth using the Youd et al. (2001) procedure is presented as Drawing No. 11. Most data points have a factor of safety greater than 1.25. Therefore, in our judgment, the potential for liquefaction need not be considered in the foundation design.

Foundation System

The uncontrolled fill and the underlying loose sandy, soft silt, and clay materials are not suitable for support of a shallow foundation system; excessive total and differential settlements may develop.

A deep foundation system is recommended for the buildings to transfer the building loads to the underlying bedrock. Small-diameter caisson piles (mini-caissons) socketed into the bedrock or end bearing piles driven to bedrock are feasible foundation. Various sizes and allowable design capacities are presented in Table 1:

Table 1:

Design Compressive Capacity (tons)	Design Tensile Capacity (tons)	Casing Outside Diameter (inch)	Minimum Casing Wall Thickness (inch)	Rock Socket Length (ft)	Concrete Fill 28-day Strength (psi)	Reinforcing (Grade 75)
500	165	18	1/2	10	6,000	6 #18
750	250	24	1/2	10	6,000	3 #24
1000	330	24	1/2	15	6,000	6 #24

* The rock socket length does not include the first foot for fractured/uneven rock

Drilled Caissons

A drilled caisson socketed into rock would provide both axial compression and tension resistance. Drilled caissons are installed by drilling an open-ended pipe (casing) through the overburden soils, installing steel casing sections as the borehole is advanced. The casing should be seated at least 1 foot into sound schist bedrock and then the rock socket continued (uncased) to the design depth. In competent rock, the socket diameter is generally slightly smaller than the inside diameter of the casing. The casing and socket are then filled with concrete and steel reinforcing core (rebar and/or beam) is added as required to achieve the structural capacity. The Building Code limits the structural capacity of a caisson to 33% of the grout design compressive strength, and 50% of the reinforcing core steel yield strength. The pile should be proportioned assuming the entire pile load is transferred to the rock socket.

For rock socket design, an allowable grout/rock adhesion of 200 psi should be used for compressive capacity of the sound schist bedrock (Class 1b or better). For uplift resistance, a side shear of 100 psi should be used.

The drilled caissons should be installed in the areas that are within 25 feet of the existing adjacent buildings.

Considerations for dewatering, cleaning, and inspection of the drilled sockets must be addressed by the Contractor. The bottom of the drilled sockets must be cleaned of all loose debris and sediment prior to grout placement. Internal videotaping of the caisson rock socket can be performed in lieu of a static load test. During the grout placement within the caissons, it is also important that no air voids occur. Prior to any foundation work, the contractor should submit shop drawings for the drilled caisson, including casing size, wall thickness, socket length, and methods of cleaning and inspection procedures.

Driven Piles

Driven piles are one of the most commonly used types of deep foundation systems in the New York City area. Driven piles typically consist of steel, concrete or composite members ranging from 8 to 18 inches in diameter, and are installed into the ground by repeated impacts with a high energy hammer. Possible piles are:

Grade 50 HP14x89 H-pile should provide a 150-ton capacity and HP14x117 H-pile should provide a 200-ton capacity when driven to bedrock. All H-piles should be fitted with protective points such as the Hard-Bite manufactured by Associated Pile Fitting Corp., or equivalent.

As discussed herein, the uplift capacity of the driven piles will be derived from the shear resistance between the pile and the uncontrolled fill, sand, silt and clay. The uplift capacity of the piles will be minimal due to the loose to medium dense materials. Therefore, we recommend a pile uplift capacity of 10 tons, with drilled tie-down anchors providing the balance of the required resistance (see below). Load tests could be performed to verify the pile uplift capacity.

Index Piles and Load Tests

The use of driven piles as a foundation element will require axial compression load tests. Index piles should be installed to the required tip elevation, and pile load tests should be performed prior to installation of production piles. The index piles are necessary to more accurately determine pile lengths, identify unusual conditions, and establish production installation criteria. We recommend a minimum of 10 index piles are installed.

Based on the proposed building footprint, two compression load tests are necessary to satisfy the requirements of the Building Code, to be performed in accordance with ASTM D1143 and the requirements of the Building Code. The test load must be applied in seven increments to a proof load of twice the design load, and sustained for a period of not less than 12 hours for the 150-ton piles and 24 hours for the 200-ton piles.

Drilled piled will not require axial compressive load testing, provided:

1) the piles are socketed into bedrock; and

2) the rock sockets are video inspected prior to concrete / grout placement.

Pile Uplift Capacity

We estimate that the recommended driven pile will develop an allowable axial tension (uplift) capacity of about 10 to 15 percent of axial capacity. The recommended drilled-in pile will develop an allowable uplift capacity of about 30 to 35 percent of axial capacity. The uplift capacity of the piles will also need to be substantiated with at least one static uplift test performed in accordance with ASTM D3689. The proof load shall be twice the design load. The load should be applied in seven increments of at least 1 hour, with the proof load sustained for a period of at least 12 hours. The pile butt movement during the last hour of sustained loading shall not exceed 0.01 inch.

Pile Lateral Capacity

Per the Building Code, the maximum allowable lateral load of a pile is 1 ton, unless verified by lateral load test. If an allowable lateral capacity greater than 1 ton is required, then load-tests performed in accordance with ASTM D3966 should be performed. The maximum allowable lateral load shall not be more than one-half the test load producing a gross lateral movement of 1 inch at the ground surface.

The recommended allowable lateral capacities of an 18-inch-diameter caisson pile are 3 tons for the free-head condition and 8 tons for the fixed-head condition. The recommended allowable lateral capacities of a 24-inch-diameter caisson pile are 6 tons for the free-head condition and 14 tons for the fixed-head condition. The recommended allowable lateral capacities of the HP14x89 and HP14x117 are 2 tons for the free-head condition and 6 tons for the fixed-head condition. Capacities will need to be re-evaluated for group effects after the pile locations are finalized by the structural engineer.

Waterproofing

The groundwater level was measured to be at about 9 feet below ground surface or about el 2 NAVD88. We recommend waterproofing the slabs and walls with sheet-membranes (product such as those manufactured by Grace) to the DFE of el 10 NAVD88. The use of bentonite waterproofing or negative side crystalline waterproofing is not recommended.

The substrata to receive horizontal waterproofing should be a 3-inch-thick concrete working surface (mud-mat). Vertical waterproofing should be protected with a rigid barrier to prevent damage during backfilling operations. Outboard of the membrane waterproofing, the foundation walls should be protected with drainage panels for the full height of the wall. The drainage panels must be secured in place with the filter fabric side against the soil. Joints in the filter material should be carefully taped to prevent concrete or soil from entering the drainage matrix. Any punctures or tears in the drainage panels and waterproofing membrane must be repaired, and penetrations by utilities should be carefully sealed in accordance with the manufacture's recommendations.

Slab Support

The ground floor slab should be designed as a structural slab that integrated with the pile foundations. The structural slab must be designed to resist the hydrostatic uplift pressures resulting from the DFE of el 10 NAVD88.

Permanent Below Grade Walls

Permanent below grade walls should be designed to resist static and dynamic earth pressures, surcharge and hydrostatic pressures associated with a utility break or periods of heavy precipitation. The static lateral earth pressure diagrams are shown in Drawing No. 12.

Static Earth Pressures

The recommended design lateral earth pressure diagram has a triangular distribution using an equivalent fluid weight of 60 psf per foot of depth of soil. An equivalent fluid unit weight of 100 psf per foot of depth should be used below the design groundwater level. We recommend that a vertical surcharge load of 600 psf be considered for all perimeter below-grade walls (fire-truck loading). Lateral pressures from surcharge loads should have a uniform distribution based on a pressure equal to 50 percent of the vertical pressure acting against the full height of the wall.

The foundation walls along the Thomson Avenue and 44th Drive retaining walls should be able to withstand the abovementioned static earth pressures in the case of future retaining wall failures or removal.

Dynamic Earth Pressure

In accordance with Section 1802.2 of the Building Code, dynamic earth pressures need not be considered in design for structures assigned to SDC C.

Temporary Support of Excavation

The proposed parking garage along the retaining walls will be at the ground floor level. From the referenced architectural drawings, the top of slab elevation is at el 10.625 NAVD88, however, the team is currently considering lowering the garage floor 1 foot. With the thickness of the proposed floor slab, the general excavation in front of the existing retaining wall is assumed to be at about el 8.5 NAVD88, which is about 2.5 feet below existing grade. It's our judgment that there's no stability issue of the retaining wall with this excavation depth. However, any proposed changes in the excavation depths should be brought to Langan's attention as soon as possible so that we can re-assess the stability of the retaining walls.

Also, the extents of excavation for environmental remediation were not determined at this time. A support of excavation system of the existing retaining walls will have to be designed if the soil in front of the wall is not sufficient to provide adequate lateral earth pressure for the existing retaining wall.

Utility Support

Utilities constructed below ground-level floor slabs may be subjected to settlement resulting from consolidation of the underlying compressible organic clay layer. Therefore, we recommend that integrated utility chases (trenches) be cast into the slab to accommodate the utilities. Alternately, utilities could be hung from the structural slabs. In the later case, utility lines and their supports would require adequate strength to carry the weight of the utility and soil cover. At the locations where utility pipes transition from the pile-supported building to on-grade support, flexible connections should be considered.

OTHER GEOTECHNICAL RECOMMENDATIONS

Backfill and Compaction

Fill used for backfill under the floor slabs, around pile caps or pits should be free of organic, frozen, and other deleterious materials, and should have a maximum particle size no greater than 4 inches. It should also contain no more than 10 percent by dry weight passing the No. 200 sieve. The existing on-site uncontrolled fill is unsuitable for reuse as controlled fill.

Controlled fill should be placed in uniform 12-inch-thick loose lifts and compacted to at least 95 percent of its maximum dry unit weight as determined by ASTM D1557. In restricted areas where only hand-operated compactors can be used, the maximum loose lift thickness should be limited to about 6 to 8 inches. No fill should be placed on areas with free-standing water or frozen subsoil.

Pre-construction Conditions Documentation and Monitoring

A pre-construction Conditions Documentation of the neighboring buildings should be performed. The documentation would provide the owner with documentation of the existing conditions as a base line for in the event of a future damage claim. On the basis of this documentation, an observational and instrumentation program should be designed for monitoring the performance of adjacent structures and evaluating construction procedures.

During excavation support construction and active pile installation, an optical survey program should be implemented to monitor for vertical and horizontal movements of surrounding structures and the excavation support system. The survey should be performed every other week, with measurements taken to the nearest 0.005 feet. The survey should be performed by a licensed surveyor. The recommended allowable lateral movement of the perimeter walls is ¾ inch, and the allowable ground settlement behind the wall is ¾ inch. Work should be temporarily stopped if movements (vertical or horizontal) exceed about ¼ inch over two

readings or a movement trend develops over several readings. Criteria for allowable movements of structures should be finalized after a building's preconstruction conditions documentation is completed. The status of the excavation support system should be reviewed when the vertical or lateral movements reach one-half the threshold limits.

LIMITATIONS

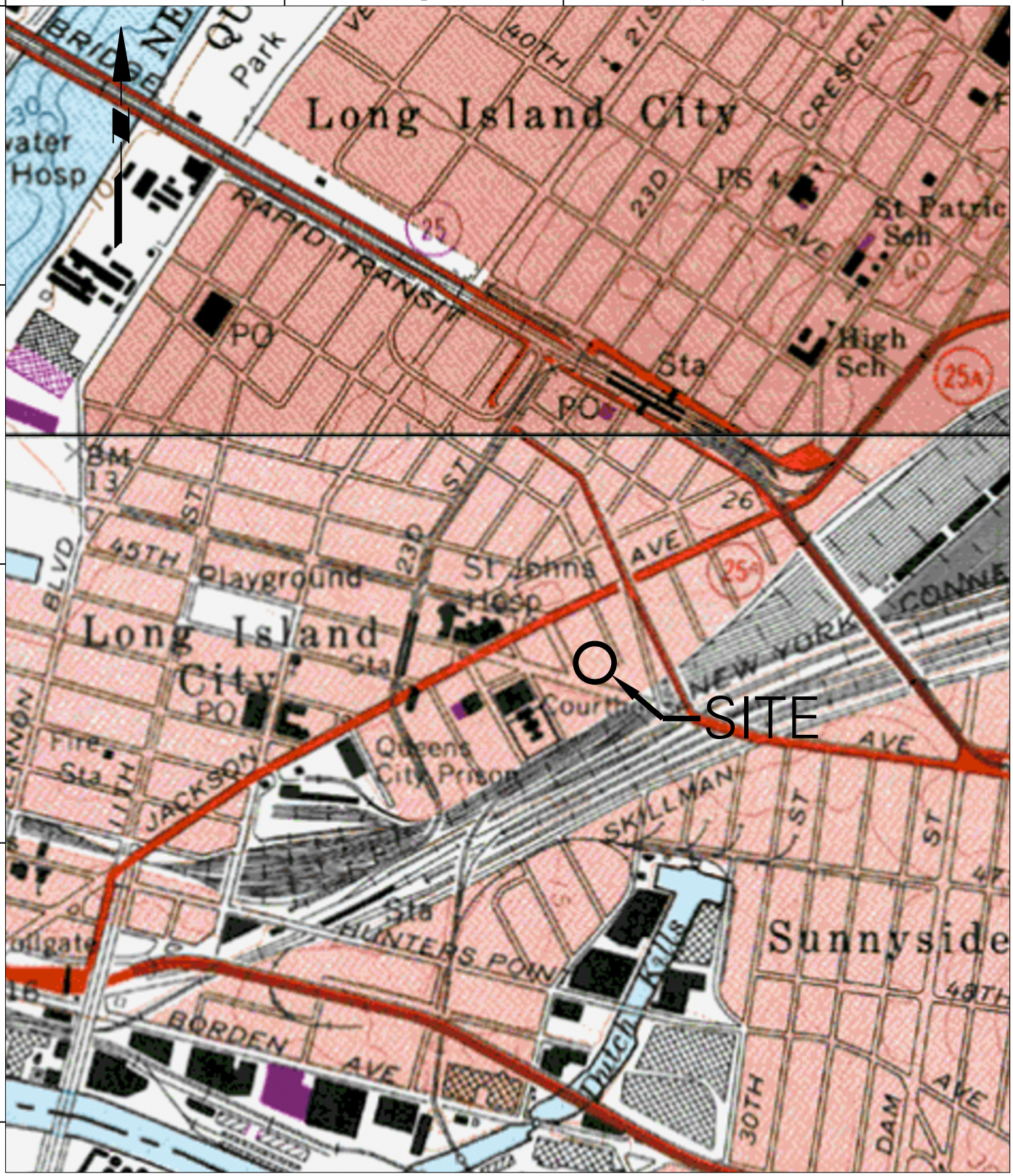
The conclusions and recommendations provided in this report are based on subsurface conditions inferred from a limited number of borings, as well as architectural and structural information provided by FXFOWLE Architects and DeSimone Consulting Engineers, respectively. Recommendations provided are dependent upon one another and no recommendation should be followed independent of the others.

Any proposed changes in structures or their locations should be brought to Langan's attention as soon as possible so that we can determine whether such changes affect our recommendations. Information on subsurface strata and groundwater levels shown on the logs represent conditions encountered only at the locations indicated and at the time of investigation. If different conditions are encountered during construction, they should immediately be brought to Langan's attention for evaluation, as they may affect our recommendations.

This report has been prepared to assist the Owner, architect and structural engineer in the design process and is only applicable to the design of the specific project identified. The information in this report cannot be utilized or depended on by engineers or contractors who are involved in evaluations or designs of facilities (including underpinning, grouting, stabilization, etc.) on adjacent properties which are beyond the limits of that which is the specific subject of this report.

Environmental issues (such as potentially contaminated soil and groundwater) are outside the scope of this study and should be addressed in a separate study.

DRAWINGS



SOURCE: U.S. GEOLOGICAL SURVEY. **Central Park and Brooklyn Quandrangle Maps** [map]. 1967. Photovised 1979.

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BLOCK No. 268, LOT No. 1,24,25,26
LONG ISLAND CITY
QUEENS NEW YORK

Drawing Title

SITE LOCATION MAP

Project No. 170282501	Drawing No. 1
Date 05/09/2014	
Scale N.T.S.	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 1 of 12

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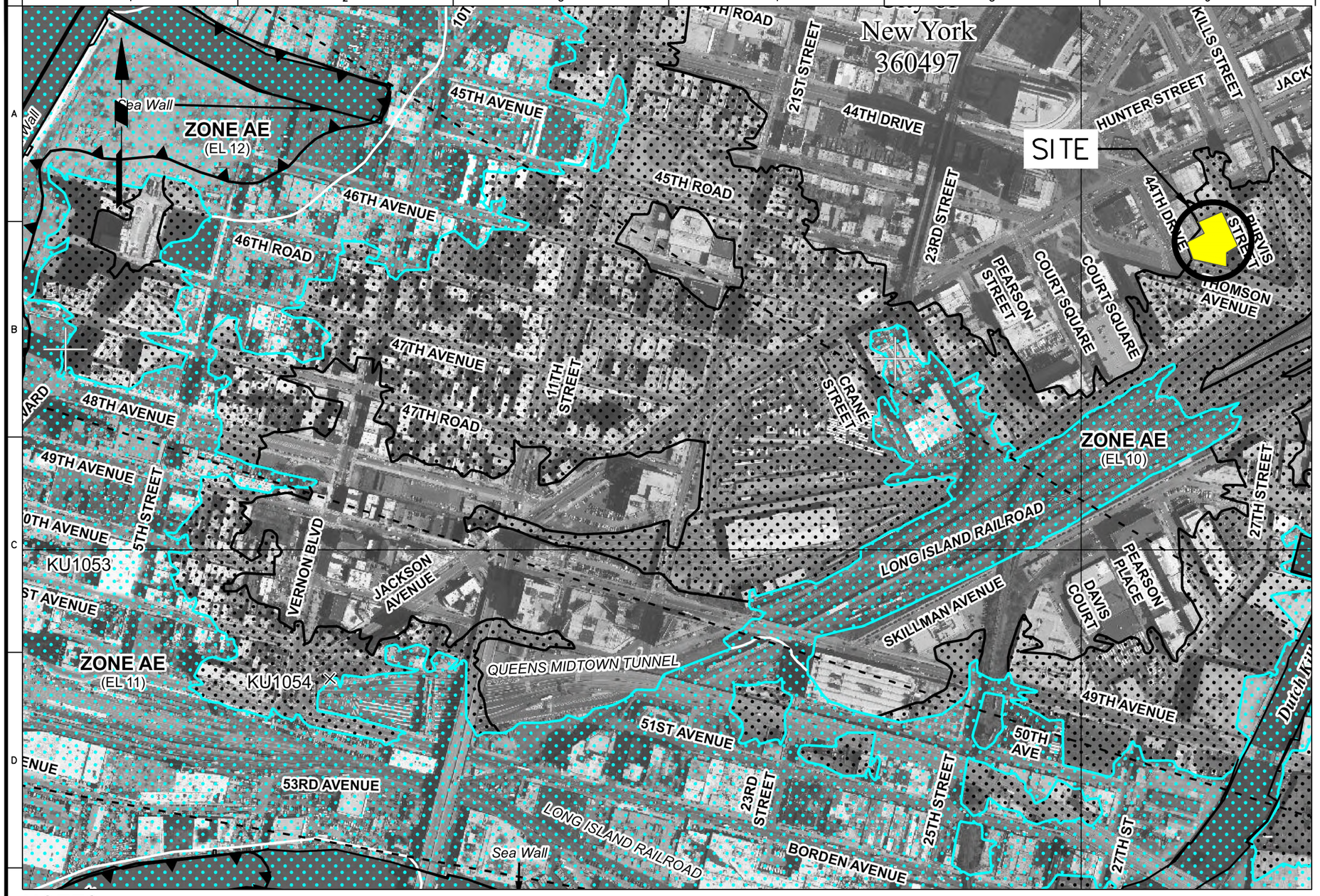

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X, ZONE D — Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- Footbridge
- 97°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4276000 N — 1000-meter Universal Transverse Mercator grid values, zone 18
- 600000 FT — 5000-foot grid values: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

NOTES

1. ELEVATIONS CONTAINED WITHIN THIS MAP ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. REFERENCE: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM), CITY OF NEW YORK, NEW YORK, PANEL 202 OF 457, REVISED 5 DECEMBER 2013, MAP NO. 3604970202G.

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Drawing Title
PRELIMINARY FIRM

Project No. 170282501	Drawing No. 2
Date 05/09/2014	
Scale N.T.S.	
Drawn By VV / Checked By TKC	
Submission Date 05/12/2014	Sheet 2 of 12

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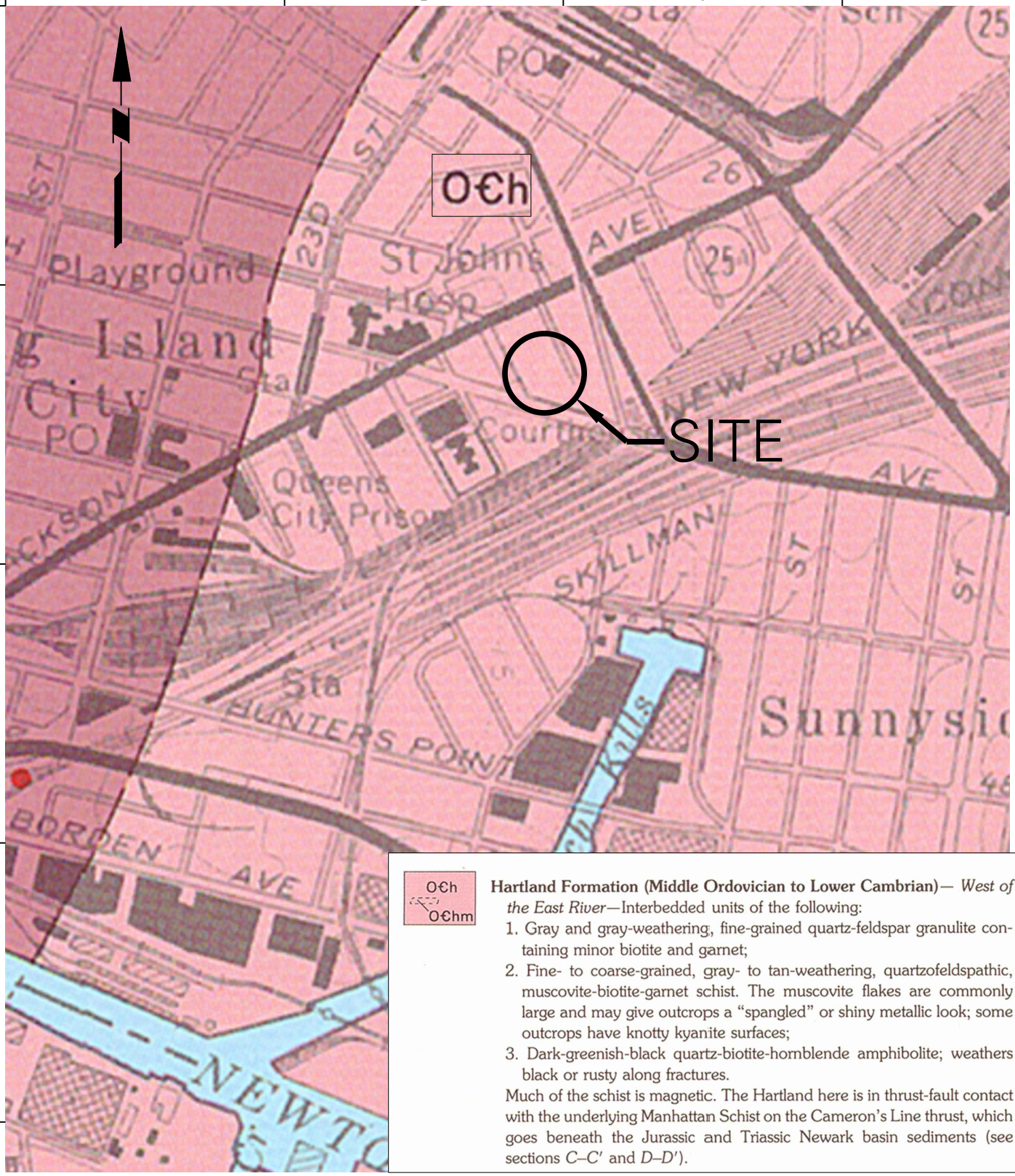

Hartland Formation (Middle Ordovician to Lower Cambrian)— *West of the East River*—Interbedded units of the following:

1. Gray and gray-weathering, fine-grained quartz-feldspar granulite containing minor biotite and garnet;
2. Fine- to coarse-grained, gray- to tan-weathering, quartzofeldspathic, muscovite-biotite-garnet schist. The muscovite flakes are commonly large and may give outcrops a "spangled" or shiny metallic look; some outcrops have knotty kyanite surfaces;
3. Dark-greenish-black quartz-biotite-hornblende amphibolite; weathers black or rusty along fractures.

Much of the schist is magnetic. The Hartland here is in thrust-fault contact with the underlying Manhattan Schist on the Cameron's Line thrust, which goes beneath the Jurassic and Triassic Newark basin sediments (see sections *C–C′* and *D–D′*).

SOURCE: BEDROCK AND ENGINEERING GEOLOGICAL MAP BY CHARLES A. BASKERVILLE, DATED 1994.

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QUEENS NEW YORK

Drawing Title
SITE GEOLOGY MAP

Project No. 170282501	Drawing No. 3
Date 05/09/2014	
Scale N.T.S.	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 3 of 12

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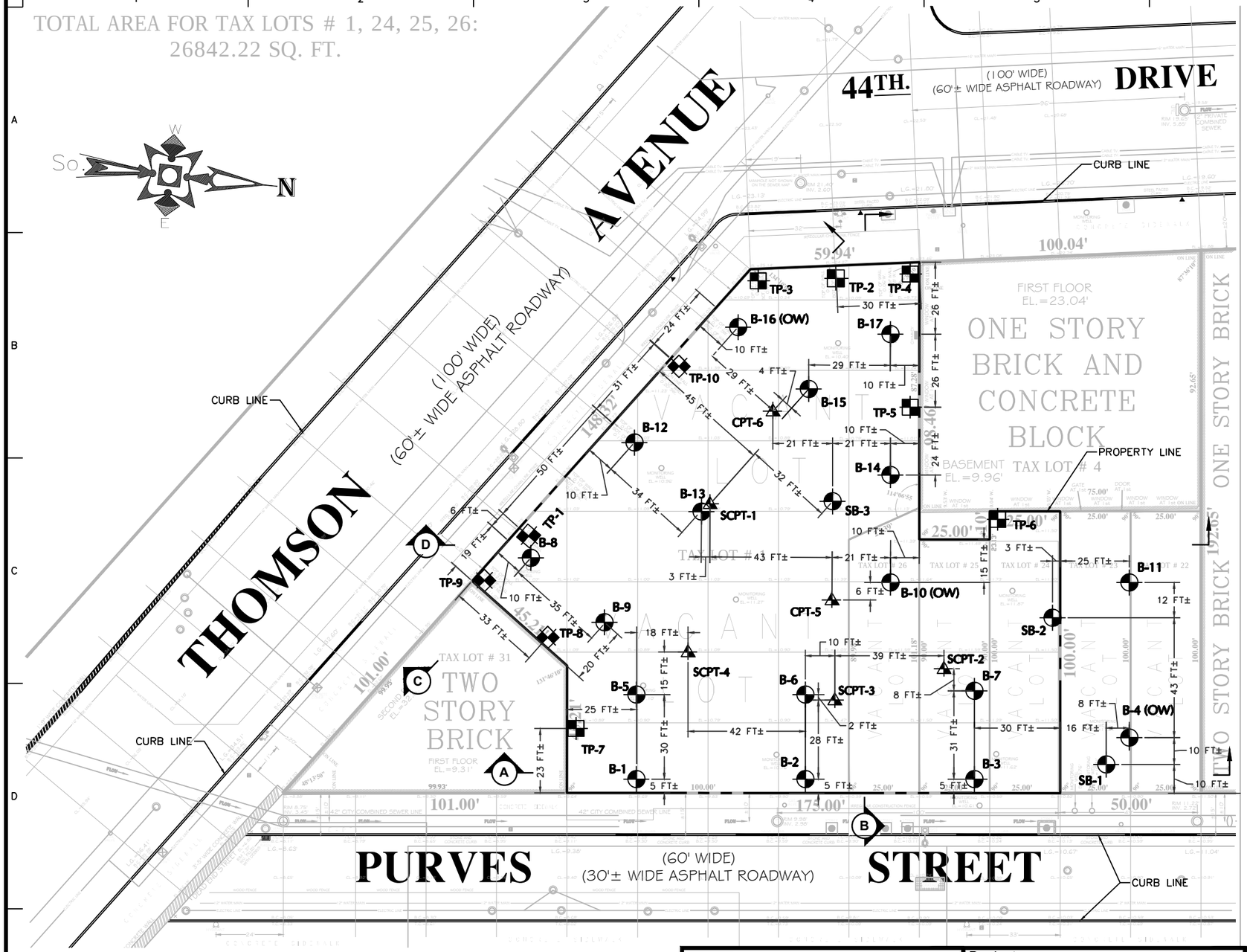
TOTAL AREA FOR TAX LOTS # 1, 24, 25, 26:
26842.22 SQ. FT.



NOTES

1. BASE PLAN WAS TAKEN AND REVISED FROM THE DRAWING TITLED "TOPOGRAPHIC & BOUNDARY SURVEY", JOB NO. 14169, PREPARED BY APPLE SURVEYING, DATED 11 APRIL 2014.
2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), WHICH IS 1.095 FEET ABOVE THE NATIONAL GEODETIC SURVEY DATUM AT SANDY HOOK, NEW JERSEY (NGVD 29).
3. LOCATIONS OF BORINGS, TEST PITS, AND SEISMIC CONE PENETRATION TESTS ARE APPROXIMATE.
4. 2006 BORINGS, SB-1, SB-2 AND SB-3, WERE DRILLED BY SOL MECHANICS DRILLING CORP.
5. 2008 BORINGS, B-1 THROUGH B-17, WERE DRILLED BY CRAIG TEST BORING UNDER THE FULL TIME SPECIAL INSPECTION OF A LANGAN ENGINEER BETWEEN 4 AND 24 JANUARY 2008.
6. TEST PITS TP-1 AND TP-2 WERE EXCAVATED BY SOUTH SHORE PAVING UNDER THE FULL TIME SPECIAL INSPECTION OF A LANGAN ENGINEER BETWEEN 6 AND 7 FEBRUARY 2008..
7. TEST PITS TP-3 THROUGH TP-10 WERE EXCAVATED BY MAC-WAY CONTRACTING OF NEW YORK UNDER THE FULL TIME SPECIAL INSPECTION OF A LANGAN ENGINEER BETWEEN 7 AND 8 APRIL 2014.
8. SEISMIC CONE PENETRATION TESTS WERE CONDUCTED BY CONTEC INC. UNDER THE FULL TIME SPECIAL INSPECTION OF A LANGAN ENGINEER ON 15 APRIL 2014.

LEGEND

- TP-5 — TEST PIT LOCATION
- SCPT-1 — SEISMIC CONE PENETRATION TEST LOCATION
- CPT-5 — CONE PENETRATION TEST LOCATION
- SB-2 — SOIL MECHANICS DRILLING CORP.'S 2006 BORING
- B-11 — LANGAN'S 2008 BORING
- (OW) — OBSERVATION WELL

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Drawing Title
SUBSURFACE INVESTIGATION PLAN

Project No. 170282501	Drawing No. 4
Date 05/09/2014	
Scale 1" = 40'	
Drawn By JRM / Checked By JMG	
Submission Date 05/12/2014	Sheet 4 of 12

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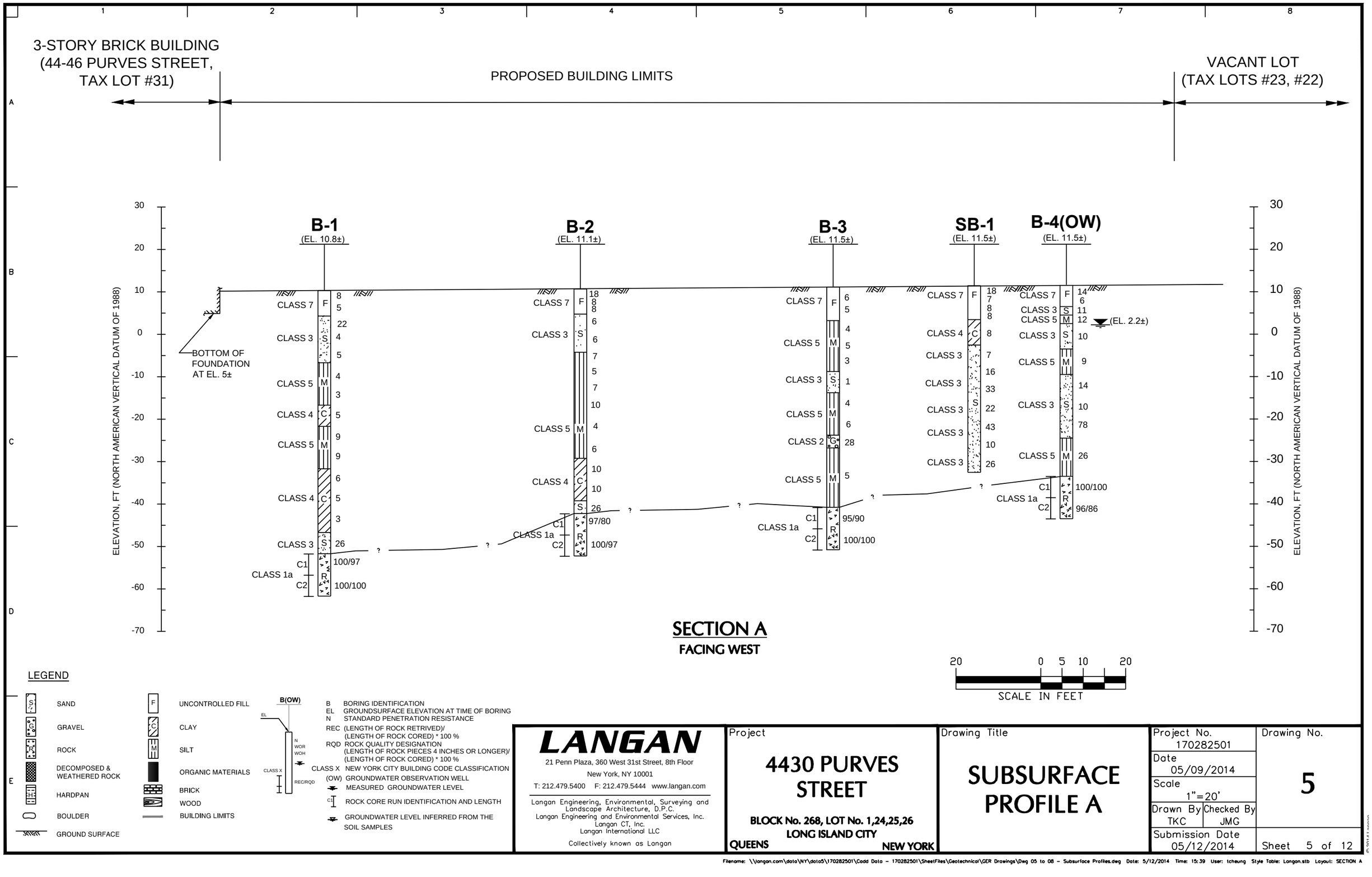

SECTION A
FACING WEST

SCALE IN FEET: 20 0 5 10 20

LEGEND

- SAND
- GRAVEL
- ROCK
- DECOMPOSED & WEATHERED ROCK
- HARDPAN
- BOULDER
- GROUND SURFACE
- UNCONTROLLED FILL
- CLAY
- SILT
- ORGANIC MATERIALS
- BRICK
- WOOD
- BUILDING LIMITS

B(OW) — EL — N WOR WOH — CLASS X — REC/RQD — C1

- B BORING IDENTIFICATION
- EL GROUNDSURFACE ELEVATION AT TIME OF BORING
- N STANDARD PENETRATION RESISTANCE
- REC (LENGTH OF ROCK RETRIVED)/(LENGTH OF ROCK CORED) * 100 %
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 INCHES OR LONGER)/(LENGTH OF ROCK CORED) * 100 %
- CLASS X NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) GROUNDWATER OBSERVATION WELL
- MEASURED GROUNDWATER LEVEL
- ROCK CORE RUN IDENTIFICATION AND LENGTH
- GROUNDWATER LEVEL INFERRED FROM THE SOIL SAMPLES

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Drawing Title
SUBSURFACE PROFILE A

Project No. 170282501	Drawing No. 5
Date 05/09/2014	
Scale 1"=20'	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 5 of 12

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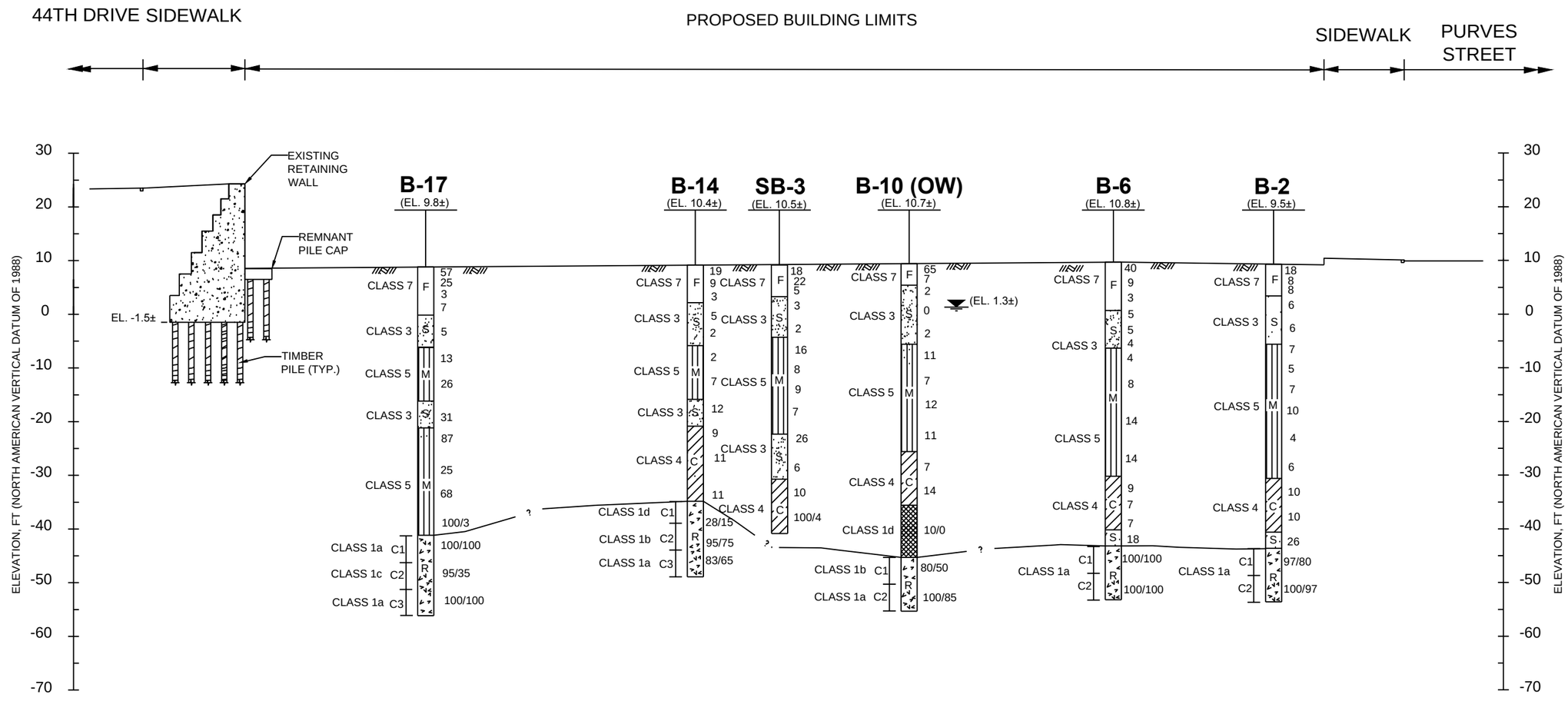

SECTION B
FACING NORTH

20 0 5 10 20
SCALE IN FEET

LEGEND

- SAND
- GRAVEL
- ROCK
- DECOMPOSED & WEATHERED ROCK
- HARDPAN
- BOULDER
- GROUND SURFACE
- UNCONTROLLED FILL
- CLAY
- SILT
- ORGANIC MATERIALS
- BRICK
- WOOD
- BUILDING LIMITS

B(OW) — EL — N WOR WOH — CLASS X — REC/RQD

- B BORING IDENTIFICATION
- EL GROUNDSURFACE ELEVATION AT TIME OF BORING
- N STANDARD PENETRATION RESISTANCE
- REC (LENGTH OF ROCK RETRIVED)/(LENGTH OF ROCK CORED) * 100 %
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 INCHES OR LONGER)/(LENGTH OF ROCK CORED) * 100 %
- CLASS X NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) GROUNDWATER OBSERVATION WELL
- MEASURED GROUNDWATER LEVEL
- C1 ROCK CORE RUN IDENTIFICATION AND LENGTH
- GROUNDWATER LEVEL INFERRED FROM THE SOIL SAMPLES

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Drawing Title
SUBSURFACE PROFILE B

Project No. 170282501	Drawing No. 6
Date 05/09/2014	
Scale 1"=20'	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 6 of 12

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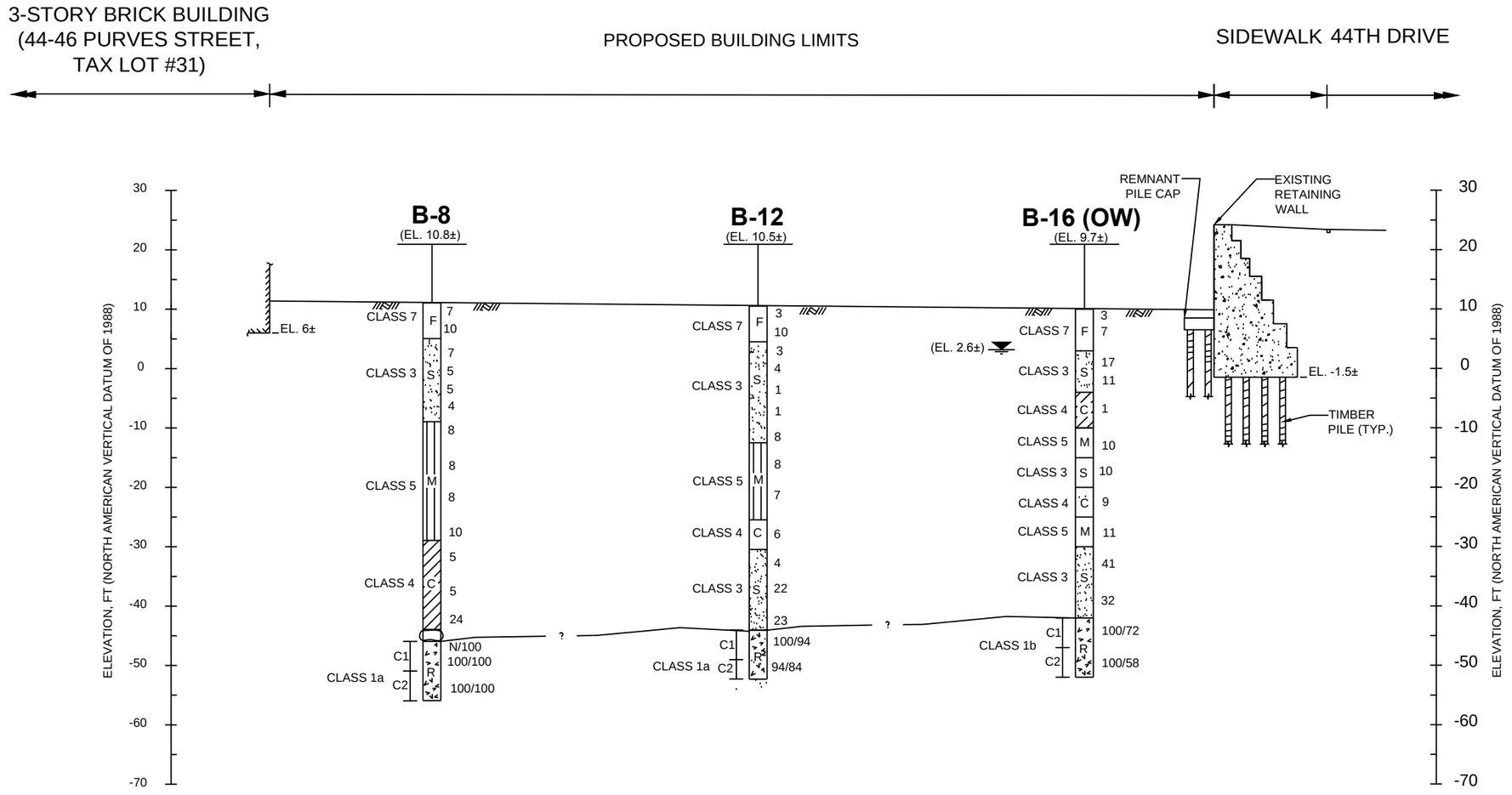

SECTION C
FACING SOUTHWEST

20 0 5 10 20
SCALE IN FEET

LEGEND

- SAND
- GRAVEL
- ROCK
- DECOMPOSED & WEATHERED ROCK
- HARDPAN
- BOULDER
- GROUND SURFACE
- UNCONTROLLED FILL
- CLAY
- SILT
- ORGANIC MATERIALS
- BRICK
- WOOD
- BUILDING LIMITS

B(OW) — EL — N WOR WOH — CLASS X — REC/RQD

- B BORING IDENTIFICATION
- EL GROUNDSURFACE ELEVATION AT TIME OF BORING
- N STANDARD PENETRATION RESISTANCE
- REC (LENGTH OF ROCK RETRIVED)/ (LENGTH OF ROCK CORED) * 100 %
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 INCHES OR LONGER)/ (LENGTH OF ROCK CORED) * 100 %
- CLASS X NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) GROUNDWATER OBSERVATION WELL
- MEASURED GROUNDWATER LEVEL
- C1 ROCK CORE RUN IDENTIFICATION AND LENGTH
- GROUNDWATER LEVEL INFERRED FROM THE SOIL SAMPLES

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Drawing Title
SUBSURFACE PROFILE C

Project No. 170282501	Drawing No. 7
Date 05/09/2014	
Scale 1"=20'	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 7 of 12

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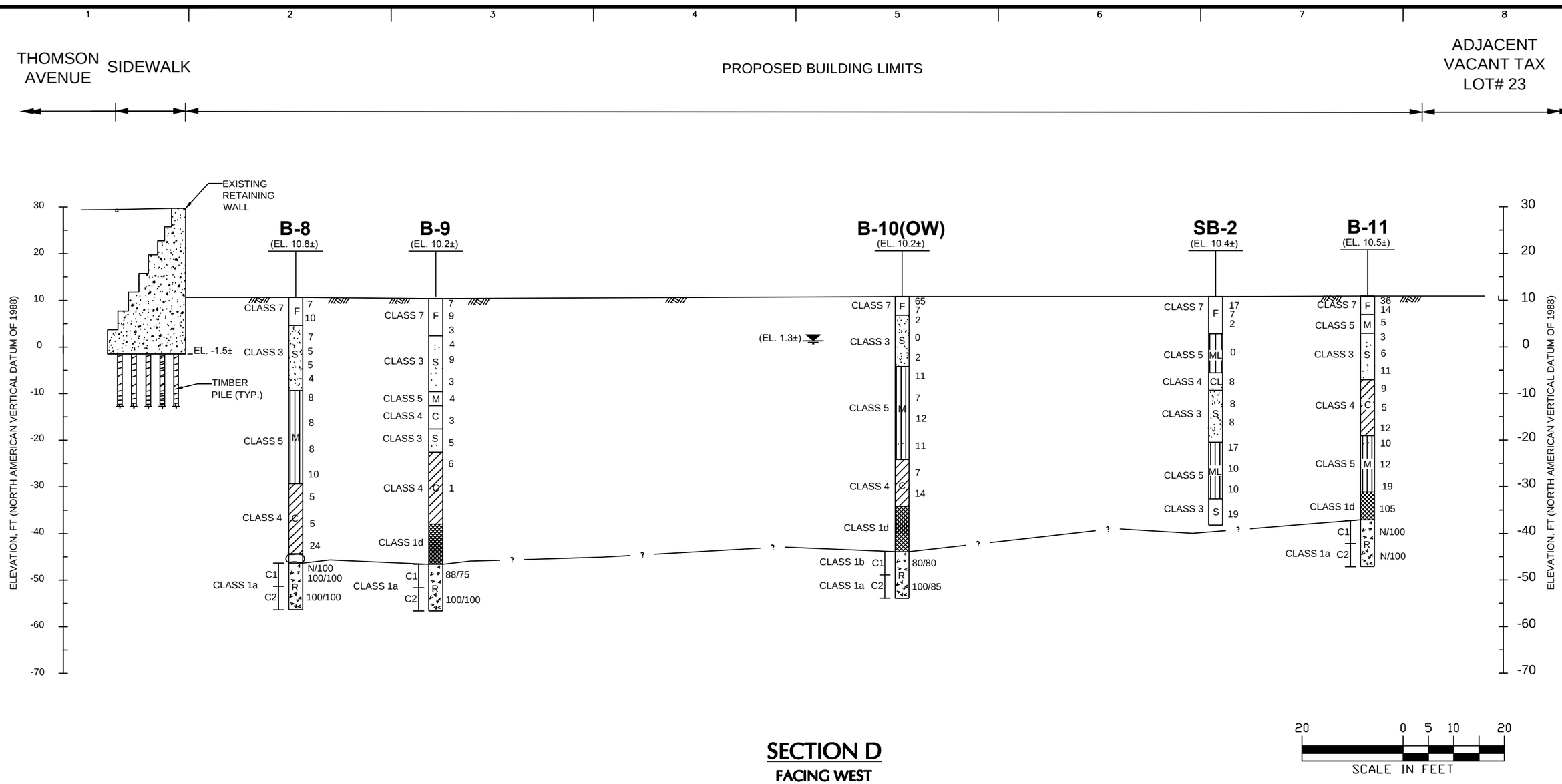

SECTION D
FACING WEST

LEGEND

- SAND
- GRAVEL
- ROCK
- DECOMPOSED & WEATHERED ROCK
- HARDPAN
- BOULDER
- GROUND SURFACE
- UNCONTROLLED FILL
- CLAY
- SILT
- ORGANIC MATERIALS
- BRICK
- WOOD
- BUILDING LIMITS

B(OW) — EL — N WOR WOH — CLASS X — REC/RQD

- B BORING IDENTIFICATION
- EL GROUNDSURFACE ELEVATION AT TIME OF BORING
- N STANDARD PENETRATION RESISTANCE
- REC (LENGTH OF ROCK RETRIVED)/ (LENGTH OF ROCK CORED) * 100 %
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 INCHES OR LONGER)/ (LENGTH OF ROCK CORED) * 100 %
- CLASS X NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) GROUNDWATER OBSERVATION WELL
- MEASURED GROUNDWATER LEVEL
- C1 ROCK CORE RUN IDENTIFICATION AND LENGTH
- GROUNDWATER LEVEL INFERRED FROM THE SOIL SAMPLES

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21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
4430 PURVES STREET
BLOCK No. 268, LOT No. 1,24,25,26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
SUBSURFACE PROFILE D

Project No. 170282501	Drawing No. 8
Date 05/09/2014	
Scale 1"=20'	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 8 of 12

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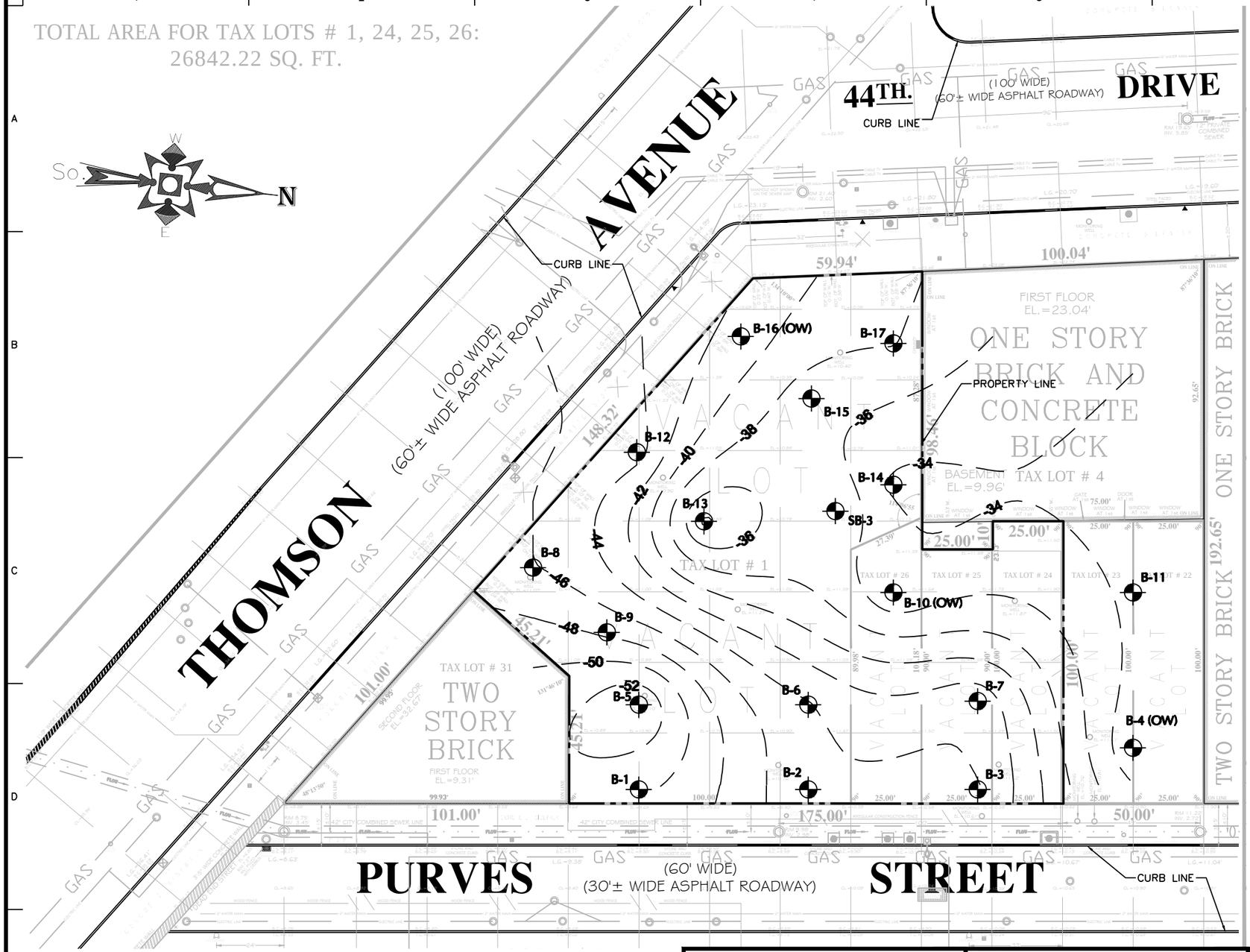
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Geotechnical\GER Drawings\Dwg 05 to 08 - Subsurface Profiles.dwg Date: 5/12/2014 Time: 15:40 User: tcheung Style Table: Langan.stb Layout: SECTION D

TOTAL AREA FOR TAX LOTS # 1, 24, 25, 26:
26842.22 SQ. FT.



NOTES

1. BASE PLAN WAS TAKEN AND REVISED FROM THE DRAWING TITLED "TOPOGRAPHIC & BOUNDARY SURVEY", JOB No. 14169, PREPARED BY APPLE SURVEYING, DATED 11 APRIL 2014.
2. ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), WHICH IS 1.095 FEET ABOVE THE NATIONAL GEODETIC SURVEY DATUM AT SANDY HOOK, NEW JERSEY (NGVD 29).
3. LOCATIONS OF BORINGS ARE APPROXIMATE.
4. 2006 BORINGS, SB-1, SB-2 AND SB-3 WERE DRILLED BY SOL MECHANICS DRILLING CORP.
5. 2008 BORINGS, B-1 THROUGH B-17, WERE DRILLED BY CRAIG TEST BORING UNDER THE FULL TIME SPECIAL INSPECTION OF A LANGAN ENGINEER BETWEEN 4 AND 24 JANUARY 2008.
6. ESTIMATED ROCK CONTOUR ELEVATIONS BASED ON GROUND ELEVATIONS AND DEPTH OF ROCK AT BORING LOCATIONS IN NAVD88. THESE CONTOURS ARE CONSIDERED VERY APPROXIMATE. CONSIDERABLE VARIATION CAN BE EXPECTED

LEGEND

- SB-2 — SOIL MECHANICS DRILLING CORP.'S 2006 BORING
- B-11 — LANGAN'S 2008 BORING
- (OW) — OBSERVATION WELL
- -50 — ESTIMATED CLASS 1b OR BETTER ROCK SURFACE CONTOUR LINE (EL.)

40 0 10 20 40
SCALE IN FEET

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BLOCK No. 268, LOT No. 1,24,25,26
LONG ISLAND CITY
QUEENS **NEW YORK**

Drawing Title
ROCK CONTOUR PLAN

Project No. 170282501	Drawing No. 9
Date 05/09/2014	
Scale 1" = 40'	
Drawn By JRM / Checked By JMG	
Submission Date 05/12/2014	Sheet 9 of 12

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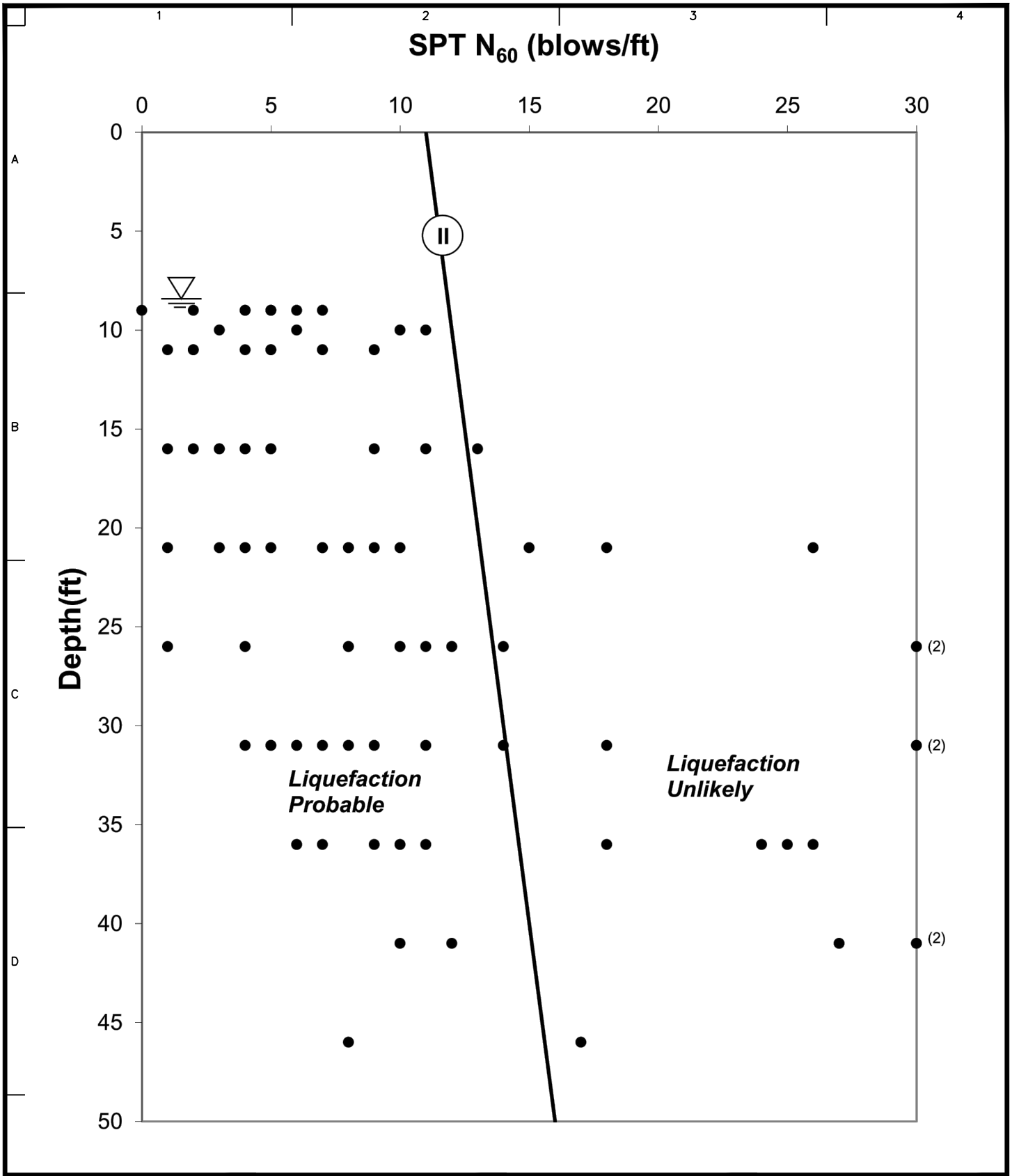
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Geotechnical\GER Drawings\Dwg 09 - Rock Contour Plan.dwg Date: 5/12/2014 Time: 15:45 User: tcheung Style Table: Langan.stb Layout: ANSIB-BL



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Project	4430 PURVES STREET BLOCK No. 268, LOT No. 1,24,25,26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	NYCBC LIQUEFACTION SCREENING CHART
Project No.	170282501
Date	05/09/2014
Scale	N.T.S.
Drawn By / Checked By	TKC / JMG
Submission Date	05/12/2014
Drawing No.	10
Sheet	10 of 12

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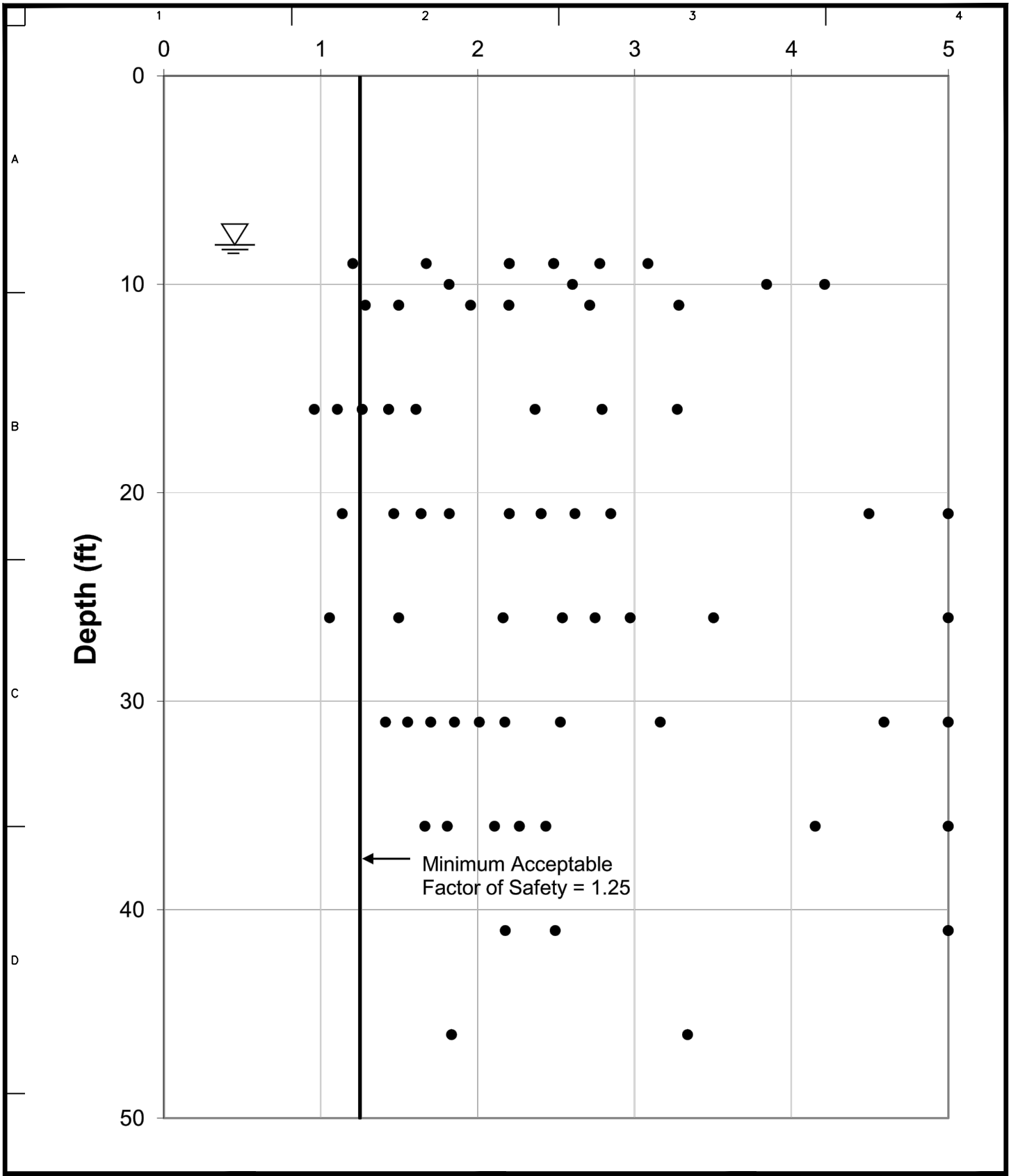
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Geotechnical\GER Drawings\Dwg 10 - NYCBC Liquefaction Screening Chart.dwg Date: 5/10/2014 Time: 18:12 User: tcheung Style Table: Langan.stb Layout: HSA



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4430 PURVES STREET
BLOCK No. 268, LOT No. 1,24,25,26
LONG ISLAND CITY
QUEENS NEW YORK

Drawing Title
YOUD et. al.
LIQUEFACTION
PLOT (2001)

Project No. 170282501	Drawing No. 11
Date 05/09/2014	
Scale N.T.S.	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 11 of 12

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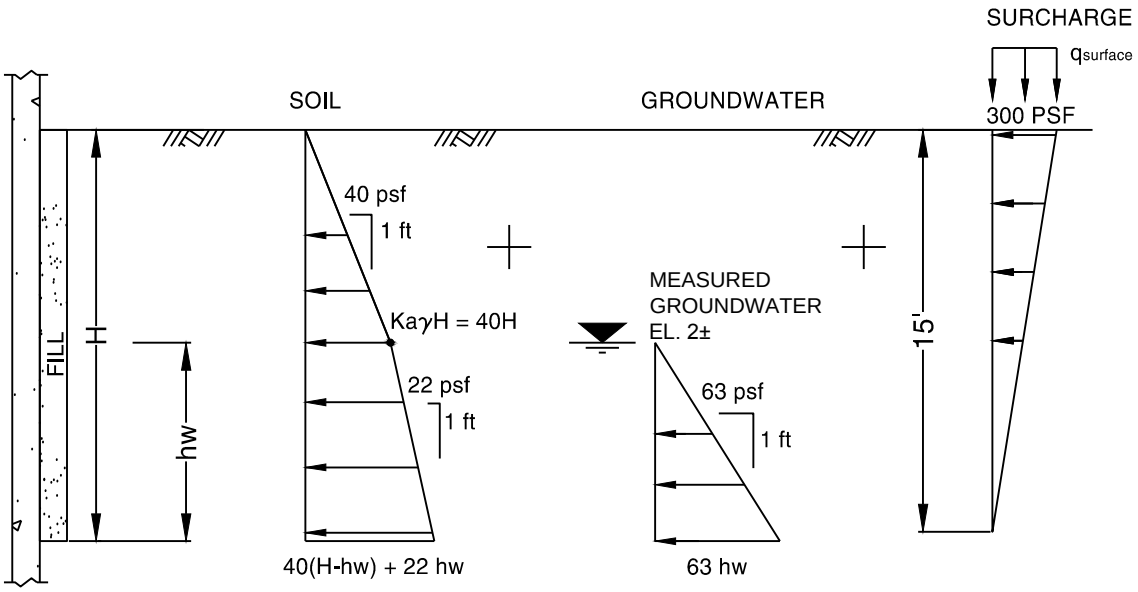
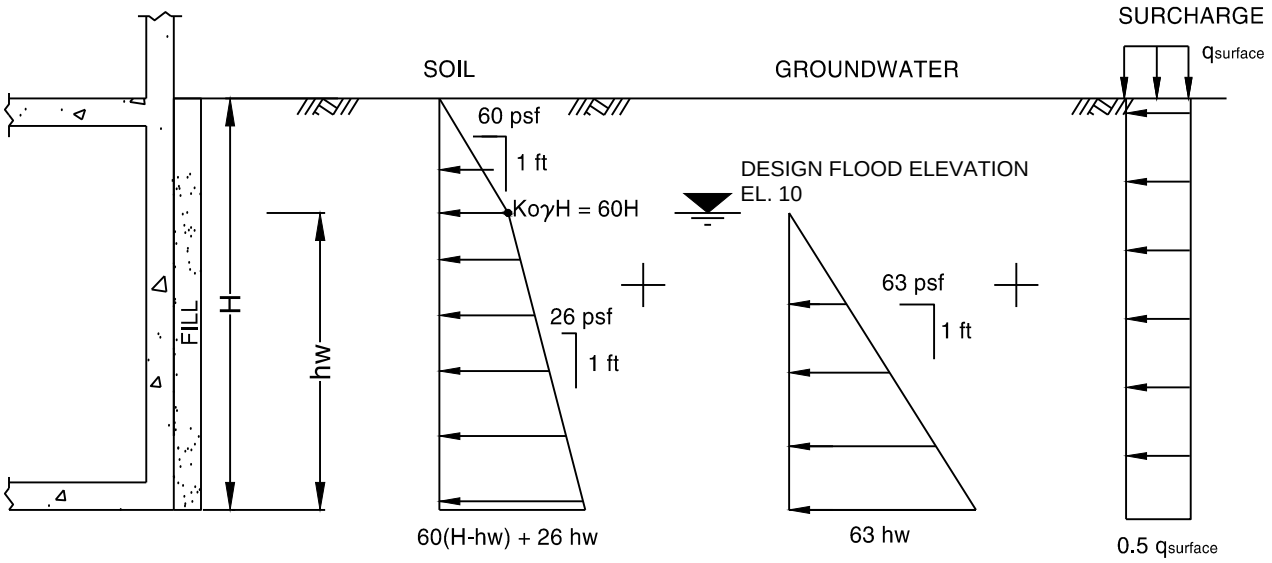
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Geotechnical\GER Drawings\Dwg 11 - Youd et. al..dwg Date: 5/10/2014 Time: 18:13 User: tcheung Style Table: Langan.stb Layout: HSA



STATIC TEMPORARY LATERAL EARTH PRESSURES



STATIC PERMANENT LATERAL EARTH PRESSURES

H	=	Height of Wall (H)
hw	=	Height of Water from Bottom of Structures
Ka	=	Active Earth Pressure Coefficient (Φ=0) = 0.33
Ko	=	At-rest Earth Pressure Coefficient (Φ=0) = 0.5
γ	=	Soil Unit Weight = 120lb/ft³

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4430 PURVES STREET
BLOCK No. 268, LOT No. 1,24,25,26
LONG ISLAND CITY
QUEENS NEW YORK

Drawing Title
LATERAL EARTH PRESSURE DIAGRAM

Project No. 170282501	Drawing No. 12
Date 05/09/2014	
Scale N.T.S.	
Drawn By TKC / Checked By JMG	
Submission Date 05/12/2014	Sheet 12 of 12

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Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Geotechnical\GER Drawings\Dwg 12 - Lateral Earth Pressure Diagram.dwg Date: 5/12/2014 Time: 17:28 User: tcheung Style Table: Langan.stb Layout: ANSIA-BP

APPENDIX A

ROLL#C51 16X

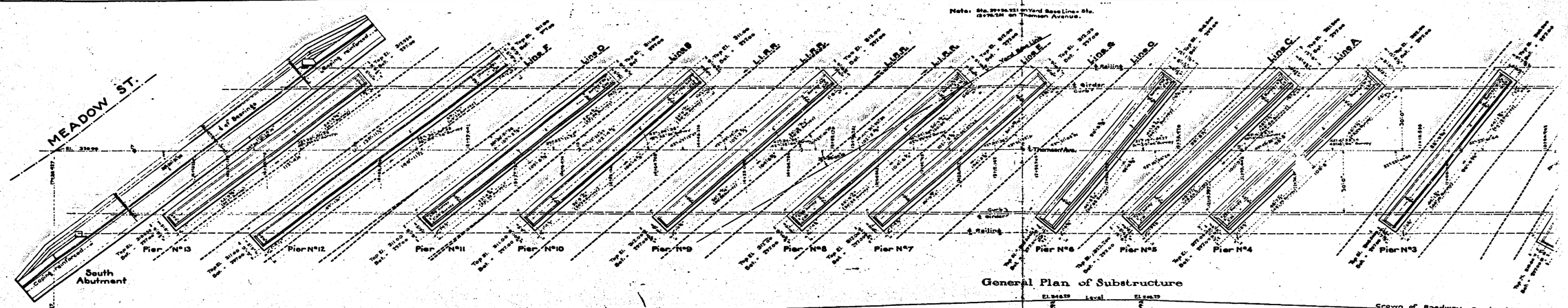
CERTIFIED COPY OF THE RECORDS OF THE CITY OF NEW YORK, DEPARTMENT OF TRANSPORTATION, DIVISION OF DESIGN - BRIDGES.
MICROFILM BY: UNIVERSAL MICROFILM CORP.
DATE: OCTOBER 1986

THOMSON AVE. BRIDGE OVER L.I.R.R. & AMTRAK

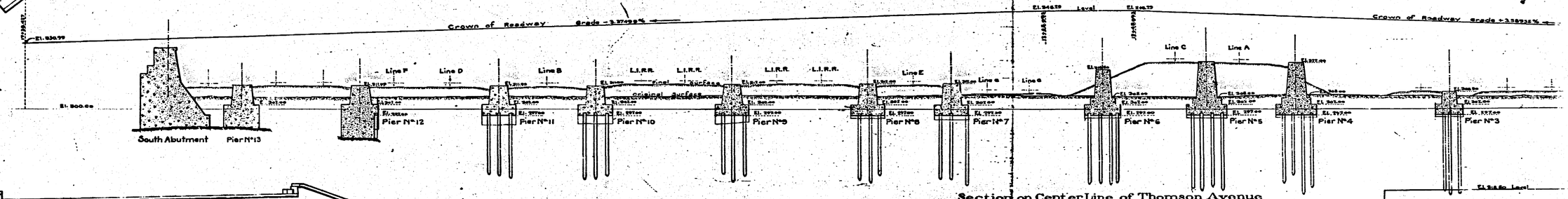
QUEENS COUNTY

BIN #2-24730 ROLL #C51

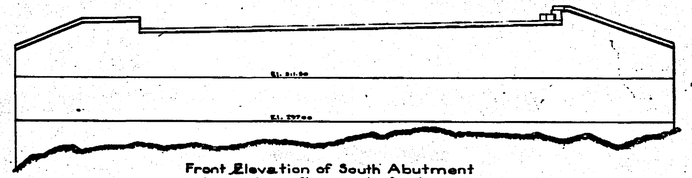
2-24730



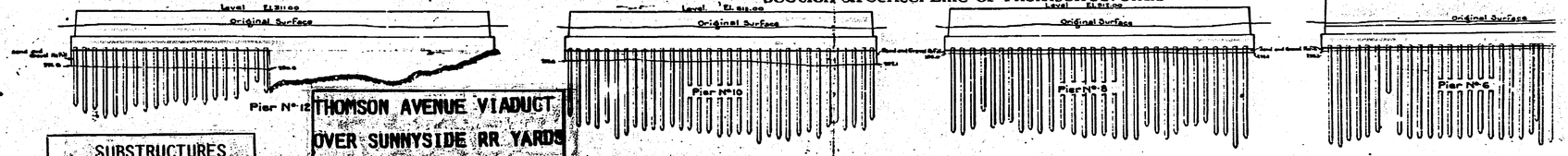
General Plan of Substructure



Section on Center Line of Thomson Avenue



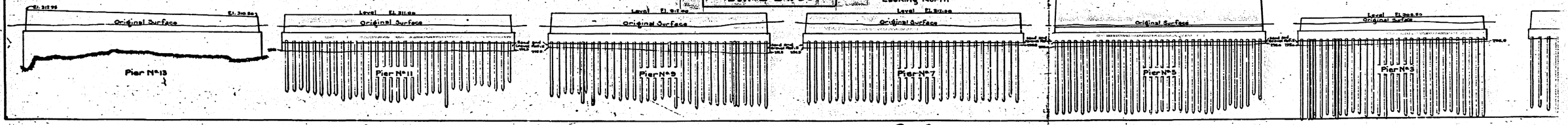
Front Elevation of South Abutment
(Rock profile on center line of bearings)



THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

SUBSTRUCTURES

Side Elevations of Piers
Looking North

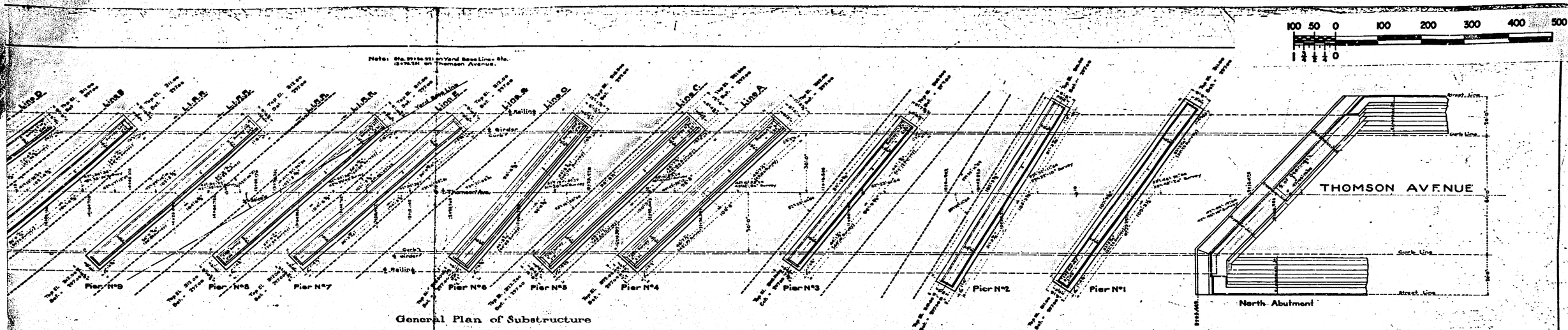


F1

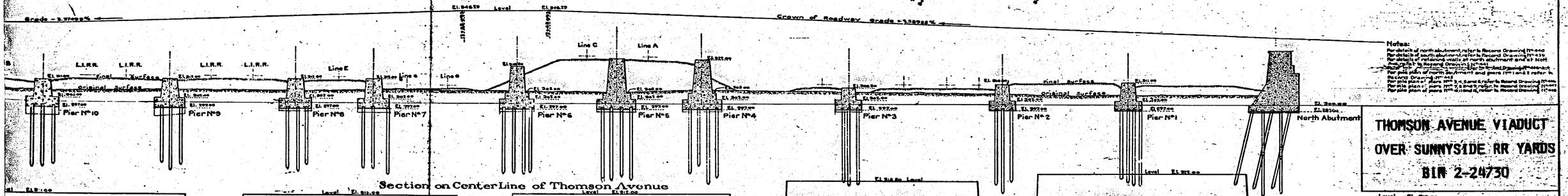
MF 79869

Rec. Dwg. No. 438 @

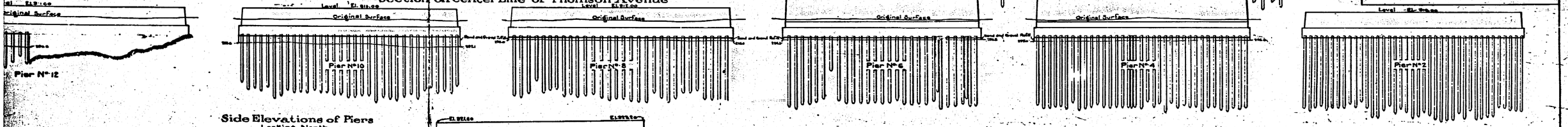
Drw 1017



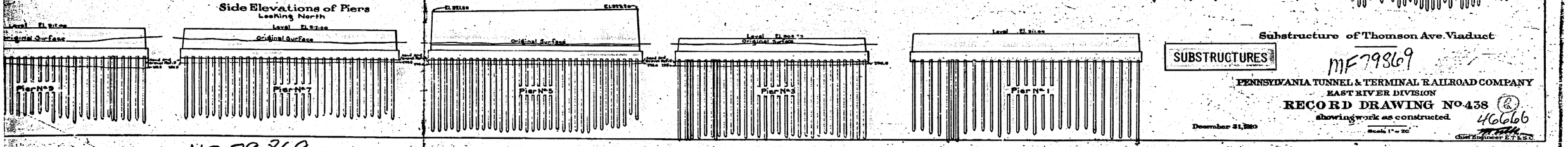
General Plan of Substructure



Section on Center Line of Thomson Avenue



Side Elevations of Piers
Looking North



Notes:
For details of north abutment refer to Record Drawing N°439
For details of south abutment refer to Record Drawing N°439
For details of retaining walls at north abutment and at Nott
For details of bearings refer to Record Drawing N°
For pile plan of north abutment and piers 11 and 12 refer to Record Drawing N°
For pile plans of piers 9 to 3 and 1 refer to Record Drawing N°
For pile plans of piers 10 and 8 refer to Record Drawing N°
For pile plans of piers 7 and 6 and 5 refer to Record Drawing N°

THOMSON AVENUE VIADUCT OVER SUNNYSIDE RR YARDS

BIN 2-24730

Substructure of Thomson Ave. Viaduct

SUBSTRUCTURES

MF 79869

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING NO. 438 (2)
showing work as constructed
466666

December 31, 1910

Scale 1" = 20'

Chief Engineer P.T.&T.R.R.

MF 79869

F2

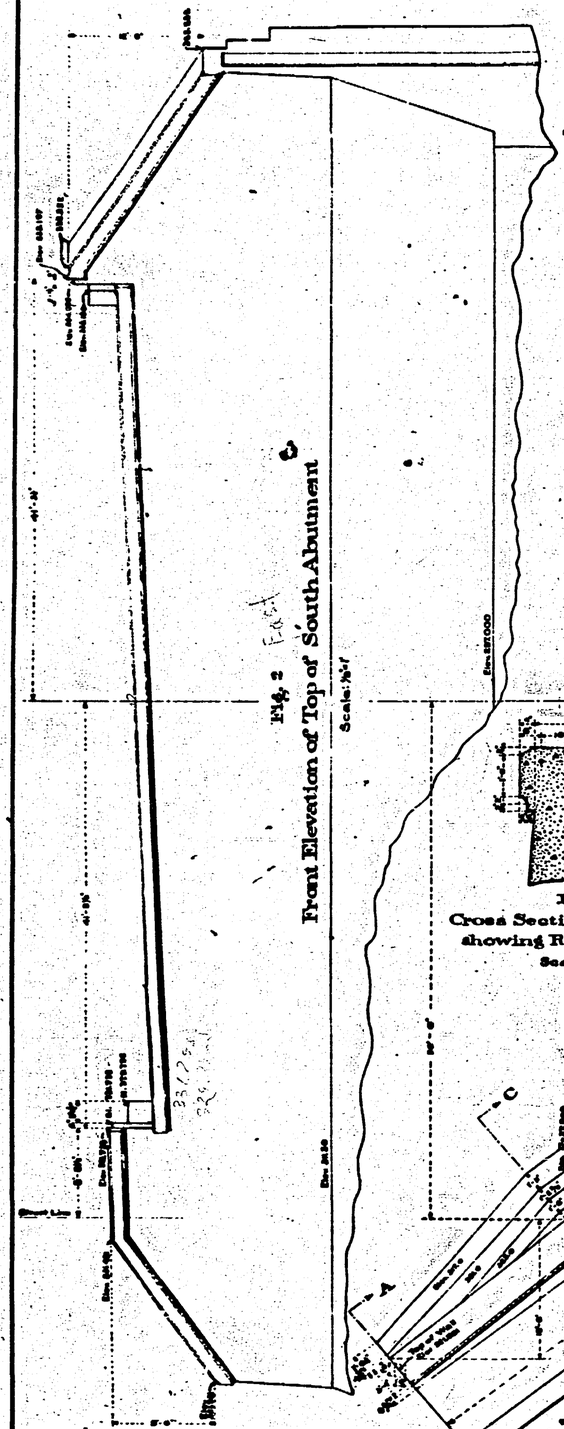


Fig. 2
Front Elevation of Top of South Abutment
Scale: ⅛"=1'

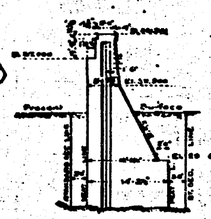


Fig. 3
Section A-B
Scale: ⅛"=1'

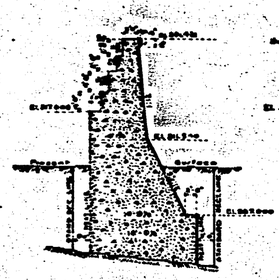


Fig. 4
Section C-D
Scale: ⅛"=1'

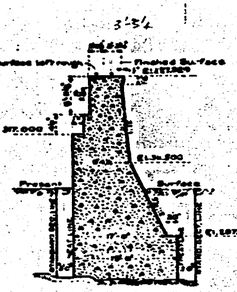


Fig. 5
Section E-F
Scale: ⅛"=1'

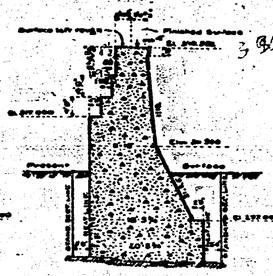


Fig. 6
Section G-H
Scale: ⅛"=1'

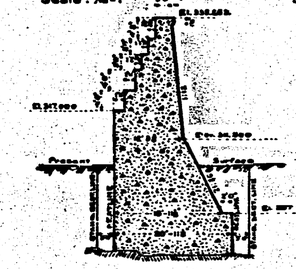


Fig. 7
Section J-K
Scale: ⅛"=1'

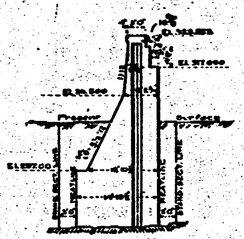


Fig. 8
Section M-L
Scale: ⅛"=1'

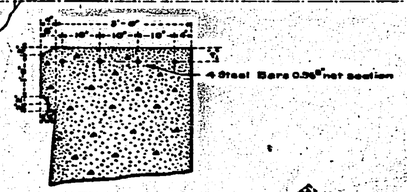


Fig. 9
Cross Section of Coping showing Reinforcement
Scale: 1"=1'

Fig. 2
Front Elevation of Top of South Abutment
Scale: ⅛"=1'

Fig. 1
Plan
Scale: 1/16"=1'

100 50 0 100 200 300 400 500

1 ½ ¼ 0 2'0⅛" 3'-0 5/8"

SOUTH ABUTMENT

Modification of Plan
of
Thomson Avenue Viaduct and Approach
heretofore approved by the Board of Estimate and Apportionment by resolution adopted June 28, 1907

RECORD DRAWING Nº 439
Showing work as constructed
Note: Alterations and changes are indicated in red on original tracing of Contract Drawing.

Details
of
South Abutment
for
Thomson Avenue Viaduct

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

Approved by the Board of Estimate and Apportionment by resolution adopted on December 6th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company and the Long Island Railroad Company

Secretary
Board of Estimate
and Apportionment.

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
CONTRACT DRAWING Nº 414

Supersedes old Nº 419

June 24, 1907
Revised to Nov. 11, 1907

A. B. Cobb
Chief Engineer

46666

MF 7,8,3

D.RW 1017

R.D. 4-9

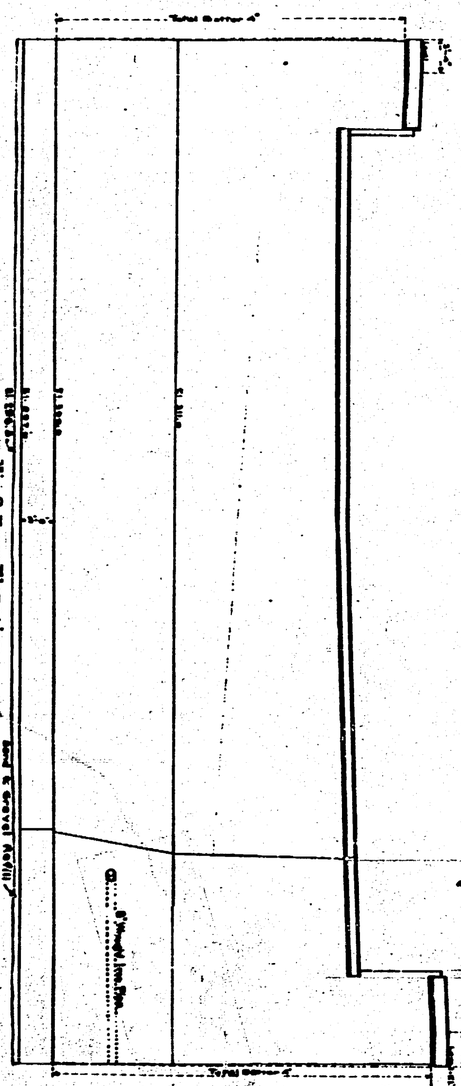


Fig. 2 Front Elevation.

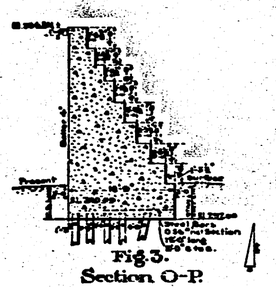


Fig. 3.
Section O-P.

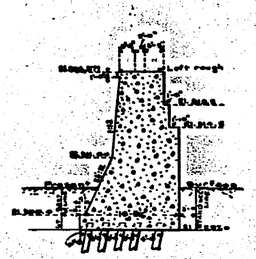


Fig. 4.
Section Q-R.

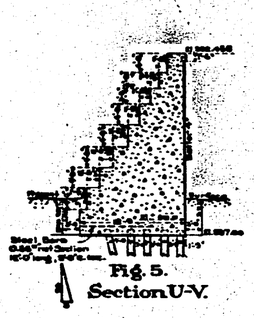


Fig. 5.
Section U-V.

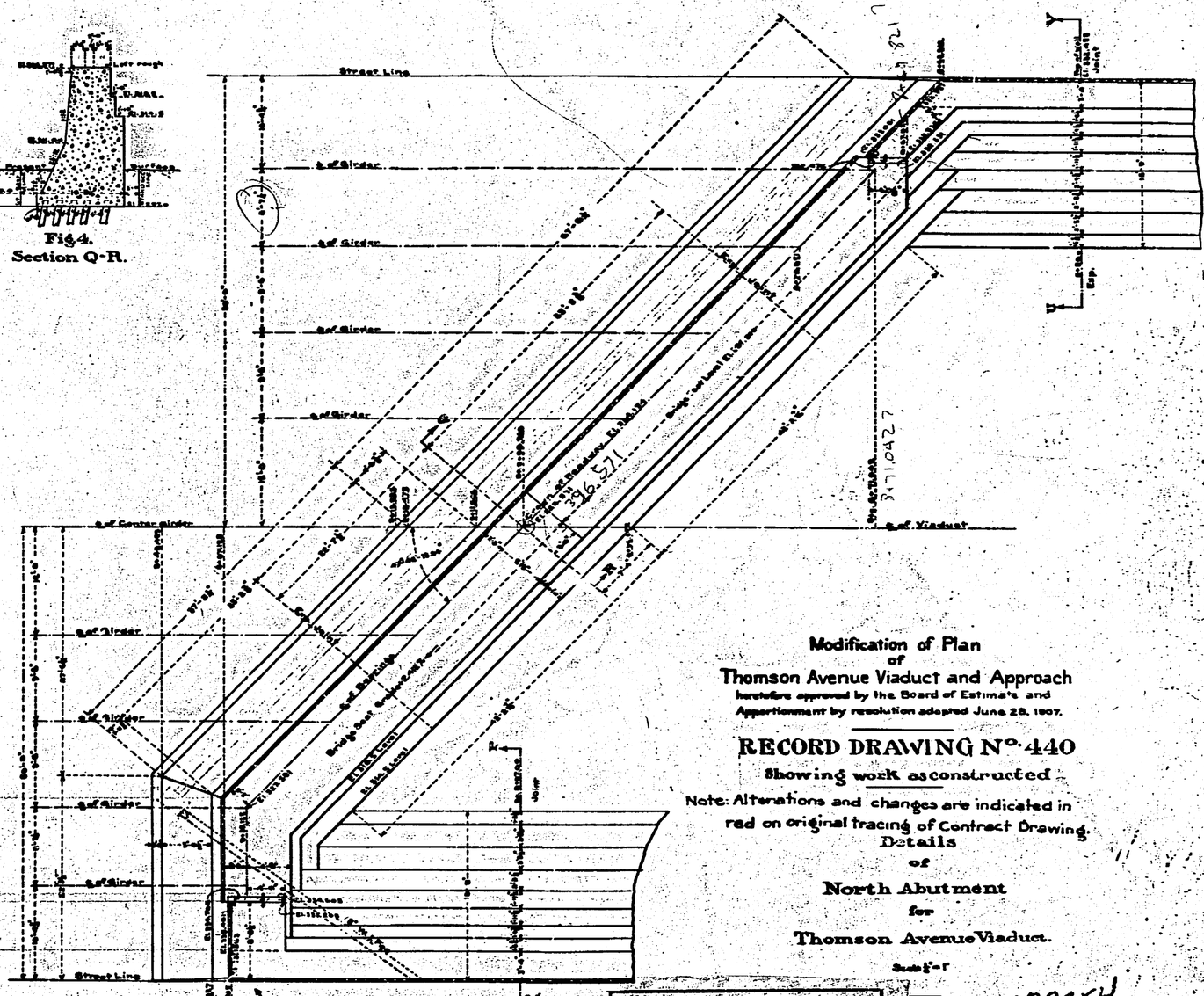


Fig. 1.
Plan.

For File Plan see Record Drawing No. 445

Modification of Plan
of
Thomson Avenue Viaduct and Approach
heretofore approved by the Board of Estimate and
Apportionment by resolution adopted June 28, 1907.

RECORD DRAWING No. 440
Showing work as constructed

Note: Alterations and changes are indicated in red on original tracing of Contract Drawing.

Details
of
North Abutment
for
Thomson Avenue Viaduct.

Scale 1"=1'

NORTH ABUTMENT

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY.
EAST RIVER DIVISION.

CONTRACT DRAWING No. 430.

(Supersedes old No. 428.)

June 24, 1907.
Revised Feb. 4, 1908.

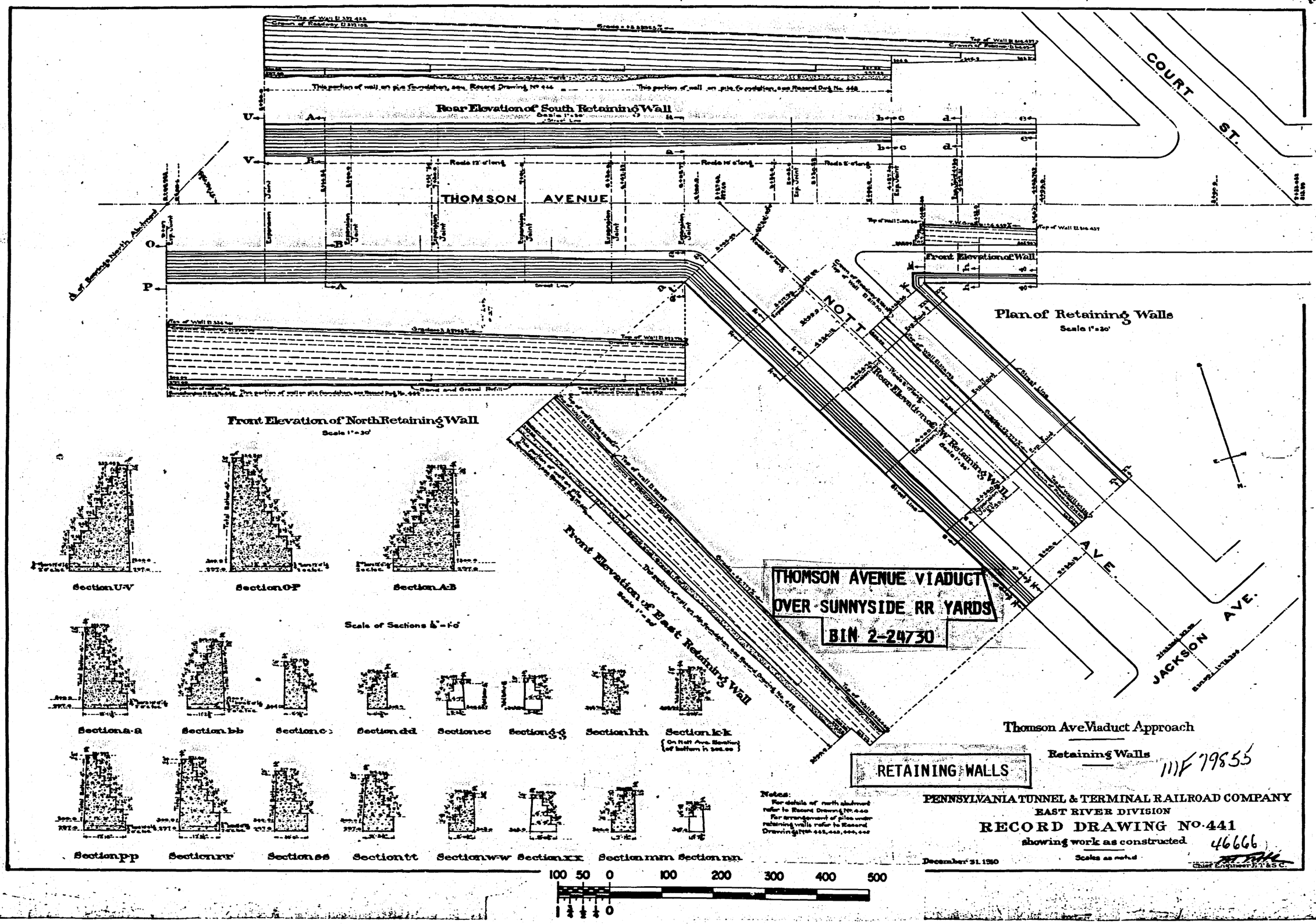
Chief Engineer.

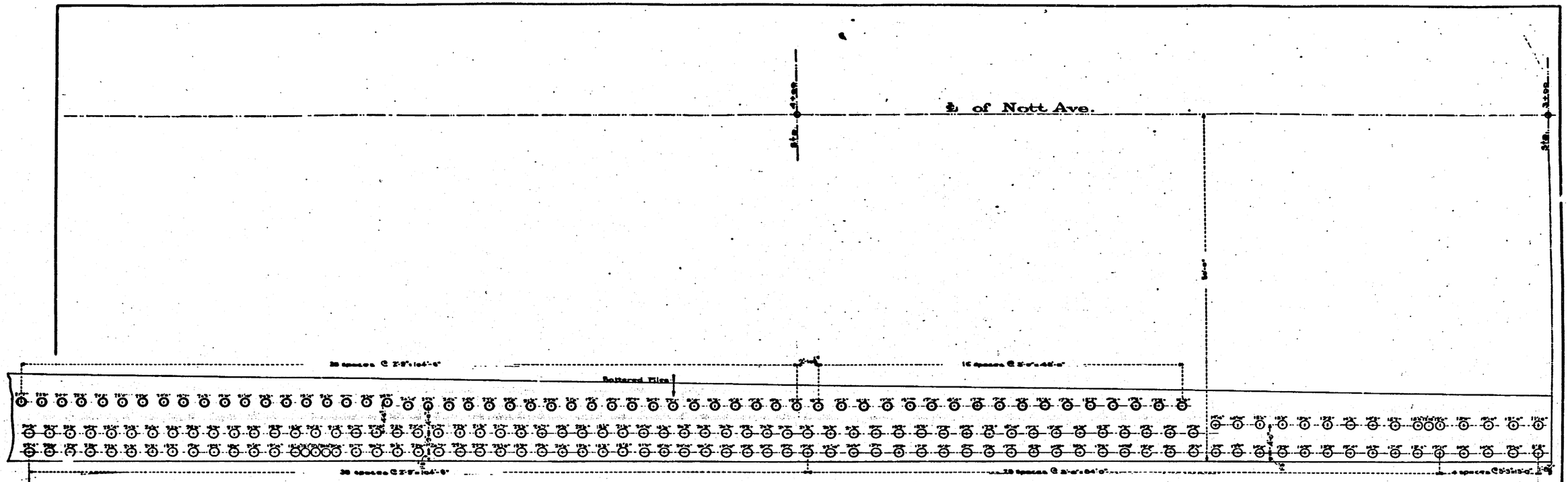
THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

MF 79854

46666

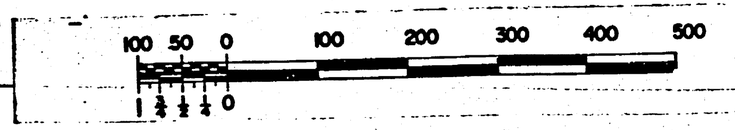
100 50 0 100 200 300 400 500


Rear Elevation of South Retaining Wall
Front Elevation of North Retaining Wall
Front Elevation of East Retaining Wall
Front Elevation of Wall
Plan of Retaining Walls
Rear Elevation of W. Retaining Wall
THOMSON AVENUE
COURT ST.
NOTT AVE.
JACKSON AVE.
Section U-V
Section O-P
Section A-B
Scale of Sections
Section a-a
Section bb
Section cc
Section dd
Section ee
Section gg
Section hh
Section k-k
Section pp
Section rr
Section ss
Section tt
Section w-w
Section xx
Section mm
Section nn
THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730
RETAINING WALLS
Thomson Ave Viaduct Approach
Retaining Walls
111F 79855
PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING NO. 441
showing work as constructed
46666
December 31, 1930
Scales as noted
Chief Engineer P.T.&T.R.R.Co.



Note:-
All Piles shown thus ○
are battered 2:12
in direction indicated
by arrow.

Note: figure given for each pile is length below cut-off
Elevation of cut-off = 298.00



THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

Pile Plan
of
Thomson Avenue Viaduct

Piles under East Wall of Nott Ave.

111F79851 c

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING NO. 442
showing work as constructed
46666

December 31, 1910

Scale 1" = 1'-0"

Chief Engineer P.T. & T.R.R.

South Retaining Wall

℄ of Thomson Ave. Viaduct

℄ of Nott Ave.

North Retaining Wall

Note: Figures given for each pile is length below cut-off
Elevation of cut-off = 298.00

Note
All piles shown thus ○ are battered 2:12 in direction indicated by arrow.

100 50 0 100 200 300 400 500

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

Pile Plan of Thomson Avenue Viaduct

NIF 79857

Piles under Retaining Walls
at intersection with Nott Avenue

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

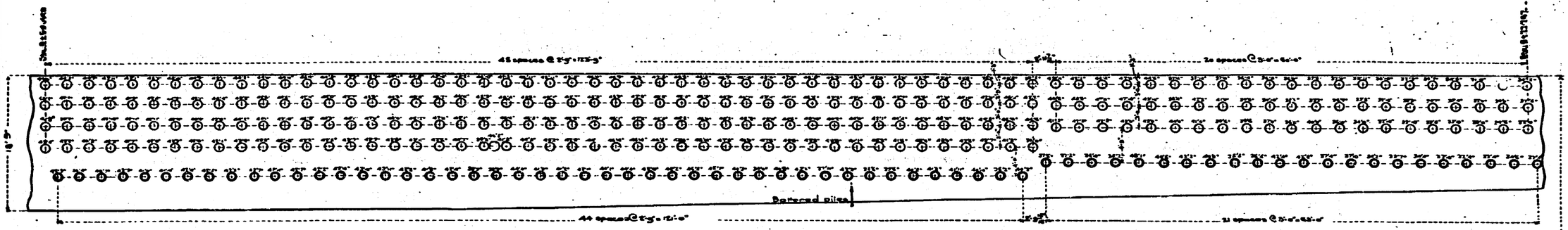
RECORD DRAWING No. 443
showing work as constructed.

Scale 1" = 10'

December 31, 1910

46666.

Chief Engineer P.T.&T.R.R.C.



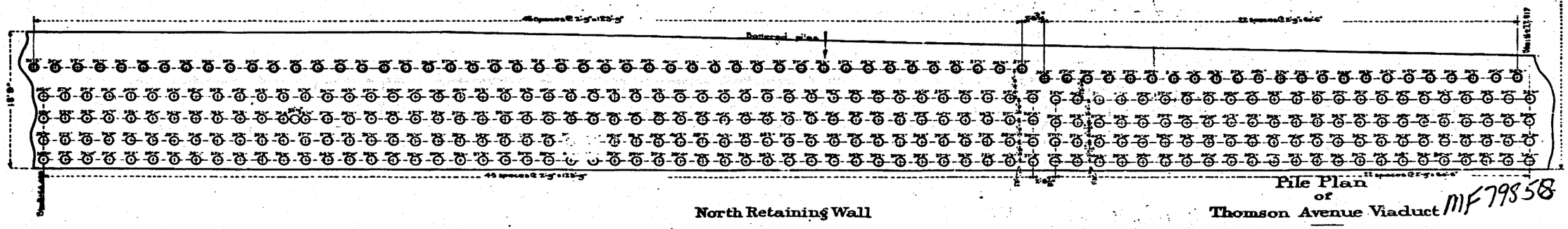
South Retaining Wall

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

℄ of Thomson Ave. Viaduct

Note.
All piles shown thus ○
are battered 2:12
in direction indicated
by arrow

PILE PLAN



North Retaining Wall

Note: Figure given for each pile is length below cut-off
Elevation of cut-off = 736.00

100 50 0 100 200 300 400 500

1 ¾ ½ ¼ 0

Pile Plan of Thomson Avenue Viaduct

MF79858

Piles under Retaining Walls adjoining North Abutment

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING NO. 444
showing work as constructed 46666

December 31, 1910. Scale ¼" = 1'-0"

Chief Engineer P.T. & T. R.R. C.

drw 10

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

℄ of Thomson Ave. Viaduct

Pier No 2

Pier No 1

North Abutment

(West)

Note: All Piles shown thus O are battered 2:1 in direction indicated by arrow.

Note: Figure given for each pile is length below cut-off Elevation of cut-off 29.00

100 50 0 100 200 300 400 500

1 ½ ½ ½ ½ 0

Pile Plan of Thomson Avenue Viaduct

North Abutment and Piers 1 and 2

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

RECORD DRAWING No. 445
showing work as constructed

December 31, 1910

Scale ⅛" = 1'-0"

Chief Engineer of P.T.&T.R.R.C.

MF79859

46666

Pier No 6

Pier No 5

Pier No 4

Pier No 3

Thomson Avenue Viaduct

TO JACKSON AVE

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

Note: Figure given for each pile is length below cut-off
Elevation of cut-off - 28.00

100 50 0 100 200 300 400 500

1 ½ ½ ½ 0

Pile Plan
of
Thomson Avenue Viaduct
Piers 3, 4, 5 and 6

MF 79860

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING No. 446
showing work as constructed

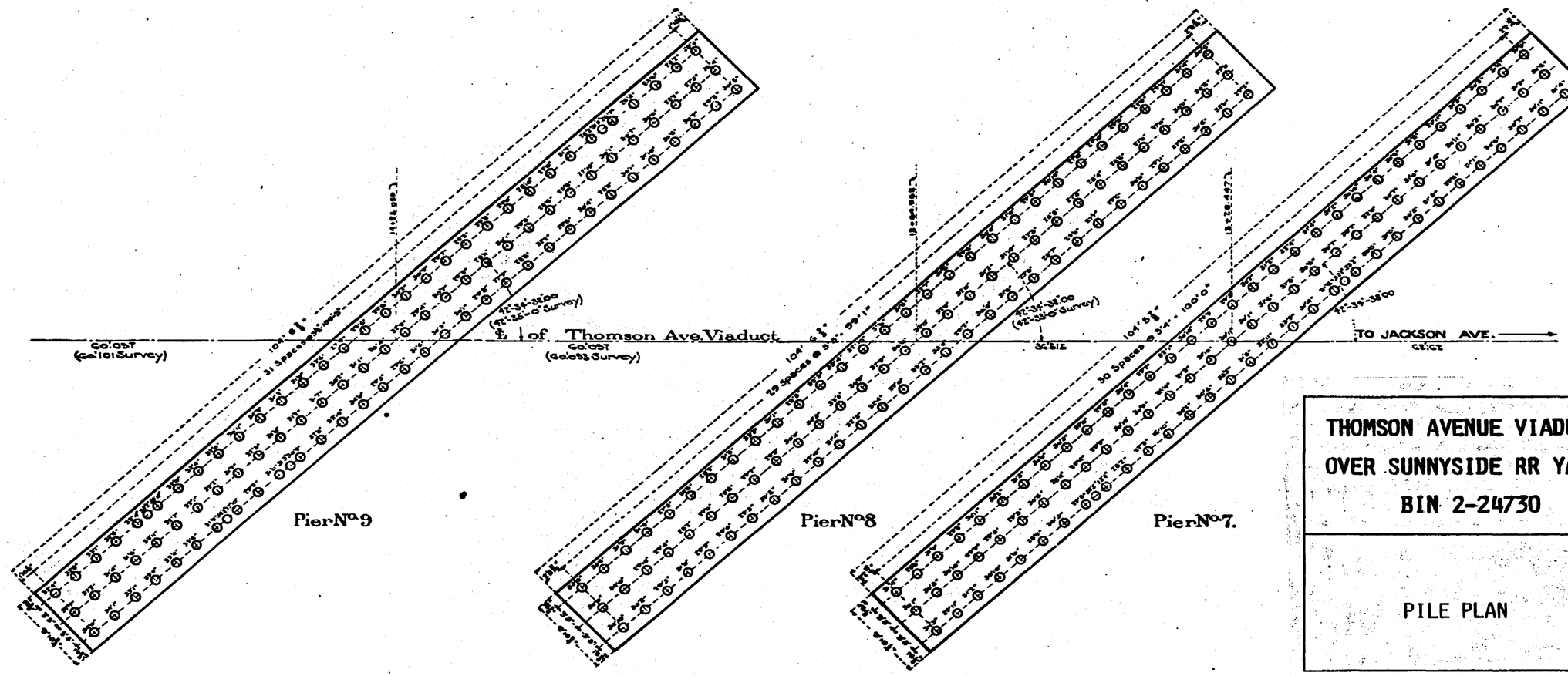
46666

December 31, 1910

Scale 1" = 10'

Chief Engineer P.T.T. & T.C.

Drw. 1



Note: Figure given for each pile is length below cut-off
Elevation of cut-off = 29.00

100 50 0 100 200 300 400 500

1 ½ ½ ½ 0

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

Pile Plan
of
Thomson Avenue Viaduct
Piers 7, 8 and 9

MF 79861

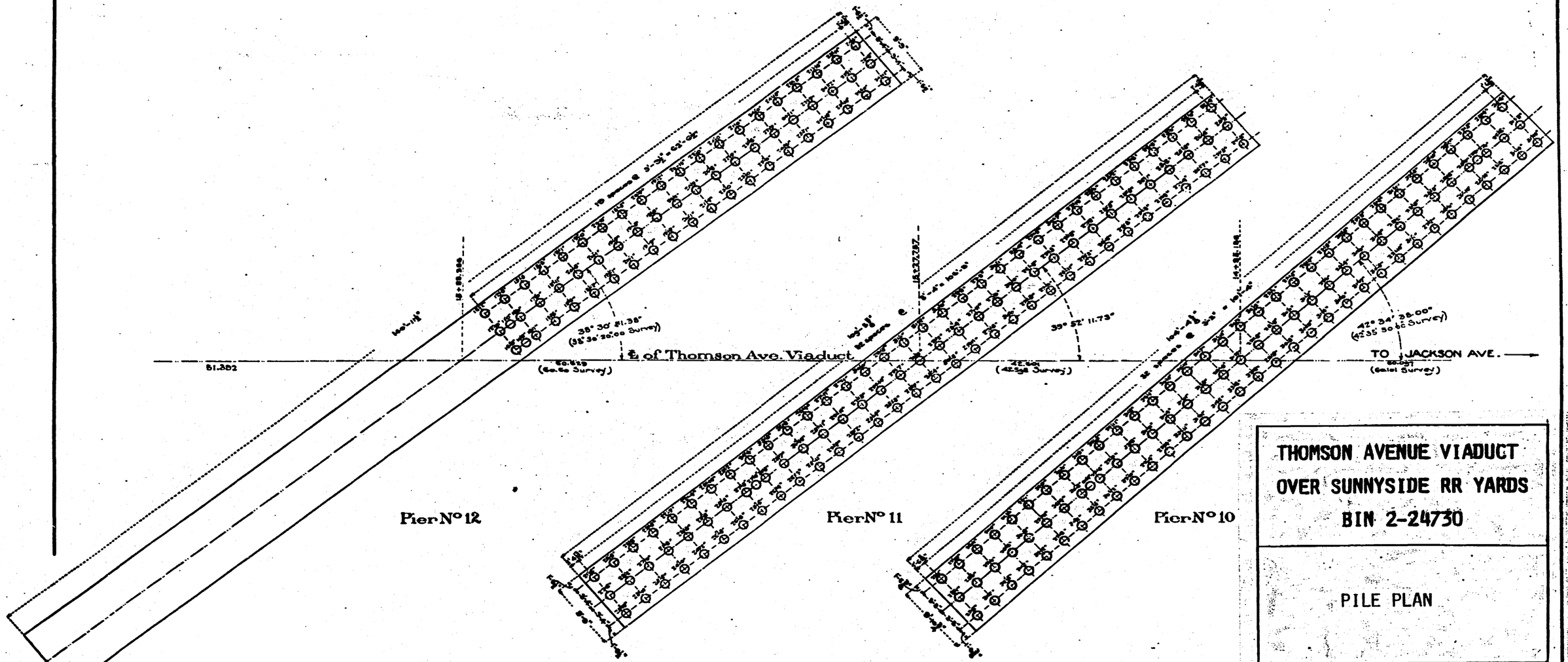
PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING NO. 447
showing work as constructed.

46666

December 31, 1910

Scale ⅛" = 1'-0"

Chief Engineer E.T. & S.C.



Note: Figure given for each pile is length below cut-off
Elevation of cut-off = 298.00

100 50 0 100 200 300 400 500

1½ 1 ½ 0

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

PILE PLAN

Pile Plan
of
Thomson Avenue Viaduct
Piers 10, 11 and 12

MF 79862

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
RECORD DRAWING N°. 448
showing work as constructed.

46666

December 31, 1910

Scale 1" = 1'-0"

Chief Engineer

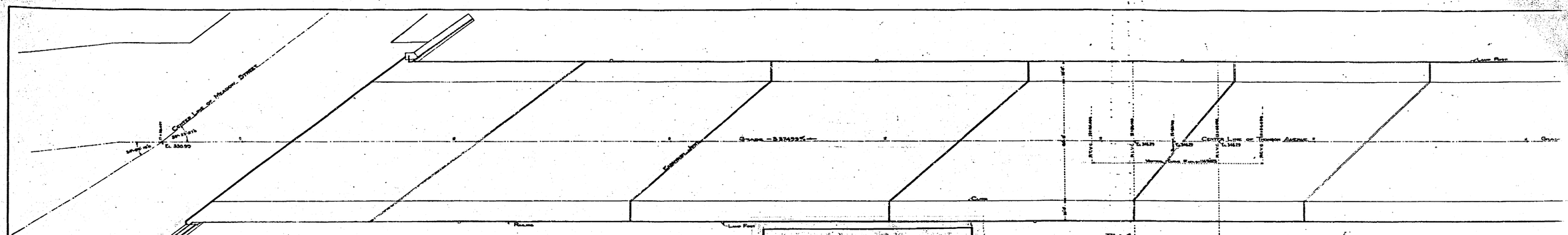


Fig.1
General Plan of Roadway

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

SUPERSTRUCTURE

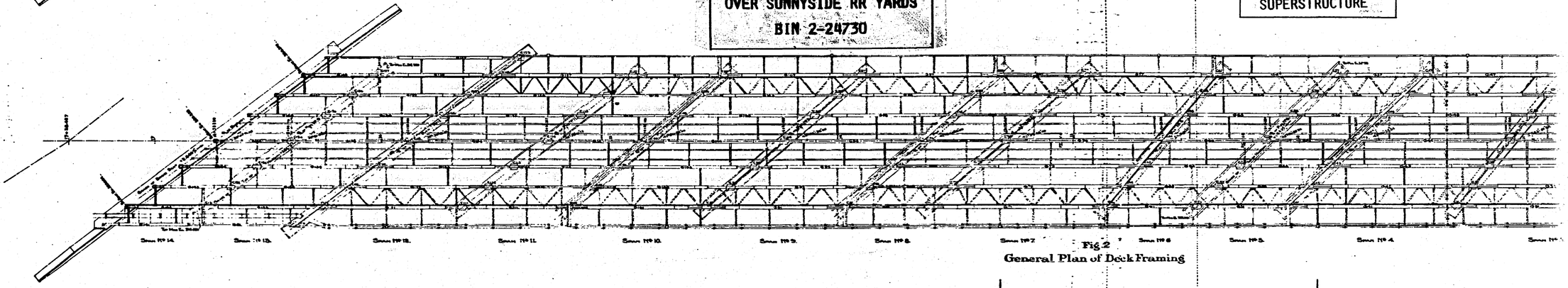


Fig.2
General Plan of Deck Framing

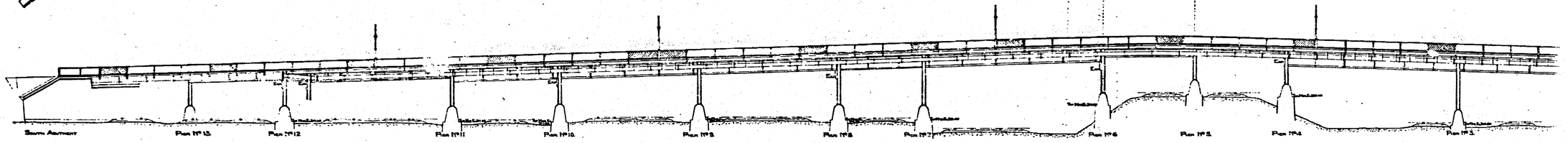


Fig.3
Side Elevation looking West

RD 4-1

F11

MF 79868

4.49 ⓒ

Drw 1017

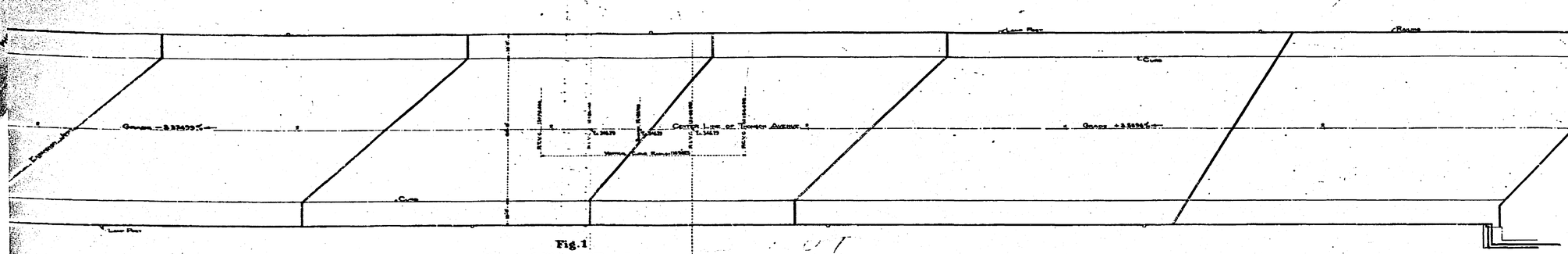


Fig.1
General Plan of Roadway

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

Approved by the Board of Estimate and Apportionment by resolution adopted on May 22nd 1908 in accordance with the provisions of Section XIII of the Agreement dated June 21.1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary
Board of Estimate
and Apportionment.

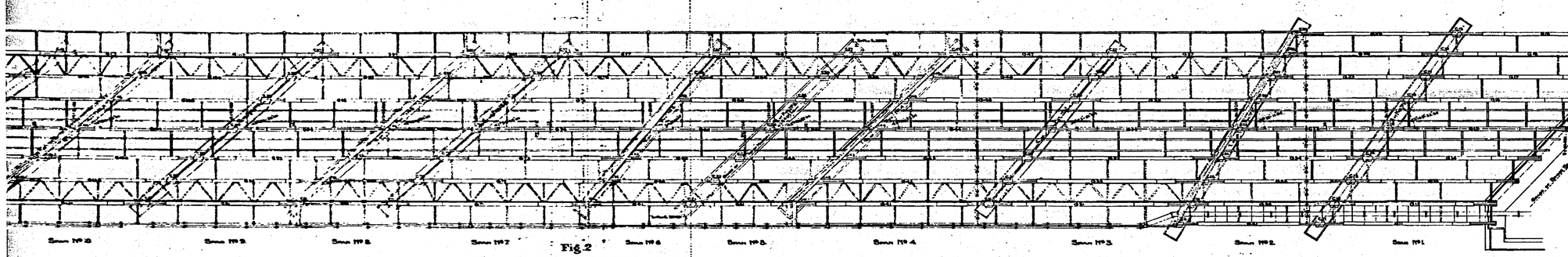


Fig.2
General Plan of Deck Framing

SUPERSTRUCTURE

RECORD DRAWING No. 449
Showing work as constructed.

#449

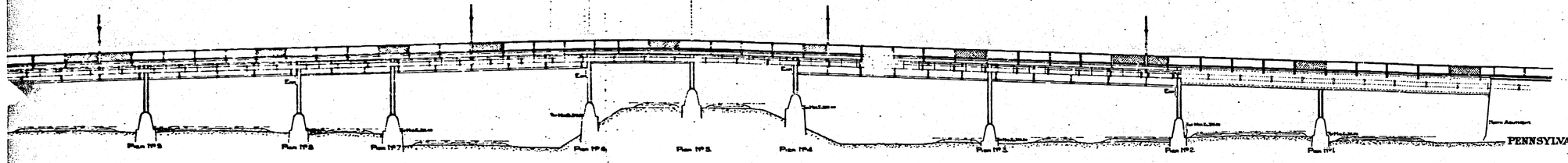


Fig.3
Side Elevation looking West

THOMSON AVENUE VIADUCT
Superstructure
Scale 1"=20'

3-1
Case 2

MF79866

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 502 (4)

100 50 0 100 200 300 400 500

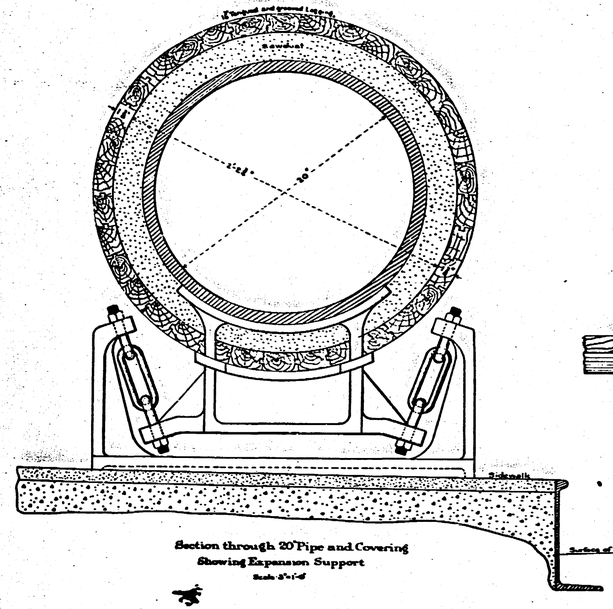
April 15, 1908

Chief Engineer

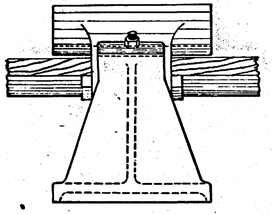
MF 79868

F 2

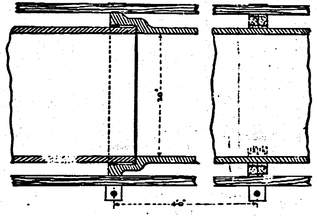
#449



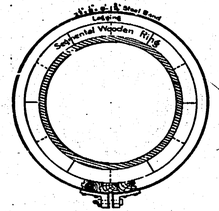
Section through 20" Pipe and Covering
Showing Expansion Support
Scale 3/4"=1'-0"



Side View

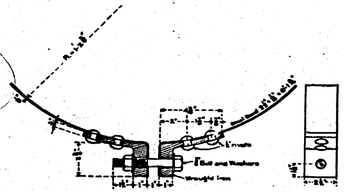


Section on ℄ of Pipe

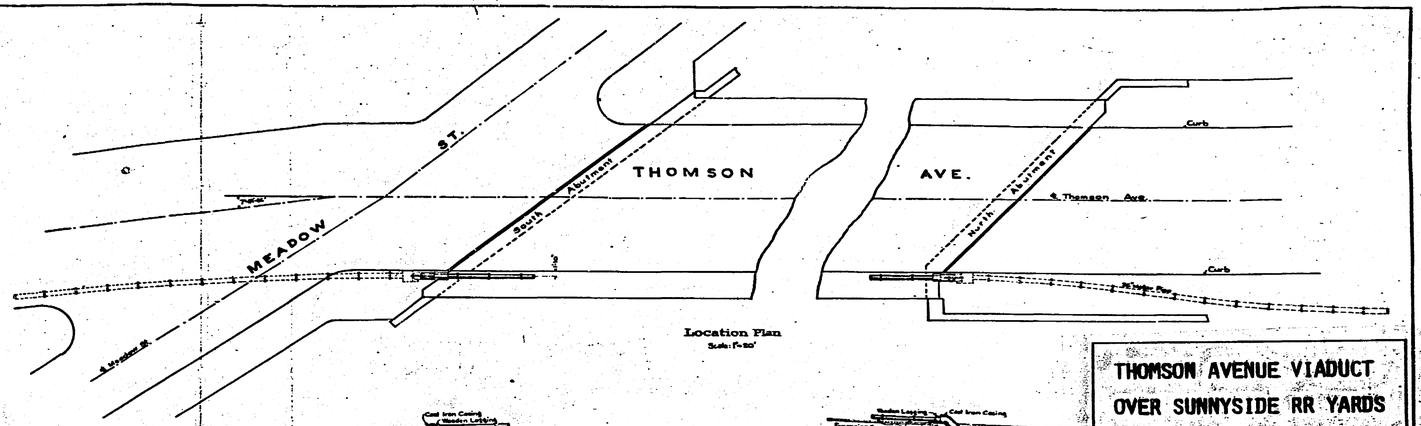


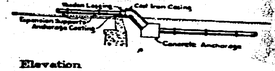
Cross Section

Detail showing method of attaching Lagging to Pipe
Scale 1½"=1'-0"



Detail of Steel Band
200 Req'd.
Scale 3/4"=1'-0"





Elevation
Scale 1"=50'

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

100 50 0 100 200 300 400 500

DEPARTMENT OF WATER SUPPLY, GAS & ELECTRICITY

No adequate provision for carrying the pipe in a gallery under the bridge having been made, the plan herein proposed is approved.

Dated, February 15th, 1909. (Signed) I.M. de Verona
Chief Engineer

WATER PIPE

RECORD DRAWING No. 451
Showing work as constructed.

MF 7:870

Water Pipe

THOMSON AVENUE VIADUCT
Location Plan and Typical Details
Scale as noted

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 304

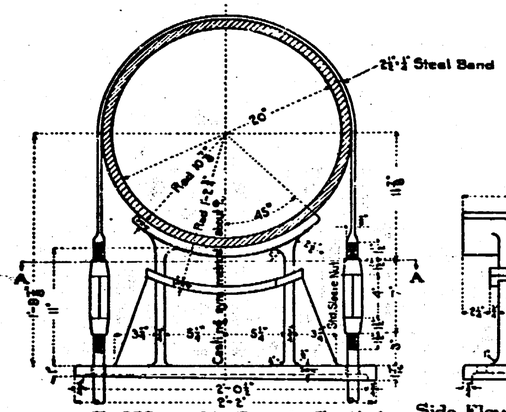
Jan. 2, 1909
Revised Jan. 25, 1909.

(Signed) Alfred Noble
Chief Engineer

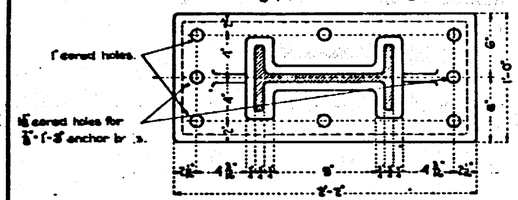
46666

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

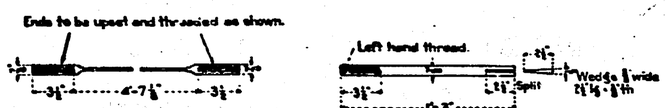
WATER PIPE



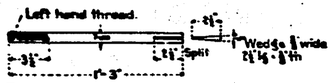
End View of Anchorage Casting
Showing pipe and anchorage band.



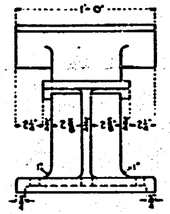
Section A-A
Showing Casting only.



Detail of 2½"-⅜" Band, developed
2 req'd.

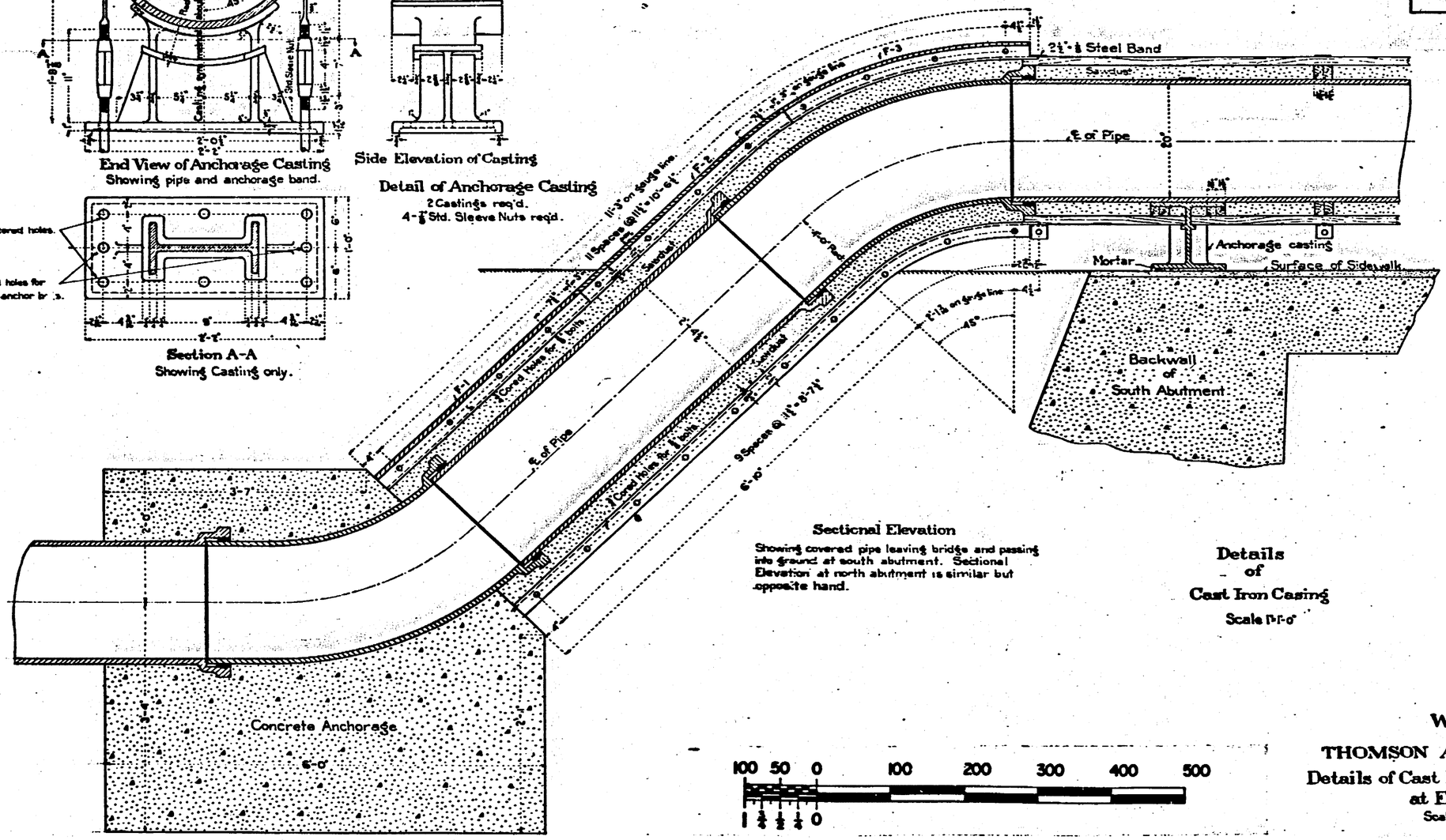


Detail of Anchor Bolt
4 req'd.



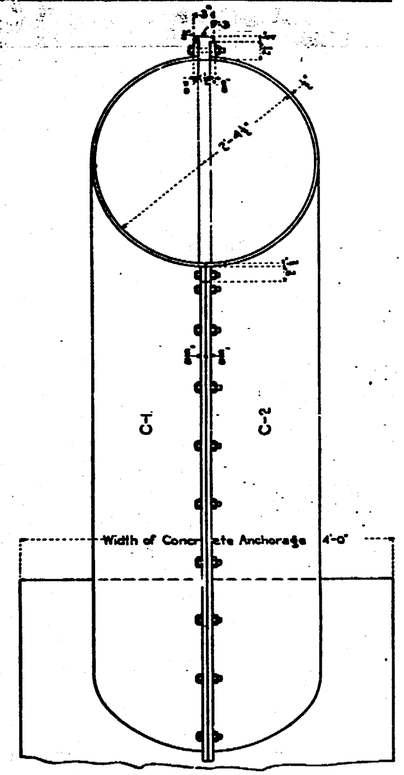
Side Elevation of Casting

Detail of Anchorage Casting
2 Castings req'd.
4-⅞" Std. Sleeve Nuts req'd.



Sectional Elevation

Showing covered pipe leaving bridge and passing into ground at south abutment. Sectional Elevation at north abutment is similar but opposite hand.



End View of Cast Iron Casing

2 Castings Req'd	Mark
2	C-1
2	C-2
2	F-1
2	F-2
2	F-3

Details of Cast Iron Casing
Scale 1"=1'-0"

100 50 0 100 200 300 400 500

1 ½ ½ ½ 0

RECORD DRAWING No. 452
Showing work as constructed

Water Pipe
THOMSON AVENUE VIADUCT
Details of Cast Iron Casing and Supports at Ends of Viaduct
Scale 1½"=1'-0" Unless noted.

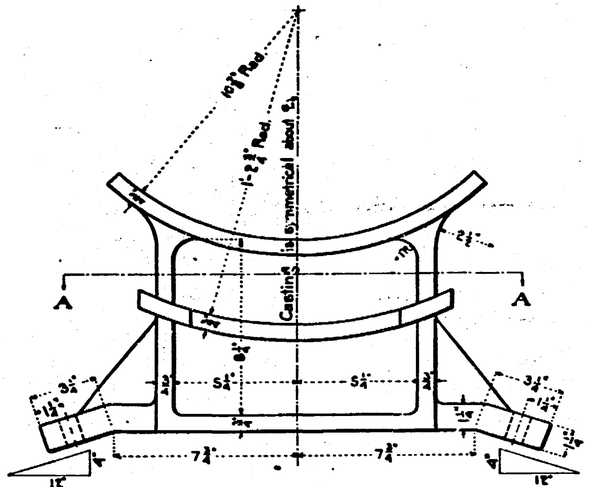
MF79865

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
CONTRACT DRAWING No 305

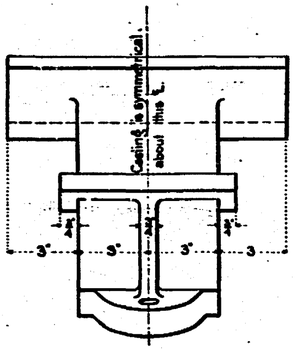
Jan. 9, 1909.

Chief Engineer

46666.

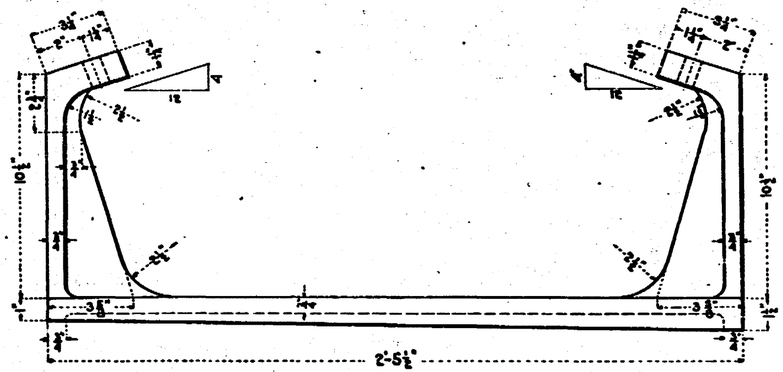


End Elevation

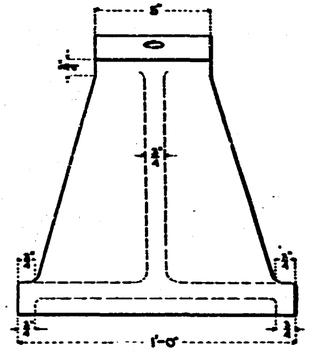


Side Elevation

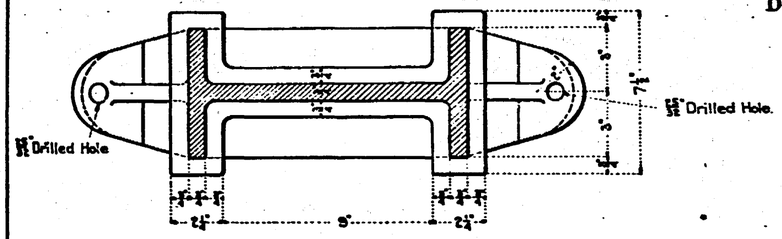
Detail of Upper Casting of Expansion Support.
65 Castings req'd.



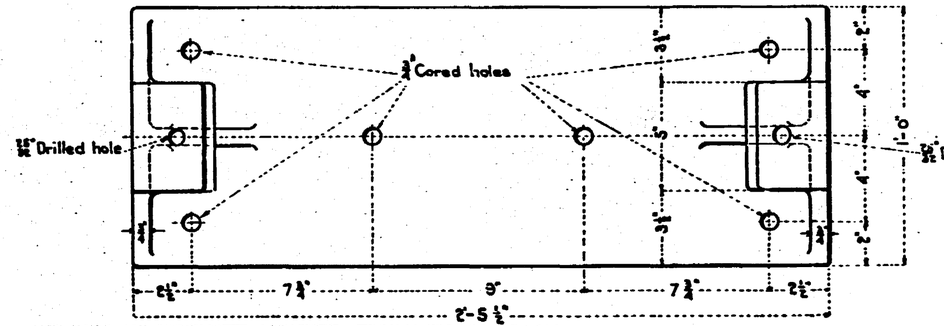
End Elevation



Side Elevation

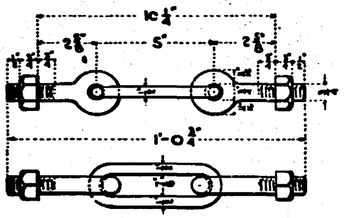


Section A-A



Plan

Details of Lower Casting of Expansion Supports.
65 Castings req'd.



Detail of Link and Eye Bolts
130 req'd.

THOMSON AVENUE VIADUCT
OVER SUNNYSIDE RR YARDS
BIN 2-24730

WATER PIPE
EXPANSION SUPPORTS

100 50 0 100 200 300 400 500

RECORD DRAWING No. 455
Showing work as constructed

Water Pipe
THOMSON AVENUE VIADUCT
Details of Expansion Supports.
Scale 3"=1'-0"

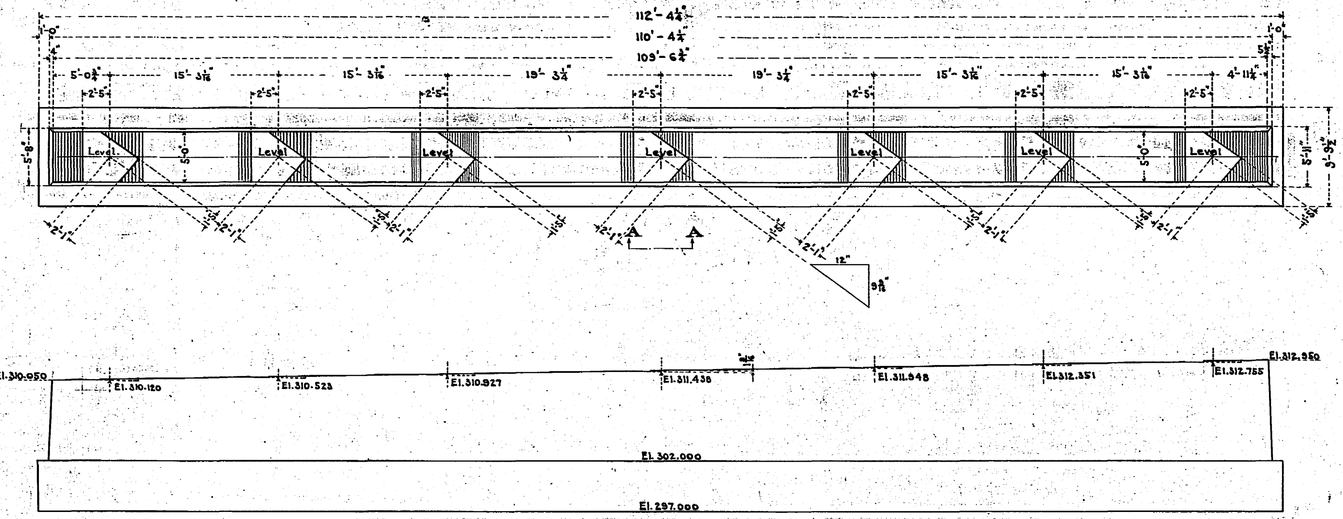
MF79814

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
CONTRACT DRAWING No 306

Revised Jan. 25, 1909
Jan. 9 1909.

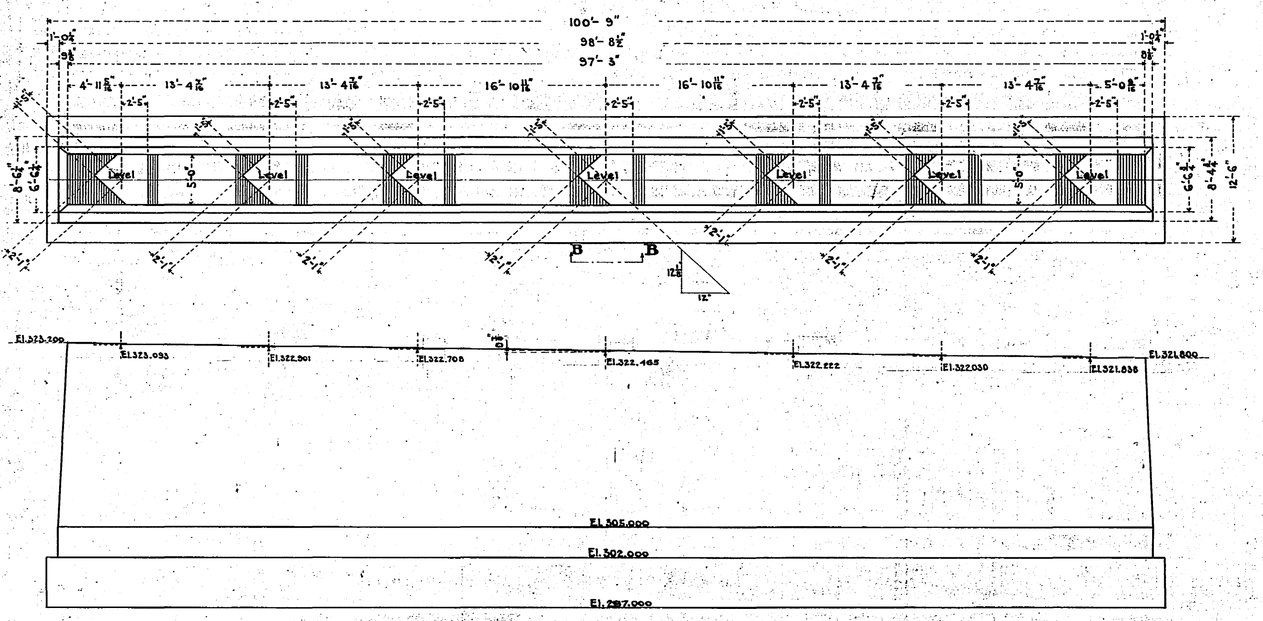
Chief Engineer

466666



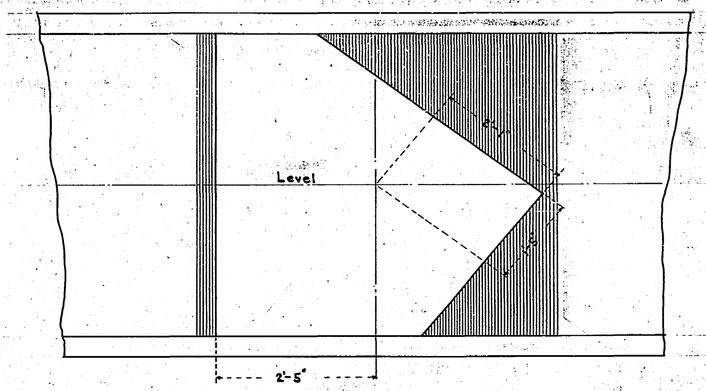
Elevation of Pier 13 showing Cutting for Column Bases

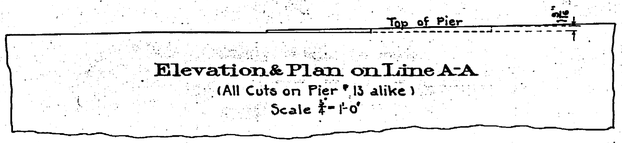
Scale ⅛" = 1'-0"



Elevation of Pier 5 showing Cutting for Column Bases

Scale ⅛" = 1'-0"

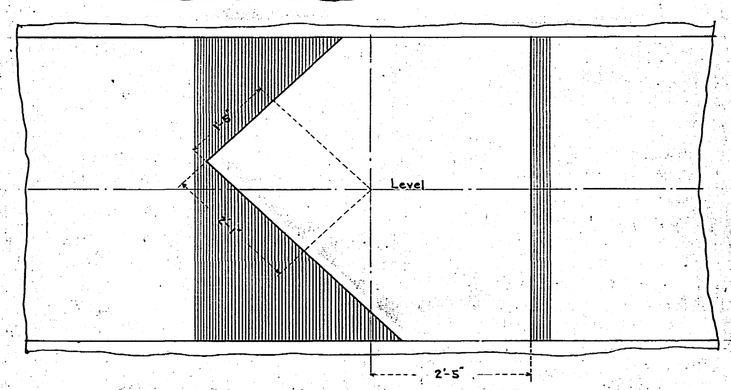


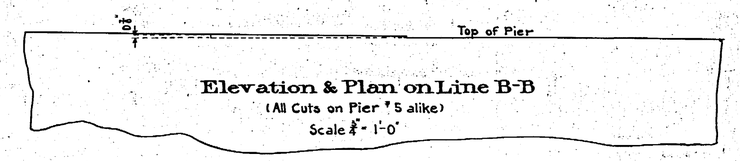


Elevation & Plan on Line A-A

(All Cuts on Pier 13 alike)

Scale ½" = 1'-0"





Elevation & Plan on Line B-B

(All Cuts on Pier 5 alike)

Scale ½" = 1'-0"

THOMSON AVENUE VIADUCT

Finish for Piers Nos. 5 and 13
at Bases of Columns

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

2 24730 C51 001

SPECIAL PLAN No. 401.

June 24, 1908.

A. Noble
Chief Engineer

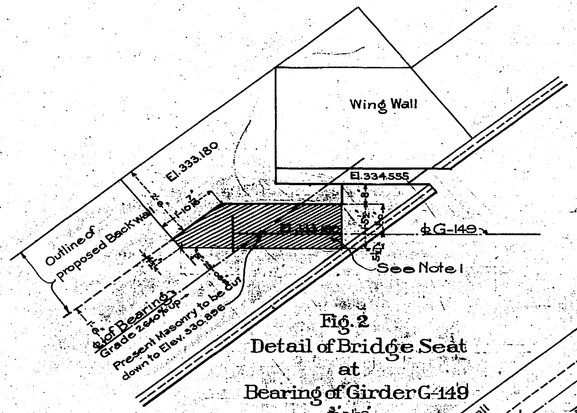


Fig. 2
Detail of Bridge Seat
at
Bearing of Girder G-149
3/4"-1'-0"

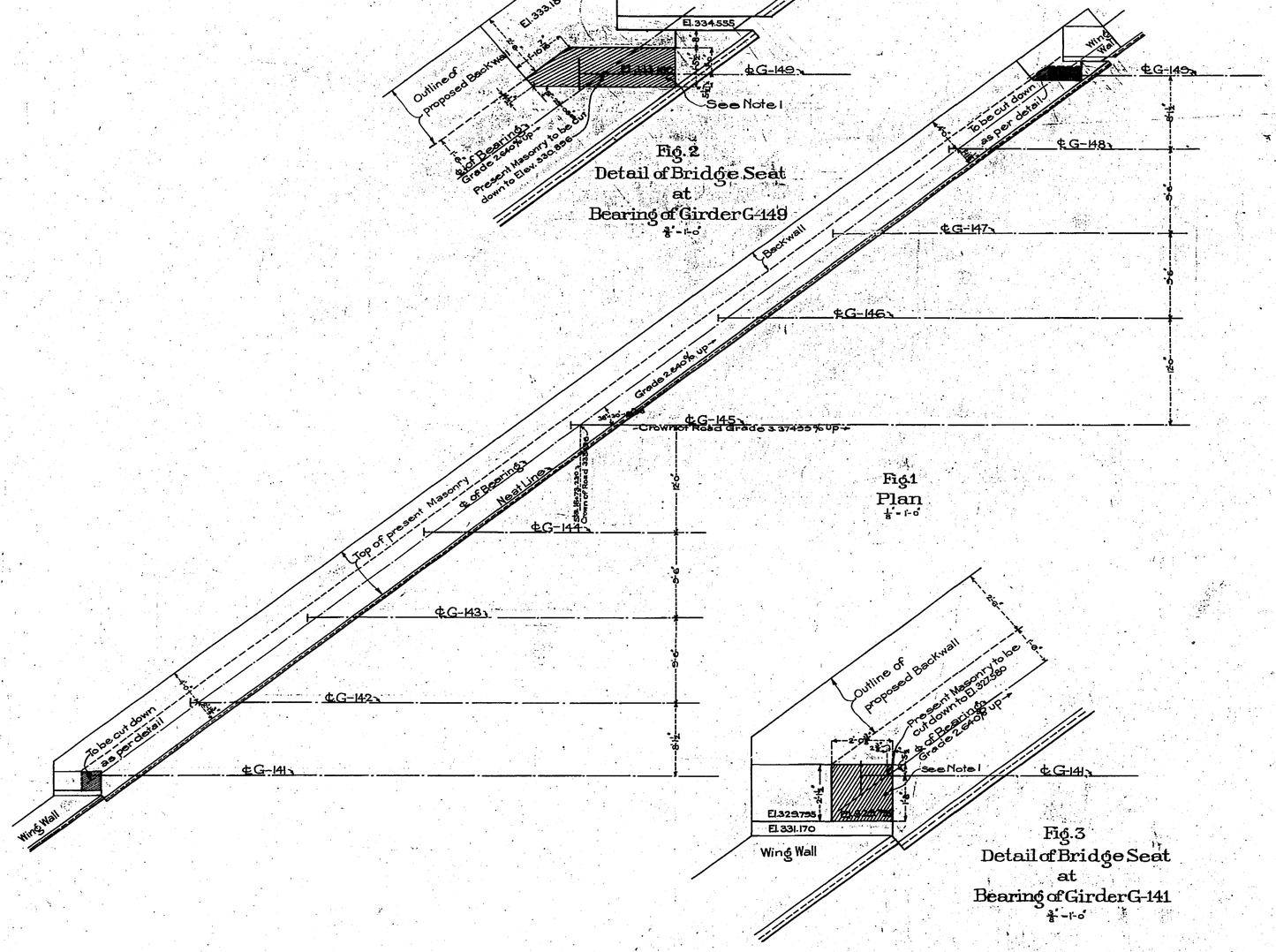


Fig. 1
Plan
1/8"-1'-0"

Fig. 3
Detail of Bridge Seat
at
Bearing of Girder G-141
3/4"-1'-0"

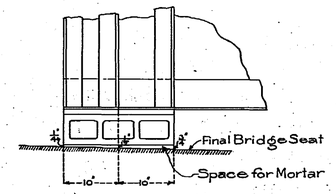


Fig. 4
Sketch showing typical Bearing
for
Girders G-141 and G-149
3/4"-1'-0"

Note 1:
Portion shown crosshatched is to be cut down to the Plane of the Bridge Seat

Note:
Elevations refer to Top of present Masonry, unless otherwise noted

Changes
in
South Abutment

Thomson Avenue Viaduct

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY

EAST RIVER DIVISION

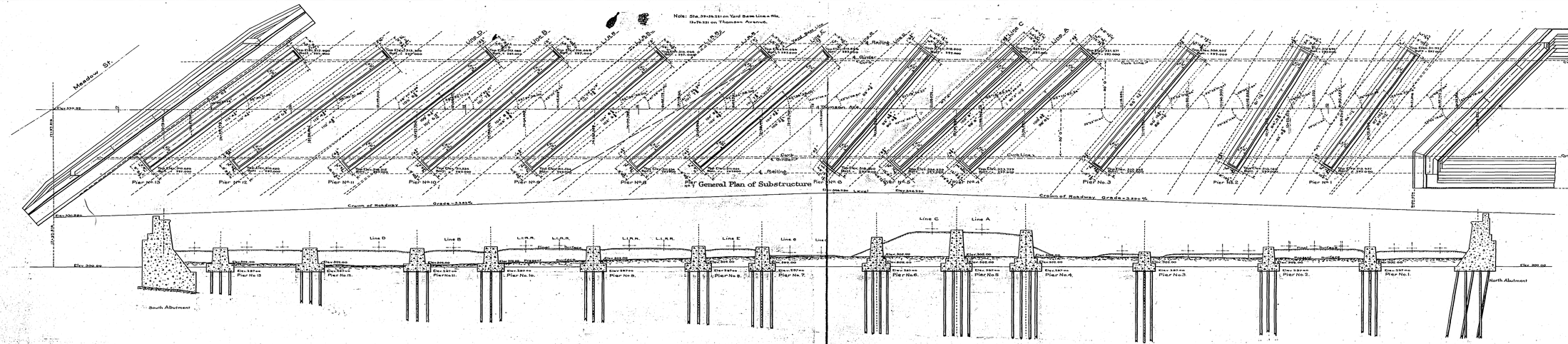
2 24730 C51 002

SPECIAL PLAN No. 402

Sept. 2, 1908.

Chief Engineer

1017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Line DDDDDDDDDDDDDDDDDDDDDDDDDDDD
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Line FFFFFFFFFFFFFFFFFFFFFFFFFFFF
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Line IIIIIIIIIIIIIIIIIIIIIIIIIIII
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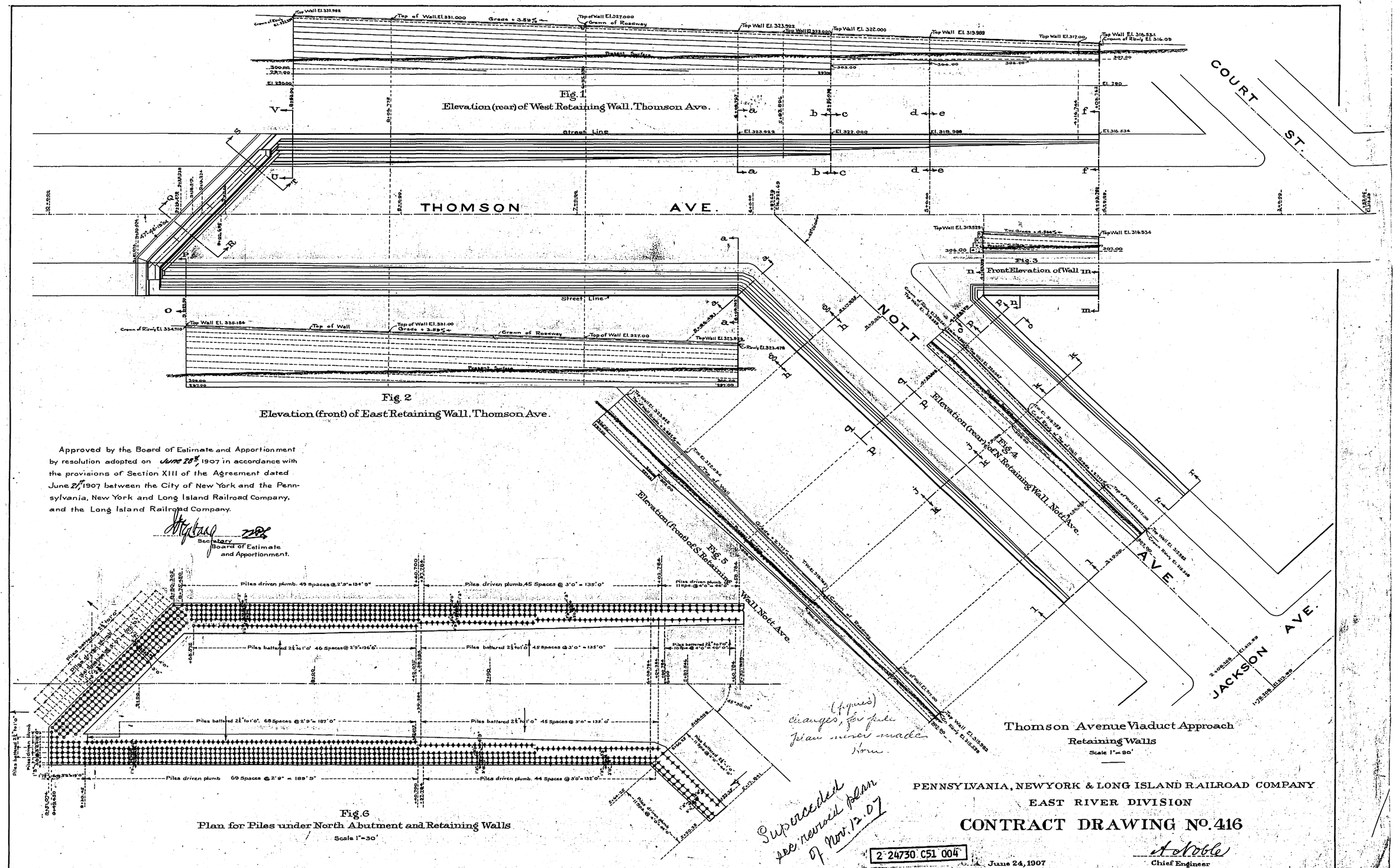


Fig. 1
Elevation (rear) of West Retaining Wall, Thomson Ave.

Fig. 2
Elevation (front) of East Retaining Wall, Thomson Ave.

Fig. 3
Front Elevation of Wall m n

Fig. 4
Elevation (rear) of N. Retaining Wall, Nott Ave.

Fig. 5
Elevation (front) of S. Retaining Wall Nott Ave

Fig. 6
Plan for Piles under North Abutment and Retaining Walls
Scale 1"=30'

Approved by the Board of Estimate and Apportionment by resolution adopted on June 28th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary
Board of Estimate and Apportionment.

(4 ques) changes, for pile plan never made from

Superseded see revised plan of Nov. 12. 07

Thomson Avenue Viaduct Approach
Retaining Walls
Scale 1"=30'

PENNSYLVANIA, NEWYORK & LONG ISLAND RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 416

2-24730 C51 004

June 24, 1907

H. Noble
Chief Engineer

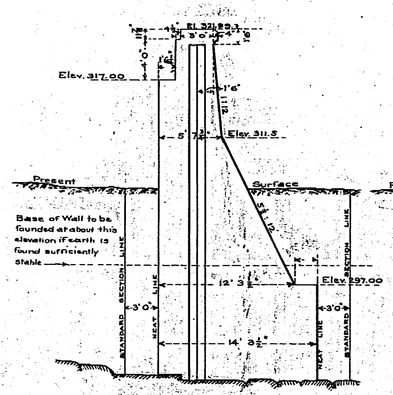


Fig. 1
Section A-B

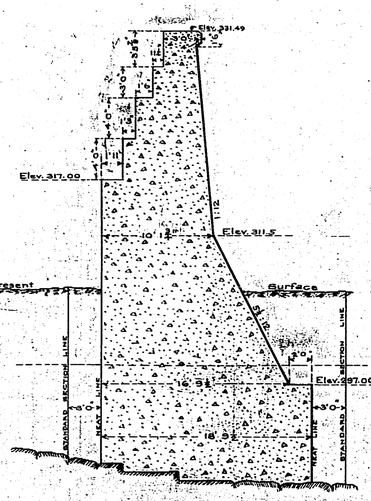


Fig. 2
Section C-D

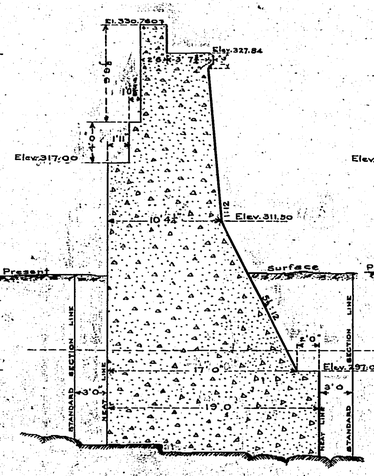


Fig. 3
Section E-F

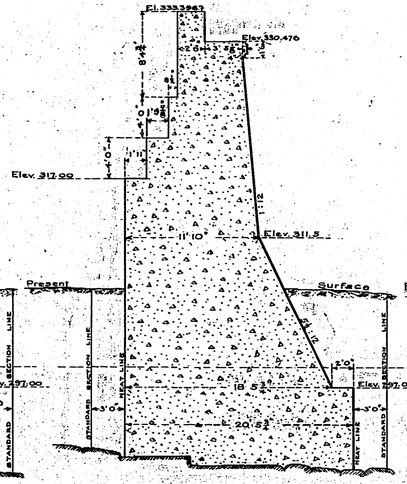


Fig. 4
Section G-H

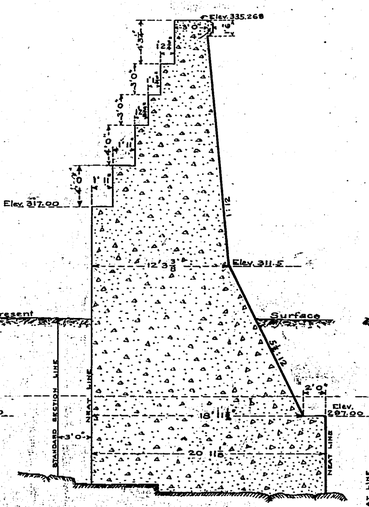


Fig. 5
Section J-K

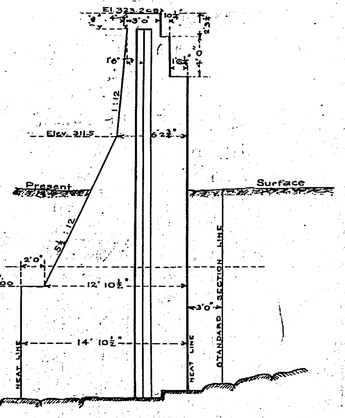


Fig. 6
Section M-N

Cross Sections of South Abutment and Retaining Wall.

For plan showing locations of cross sections see Contract Drawing No. 419

Approved by the Board of Estimate and Apportionment by resolution adopted on June 28th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company and the Long Island Railroad Company.

Secretary
Board of Estimate and Apportionment.

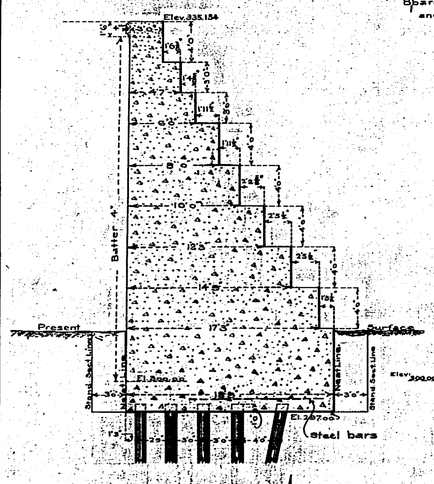


Fig. 7
Section O-P

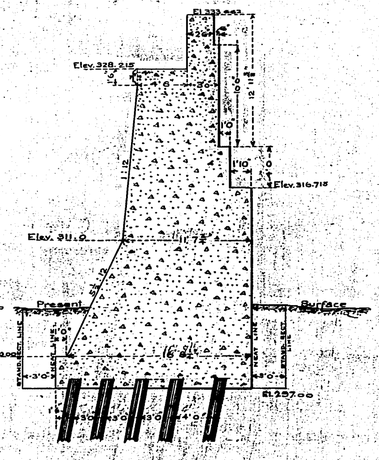


Fig. 8
Section Q-R

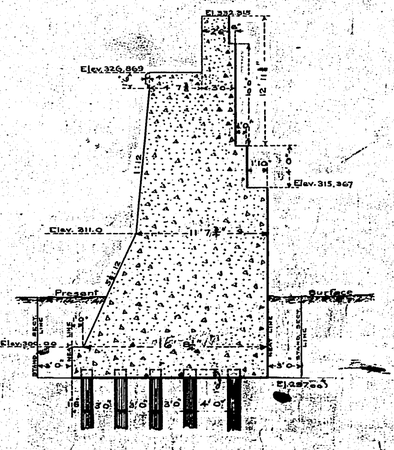


Fig. 9
Section S-T

Battered piles to have batter of 2½" per foot

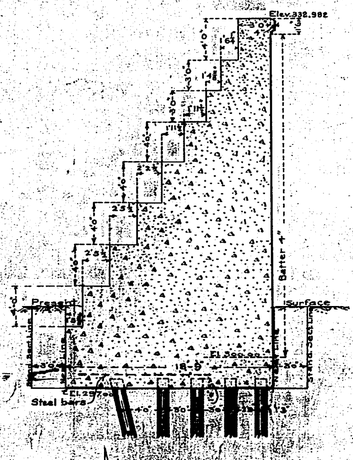


Fig. 10
Section U-V

Cross Sections of North Abutment and Retaining Walls

For plan showing locations of cross sections see Contract Drawing No. 420

Sections of Abutments
for
Thomson Avenue Viaduct

Scale ⅛" = 1'

PENNSYLVANIA, NEW YORK & LONG ISLAND RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 417

June 24, 1907

H. H. Noble
Chief Engineer

2 24730 C51 005

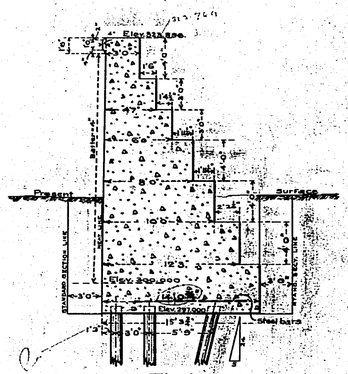


Fig.1
Section a-a

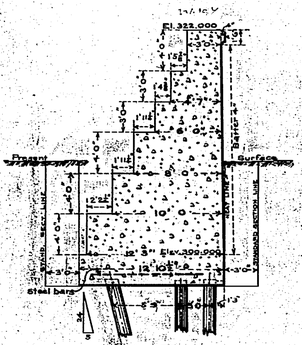


Fig. 2
Section b-b

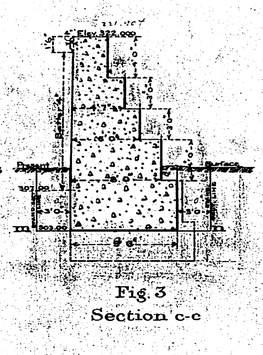


Fig. 3
Section c-c

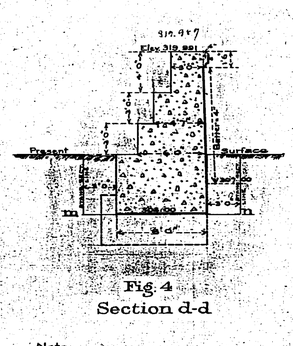


Fig. 4
Section d-d

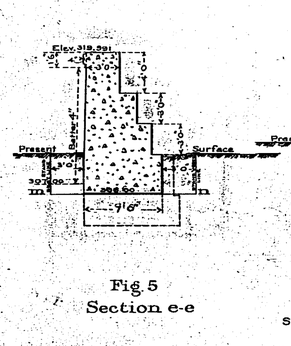


Fig. 5
Section e-e

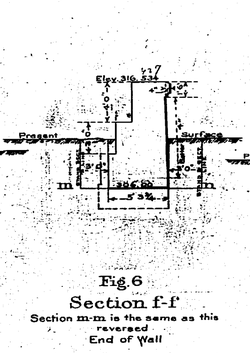


Fig. 6
Section f-f
Section m-m is the same as this reversed
End of Wall

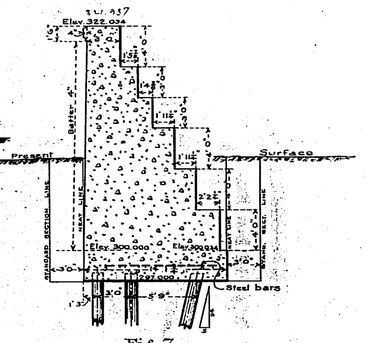


Fig. 7
Section g-g

Note:
Bases of Walls are to be placed at about elevation m-n if earth is found to be sufficiently stable. In case suitable material is not found at that depth excavation is to be carried deeper. Piles are to be used if necessary.

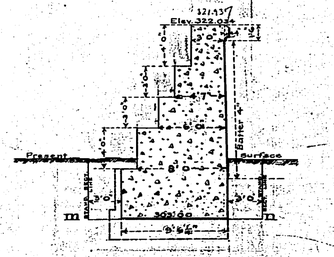


Fig.8
Section h-h

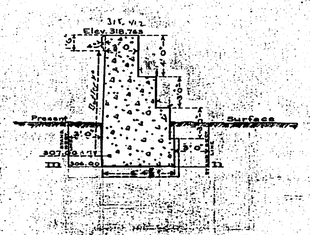


Fig. 9
Section j-j

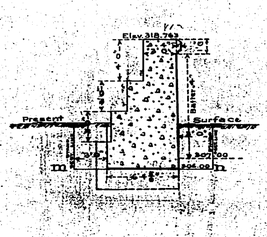


Fig.10
Section k-k

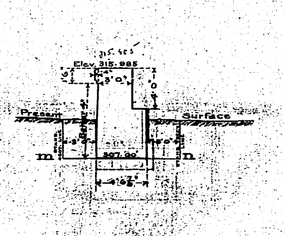


Fig.11
Section l-l
Section PP is the same as this reversed
End of Wall

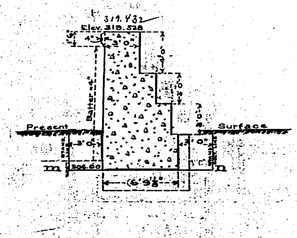


Fig.12
Section n-n
Section O-O is the same as this reversed

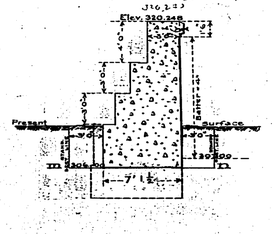


Fig.13
Section p-p

For plan showing locations of Cross Sections see Contract Drawing No. 416

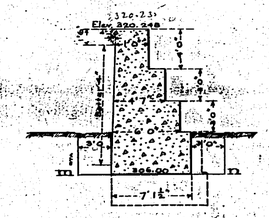


Fig.14
Section q-q

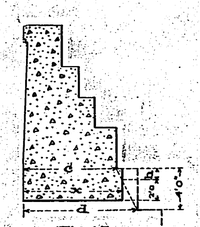


Fig.15
Formula for breadth of base of wall

$$x = c + \frac{(d-c)h}{4}$$

Approved by the Board of Estimate and Apportionment by resolution adopted on June 28th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary
Board of Estimate and Apportionment.

Thomson Ave Viaduct Approach

Cross Sections of Retaining Walls

Scale 3/8" = 1'

PENNSYLVANIA, NEW YORK & LONG ISLAND RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 418

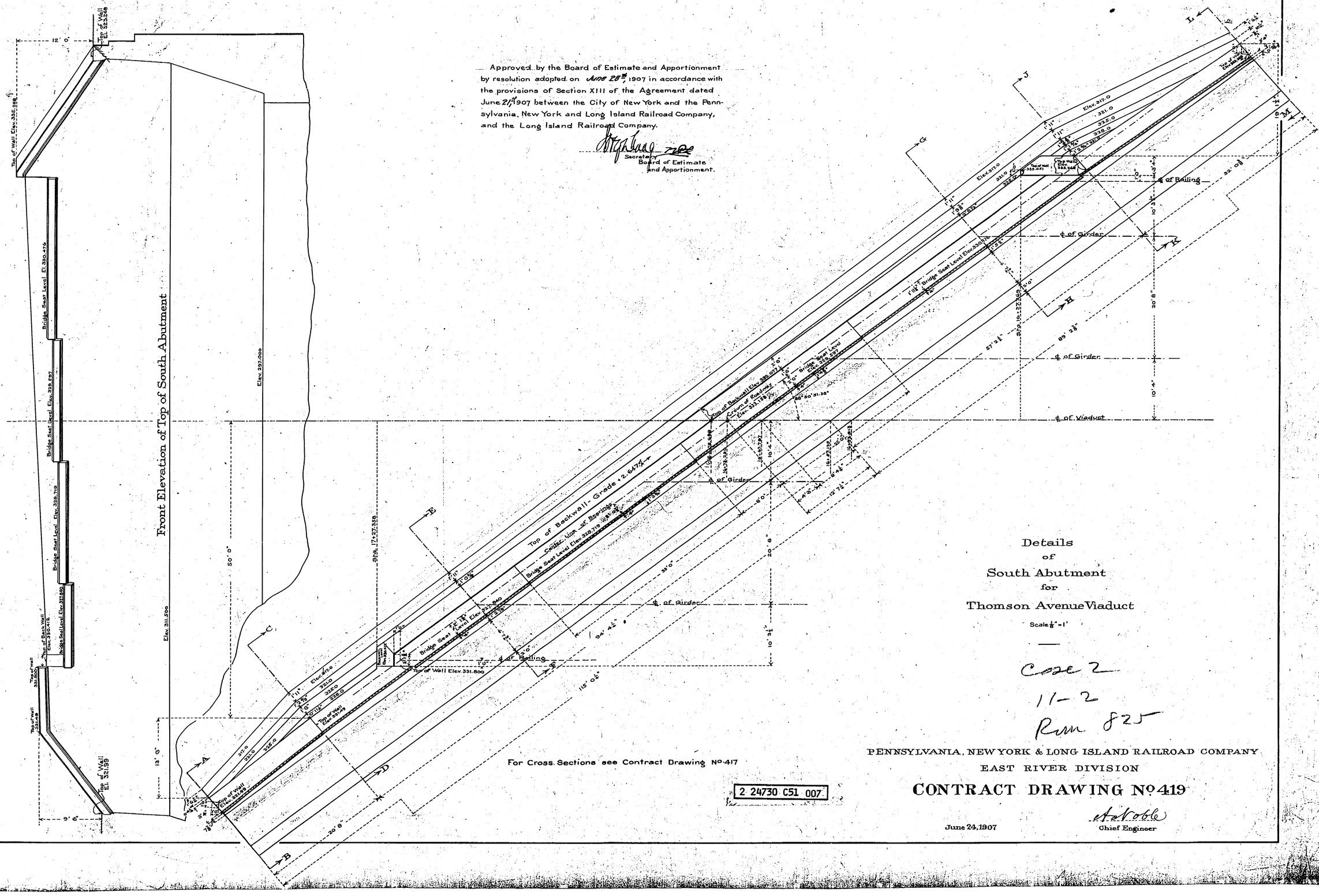
June 24, 1907

Chief Engineer

2 24730 C51 006

Approved by the Board of Estimate and Apportionment by resolution adopted on June 28th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary
Board of Estimate
and Apportionment.



For Cross Sections see Contract Drawing No. 417

2 24730 C51 007

Details of South Abutment for Thomson Avenue Viaduct

Scale 1/8" = 1'

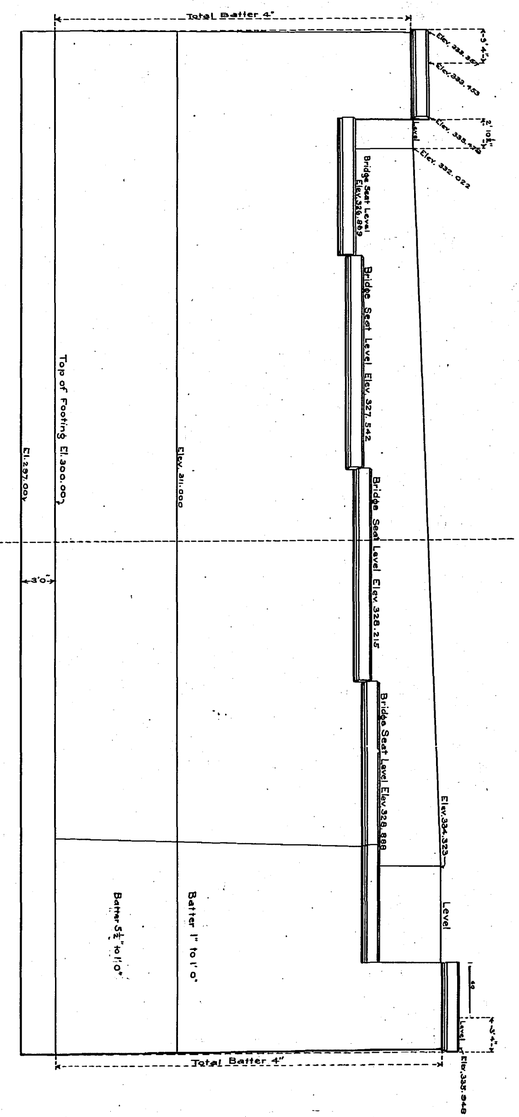
Coze 2
11-2
Rm 825

PENNSYLVANIA, NEW YORK & LONG ISLAND RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No. 419

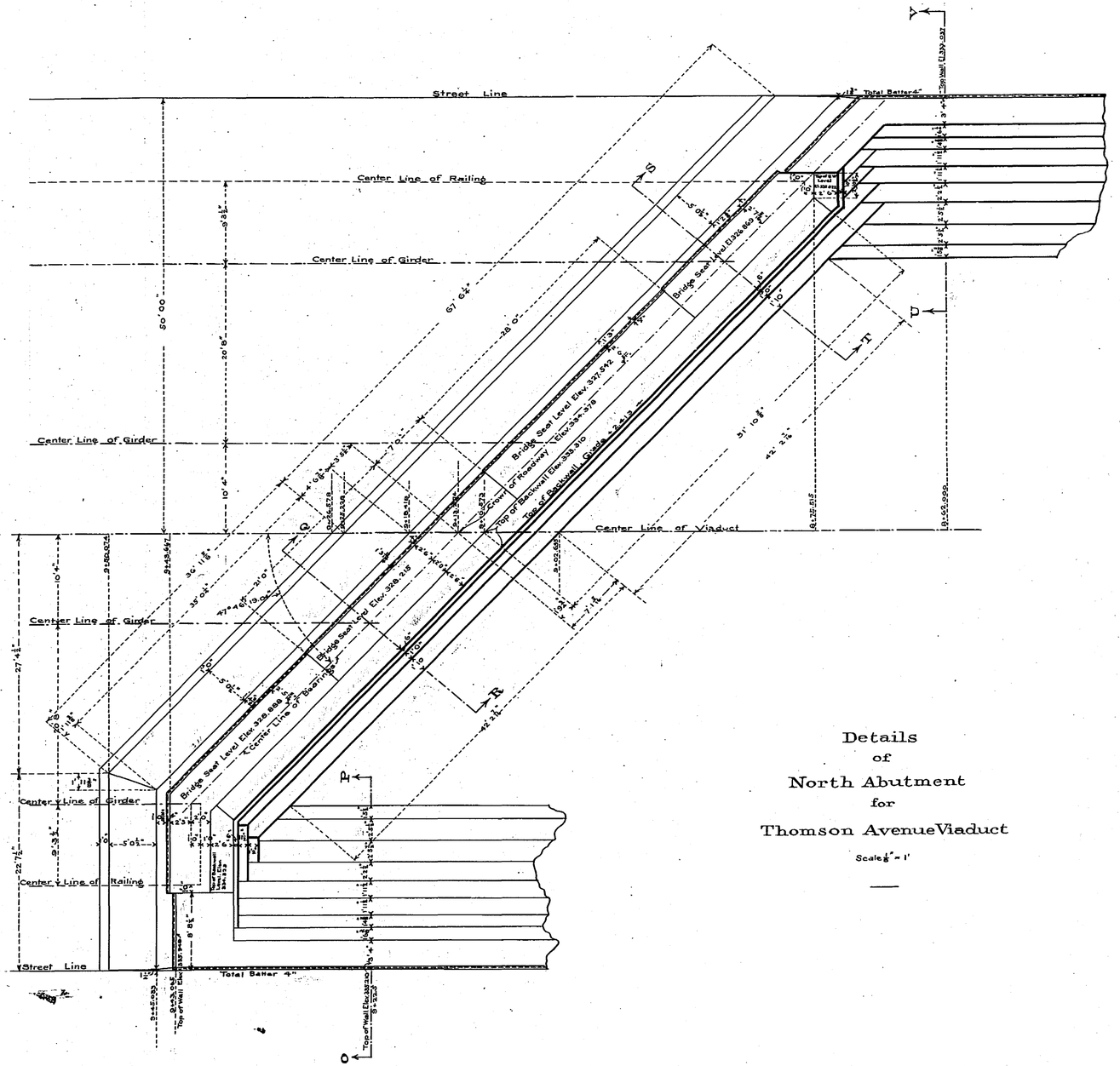
June 24, 1907

Chief Engineer



Front Elevation of North Abutment

Scale ⅛" = 1'



For Cross Sections see Contract Drawing No. 417

Approved by the Board of Estimate and Apportionment by resolution adopted on June 28th 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary,
Board of Estimate
and Apportionment.

2 24730 C51 008

Details of North Abutment for Thomson Avenue Viaduct

Scale ⅛" = 1'

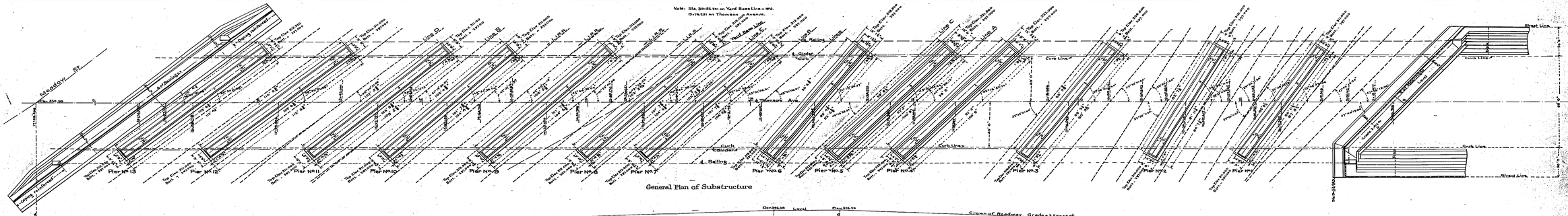
PENNSYLVANIA, NEW YORK & LONG ISLAND RAILROAD COMPANY

EAST RIVER DIVISION

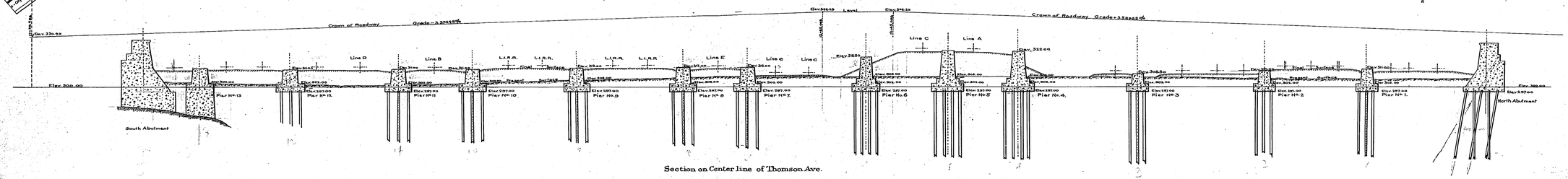
CONTRACT DRAWING No 420

June 24, 1907

Chief Engineer



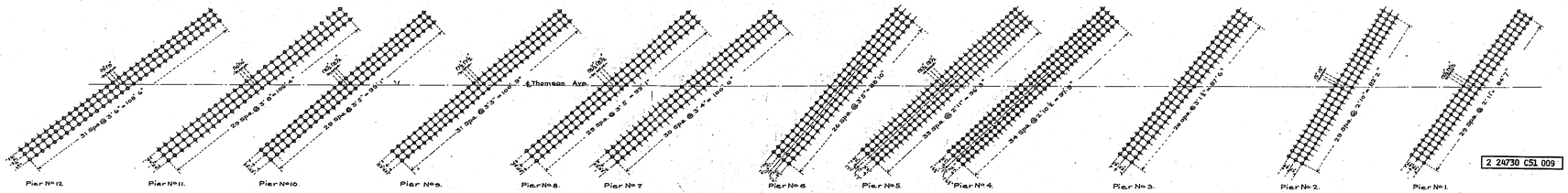
General Plan of Substructure



Section on Center line of Thomson Ave.

Approved by the Board of Estimate and Apportionment by resolution adopted on December 6th 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary Board of Estimate and Apportionment.



Pile Plan

Modification of Plan of Thomson Avenue Viaduct and Approach heretofore approved by the Board of Estimate and Apportionment by resolution adopted June 28, 1907

Substructure for Thomson Avenue Viaduct

Scale: 1" = 20'

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

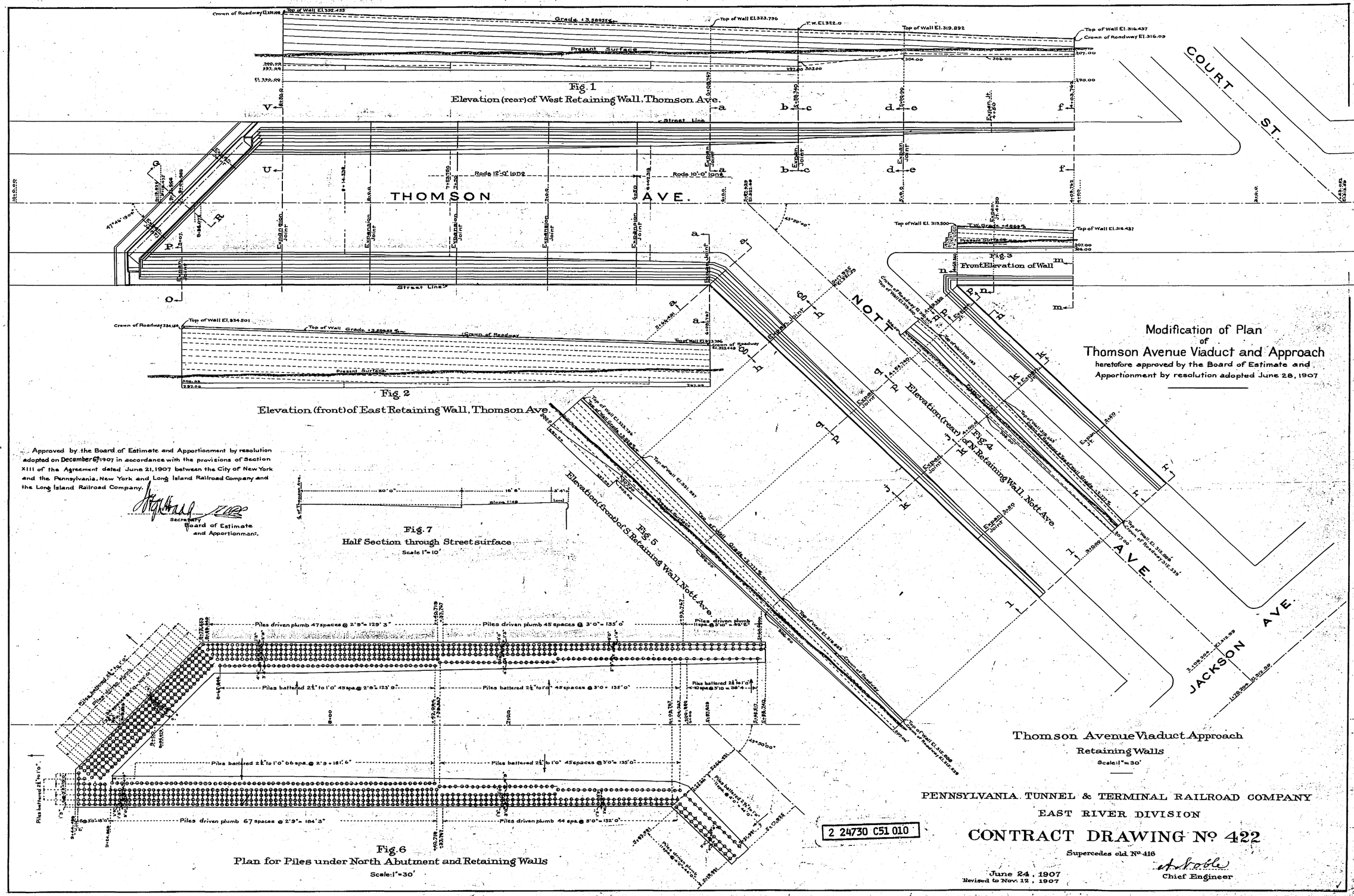
CONTRACT DRAWING No. 421 dec 477

Supersedes old No. 413

June 24, 1907
Revised to Nov. 15, 1907

A. Ackerth
Chief Engineer

2 24730 C51 009



Approved by the Board of Estimate and Apportionment by resolution adopted on December 6th 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company and the Long Island Railroad Company.

Secretary
Board of Estimate and Apportionment.

Modification of Plan of Thomson Avenue Viaduct and Approach

heretofore approved by the Board of Estimate and Apportionment by resolution adopted June 28, 1907

Thomson Avenue Viaduct Approach
Retaining Walls
Scale: 1"=30'

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No 422

Supercedes old No. 416

June 24, 1907
Revised to Nov. 12, 1907

Chief Engineer

2 24730 C51 010

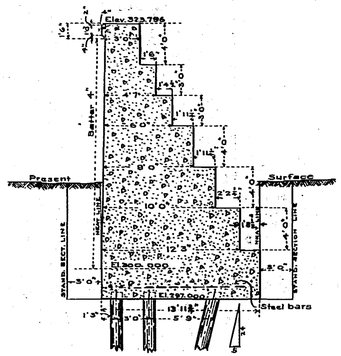


Fig. 1
Section a-a

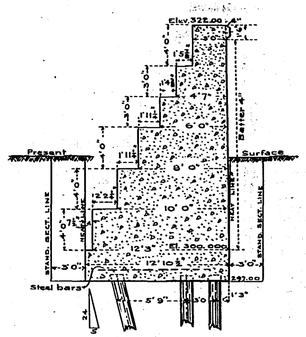


Fig. 2
Section b-b

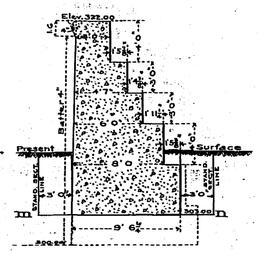


Fig. 3
Section c-c

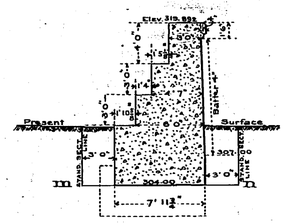


Fig. 4
Section d-d

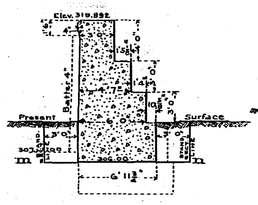


Fig. 5
Section e-e

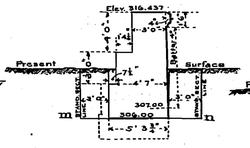


Fig. 6
Section f-f
Section m-m is the same as this reversed End of Wall

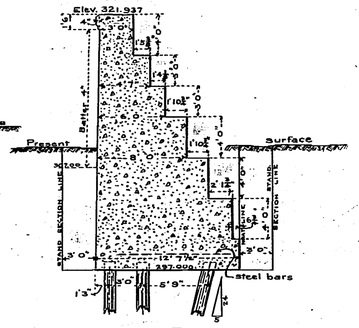


Fig. 7
Section g-g

Note:
Bases of Walls are to be placed at about elevation m-n if earth is found to be sufficiently stable. In case suitable material is not found at that depth excavation is to be carried deeper. Piles are to be used if necessary.

Steel Bars:
Steel bars to be of 0.56" net section, 10' along and 2'0" c-c.

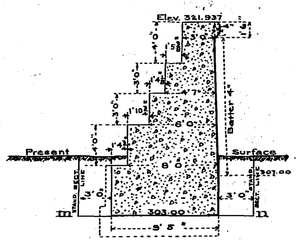


Fig. 8
Section h-h

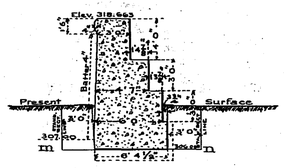


Fig. 9
Section j-j

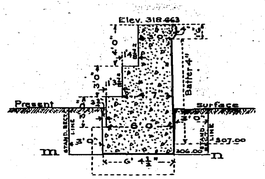


Fig. 10
Section k-k

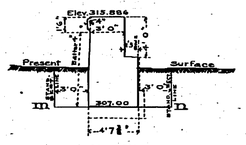


Fig. 11
Section l-l
Section r-r is the same as this reversed End of Wall

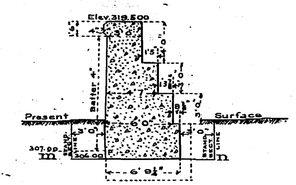


Fig. 12
Section n-n

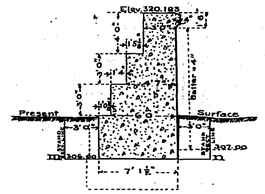


Fig. 13
Section p-p

For plan showing locations of Cross Sections
see Contract Drawing No. 422

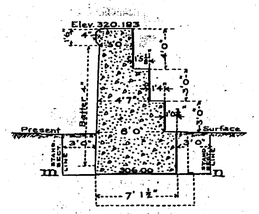


Fig. 14
Section q-q

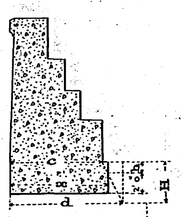


Fig. 15
Formula for breadth of base of wall

$$x = c + \frac{(d-c)h}{H}$$

Approved by the Board of Estimate and Apportionment by resolution adopted on December 6th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary
Board of Estimate
and Apportionment.

2 24730 C51 011

Modification of Plan
of
Thomson Avenue Viaduct and Approach
heretofore approved by the Board of Estimate and Apportionment by resolution adopted June 28, 1907

Thomson Ave Viaduct Approach

Cross Sections of Retaining Walls

Scale 1" = 1'

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY

EAST RIVER DIVISION

CONTRACT DRAWING No 423

Supercedes old No 418

June 24, 1907
Revised to Nov. 13, 1907

Chief Engineer

Not a record drawing

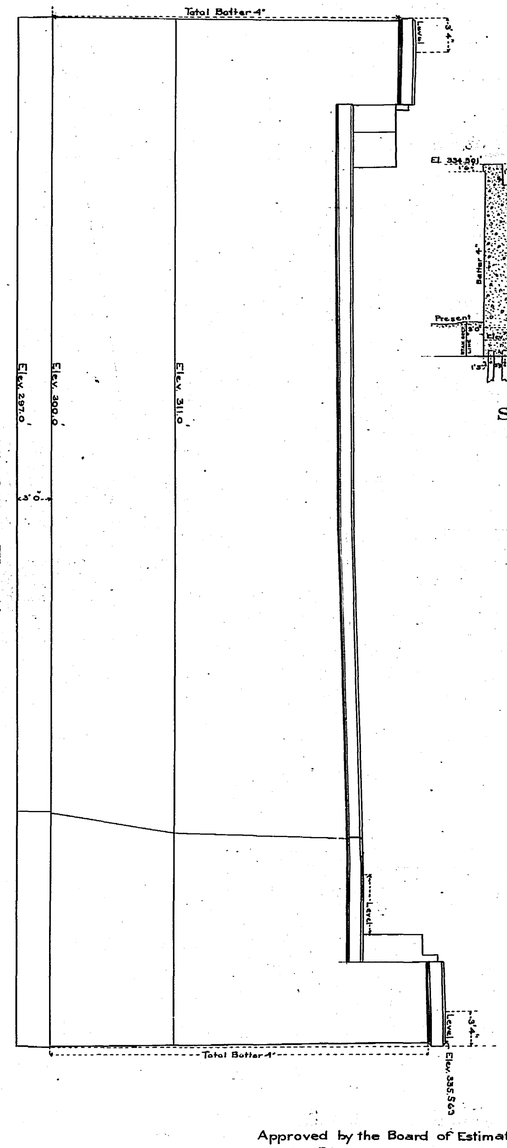


Fig. 2 Front Elevation

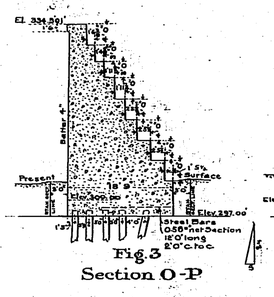


Fig. 3
Section O-P

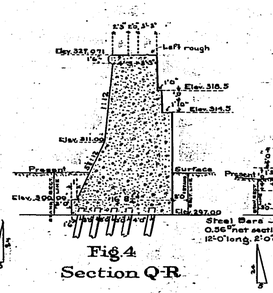


Fig. 4
Section Q-R

Fig. 5
Section U-V

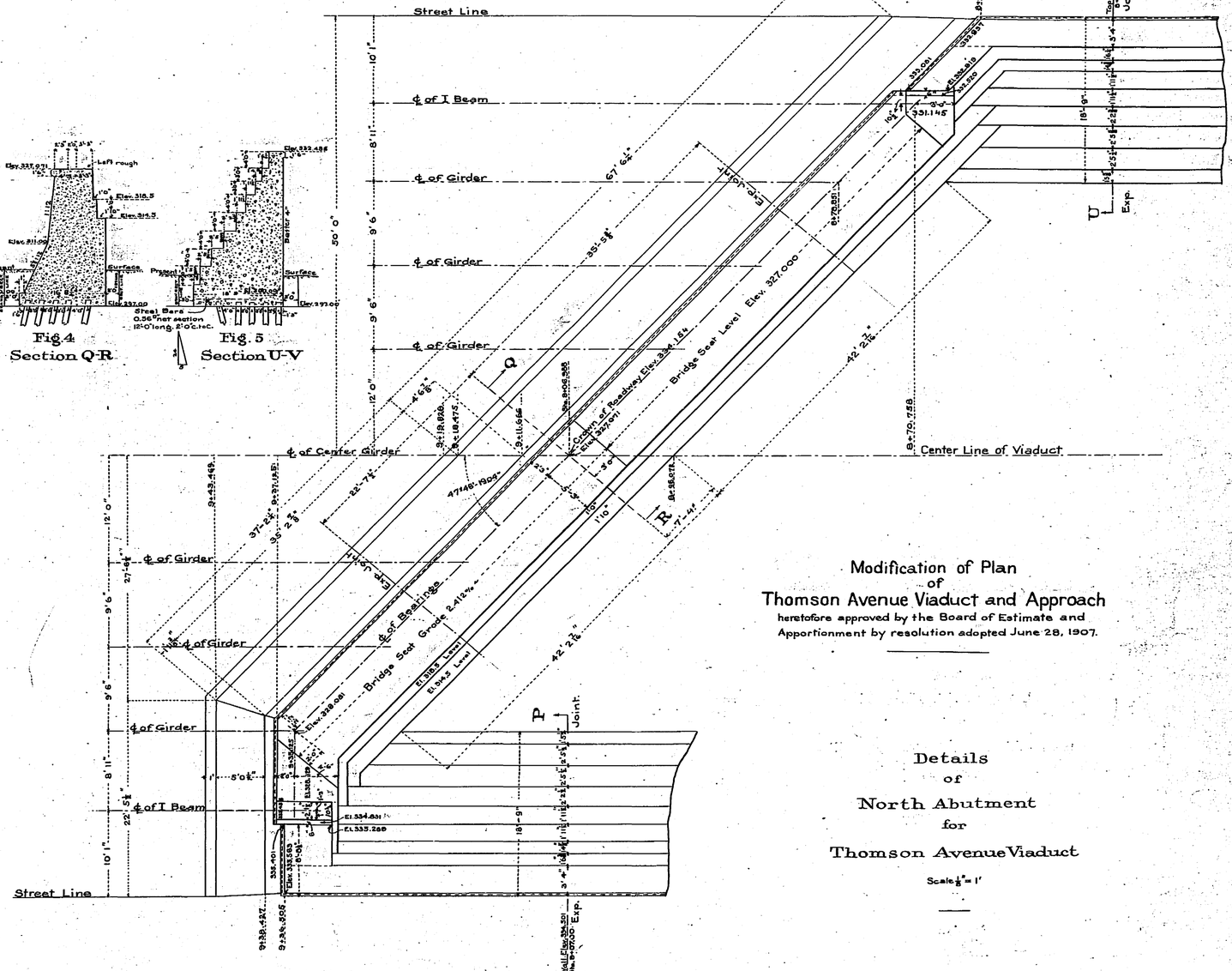


Fig. 1
Plan

Modification of Plan of Thomson Avenue Viaduct and Approach

heretofore approved by the Board of Estimate and Apportionment by resolution adopted June 28, 1907.

Details of North Abutment for Thomson Avenue Viaduct

Scale 1/8" = 1'

Approved by the Board of Estimate and Apportionment by resolution adopted on December 6th, 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21st 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company

Secretary
Board of Estimate and Apportionment.

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION

CONTRACT DRAWING No 424

Supercedes old No 420

June 24, 1907
Revised to Nov. 14, 1907

Chief Engineer

2 24730.C51 012

Ser. Cont. Dr. 430

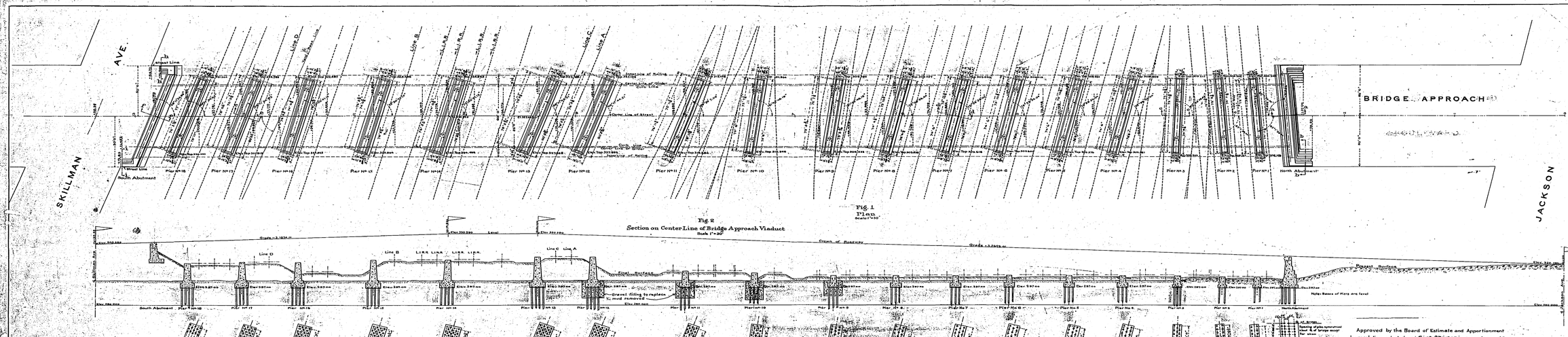


Fig. 1
Plan
Scale 1"=50'

Fig. 2
Section on Center Line of Bridge Approach Viaduct
Scale 1"=20'

Fig. 18
Pile Plan
Scale 1"=20'

Fig. 17
End View b-b
Scale 1"=10'

Fig. 16
End View i-i
Scale 1"=10'

Fig. 15
Front Elevation of South Abutment
Scale 1"=20'

Fig. 13
Section f-f
Scale 1"=10'

Fig. 14
Section g-g
Scale 1"=5'

Fig. 12
Section h-h
Scale 1"=10'

Fig. 11
Front Elevation of North Abutment
Scale 1"=20'

Fig. 10
Section a-a
Scale 1"=10'

Fig. 7
Section d-d
Scale 1"=10'
Piers Nos 4, 5, 6, 8, 9, 10 and 11 are similar to this

Fig. 6
Side Elevation of Pier No 7
Scale 1"=10'

Fig. 9
Section c-c
Scale 1"=10'

Fig. 8
Side Elevation of Pier No 3
Scale 1"=10'
Piers Nos 1 & 2 are similar to this

Fig. 4
Section e-e
Scale 1"=10'
Piers Nos 12, 13, 14, 15, 16 & 18 are similar to this

Fig. 3
Side Elevation of Pier No 17
Scale 1"=10'

Fig. 5
Detail of Coping
Scale 1"=1'

Approved by the Board of Estimate and Apportionment by resolution adopted on Sept. 27 1907 in accordance with the provisions of Section XIII of the Agreement dated June 21, 1907 between the City of New York and the Pennsylvania, New York and Long Island Railroad Company, and the Long Island Railroad Company.

Secretary to Board of Estimate and Apportionment.

Substructure for Bridge Approach Viaduct

2 24750 C51 013

PENNSYLVANIA, TUNNEL AND TERMINAL RAILROAD COMPANY
EAST RIVER DIVISION
CONTRACT DRAWING No 425

June 24, 1907

Chief Engineer

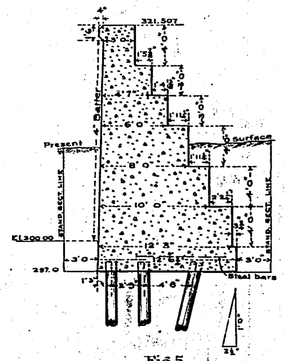


Fig. 5.
Section b-b.
Scale 1/8"=1'

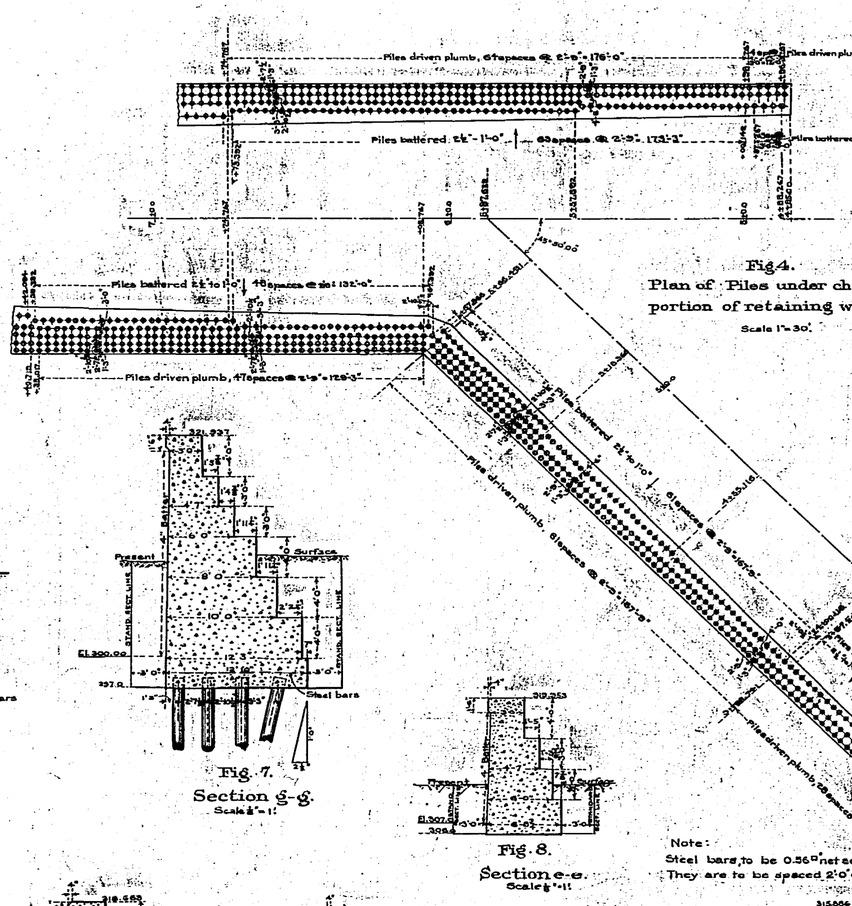


Fig4.
Plan of Piles under changed portion of retaining walls.
Scale 1"=30'.

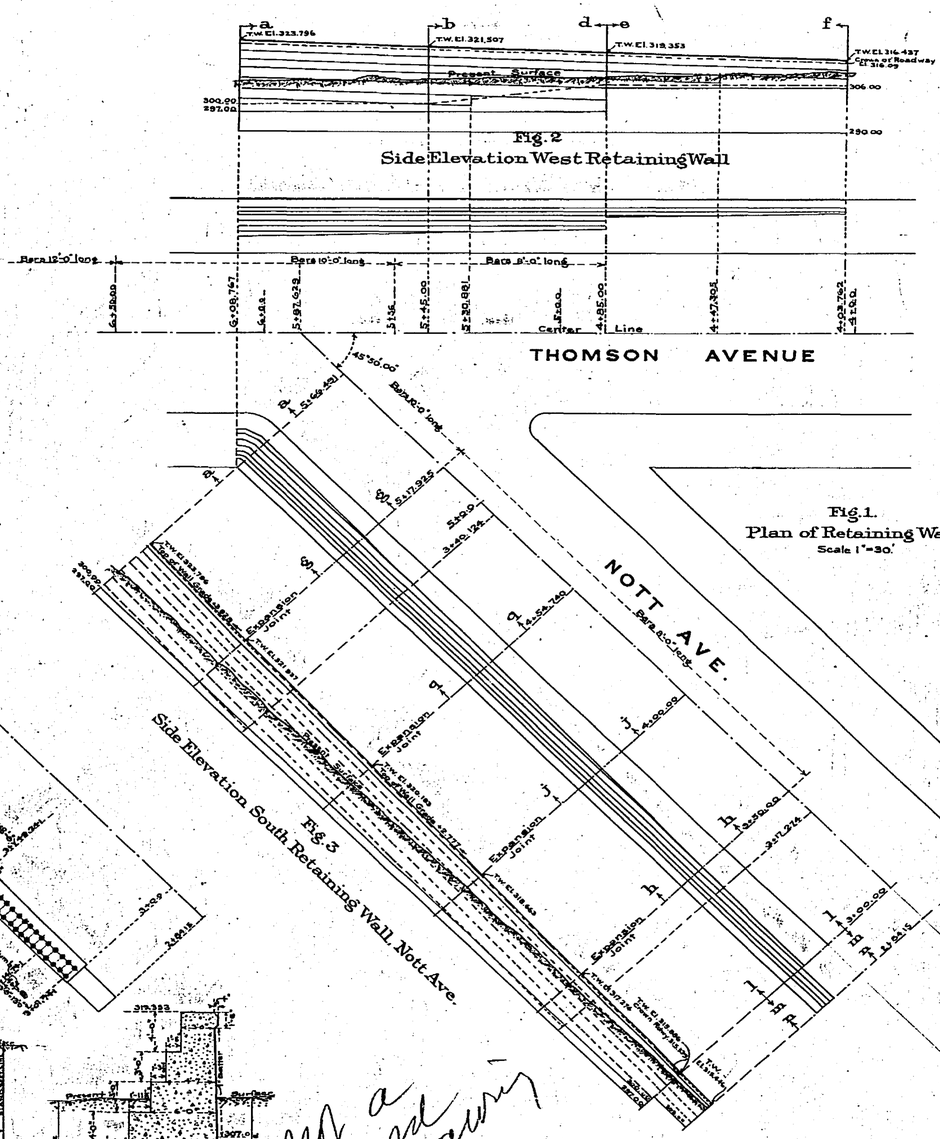


Fig. 2
Side Elevation West Retaining Wall

Fig. 3

Fig.1.
Plan of Retaining Walls.
Scale 1"=30'.

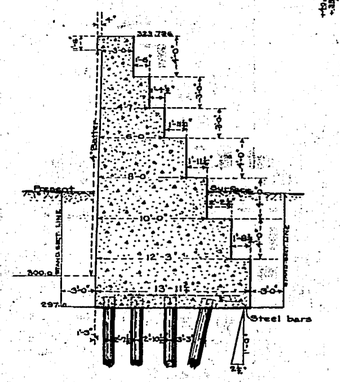


Fig. 6.
Section a-a.
Scale 1/8"=1'

Fig. 7.
Section g-g.
Scale 1/8"=1'

Fig. 8.
Section e-e.
Scale 1/8"=1'

Note:
Steel bars, to be 0.56 lbs net section.
They are to be spaced 2'0" C. to C.

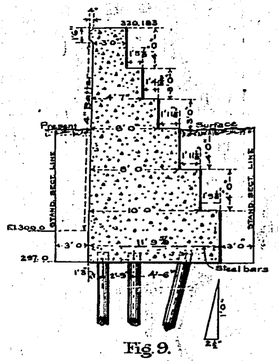


Fig. 9.
Section q-q.
Scale 1/8"=1'

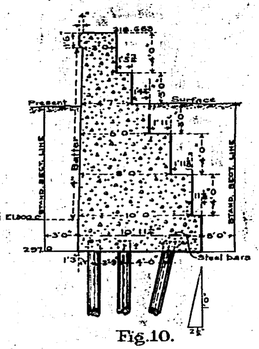


Fig. 10.
Section j-j.
Scale 1/8"=1'

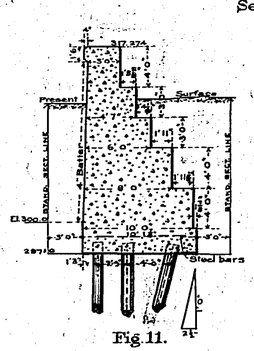


Fig. 11.
Section h-h.
Scale 1/8"=1'

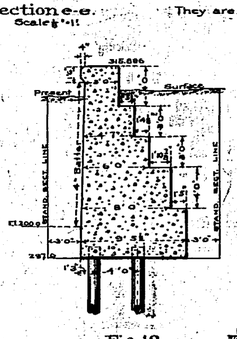


Fig. 12.
Section l-l.
Scale 1/8"=1'

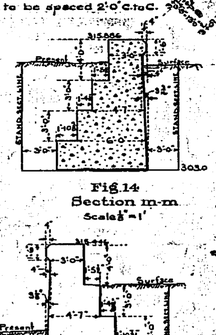


Fig.14
Section m-m
Scale 1/8"=1'

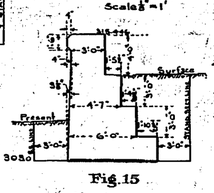


Fig.15
Section n-n
Scale 1/8"=1'

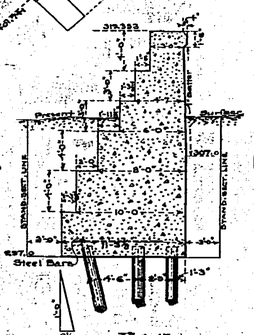


Fig. 15.
Section d-d.
Scale 1/8"=1'

Thomson Avenue Viaduct Approach.
Retaining Walls.

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY.

EAST RIVER DIVISION.

CONTRACT DRAWING No. 428.

To be used in conjunction with Contract Drawing No 422.

June 24, 1907.

Chief Engineer.

2 24730 C51 014

As a record Drawing

DRW 1017

Not a record drawing

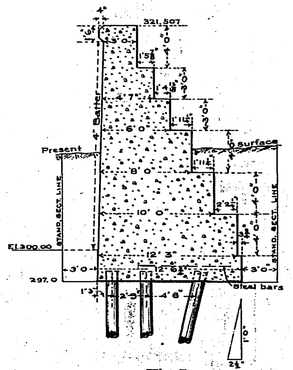


Fig.5.
Section b-b.
Scale ½"=1'

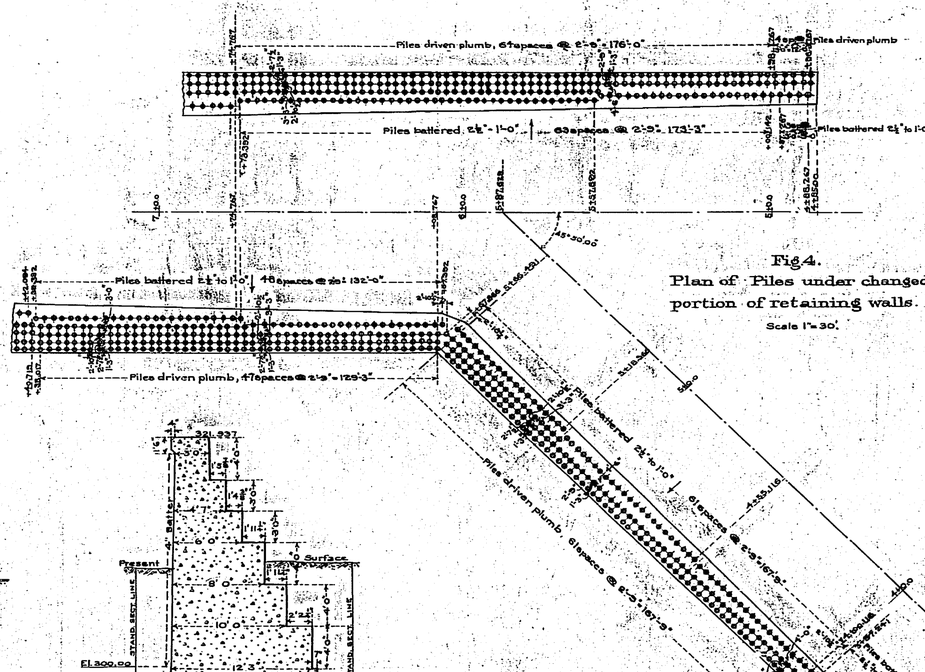


Fig.4.
Plan of Piles under changed portion of retaining walls.
Scale 1"=30'.

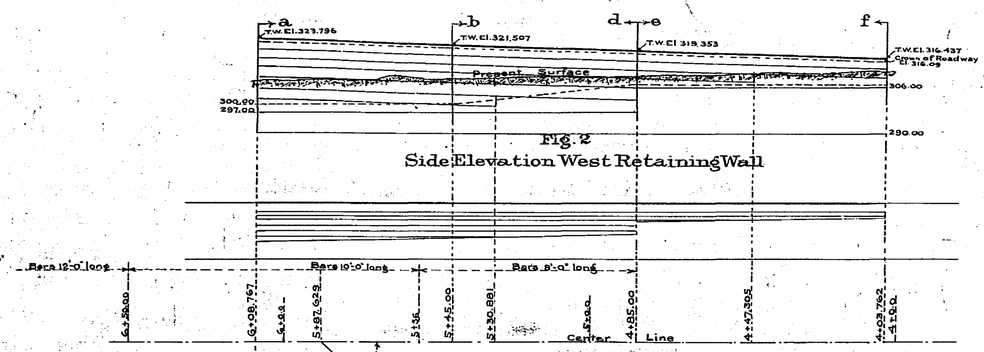


Fig.2
Side Elevation West Retaining Wall

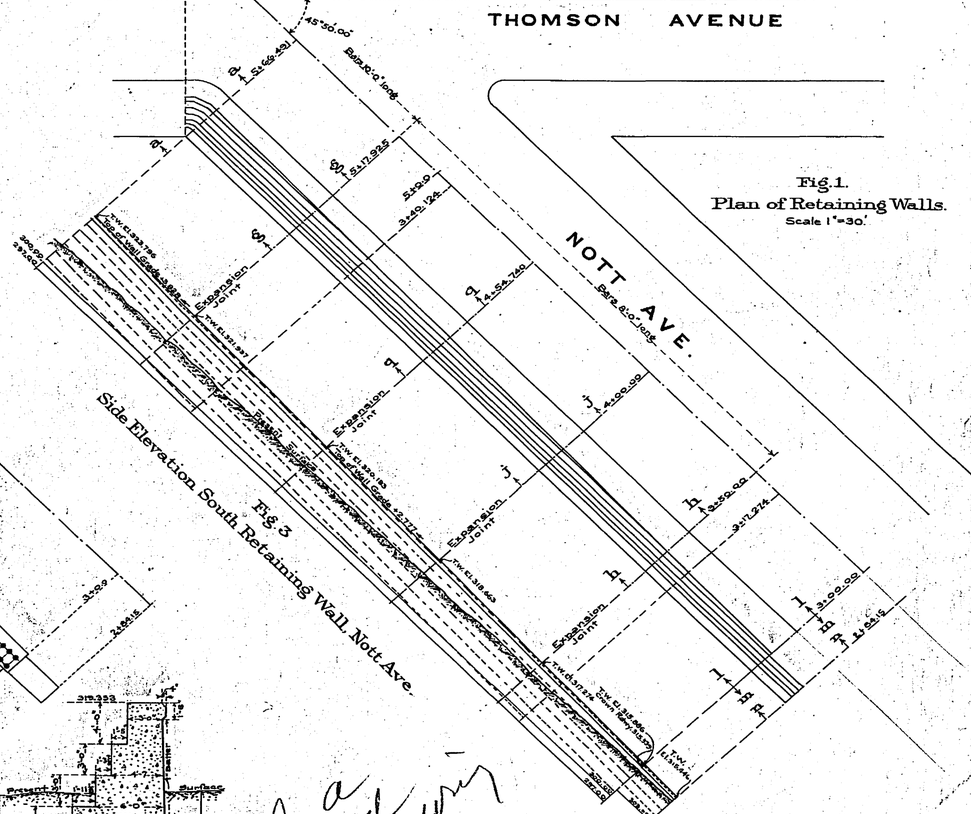


Fig.1.
Plan of Retaining Walls.
Scale 1"=30'.

Side Elevation South Retaining Wall, Nott Ave.
Fig.3

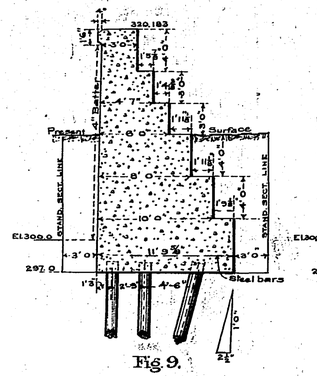


Fig. 6.
Section a-a.
Scale ⅛"=1'

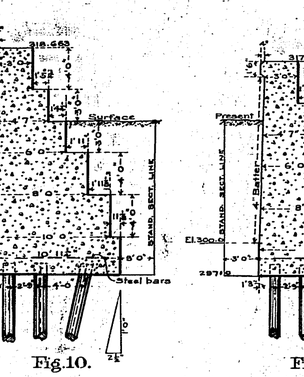


Fig. 7.
Section g-g.
Scale ⅛"=1'

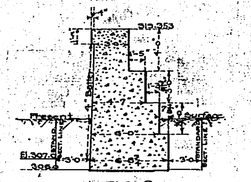


Fig. 8.
Section e-e.
Scale ⅛"=1'

Note:
Steel bars, to be 0.56□" net section.
They are to be spaced 2'-0" c. to c.

Fig. 9.
Section q-q.
Scale ⅛"=1'

Fig.10.
Section j-j.
Scale ⅛"=1'

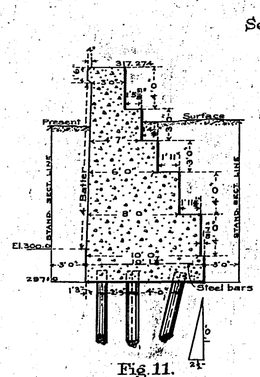


Fig.11.
Section h-h.
Scale ⅛"=1'

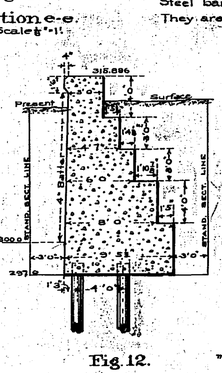


Fig.12.
Section l-l.
Scale ⅛"=1'

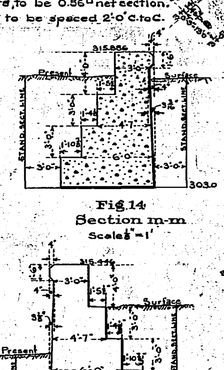


Fig.14
Section m-m
Scale ⅛"=1'

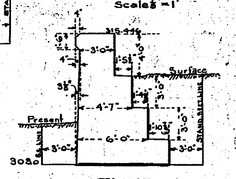


Fig.15
Section n-n
Scale ⅛"=1'

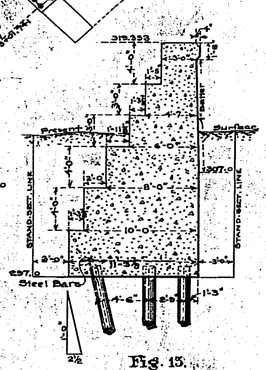


Fig. 15.
Section d-d.
Scale ⅛"=1'

2 24730 C51 014

Not a record drawing

Thomson Avenue Viaduct Approach.
Retaining Walls.

PENNSYLVANIA TUNNEL & TERMINAL RAILROAD COMPANY.

EAST RIVER DIVISION.

CONTRACT DRAWING No. 428.

To be used in conjunction with Contract Drawing No. 422.

June 24, 1907.

Chief Engineer.

DRW-1017

Not a record drawing

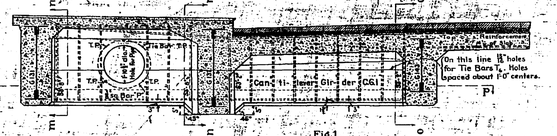


Fig.1
Part Cross Section at CG1

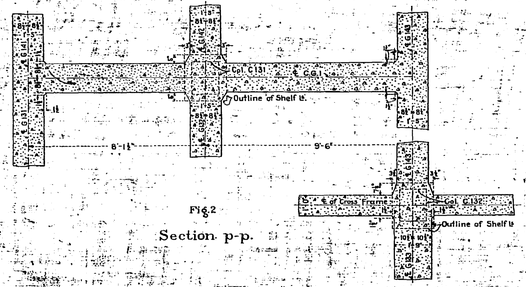


Fig.2
Section p-p.

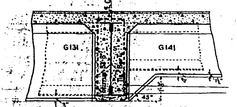


Fig.3
Section m-m.

Wire Mesh:-
Longitudinals N°10 Wire 8" centers.
Transverses N°8 - 3"
Sheets 3'-4" wide

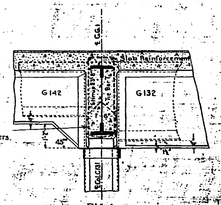


Fig.4
Section n-n.

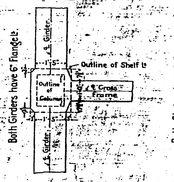


Fig.11

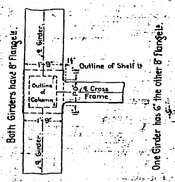


Fig.12

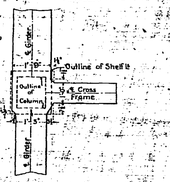


Fig.13

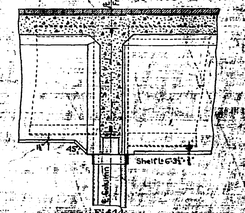


Fig.14

Typical Details of Concrete Protection of Tops of Columns in Bents N°s 1 & 13

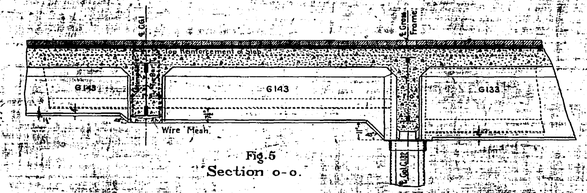


Fig.5
Section o-o.

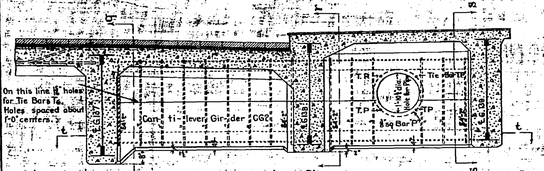


Fig.6
Part Cross Section at CG2

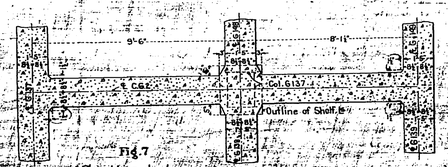


Fig.7
Section t-t

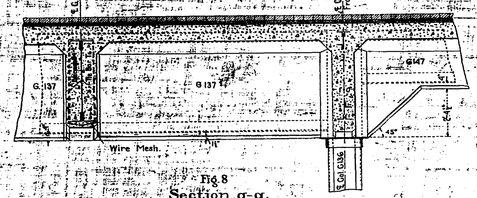


Fig.8
Section q-q

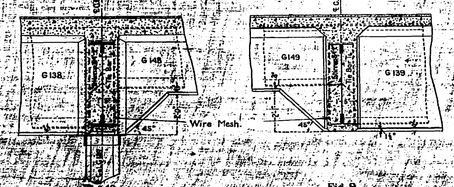


Fig.9
Section s-s.

Required:-
32 lin. ft of 3'-4" wide strips of Wire Mesh.
4 Bars marked "P" Net Sec. 0.14 sq. inches
9 Stirrups " S 5'-2" " "
6 " " S 5'-8" " "
15 " " S 4'-8" " "
57 Tie Bars " T " 0.06 "
8 " " T "

Front Elevation
Fig.15

Side Elevation
Fig.16

Details of "Bar P" 4 required
Scale 1"=1'

Fig.17
Details of Stirrup

Details of Tie Bars
Scale 1"=1'

Fig.19

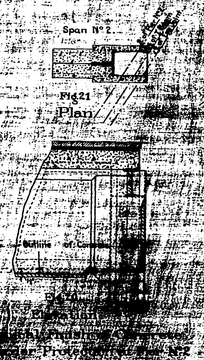


Fig.21
Plan

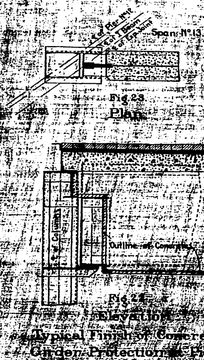


Fig.23
Plan

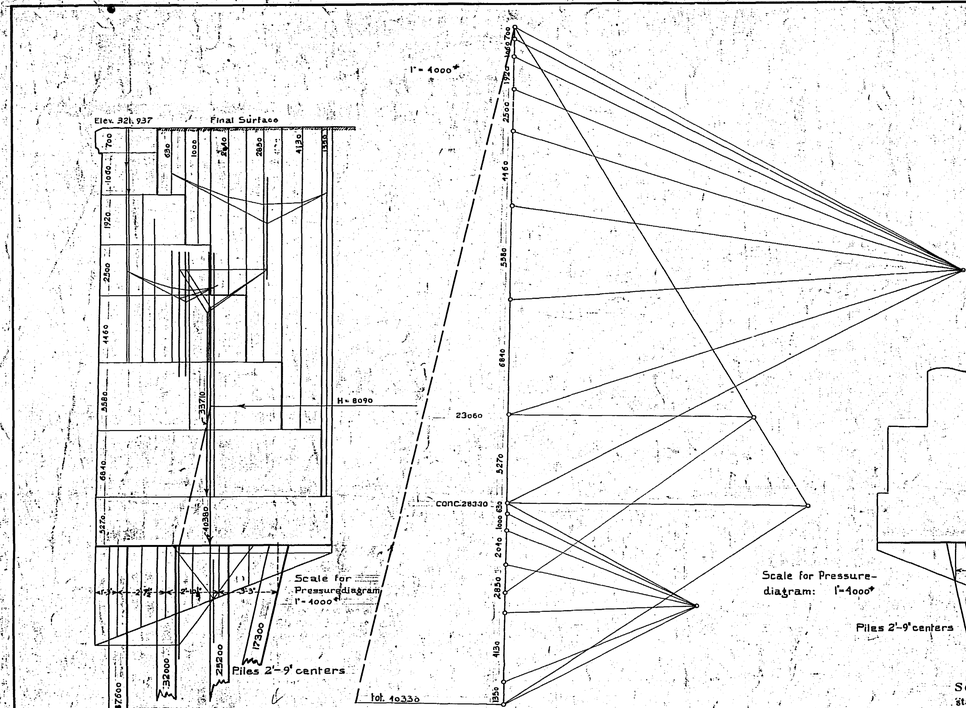
Fig.22
Elevation

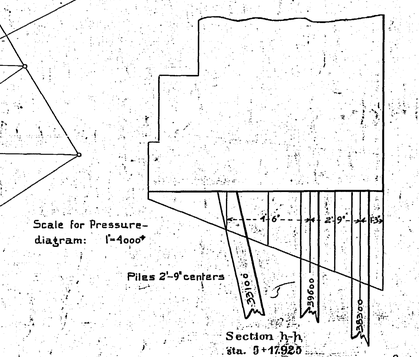
THOMSON AVENUE VIADUCT
Details of Concrete Protection
for
Cantilever Girders, Columns etc.
Scale 1/2" for Unless noted.

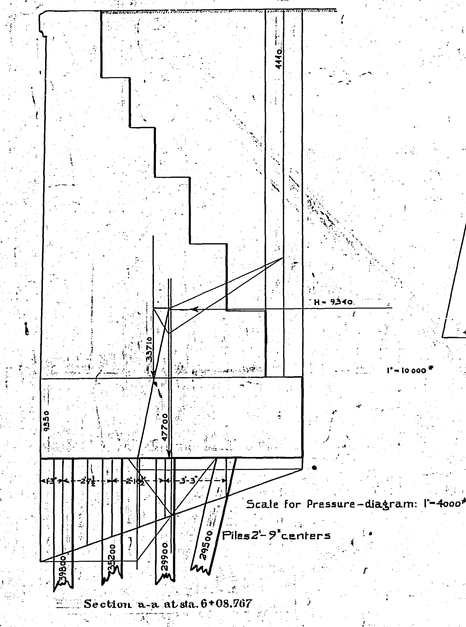
PENNSYLVANIA TUNNEL AND TERMINAL RAILROAD
EAST RIVER DIVISION
CONTRACT No. [illegible]

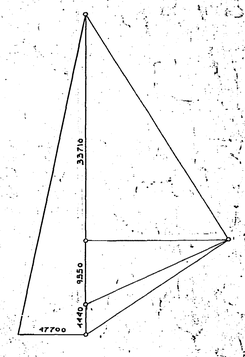
2-24130 USE 076

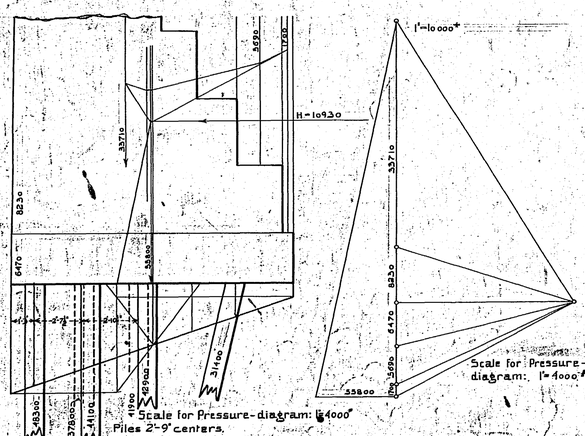
Typical Finish of Concrete
Girder Protection at Pier No. 2

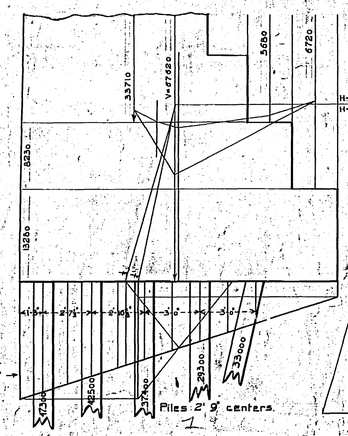


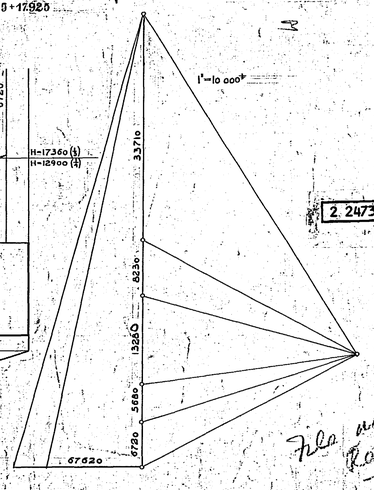












Formula for H:

$H = \frac{1}{2} \cdot 105 \cdot h \times \frac{1}{3} h.$

h = dept of section.

Weight of Concrete 140# per cub. ft.

" " Earth 105 " "

2.24730 C51 077

Investigation
of
Footings of Retaining Wall, North Approach,
Thomson Avenue Viaduct.
Substructure.

1/4" - 1'0"

Jan. 1, 1908.

File with Record Drawings Case 2 Rec'd 32-19

Put Mic in Vol 4 Record Drawings

File this with Thomson Ave Record Drawings

29 x 20

APPENDIX B

Langan
Engineering and Environmental Services, Inc.

LOG OF BORING B- 1 SHEET 1 OF 5

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 10.8 ± (NAVD 88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED 1/19/2008	DATE FINISHED 1/19/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 70'	ROCK DEPTH 60'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING		NO. SAMPLES 14 / DIST. / UNDIST. / CORE 2	
CASING HAMMER		WATER LEVEL / FIRST / COMPL. / 24 HR	
SAMPLER	2" O.D. Splitspoon	FOREMAN	Dave O.
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	8" Concrete Fill [11-65] [SP] black coarse sand some gravel some brick	1					PURVES ST gate 5 25 B-1 BUILDING
		Fill [11-65] [SP] black coarse sand some brown sand some gravel	2 3 4	S-1		7	6 5 3 3	
			5	S-2		10	3 2 3 2	· S1 @ 8:00 · S2 @ 8:10 · S3 @ 8:15
SAND	7-65	SAND [7-65] [SP] Some brown me sand contains rock frag gneiss mica occ. boulder schist	6 7 8	S-3		8	4 18 4 4	· Hit Something Hard During Sample S3
			9	S-4		24	3 2 2 2	· S4 @ 8:25 · S5 @ 8:30
		SAND [7-65] [SP] Some brown medium sand trace of soft gray clay	10 11 12	S-5			2 2 3 3	→ Drill To 15' (gray wash) (smooth drilling)
SAND	7-65	SAND [7-65] [SP] moist brown, coarse-medium sand some black sand	13 14					

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/17/2008

LOG OF BORING NO. B-1

SHEET 2 OF 5

SYMBOL	NYCDOT	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BL/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	**SILT** [10-65] [ML] brown soft, fine silt trace moist v.f sand	15					
			16	S 6	SS	15	2 2 2 2	• S_6 @ 8:45
			17					
			18					→ DRILL TO 20' (brown wash) (no chatter)
		SILT [10-65] [ML] brown, soft, fine, moist silt some brown v.f sand trace of soft clay	19					
			20					
			21	S 7	SS	14	3 2 1 2	• S_7 @ 9:00 AM
			22					
			23					→ DRILL TO 25' (gray wash)
			24					
CLAY	9-65	**CLAY** [9-65] [CL] Semi hard, gray clay some brown/gray silt	25					
			26	S 8	SS	24	3 2 3a	• S_8 @ 9:10 AM
			27					→ DRILL TO 30' (gray wash)
			28					
			29					
SILT	10-65	**SILT** [10-65] [ML] moist brown, soft, silt some soft gray clay	30					
			31	S 9	SS	24	5 3 6 6	• S_9 @ 9:20 AM (gray wash)

086100

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/17/2008

LOG OF BORING NO. B-1

SHEET 3 OF 5

SYMBOL	NYCBL	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLWS/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] [ML] Gray. soft clayey silt	32 33 34 35					Drill To 35' gray wash no chattering
			36	S 10	SS	24	2 4 5 6	
			37 38 39 40					Drill To 40' gragish wash (no chatter.)
SILT	10-65							
CLAY	9-65	CLAY [9-65] [CL] gray sem. soft clay trace of grayish silt	41	S 11	SS	24	3 3 3 3	
			42 43 44 45					Drill To 45' (brown wash) (no chattering)
CLAY	9-65	CLAY [9-65] [CL] gray soft silty clay	46	S 12	SS	24	2 2 3 4	
			47 48					

086100

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/17/2008

LOG OF BORING NO. B-1

SHEET 4 OF 5

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS /6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY	9-65	CLAY [9-65] [CL] Gray Semi hard silty clay Some gravel	49 50 51 52	S13	SS	16	2 3 N/100	DRILL TO 50' Something hard at 51' Start core at 60' DRILLING TO 55'
SAND	7-65	SAND [7-65] [SP] Coarse gray sand Some rock fragments Some gravel	53 54 55 56 57 58 59 60	S14	SS	6	10 14 12 10	• S14 @ 11:30 AM
ROCK	1-65	Rock [1-65] gray white mica hard schist trace of slightly weathered rock trace of green mica schist	61 62 63 64 65	C1		REC = 100% RQD = 97%	40 MIN	C1 @ 12:00 PM

086100

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/17/08

LOG OF BORING NO. B 1

SHEET 5 OF 5

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLOWS/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	1-65	Rock [1-65] gray. fresh mica schist trace of green medium mica schist	65 66 67 68 69 70	C2	C	REC = 100'/. RQD = 100'/.	45 MIN	* STOP DRILLING AT 70'

086100

Langan
Engineering and Environmental Services, Inc.

LOG OF BORING B - 2 SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 11.1 ± (NAVD88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED 1/15/2008	DATE FINISHED 1/15/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 63'	ROCK DEPTH 53'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING		NO. SAMPLES DIST. 13	UNDIST. CORE 2
CASING HAMMER		WATER LEVEL FIRST	COMPL. 24 HR
SAMPLER	2" O.D. Splitspoon	FOREMAN	Dave O.
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC	TYPE	RECOV./FT.	PENETR. RESIST BLOS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	FILL [11-65] concrete, gravel, black sand	1	S1	SS	4"	6 12 16 8	Purves St gate sidewalk 5' 85' B-2 Existing Building
		FILL [11-65] [SP] Some gravel Some concrete Some black sand	2 3	S2	SS	4"	4 3 5 6	
		FILL [11-65] [SP] Some brick Some gravel trace of concrete	4 5	S3	SS	4"	3 4 4 3	
S.A.D.P.	7-65	SAND [7-65] [SP] brown, moist, m-c, sand trace of gravel	6 7	S4	SS	10"	4 3 3 3	
		SAND [7-65] [SP] brown, moist, m-c sand some black sand trace of gravel	8 9 10	S5	SS	8"	4 3 3 3	
		SAND [7-65] [SP] brown, moist m-f sand Some brown silt	11 12	S6	SS	18"	3 3 4 4	
			13 14					

S1 @ 8:00

S2 @ 8:05

S3 @ 8:10

S4 @ 8:15

S5 @ 8:20

S6 @ 8:25

→ Drill To 15'
(brown wash)
(no chattering)

Langan
Engineering and Environmental Services

JOB NO. 5B21201 | LOG OF BORING NO. B-2

DATE: 1/15/2008 | SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT		SILT [7-65] [ML] brown, v. fine, moist Silt some soft clay	14–15					
			15–16	S7	SS	18"	3 2 3 5	S7 @ 8:50
			16–17					
			17–18					
			18–19					→ Drill to 20' (brown wash) (no chattering)
		SAND [7-65] [ML] brown, v. fine, moist Sand some Silt trace of soft clay	19–20					
			20–21	S8	SS	18"	4 3 4 5	S8 @ 9:00 RIG BRAKES
			21–22					→ Drill to 25' (brown wash)
			22–23					
			23–24					
			24–25					
SILT	10-65	SILT [10-65] [ML] brown, soft, moist silt trace of soft clay trace of fine sand	25–26	S9	SS	17"	5 4 6 7	S9 @ 9:15
			26–27					
			27–28					→ Drill to 30' (no chattering)
			28–29					
			29–30					

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/15/2008

LOG OF BORING NO. B-2
SHEET 3 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] [ML] brown, moist, soft silt Some medium brown sand	31 32	S10	SS	17"	1 1 3 3	• S10 @ 9:30 AM → DRILL TO 35' (gray wash) (no chatter)
		SILT [10-65] [ML] gray, moist, soft, silt trace of soft gray clay	33 34 35 36 37	S11	SS	24"	3 3 3 4	• S11 @ 9:40 AM (gray wash) (no chatter) → DRILLING TO 40'
	10-65		38 39					
CLAY	9-65	CLAY [9-65] [CL] gray, moist, semi soft clay some soft, moist gray silt Some m-f brown sand	40 41 42	S12	SS	24	2 4 6 7	• S12 @ 9:50 AM
			43 44					→ DRILL TO 45' (some chatter) (gray wash)
		CLAY [9-65] [CL] gray, moist, sem. hard clay small trace of silt	45 46 47	S13	SS	24"	3 4 6 6	

Langan
Engineering and Environmental Services

JOB NO. 58212D1
DATE: 1/16/2008

LOG OF BORING NO. B-2
SHEET 4 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [7-65] [SP] Very Coarse, Moist, black/brown sand Some Rock fragments	48					→ DRILL TO 50' (some chattering at 49') (brown wash)
			49					
			50	S-3	SS	8"	14	
			51				14	
			52				12	
							10/4	
ROCK	1-65	Rock gray/white mica schist hard schist, slightly weathered some green mica schist some decomposed green mica schist	53	C1	CORE BARREL	REC = 97% RQD: 80%	30 min	→ DRILL TO 55' (some chattering) (brown wash) · C1
			54					
			55					
			56					
			57					
			58					
	1-65	Rock gray white hard, fresh mica shist Some green mica shist	59	C2	CORE BARREL	REC = 100% RQD = 97%	40 min	· C2
			60					
			61					
			62					
			63					* STOP AT 63'
			64					

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LOG OF BORING B-3 **SHEET** 1 **OF** 4

PROJECT	4430 Purves St	PROJECT NO.	5821.201
LOCATION	4430 Purves St. LIC. Queens	ELEVATION AND DATUM	el. 11.5ft (NAVD 88)
DRILLING AGENCY	Craig Test Boring	DATE STARTED 1/24/08	DATE FINISHED 1/25/08
DRILLING EQUIPMENT	Mobile B61 Mounted Rig	COMPLETION DEPTH	ROCK DEPTH
SIZE AND TYPE OF BIT	3 7/8" Dia Rollerbit	NO. SAMPLES: DIST. 10	UNDIST. CORE 2
CASING		WATER LEVEL: FIRST	CDMPL. 24 HR.
CASING HAMMER	WEIGHT DROP	FOREMAN	DAVE O
SAMPLER	2" Standard Split Spoon	INSPECTOR	Peter Mountanos
SAMPLER HAMMER	WEIGHT 140 lb DROP 30"		

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLS/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		8" CONCRETE	1					Purves St N
FILL	11-65	FILL black coarse sand [11-65] Some brick [SP] Some concrete	2					Sidewalk
			3					Gate
			4					Building 5' 80' B-3
FILL	11-65	FILL black coarse sand [11-65] Some brick [SP] Some gravel	5	S1	SS	5	2 3 3 3	1/24
			6					• START DRILLING @ 1:30 PM
			7	S2	SS	8	1 2 3 4	• S1 @ 1:35
			8					• S2 @ 1:40
SILT	10-65	SILT brown soft silt [10-65] trace of goldish [ML] brown flakes	9	S3	SS	15	3 2 3 2	• S3 @ 1:45
			10					
			11	S4	SS	16	2 2 3 3	• S4 @ 1:50
			12					
	10-65	SILT brown moist soft silt [10-65] trace of clay [ML]	13					→ DRILL TO 15'
			14					

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JOB NO. 5821201
DATE 1/24/08

LOG OF BORING NO. B-3

SHEET 2 OF 4

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] [ML] moist brown sandy silt	15					(brown wash) (no chattering)
			16	S5	SS	6"	1 1 2 2	· S5 @ 2:00
			17					
	10-65		18					→ Drill to 20' (brown wash) (no chatter)
			19					
SAND	8-65	SAND [8-65] [ML] brown fine silty sand	20					
			21	S6	SS	6"	1 0 1 0	· S6 @ 2:15
			22					
			23					→ Drill to 25' (brown wash) (no chatter)
			24					
	10-65	SILT [10-65] [ML] moist brown fine clayey silt	25					
			26	S7	SS	24"	1 2 2 2	· S7 @ 2:40
			27					
			28					→ Drill to 30' (gray wash)
			29					
	10-65	SILT [10-65] [ML] gray moist clayey silt	30					
			31	S8	SS	24"	3 3 3 3	· S8 @ 3:00

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JOB NO. 5821201
DATE 4/24/2008

LOG OF BORING NO. B-3

SHEET 3 OF 4

SYMBOL	NYCDEC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65		33					→ Drill to 35' (some chatter)
		GRAVEL [6-65] [GW]	34					
		green, red, brown course Sandy gravel	35				7	
GRAVEL	6-65	trace of rock frag.	36	S9	SS	2"	7	• S9 @ 3:30 PM
		trace of silt	37				9	
			38					→ Drill to 40' (some chatter) (gray wash)
		SILT [10-65] [CL-ML]	39					
		gray soft clayey silt	40				5	
			41	S10	SS	10"	5	• S10 @ 3:40 PM
			42				5	
SILT	10-65		43					→ Drill To 45' (Hit Rock)? (Major Chatter)
			44					
			45					
			46					→ Drill To Top of Rock
	10-65		47					
			48					
			49					

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JOB NO. 5821201
DATE 1/24/08

LOG OF BORING NO. B-3

SHEET 4 OF 4

SOIL/ROCK	MCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
DECOMPOSED ROCK	4-65		51					
			52					
			53					
		Rock gray white hard, fresh mica schist	54	C1	CORE BARREL	REC = 95% RQD = 90%		C1 @ 4:15
			55					
			56					
ROCK	1-65		57					
			58					
		Rock gray white hard, fresh mica schist	59	C2	NONE BARREL	REC = 100% RQD = 100%		C2 @ 5:30
			60					
ROCK			61					
			62					
			63					

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LOG OF BORING B-4(ow) **SHEET** 1 **OF** 4

PROJECT 4430 Purves St		PROJECT NO. 5821201	
LOCATION 4430 Purves St, Queens		ELEVATION AND DATUM el. 11.6± (NAVD 88)	
DRILLING AGENCY Craig Test Boring		DATE STARTED 1/23/08	DATE FINISHED 1/24/08
DRILLING EQUIPMENT Mobile B61 Mounted Rig		COMPLETION DEPTH 54'	ROCK DEPTH 44'
SIZE AND TYPE OF BIT 3 7/8" ROLLER BIT		NO. SAMPLES DIST. 11	UNDIST. CORE 2
CASING		WATER LEVEL FIRST 9 1/2	COMPL 9 5/8 24 HR. 9 7/8
CASING HAMMER WEIGHT	DROP	FOREMAN DAVE O.	
SAMPLER 2" dia standard split spoon		INSPECTOR PETER MONTANO	
SAMPLER HAMMER WEIGHT 140 lb	DROP 30"		

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLOWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	FILL black poor graded sand [11-65] Some concrete [SP] Some brick	1	S1	SS	12"	6 4 10 4	PURVES ST SIDEWALK gate 1 Story Bldg 20' 20' B-4
FILL	11-65	FILL brown poor graded gravel [11-65] [SP]	3	S2	SS	1"	5 4 2 1	1/23
SAND	7-65	SAND brown well graded sand [7-65] Some Concrete [SP] Some gravel	5	S3	SS	19"	13 8 3 2	BEGIN DRILLING @ 3:00 PM
SILT	10-65	SILT brown fine silt [10-65] Some m-f sand [ML]	7	S4	SS	24"	5 5 7 7	S1 @ 3:05 PM
SAND	7-65	SAND brown m-f sand [7-65] trace of gray silt [SP] trace of brown silt	9	S5	SS	20"	6 5 5 6	S2 @ 3:10 PM
			11					S3 @ 3:15 PM
			13					S4 @ 3:20 PM
								S5 @ 3:25 PM
								→ DRILL TO 15'

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JOB NO. 5821201
DATE 1/24/08

LOG OF BORING NO. B-4 (OW)

SHEET 2 OF 4

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLG/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT brown clayey moist soft silt [10-65] [ML-CL]	15 16 17 18 19	S6	SS	12"	4 4 5 8	BEGIN at 8:00 AM 1/24 · S6 @ 8:10 AM → DRILL TO 20' (brown wash) (no chatter)
SAND, P.A.P.A.P.R.	7-65	SAND brown medium moist sand trace of gravel [7-65] [SP]	20 21 22 23 24 25	S7	SS	10"	3 8 10 14	· S7 @ 8:20 AM (brown wash → DRILL TO 25' (some chatter)
SAND, P.A.P.A.P.R.	7-65	SAND brown F-C Moist sand + some of gray silty clay, Mica schist [7-65] [SM]	26 27 28 29	S8	SS	1"	10 10 N/100	· S8 @ 8:30 AM → DRILL TO 30' (no chatter) (gray wash)
SAND, P.A.P.	7-65	SAND [7-65] [SM] gray coarse sand some gravely moist gray silt	30 31	S9	SS	10"	4 33 45 65	· S9 @ 8:40 AM

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JOB NO. 5821201
DATE 1/24/2008

LOG OF BORING NO. B-4 (OW)
SHEET 3 OF 4

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] [ML] gray moist sandy silt Some gravel	33					→ DRILL TO 35' (Some chatter) (gray wash)
			34					
			35					
			36	S10	SS	10"	8 10 16 14	• S.10 @ 9:00 AM
			37					
			38					→ DRILL TO 40' (HEAVY chatter) (gray wash)
			39					
			40					
GRAVEL			41	S11	SS	0"	W/100	* BOULDER
			42					
			43					
			44					
ROCK	1-65	ROCK gray/white hard, fresh mica schist [1-65]	45	C1		REC=100% RQD=100%	45 MPI	• C1 @ 9:45 AM
			46					
			47					
			48					
			49					

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JOB NO. 5821201
DATE 1/24/2008

LOG OF BORING NO. B-4 (OW)

SHEET 4 OF 4

SYMBOL	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK 1-65	Rock [1-65] gray/white hard, fresh, Mica schist trace of green Mica schist	50 51 52 53 54	C2		RQD = 86% REC = 96%	45 min	• Stop at 54' @ 12:30 PM

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LOG OF BORING B-5 **SHEET** 1 **OF** 5

PROJECT	4430 Purves St	PROJECT NO.	5821201
LOCATION	4430 Purves St, Queens	ELEVATION AND DATUM	~10.9 I (NAVD 88)
DRILLING AGENCY	Craig Test Boring	DATE STARTED 1/22/08	DATE FINISHED 1/22/08
DRILLING EQUIPMENT	Mobile B61 Mounted Rig	COMPLETION DEPTH 75'	ROCK DEPTH 65'
SIZE AND TYPE OF BIT	3 7/8" Roller bit	NO. SAMPLES	DIST. 14 / UNDIST. / CORE 2
CASING		WATER LEVEL	FIRST / COMPL. / 24 HR.
CASING HAMMER	WEIGHT / DROP	FOREMAN	Dave O
SAMPLER	2" dia Standard split spoon	INSPECTOR	Peter Mountanos
SAMPLER HAMMER	WEIGHT 140lb / DROP 30"		

SYMBOL	NYCBSL	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO.LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	**FILL** black sand some gravel [11-65] [SP]	1	S1	SS	20"	6 5 5 4	Purves St
		FILL brown m-c sand some brick [11-65] [SP]	2					Gate 35' 25' 3 Story Brick Bldg Thomas Ave B-5 N.T.S.
			3					
			4	S2	SS	20"	4 3 3 4	
		SAND [7-65] brown m-c Sand trace of fill [SP]	5					1/22
P.A.P. SAND	7-65		6	S3	SS	24"	2 2 3 3	· S1 @ 7:50 AM
		SAND [7-65] brown m-c moist sand [SP]	7					
			8	S4	SS	14"	2 2 2 2	· S2 @ 7:55 AM
		SAND [7-65] brown m-c moist sand [SP]	9					
			10	S5	SS	24"	1 1 2 2	· S3 @ 8:05 AM
			11					· S4 @ 8:15 AM
			12					
			13					· S5 @ 8:20 AM
			14					

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JOB NO. 5821201
DATE 1/22/2008

LOG OF BORING NO. B-5

SHEET 2 OF 5

SYMBOL	NYLEBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV./FT.	PENETR. RESIST. BLS/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
S.A. SAND	7-65	SAND [7-65] [SM] brown moist clayey sand	15					
			16	S6	SS	12"	2 2 3 3	· S6 @ 8:30
			17					
			18					→ DRILL TO 20'
			19					(no chatter) (brown wash)
SILT	10-65	SILT [10-65] [ML] brown moist sandy silt	20					
			21	S7	SS	15"	3 3 2 2	· S7 @ 8:40
			22					→ DRILL TO 25' (no chatter)
			23					(gray wash)
			24					
CLAY	9-65	CLAY [9-65] [CL] gray silty clay some moist grayish silt	25					
			26	S8	SS	18"	3 3 4 6	· S8 @ 8:50 (no chatter)
			27					
			28					
			29					
SILT	10-65	SILT [10-65] [ML] brown soft silt trace of gray clay	30					
			31	S9	SS	10"	2 1 4 2	· S9 @ 9:00 AM

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JOB NO. 5821201
DATE 1/22/2008

LOG OF BORING NO. B-5

SHEET 3 OF 5

SYMBOL	USCS	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			33					→ DRILL TO 35'
			34					
			35					
		SILT [10-65] [ML] gray moist fine silt some soft gray clay	36	S10	SS	20"	3 4 3 4	· S10 @ 9:20 AM
			37					
			38					→ DRILL TO 35' (no chatter)
			39					
			40					
		CLAY [9-65] [CL] gray semi-hard clay trace of gray silt	41	S11	SS	24"	3 4 6 6	· S11 @ 9:35 AM
			42					
			43					→ DRILL TO 45' (gray wash) (no chatter)
			44					
			45					
		SILT [CL-ML] gray moist clayey silt	46	S12	SS	24"	3 4 4 4	· S12 @ 9:45 AM
			47					
			48					→ DRILL TO 50' (some chatter)
			49					

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JOB NO. 5821201
DATE 1/22/2008

LOG OF BORING NO. B-5

SHEET 4 OF 5

SYMBOL	UNIT/LEG	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	**SAND** [7-65] [SP] Coarse gravely sand Some rock frag. Some gray silt	51 52 53 54	S13	SS	12"	12 18 21 22	- S3 @ 10:00 AM → Drill To 55' (some chatter)
SAND	7-65	**SAND** [7-65] [SP] hard coarse gray brown gravely sand Some rock frag Some gray silt	55 56 57 58 59 60 61 62 63 64	S14	SS	12"	14 18 18 18	- S14 @ 10:20 AM → Drill To TOD of rock
ROCK	1-65	**ROCK** [1-65] gray white hard, fresh mica schist Some green mica schist	65 66 67	C1		REC & RQD=100	40 min	

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JOB NO. 5821201
DATE 1/22/2008

LOG OF BORING NO. B-5

SHEET 5 OF 5

Symbol	Number	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BL/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	1-65	Rock [1-65] hard gray white, fresh mica schist	69 70 71 72 73 74 75	C2		REC & RQD = 100%	50 min	C2 @ 11:15 AM Stop @ 75'

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LOG OF BORING B - 6 SHEET 1 OF 5

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 10.81 (NAVD 88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED 1/16/2008	DATE FINISHED 1/16/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 70'	ROCK DEPTH 55'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING	N/A	NO. SAMPLES 14 / DIST. / UNDIST. / CORE 3	
CASING HAMMER	N/A	WATER LEVEL / FIRST / COMPL. / 24 HR	
SAMPLER	2" O.D. Splitspoon	FOREMAN	Dave O.
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOG	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	FILL 11-65	FILL 6" CONCRETE [11-65] Some concrete [SP] some black sand some gravel	1	S1	SS	10"	32 37 8 5	Purves St sidewalk gate 45°
		FILL [11-65] [SP] some black coarse sand some concrete some gravel	2 3 4	S2	SS	18	4 4 5 5	
		FILL [11-65] [SP] some brown coarse sand	4 5	S3	SS	15	3 2 1 3	1/16/08 Start @ 7:00 AM
		FILL [11-65] [SP] some brown fine sand	6	S4	SS	24	3 3 2 1	S1 @ 7:15 AM
P.S. SAND	SAND [8-65] [ML-SP]	SAND [8-65] [ML-SP] brown v.f. sand trace of silt	7 8	S5	SS	24	2 2 3 3	S2 @ 7:20 AM
P.S. SAND	SAND [8-65] [ML-SP]	SAND [8-65] [ML-SP] brown silty fine sand trace of silt	9 10 11 12	S6	SS	24	2 2 2 2	S3 @ 7:25 AM S4 @ 7:30 AM S5 @ 7:50 AM S6 @ 7:55 AM
			13 14					

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JOB NO. 58 2720 J

DATE: 1/16/2008

LOG OF BORING NO. B-6

SHEET 2 OF 5

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] (ML) brown silt (moist) some v. fine sand	14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S7	SS	20"	2 2 2 2	S7 @ 8:15
								→ DRILL TO 20' (brown wash)
		SILT [10-65] (ML) brown soft clayey silt (moist)		S8	SS	6"	2 3 5 5	S8 @ 8:25
								→ DRILL TO 25 (brown wash)
		SILT [10-65] (ML) brown silt trace of v.f. br. sand (moist)		S9	SS	8"	3 8 6	S9 @ 8:30
								→ DRILL TO 30' (brown wash)

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JOB NO. SB21201 | LOG OF BORING NO. B-6

DATE: 1/16/2008 | SHEET 3 OF 5

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT [10-65] [ML] brown sandy silt some v. fine sand trace of hard clay (moist)	31	S10	SS	8"	3 2 1 9	• S10 @ 9:00 AM
			32					
			33					→ DRILL TO 35'
			34					
		CLAY [9-65] [CL] gray, semi-hard clay trace of gray SILT (moist)	35	S11	SS	10"	6 4 5 6	• S11 @ 9:15 AM
			36					
			37					
	9-65		38					→ DRILL TO 40'
			39					
		CLAY [9-65] [CL] gray semi-hard moist clay trace of gray silt	40	S12	SS	24"	2 3 4 4	• S12 @ 9:20 AM
			41					
CLAY			42					
			43					
			44					→ DRILL TO 45'
	9-65	CLAY [9-65] [CL] gray semi hard moist clay	45	S13	SS	10"	3 3 4 6	• S13 @ 9:30 AM
			46					
			47					

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JOB NO. 58212201
DATE: 1/16/2008

LOG OF BORING NO. B-6
SHEET 4 OF 5

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [7-65] (SP) V. coarse grav Sand Some rock frag Some gravel	48 49 50 51 52	S4	SS	6"	13 10 4 4	→ Drill To 50' (some chatter) S4 @ 10:50 AM
ROCK	1-65	ROCK [1-65] grey white hard, fresh mica schist Some green colored mica schist on exterior	53 54 55 56 57 58	C1			40 Min	Rec=100 % RQD=100 % C1 @ 10:30
ROCK	1-65	ROCK [1-65] grey hard MICA schist slightly weathered green decomposed rock mica schist	59 60 61 62 63 64	C2			45 Min	REC=100 % RQD: 90 % C2 @ 11:30

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JOB NO. 5821201
DATE: 1/16/2008

LOG OF BORING NO. B-6
SHEET 5 OF 5

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	I-65	ROCK [1-65] gray, hard, fresh Mica schist	65–82	C3		40 min		REC: 100'. RQD 100'. C3 @ 12:45 PM STOP AT 70' @ 1:30 PM

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LOG OF BORING B-7 SHEET 1 OF 4

PROJECT 4430 Purves Street		PROJECT NO. 5821201	
LOCATION 4430 Purves Street, LIC, Queens		ELEVATION AND DATUM el. 11.5± (NAVD88)	
DRILLING AGENCY Craig Test Boring		DATE STARTED 1/4/08	DATE FINISHED 1/4/08
DRILLING EQUIPMENT Truck Mounted Mobile B61 Rig		COMPLETION DEPTH 57'	ROCK DEPTH 47'
SIZE AND TYPE OF BIT 3 7/8" Tri-Cone Rollerbit		NO. SAMPLES DIST. 12	UNDIST. CORE 2
CASING		WATER LEVEL FIRST	COMPL. 24 HR.
CASING HAMMER WEIGHT	DROP	FOREMAN Dave O.	
SAMPLER 2" Standard split spoon		INSPECTOR Peter Mountanos	
SAMPLER HAMMER WEIGHT 140 lb	DROP 30"		

SYMBOL	NYCDEP	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		6" Concrete						PURVES STREET
FILL	11-65	FILL brown, m-f, sand, some silt, some coarse gravel [11-65] [SP]	1					SIDEWALK gate
			2	S1	SS	10"	5 2 6 2	35'
		FILL brown, m-f sand, some silt, some coarse gravel [11-65] [SP]	3					B-7
			4	S2	SS	10"	4 3 2 2	
SAND	7-65	SAND brown, m-f, sand, trace of gravel, trace of silt [7-65] [SP]	5					1/4/08
			6	S3	SS	8"	1 2 2 2	• LANGAN & CRAIG ARRIVE AT 7:00 AM
SAND	7-65	SAND brown, m-f, sand, trace of gravel, trace of silt [7-65] [SP]	7					• DRILLING BEGINS @ 9:00 AM
			8	S4	SS	4"	2 2 2 2	• S1 @ 10:00 AM
			9					• S2 @ 10:05 AM
SAND	7-65	SAND brown, m-f sand, trace of gravel, trace of silt [7-65] [SP]	10					• S3 @ 10:20 AM
			11	S5	SS	10"	3 4 5 6	• S4 @ 10:25 AM
			12					→ DRILL TO 10'
			13					• S5 @ 10:30 AM
			14					→ DRILL TO 15' (brown wash)

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JOB NO. 5821201 | LOG OF BORING NO. B-7

DATE: 1/4/08 | SHEET 2 OF 4

MATERIAL SYMBOL	USCS CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLAS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
9-65	SILT	SILT brown silt with trace of clay [ML]	14					
		CLAY brown clay trace of silt trace of sand [SC]	15	S3 A&B	SS	14"	1 2 2 9	- S3 @ 10:35 AM → drill to 20' (smooth drilling) (no chattering) (brown wash)
			16					
			17					
			18					
			19					
CLAY	9-65	CLAY brown/gray clay some brown sand trace of gravel trace of silt [SC]	20	S5	SS	20"	5 7 6 7	- S7 @ 10:40 AM
			21					
			22					→ drill to 25' (smooth drilling) (no chattering) (brown wash)
			23					
			24					
			25					
		CLAY brown/gray clay trace of gravel trace of brown silt [SC]	26	S8	SS	24"	7 6 6 6	- S8 @ 10:45 AM
	9-65		27					
			28					→ drill to 30' (smooth drilling) (no chattering) (brown wash)
			29					
			30					

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JOB NO. 5B21201 | LOG OF BORING NO. B7

DATE: 1/4/08 | SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		CLAY Some Sand	30					30'-31' CLAY
			31	S9	SS	20"	4 5 6 7	31'-32' SAND
FILL: Brown Fine to Coarse SAND, some Gravel, some Rock Frag.	D	SAND (17-65) [SP] brown moist m-c Sand Some gravel Some rock frag.	32					→ drill to 35' (Smooth drilling to 33') (chattering @ 33')
			33					
			34					
			35				10 15	Possibly boulder (brown wash
	N	SAND (8-65) gray Coarse-medium Sand Some gravel Some Silt	36	S10	SS	14"	9 12	
	A		37					
			38					→ drill to 40' (Smooth drilling) (brown wash)
			39					
		CLAY (9-65) [CL] gray clay trace of silt trace of fine Sand (brown)	40					
			41	S11	SS	27"	4 5 5 6	S11 @ 11:00 AM
			42					→ drill to 45' (some chattering at 43') (gray wash)
			43					
			44					
			45					
SILT	10-65	SILT gray Silt Some cobble stone trace of clay Some gravel/sand	46	S12			20 6"/4" 100/100	BOULDER
			47					
			48					

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/4/2008

LOG OF BORING NO. B-7

SHEET 4 OF 4

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLS/in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	1-65	Rock (1-65) gray, hard fresh + Schist	48 49 50 51 52	C1	Core Barrel	REC = 70'/. RQD = 84'/.	40 MINUTES	→ Drill To 50' (some chattering @ 47') (Gray Wash) · Begin Core @ 47' 40 min To Core 47'-52'
ROCK	1-65	Rock (1-65) gray, hard fresh + Schist	53 54 55 56 57	C2	Core Barrel	REC = 100'/. RQD = 100'/.	45 MINUTES	· Stop @ 2:20 PM
			58 59 60 61 62 63 64					

086100

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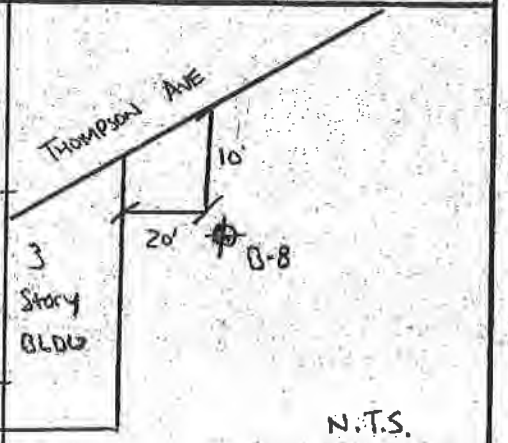
LOG OF BORING B-8 SHEET 1 OF 9

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el 10.9± (NAVD88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED 1/16/2008	DATE FINISHED 1/16/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 67'	ROCK DEPTH 57'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING		NO. SAMPLES 14 / DIST. / UNDIST. / CORE 2	
CASING HAMMER		WATER LEVEL / FIRST / COMPL. / 24 HR	
SAMPLER	2" O.D. Splitspoon	FOREMAN Jonathon	
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR Peter Mountanos	

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST. BLWS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	FILL [11-65] [SP] brown sand some gravel trace of concrete	1					
		FILL [11-65] [SP] brown sand some gravel trace of concrete	2	S1	SS	10"	7 3 4 4	
			3					
			4					
			5	S2	SS	0"	4 4 6 4	
P.P. 4.5 SAND	7-65	SAND [7-65] [SP] brown coarse sand some gravel	6					
			7	S3	SS	20"	4 4 3 4	
		SAND [7-65] [SP] brown coarse sand some gravel	8					
			9	S4	SS	0"	5 3 2 2	
			10					
			11	S5	SS	12"	2 3 2 3	
			12					
			13					
			14					



1/16

- START @ 9:00 AM
- S1 @ 9:15 AM
- S2 @ 9:25 AM
- S3 @ 9:30 AM
- S4 @ 9:45 AM
- S5 @ 9:50 AM

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JOB NO. 582120J
DATE: 1/16/2008

LOG OF BORING NO. B-8
SHEET 2 OF 5

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLOWS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [7-65] [SP] v.fine, brown sand trace of brown silt	14 15 16 17	S6	SS	1'11"	2 2 2 2	S6 @ 10:00 AM
			18 19					→ DRILL TO 20' (brown wash)
SILT	10-65	SILT [10-65] [ML] brown soft silt trace of v.fine brown sand	20 21 22	S7	SS	1'11"	3 4 4 4	S7 @ 10:15 AM
			23 24					→ DRILL TO 25' (gray wash)
	10-65	SILT [10-65] [CL-ML] gray soft silt trace of soft gray clay	25 26 27	S8	SS	1'6"	3 3 5 5	S8 @ 10:30 AM
			28 29 30					→ DRILL TO 30'

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JOB NO. 5821201 | LOG OF BORING NO. B-B

DATE: 1/16/2008 | SHEET 3 OF 5

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLG IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	SILT Gray soft silt, trace of soft clay [10-65] [ML]	31	S9	SS	18"	3 3 5 5	• S9 @ 10:45
			32					
			33					→ DRILL TO 35' (gray wash) (no chatter)
			34					
		SILT Gray clayey silt trace of m-c sand [10-65] [ML]	35	S10	SS	24"	3 5 5 5	• S10 @ 11:00 AM
			36					
			37					
			38					→ DRILL TO 40' (gray wash) (no chatter)
			39					
CLAY	9-65	CLAY Gray brown silty clay trace of v.f sand [9-65] [ML-CL]	40	S11	SS	24"	1 2 3 3	• S11 @ 11:15 AM
			41					
			42					
			43					→ DRILL TO 45' (gray wash) (some chatter)
			44					
		CLAY Gray soft clay [9-65] [CL]	45	S12	SS	6"	1 2 3 3	• S12 @ 11:25 AM
			46					
			47					

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JOB NO. 58201
DATE: 1/16/08

LOG OF BORING NO. B-8
SHEET 4 OF 5

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY	9-65	CLAY brown silty clay trace of f sand [9-65] [ML-CL	48 49 50 51 52	S3	S	6"	10 11 7	• S_{13} @ 11:45 AM
		d/c comm ROCK rock fragments some gravel some coarse sand	53 54 55 56	S4	S	2"	4/0	ROCK @ 59'
ROCK	1-65	ROCK gray white mica schist trace of green mica schist 1-65	57 58 59 60 61 62 63 64	C1 C2	REC & RQD = 100%	20 min 30 min		C1 @ 12:10 PM Rec = 100% Rqd = 100% 20 min C2 @ 12:55 PM rec & rqd = 100% 30 min

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JOB NO. 5821201
DATE 1/16/2008

LOG OF BORING NO. B-8

SHEET 5 OF 5

Symbol	Graphic	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK 1-65		Rock [1-65] gray, white, mica schist hard, fresh	65 66 67	C2		REC & RQD = 100'/-	30 min	STOP @ 67'

086100

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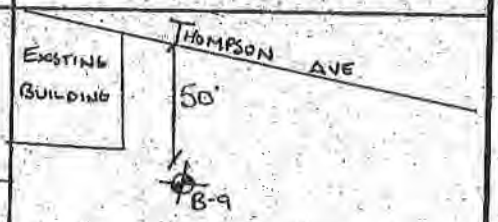
LOG OF BORING B-9. **SHEET** 1 **OF** 5

PROJECT	4430 Purves St	PROJECT NO.	5821201
LOCATION	4430 Purves St, Queens, NY	ELEVATION AND DATUM	el. 10.9± (NAVD88)
DRILLING AGENCY	Craig Test Boring	DATE STARTED 1/16/2008	DATE FINISHED 1/18/2008
DRILLING EQUIPMENT	Truck Mounted Mobile B61 Rig	COMPLETION DEPTH 70'	ROCK DEPTH 55'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone	NO. SAMPLES: DIST. / UNDIST. / CORE	
CASING		WATER LEVEL: FIRST / COMPL. / 24 HR.	
CASING HAMMER: WEIGHT / DROP		FOREMAN	Jonaton & Dane O.
SAMPLER	2" OD Split Spoon	INSPECTOR	Peter Mountanos
SAMPLER HAMMER: WEIGHT 140 lb	DROP 30"		

SYMBOL	NYCDEC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.
		6" Concrete					
FILL	11-65	**Fill** [11-65] [SP] black coarse sand some multi-color gravel trace of brick	1				
		Fill [11-65] [SP] black m-c sand some brown gravel trace of red brick	2				
			3	S1	SS	14"	4 3 4 6
			4				
			5	S2	SS	20"	4 4 5 4
			6				
		Fill [11-65] [SP] brown medium well graded sand some gravel	7	S3	SS	11"	2 2 1 2
			8				
	7-65	**Sand** [7-65] [SW] well graded, m-c, moist brown sand trace of silt	9	S4	SS	9"	3 2 2 3
			10				
			11	S5	SS	0"	4 8 1 6
			12				
			13				
			14				

REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



1/16

- Begin @ 11:30 PM
- S1 @ 11:35
- S2 @ 11:40
- S3 @ 11:45
- S4 @ 11:50
- S5 @ 11:55
- → Drill to 15' (brown wash) (no chattering)

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JOB NO. 5821201
DATE 1/18/2008

LOG OF BORING NO. B-9

SHEET 2 OF 5

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLOWS/FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND 4.1.P.A. 7-65	15					
SAND brown fine moist sand [7-65] [SP]	16	S6	SS	16"	1 1 2 3	· S6 @ 12:05
	17					→ DRILL TO 20' (smooth drilling) (brown wash)
	18					
	19					
SILT 10-65	20					
SILT Moist brown silt w/ white flakes trace of soft clay trace of v. fine brown sand [10-65] [ML]	21	S7	SS	18"	2 2 2 4	· S7 @ 12:15
	22					→ DRILL TO 25' (no chattering) (brown wash)
	23					
	24					
CLAY 9-65	25					
CLAY Moist, soft, silty, brown, CLAY trace of brown silt [9-65] [CL]	26	S8	SS	22"	1 2 1 3	· S8 @ 12:25
	27					
	28					→ DRILL TO 30' (no chattering) (grayish brown wash
	29					
SAND 7-65	30					
SAND gray brown moist m-f clayey sand [7-65] [SM]	31	S9	SS	10"	3 3 2 4	

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JOB NO. 5821201

DATE 1/10/2008

LOG OF BORING NO. B-9

SHEET 3 OF 5

SYMBOL	GRAPHIC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY			33					→ Drill To 35' (Smooth drilling) (gray wash)
		CLAY gray soft clay Some gray fine sand trace of brown silt [9-65] [CL]	34 35 36 37	S10	SS	10"	4 2 4 3	· S10 @ 12:45
			38 39					→ Drill To 40' (Smooth drilling) (gray wash)
CLAY		CLAY gray semi-hard clay trace of brown silt [9-65] [CL]	40 41 42	S11	SS	18"	0 0 1 2	· S1 @ 12:50
			43 44 45					→ Drill To 45' (Smooth drilling) (gray wash)
CLAY		CLAY Semi-soft gray clay Some gravel and rock frag. [9-65] [CL]	46 47	S12	SS			· S12 @ 1:00
			48 49					→ Drill To 50'

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JOB NO. 5821201
DATE 1/18/2008

LOG OF BORING NO. B-9

SHEET 4 OF 5

SYMBOL	NYLOC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
DECOMPOSED ROCK	4-65		51					DRILLING TO ROCK (brown wash) (some chattering throughout)
			52					BOULDER @ 55-57
			53					SOIL & GRAVEL AT 57-58 1/2
			54					ROCK @ 58 1/2'
			55					START CORE @ 60'
			56					
			57					
		Rock hard, gray, slightly weathered mica schist [1-65]	58					
ROCK	2-65		59					
			60	C1	CORE BARREL	REC: 88% & RQD: 75%	45 minutes	
			61					
			62					
			63					
			64					
		Rock gray fresh, hard mica schist [1-65]	65					
ROCK	1-65		66	C2	CORE BARREL	REC: 100% & RQD: 45%	45 minutes	
			67					

086100

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JOB NO. 5821201
DATE 1/18/2008

LOG OF BORING NO. B-9

SHEET 5 OF 5

SYMBOL	MAT'L	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID; DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	1-65	Rock gray, white, fresh, hadschist [1-65]	69 70	C2	C.B.	Rec & TCR = 100%	45 min	FINISH HOLE @ 70'

086100

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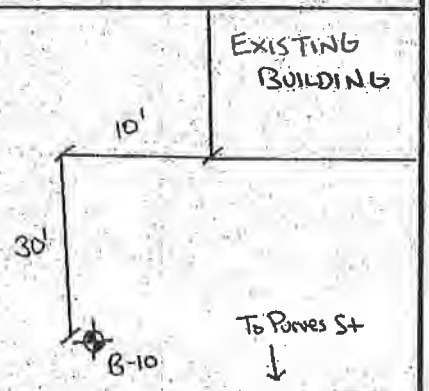
LOG OF BORING B-10(ow) **SHEET** 1 **OF** 4

PROJECT: 4430 Purves Street		PROJECT NO.: 5821201	
LOCATION: 4430 Purves Street, Long Island City		ELEVATION AND DATUM: el. 107	
DRILLING AGENCY: Craig Test Boring		DATE STARTED: 1/7/08	DATE FINISHED: 1/7/08
DRILLING EQUIPMENT: Truck Mounted Mobile B61 Rig		COMPLETION DEPTH: 65'	ROCK DEPTH: 45'
SIZE AND TYPE OF BIT: 3 7/8" Tri Cone Rollerbit		NO. SAMPLES: DIST. 13	UNDIST. CORE 2
CASING		WATER LEVEL: FIRST	COMPL. 24 HR.
CASING HAMMER: WEIGHT	DROP	FOREMAN: Dave O.	
SAMPLER: 2" Standard Split Spoon		INSPECTOR: Peter Mountanos	
SAMPLER HAMMER: WEIGHT 140 lb	DROP 30"		

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.
FILL	11-65	6" Concrete FILL [11-65] gray m-c sand some gravel some concrete	1	S1	SS	5"	12 28 37 21
		FILL [11-65] brown m-c sand some gravel some brick	2 3 4	S2	SS	9"	6 4 3 4
SAND	7-65	SAND [7-65] gray c-m sand trace of brick [SW] some gravel	5 6	S3	SS	5"	2 2 2 2
			7	S4	SS	0"	3 1 1 0
		SAND [7-65] brown m-f sand trace of gravel [SM] some silt	8 9	S5	SS	20"	1 0 0 0
	7-65	SAND [7-65] brown m-c sand some silt [SM] some gravel	10 11 12 13 14	S6	SS	10"	1 1 1 1

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



1/7/08

- BEGIN @ 7:40 AM
- S1 @ 7:45 AM
- S2 @ 7:50 AM
- S3 @ 7:55 AM

→ DRILL TO 6'

- S4 @ 8:00 AM
- S5 @ 8:10 AM

→ DRILL TO 10'

- S6 @ 8:15 AM

→ DRILL TO 15'

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/7/08

LOG OF BORING NO. B-10 (OW)
SHEET 2 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DE+G291 PTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
	7-65		14					→ Drill To 20' (smooth drilling) (brown wash) (no chattering)
SILT	10-65	SILT brown reddish fine silt trace of gray clay trace of brown sand [MH] [10-65]	15	S7	SS		3 5	• S8 @ 8:30 AM
			16				6	
			17				6	
			18					
			19					
			20					
		SILT brown reddish silt Some gray clay trace of brown sand [MH] [10-65]	21	S8	SS		2 3 4	
			22				10	→ Drill To 25' (smooth drilling) (no chattering) (brown wash)
			23					
			24					
		SILT brown reddish silt Some gray clay [MH] [10-65]	25	S9	SS	16"	5 5	• S9 @ 8:40 AM
	10-65		26				7 8	
			27					→ Drill To 30'
			28					
			29					
			30					

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/7/08

LOG OF BORING NO. B-10(ow)
SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO. LOC	SAMPLES: TYPE	SAMPLES: RECOV. FT.	SAMPLES: PENETR. RESIST. BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	**SAND** brown sand (m-c) trace of silt trace of gravel [7-65] [SP]	30–48	S10	SS	15"	P 5 6 10	→ Drill To 35' (smooth drilling) (brown wash)
CLAY	9-65	**CLAY** gray clay [9-65] [CL]		S11	SS		6 4 3 4	• S_{11} @ 850
								→ Drill To 40' (smooth drilling) (brown wash)
CLAY	9-65	**CLAY** brown/gray clay trace of brown silt trace of sand [9-65] [CL]		S12	SS	19"	4 7 7 9	• S_{12} @ 900
								→ Drill To 45' (smooth drilling) (brown wash)
ROCK	4-65							Rock @ 45' (BOULDER

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/7/08

LOG OF BORING NO. B-10 (OW)
SHEET 4 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
C K	4 - 65	DECOMPOSED ROCK Some gravel Some Sand [4-65]	49 50 51 52 53 54 55	S13	C.B.	6"	20 min	→ Core to 50' S13 @ 9:50 AM BEGIN CORING @ 10:55
R O	2 - 65	ROCK gray schist 90° foliations hard, slightly weathered	56 57 58 59 60	C1	rqd: 80%	rec: 80%	20 min	C1 @ 11:15 AM BEGIN C2 @ 11:20 AM
	1 - 65	ROCK gray white hard, fresh mica sch. st	61 62 63 64 65	C2	RQD: 85%	rec: 100%	20 min	COMPLETE @ 65' BEGIN INSTALLING WELL @ 12:30 PM to 35' 10' screen 25' riser

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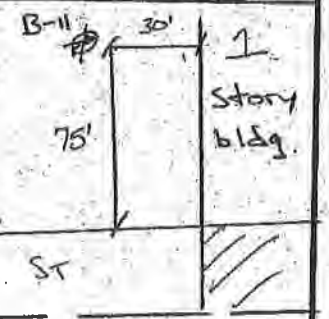
LOG OF BORING B-11 SHEET 1 OF 4

PROJECT 4430 Purves St		PROJECT NO. 5821201	
LOCATION 4430 Purves St, L IC, Queens		ELEVATION AND DATUM ±11.4± (NAVD 88)	
DRILLING AGENCY Craig Test Boring		DATE STARTED 1/23/08	DATE FINISHED 1/23/08
DRILLING EQUIPMENT Mounted B61 Mobile Rig		COMPLETION DEPTH 65'	ROCK DEPTH 55'
SIZE AND TYPE OF BIT 3 7/8" tric cone roller bit		NO. SAMPLES DIST. 13	UNDIST. CORE 2
CASING		WATER LEVEL FIRST	COMPL. 24 HR.
CASING HAMMER WEIGHT	DROP	FOREMAN Dave O.	
SAMPLER 2" Standard split spoon		INSPECTOR Peter Mountanos	
SAMPLER HAMMER WEIGHT 140lb	DROP 30"		

Strata	Depth	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-0.5	FILL [11-0.5] [SP] black coarse sand some concrete some gravel trace of brick	1					
			2	S1	SS	6"	1 16 20 8	
		FILL [11-0.5] [SP] black coarse brown sand Some m brown sand	3					
			4	S2	SS	10"	8 8 6 5	1/23 Start Drilling at 8:00 AM
			5					
			6	S3	SS	18"	2 2 3 4	S1 @ 8:05
SILT	10-0.5	SILT [10-0.5] [ML] brown silt trace of f brown sand	7					S2 @ 8:09
			8	S4	SS	20"	1 2 1 1	S3 @ 8:15
			9					
		SILT [10-0.5] [ML] brown silt	10	S5	SS	24"	3 3 3 3	S4 @ 8:20
			11					
SAND	7-0.5	SAND [7-0.5] [SP] brown moist m-f sand	12					S5 @ 8:30
			13					
			14					

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JOB NO. 5821201
DATE 1/23/2008

LOG OF BORING NO. B-11

SHEET 2 OF 4

SYMBOL	MYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS /ft.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FINE SAND	8-65	SAND [8-65] [SP] medium fine moist brown sand	15					
			16	S4	SS	16"	4 5 6 6	• S4 @ 10:00 AM
			17					
			18					→ Drill To 20' (brown wash) (no chatter)
			19					
		SAND [8-65] [SP] medium fine moist brown sand	20				4	
			21	S7	SS	16"	4 5 5	• S7 @ 10:15 AM (gray wash)
			22					
			23					→ Drill To 25' (no chatter)
			24					
CLAY	9-65	CLAY [9-65] [CL] gray semi-soft moist clay	25				4	
			26	S8	SS	20"	2 3 3	• S8 @ 10:20 AM
			27					
			28					→ Drill To 30' (gray wash)
			29					
		CLAY [9-65] [CL] gray moist silty clay	30				5	
			31	S9	SS	20"	6 6 8	• S9 @ 10:30 AM

086100

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JOB NO. 5821201
DATE 1/23

LOG OF BORING NO. B-11

SHEET 3 OF 4

SYMBOL	USCS	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLWS/FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			33					→ DRILL TO 35'
		SILT [10-65] [CL-ML] gray moist clayey silt	34					
			35				2	
			36	S10	SS	15"	5 5	• S_{10} @ 10:40 AM
			37				5	
SILT	10-65		38					→ DRILL TO 40' (gray wash)
			39					
		SILT [10-65] [CL-ML] gray moist clayey silt	40				6	
			41	S11	SS	15"	4 8	• S_{11} @ 10:50 AM
			42				8	
			43					→ DRILL TO 45' (some chatter)
			44					
			45				P	
D. ROCK	4-65	DECOMPOSED ROCK [4-65] gray/green rock fragments	46	S12	SS	1"	9 10 10	• S_{12} @ 11:00
			47					
			48					→ DRILL TO 50'
			49					* HEAVY CHATTER

086100

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JOB NO. 5821201
DATE 1/23

LOG OF BORING NO. B-11

SHEET 4 OF 4

SYMBOL	MYLOG	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		GRAVEL & D. ROCK - brown poor graded gravel black / white rock frag	51	S13	55	18"	55 65 50 50	S13 @ 11:30 AM
			52					
			53					→ DRILL TO TOP of ROCK
		ROCK [1-65] gray white hard mica schist trace of green decomposed rock	54					
			55					ROCK @ 55'
			56	C1	REC = 100%	RQD = 94%	40 min	
			57					
			58					• C1 @ 12:00 PM
			59					
			60					
		ROCK white / gray / black mica schist	61	C2	REC = 100%	RQD = 100%	60 min	
			62					
			63					• C2 @ 1:00 PM
			64					
			65					STOP @ 65'

086100

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LOG OF BORING B-12 SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	±10.0 ± (NAVD88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED 1/4/2008	DATE FINISHED 1/14/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 63	ROCK DEPTH 55'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING		NO. SAMPLES DIST. 13	UNDIST. CORE 2
CASING HAMMER		WATER LEVEL FIRST	COMPL. 24 HR —
SAMPLER	2" O.D. Splitspoon	FOREMAN JONATHON	
SAMPLER HAMMER	Automated 140 lb. Donut hammer, 30" drop 16	INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	11-65	18" CONCRETE	1					4th Drive
		FILL [11-65] [SP] black, coarse Sand some gravel	2	S1	SS	2'	1 1	10' B-12
		FILL [11-65] [SP] brown sand black m-c sand some gravel	3 4 5 6	S2	SS	2'	2 3 4 4	1/14/08
SAND	7-65	SAND [7-65] [SP] brown m-c Sand trace of fill	7 8	S3	SS	2'	1 1 2 3	• Langan Arrives @ 7:00 • Begin Drilling @ 7:15 • S1 @ 8:00 AM
		SAND [7-65] [SP] brown m-c Sand some gravel	9 10	S4	SS	6"	2 2 2 1	• S2 @ 8:08 AM
			11 12	S5	SS	0"	1 0 1 0	• S3 @ 8:15 AM • S4 @ 8:20 AM
			13 14					• S5 @ 8:22 AM

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JOB NO. 5821201 | LOG OF BORING NO. B-12

DATE: 1/14/08 | SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [SM] [7-65] brown m-f sand some gravel, some silt	14–15					
			15–16	S9	SS	18"	1 0	• SL @ 8:20 AM
			16–17				1 0	→ Drill to 20' (brown wash) (no chattering)
			17–18					
			18–19					
			19–20					
		SAND [SM] [7-65] brown, sand w/ some silt trace of clay trace of gravel	20–21	S7	SS	16"	4 4 4 4	• Sq @ 8:25 AM (1
			21–22					→ Drill to 25' (brown wash) (no chattering)
			22–23					
			23–24					
			24–25					
SILT	10-65	SILT [10-65] [ML] gray fine silt trace of clay trace of sand	25–26	S8	SS	20"	1 3 5 6	• S10 @ 8:30 AM
			26–27					
			27–28					→ Drill to 30' (no chattering) (brown wash)
			28–29					
			29–30					

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JOB NO: S821201
DATE: 1/14/2008

LOG OF BORING NO. B-12
SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	**SILT** [10-65] [ML] gray fine sandy silt trace of brown sand V. Moist.	31	S9	SS	20"	3 3 4 4	· S_9 @ 8:40 AM
			32					→ Drill To 45' (brown wash) (no chattering)
		SILT [10-65] [CL-ML] gray, hard, moist, clayey silt trace of sand (fine)	33					
			34					
			35				2	
			36	S10	SS	23"	3 3 3	· S_{10} @ 8:45 AM
			37					→ Drill to 40' (brown wash) (no chattering)
			38					
			39					
CLAY	9-65	**CLAY** [9-65] [ML] soft, gray silty clay trace of gray silt	40				1	
			41	S11	SS	22"	2 2 2	· S_{11} @ 8:50 AM
			42					
			43					→ Drill To 45' * Rig Brakes
			44					
SAND	7-65	**SAND** [SP] [7-65] M-C, brown sand some rock frag some gravel trace silt	45				4	
			46	S12	SS	14"	4 13 13	· S_{12} @ 9:30
			47					

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JOB NO. 582120 1 | LOG OF BORING NO. B-12

DATE: 11/4/08 | SHEET 4 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [7-65] [SP] brown m-c sand trace of silt some rock fragments some decomposed rock	48 49 50 51 52	SS	SS	14"	10 12 11 3	→ DRILL TO 50' (some chattering) (brown wash → DRILL TO 55' * ROCK @ 55'
ROCK	1-65	ROCK gray white mica schist hard, fresh	53 54 55 56 57 58 59	C1	C	Rec 100% (90) 94%	20 min	
		ROCK gray white hard fresh mica schist	60 61 62 63 64	C2	C	Rec 94% (90) 98%	35 min	* STOP @ 63'

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LOG OF BORING B-13 SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 10.4± (NAVD88)
DRILLING AGENCY	CRAIG TEST BORING CO., INC.	DATE STARTED 1/15/2008	DATE FINISHED 1/15/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH 53'	ROCK DEPTH 43'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION	
CASING	N/A	NO. SAMPLES 11 DIST.	UNDIST. CORE 2
CASING HAMMER	N/A	WATER LEVEL FIRST.	COMPL. 24 HR —
SAMPLER	2" O.D. Splitspoon	FOREMAN	Jonathon
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV.FT.	SAMPLES PENETR. RESIST BLWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL	FILL 11-65	FILL [11-65] [SP] black, Sand Some gravel Some concrete	1 2					Ramps on ave S. Sidewalk Existing Building 40' 70' B-13
			3	S1	SS	3"	8 9 6 4	
		FILL [11-65] [SP] black coarse sand Some gravel	4 5	S2	SS	5"	1 2 1 2	1:15:08 Start at 11:30 PM
SAND	SAND 7-65	SAND [7-65] [SP] black m-c sand	6 7	S3	SS	11"	4 2 2 2	S1 @ 11:30
		SAND [7-65] [SP] black m-c sand	8 9	S4	SS	10"	2 1 1 1	S2 @ 11:32
	SAND 7-65	SAND [7-65] [SP] black m-c, moist sand trace of organic silt trace of gravel	10 11 12	S5	SS	20"	1 1 1 1	S3 @ 11:35 S4 @
			13 14					S5 @

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JOB NO. 5821201
DATE: 1/15/08

LOG OF BORING NO. B-13

SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			14					→ Drill to 15' (smooth drilling) (brown dash)
		SILT (10-65) [ML] gray soft non-organic silt trace of fine sand	15				1 1	
	10-65		16	S8	SS	20"	2 4	
			17					→ Drill to 20' (smooth drilling) (brown dash)
			18					
			19					
		SILT [10-65] [ML] brown, moist, soft silt trace of soft clay trace of v. fine brown sand	20				1 2	
			21	S9	SS	20"	2 1	
			22					
			23					→ Drill to 25' (smooth drilling) (brown dash)
			24					
		SILT [10-65] [ML] brown, moist, soft, silt trace of soft clay trace of v. fine sand	25				0	
	10-65		26	S10	SS	16"	0 1 3	
			27					
			28					→ Drill to 30' (smooth drilling) (gray dash)
			29					
			30					

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JOB NO. 5821201 | LOG OF BORING NO. B-13

DATE: 1/15/08 | SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	SAND [7-65] [SM] gray, fine, moist sand some soft to fine silt ~~some~~ soft clay trace	31	S9	SS	15	3 2 4 6	S9 @ 12:00 PM
			32					
			33					→ Drill to 35' (smooth drilling) (gray wash)
			34					
CLAY	9-65	CLAY [10-65] [CL] brown, soft, clay trace of soft, fine, brown silt trace of v fine brown sand	35					
			36	S10	SS	24"	0 1 3 2	S10 @ 12:05
			37					
			38					→ Drill to 40' (smooth drilling) (gray wash)
			39					
		CLAY [9-65] [CL] soft, grayish brown clay trace of brown silt	40					
			41	S11	SS	24"	0 2 3 2	S11 @ 12:15
			42					
ROCK	3-65	ROCK white/gray, soft Mica Schist	43	C1	CORE BARREL	REC=35" RQD=25"	45 Minutes	→ Drill to 45' (smooth drilling) (gray wash) Hit Rock @ 44'
			44					
			45					
			46					
			47					

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JOB NO. 5821201
DATE: 1/15/2008

LOG OF BORING NO. B-13
SHEET 4 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		ROCK white/gray medium mica schist trace of green decomposed micaschist	48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	C1 C2	C.B. CORE BARREL	→ REC: 72% RQD: 52%	→ 40 minutes	

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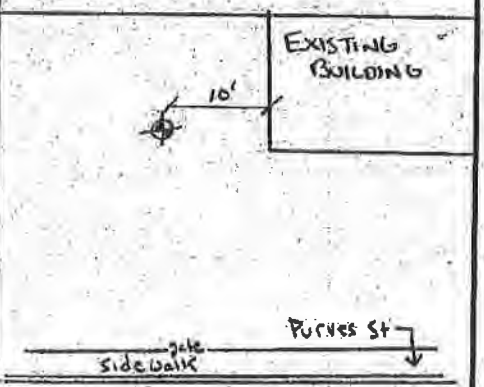
LOG OF BORING B-14 **SHEET** 1 **OF** 4

PROJECT 4430 Purves Street		PROJECT NO. 5821201	
LOCATION 4430 Purves Street, L.I.C., Queens		ELEVATION AND DATUM el. 10.4± (NAVD88)	
DRILLING AGENCY Craig Test Boring		DATE STARTED 1/7/08	DATE FINISHED 1/8/08
DRILLING EQUIPMENT Truck Mounted Mobile B61 Rig		COMPLETION DEPTH 58'	ROCK DEPTH 44'
SIZE AND TYPE OF BIT 3.7/8" Tri Cone Roller bit		NO. SAMPLES DIST. 11	UNDIST. CORE 3
CASING		WATER LEVEL FIRST	COMPL. 24 HR.
CASING HAMMER WEIGHT	DROP	FOREMAN Dave O.	
SAMPLER 2" Standard Splitspoon		INSPECTOR Peter Mountanos	
SAMPLER HAMMER WEIGHT 140lb	DROP 30"		

SYMBOL	NYCBSE	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLWS/in.
FILL	11-6.5	8" Concrete FILL [11-6.5] [SP] black sand Some gravel FILL [11-6.5] [SP] black sand Some gravel FILL [11-6.5] [SP] black sand Some gravel	1 2 3 4 5 6	S1	SS	5"	10 10 9 10
				S2	SS	6"	6 5 4 5
SAND	7-6.5	SAND [7-6.5] [SP] dark, gray, m-c, Sand Some fill trace of gray silt	7	S3	SS	8"	3 1 2 3
			8 9	S4	SS	7"	3 3 2 2
SAND	7-6.5	SAND [7-6.5] [BM] dark gray, black, coarse Sand Some silt	10 11 12 13 14	S5	SS	20"	2 1 1 1

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



1/7/2008

- BEGIN AT 1:20 PM
- S_1 @ 1:30 PM
- S_2 @ 1:35 PM
- S_3 @ 1:40 PM
- S_4 @ 1:45 PM
- S_5 @ 1:50 PM

→ DRILL TO 15'
(SMOOTH DRILLING)
(BROWN WASH)

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JOB NO. 5821201
DATE: 1/7/08

LOG OF BORING NO. B-14
SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			14					→ drill to 15' (no chattering) (brown wash) (smooth drilling)
TILL	10-65	SILT organic, black silt trace of gravel trace of wood trace of sand [OL] [10-65]	15 16 17	S6	SS	22"	1 1 1 1	• S6 @ 1:55 PM
			18					→ drill down to 20' (brown wash) (no chattering) (smooth drilling)
		SILT gray, black silt trace of gravel trace of brown sand [MH] [10-65]	19 20 21 22	S7	SS	18"	4 4 3 2	• S7 @ 2:05 PM
			23					→ drill to 25' (brown wash) (smooth drilling)
3. SAND	7-65	SAND reddish brown, m-c, sand some organic black silty clay some gravel [7-65] [SM]	24 25 26 27	S8	SS		6 5 7 4	• S8 @ 2:25
			28					→ drill to 30' (minor chattering) (brown wash
			29 30					

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JOB NO. 5821201
DATE: 1/7/08

LOG OF BORING NO. B-14
SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DE+G291 PTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY	9-65	**CLAY** brown, gray clay Some gray clayey silt trace of gravel [9-65] [CL]	30 31 32	S9	SS	20"	3 4 5 6	drill to 35' (smooth drilling) (brown wash)
		CLAY gray, hard clay [9-65] [CL]	33 34 35 36 37	S10	SS	23"	4 5 6 7	• S10 @ 2:45 Stop for day @ 3:00
			38					1/8/2007 • LANGAN & CRAIG ARRIVE @ 7:00 AM
		CLAY gray, hard, clay trace of gravel [9-65] [CL]	39 40 41 42	S11	SS	21"	2 7 4 6	→ drill to 40' (brown wash) (smooth drilling) • S11 @ 7:30 AM
			43					→ drill to 45' (brown wash) (chattering at 44')
ROCK	4-65	**ROCK** Soft, gray & white schist Some decomposed rock Some brown coarse sand	44 45 46 47 48	C1 Core barrel REC = 28% RQD = 15%			20 minutes	Changing rollerbit to break through potential boulder • C1 @ 8:08 AM

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JOB NO. 5821201
DATE: 1/8/08

LOG OF BORING NO. B-14
SHEET 4 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DE+G291 PTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
C	2-65	ROCK gray/white medium hard schist rock Some decomposed rock trace of sand	49 50 51 52 53	C2	Core Barrel	rec=95% rqd=75%	20 minutes	C2 @ 8:40 AM → Core to 58'
R	1-65	ROCK grayish/green hard schist trace of medium schist	54 55 56 57 58	C3	Core barrel	rec=83% rqd=65%	20 minutes	C3 @ 9:10 AM COMPLETE AT 10:00 AM
			59 60 61 62 63 64 65					

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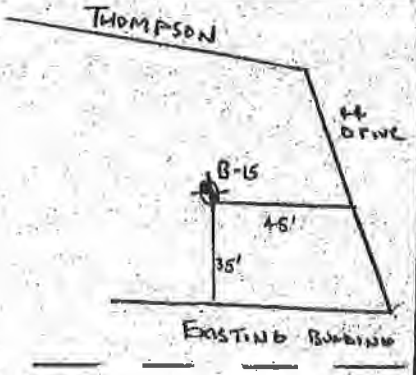
LOG OF BORING B - 15 SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201		
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el 10.2± (NAVD 88)		
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED	1/10/2008	DATE FINISHED	1/11/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH	62'	ROCK DEPTH	47'
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION			
CASING		NO. SAMPLES	DIST. 11	UNDIST.	CORE 3
CASING HAMMER		WATER LEVEL	FIRST	COMPL.	24 HR -
SAMPLER	2" O.D. Splitspoon	FOREMAN	Dave O.		
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos		

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		~ 6" Concrete	1					
FILL	[11-65] (SP)	FILL black m-f. sand some gravel trace of brick trace of silty sand	2	S1	SS	6"	20 28 44 31	
FILL	[11-65] (SP)	FILL black m-f. sand some gravel trace of brick trace of silty sand	5	S2	SS	10"	11 26 18 9	1/10/2007 Start at 12:00 PM · S_1 @ 12:10 PM
SAND	[7-65] (SP)	SAND black/brown m-c sand some gravel	7	S3	SS	5"	5 5 4 2	· S_2 @ 12:15 PM · S_3 @ 12:20 PM
SAND	[7-65] (SP)	SAND black coarse sand some gravel	9	S4	SS	4"	1 3 1 1	· S_4 @ 12:25
SAND	[7-65] (SP)	SAND black coarse sand some gravel	11	S5	SS	10"	4 4 3 3	· S_5 @ 12:30
			12					→ Rollerbit to 15' (brown wash) (smooth drilling)
			13					
			14					

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JOB NO. 5821201
DATE: 1/10/2008

LOG OF BORING NO. B-15

SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	**SILT** [10-65] [ML] black, organic, fine silt some fine sand some wood trace of gravel	14 15 16 17	S6	SS	7"	3 2 1 1	S6 @ 12:50 pm → drill to 20' (smooth drilling) (brown wash)
		SILT [10-65] [ML] black/brown silt trace of fine sand	18 19 20 21 22	S7	SS		10 7 8 9	S7 @ 1:00 pm → drill to 25' (No chattering) (brown wash)
	10-65	**SILT** [10-65] [ML] brown clayey silt trace of clay some medium sand trace of gravel	23 24 25 26 27	S8	SS		5 5 6 7	→ drill to 30' (No chattering) (brown wash)
			28 29 30					

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/10/2008

LOG OF BORING NO. B-15
SHEET 3 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SAND	7-65	**SAND** [7-65] [SP] brown, m-c, moist sand some silty sand trace of silt some gravel	31	S9	SS		9 9 9 9	· S_9 @ 1'20
			32					→ drill to 35' (brown wash) (smooth drilling)
			33					
			34					
CLAY	9-65	**CLAY** [9-65] [CL] gray, silty, soft, clay trace of sand (brown) trace of brown silt	35	S10	SS	18"	8 7 20 31	· S_{10} @ 1:30
			36					
			37					
			38					→ drill to 40' (brown wash) (no chattering)
			39					
		SAND [7-65] [SP] gray clayey sand some gravel	40	S11	SS	18"	8 7 20 31	
			41					
			42					
			43					→ drill to 45' (major chattering) (brown wash)
			44					
			45					· Hit Rock @ 47'
			46					
			47					

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/14/08

LOG OF BORING NO. B-12

SHEET 4 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	1-65	**Rock** gray schist	48 49 50 51	C1	Core Barrel	Rec. 60/60: 100% rqd: 60/60: 100%	40 min	· C1 @ 8:45 AM
	1-65	**Rock** gray brownish/green schist Some green mica trace of decomposed rock	52 53 54 55	C2	Core Barrel	RQD: 80% Rec.: 100%	45 min	· C2 @ 9:30 AM
	1-65	**Rock** gray brownish white Mineral Schist	56 57 58 59 60 61 62	C3	Core Barrel		40 min	· C3 @ 10:30 AM
			63 64					

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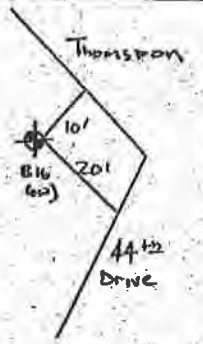
LOG OF BORING B-16(ow) SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 10.7± (NAVD88)
DRILLING AGENCY	CRAIG TEST BORING	DATE STARTED	1/9/2008
DRILLING EQUIPMENT	Truck Mounted Drill Rig	COMPLETION DEPTH	62'
SIZE AND TYPE OF BIT	2" TRI CONE ROLLERBIT	ROCK DEPTH	50'
CASING		LOCATION	
CASING HAMMER		NO. SAMPLES	DIST. 11 / UNDIST. / CORE 2
SAMPLER	2" O.D. Splitspoon	WATER LEVEL	FIRST / COMPL. / 24 HR -
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	FOREMAN	DAVE O.
		INSPECTOR	Peter Mountanos

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLS/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		8" CONCRETE 6" BRICK	1					
FILL	11-65	FILL multi-color gravelly Sand [11-65] Some gravel [SP] trace of brick	2 3 4	S1	SS	5"	2 2 1 1	1/9/08
		FILL black m-c Sand [11-65] Some black silt [SP] Some multic gravel	5 6 7	S2	SS	12"	2 2 5 8	· Start drilling at 1:15 PM · S1 @ 1:40 PM
FILL SAND	7-65	SAND black m-c Sand [7-65] Some m-c gravel [SP] trace of silt	8 9	S3	SS	18"	9 10 7 8	· S2 @ 1:45 PM · S3 @ 1:50
		SAND black Sand medium - coarse [7-65] trace of black silt [SP] Some gravel	10 11 12 13 14	S4	SS	16"	5 5 6 4	· S4 @ 1:55 → drill to 15' (smooth drilling) (brown Dust)

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/10/08

LOG OF BORING NO. B-16 (OW)
SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY	9-65	**CLAY** gray, organic, soft clay trace of gray silt trace of wood [OL]	14 15 16 17 18 19 20	S5	SS	2"	1 1 0 1	• BEGIN DRILLING @ 7:00 AM 1/10/08 → DRILL TO 15' (SMOOTH DRILLING) (BROWN WASH) • S_5 @ 7:35 AM → DRILL TO 20' (SMOOTH DRILLING) (BROWN WASH)
SILT	10-65	**SILT** gray/brown, soft clayey silt trace of sand (sand is m-f) (sand is brown) trace of clay [CH]	21 22 23 24 25	S6	SS	19"	4 4 6 9	• S_6 @ 7:45 AM → DRILL TO 25' (SMOOTH DRILLING) (BROWN WASH)
SAND	7-65	**SAND** brown m-f, moist sand trace of clay trace of clayey silt [SW]	26 27 28 29 30	S7	SS	5	4 5 5 5	• S_7 @ 7:50 AM → DRILL TO 30' (SMOOTH DRILLING) (BROWN WASH)

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JOB NO. 5821201
DATE: 1/10/08

LOG OF BORING NO. B-16 (OW)
SHEET 3 OF 4

MATERIAL SYMBOL	USCS CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
CLAY	9-65	**CLAY** gray, semi-hard silty clay trace of brown silt [9-65] [CL]	31	S8	SS	20"	3 4 5 6	• S_8 @ 8:00 AM
			32					→ DRILL TO 35' (SMOOTH DRILLING) (BROWN WASH)
			33					
			34					
		SILT brown, moist, clayey silt some brown m-f sand trace of gray clay [10-65] [ML]	35	S9	SS	20"	5 5 6 7	• S_9 @ 8:15 AM
			36					
			37					→ DRILL TO 40' (BROWN WASH) (SMOOTH DRILLING)
			38					
			39					
SAND		**SAND** brown, m-c, moist sand some gravel trace of clayey silt [7-65] [SM]	40	S10	SS	24"	6 16 25 32	• S_{10} @ 8:25 AM
			41					
			42					
			43					→ DRILL TO 45' (SOME CHATTERING @ 44') (BROWN WASH)
			44					
			45					
		• NO RECOVERY	46	S11	SS	0"	20 14 18 12	• S_{11} @ 8:30 AM
			47					

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/10/2007

LOG OF BORING NO. B-16 (OW)

SHEET 4 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			49					BEGIN TO CHATTER @ 49'
								- POSSIBLE BOULDER
			50					NO SAMPLE @ 50'
								BEGIN CORING @ 51'
			51					• C_1 start @ 9:15 AM
			52					
			53					• LOST REAMING SHELL @ 51½'
			54					* STOP DRILLING
			55					
			56					
			57					
			58					
			59					
			60					
			61					
			62					
			63					
			64					
			65					

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LOG OF BORING B-16A SHEET 1 OF 4

PROJECT	4430 Purves Street	PROJECT NO.	5821201		
LOCATION	4430 Purves Street	ELEVATION AND DATUM	el. 10.7± (NAVD 88)		
DRILLING AGENCY	Jersey Boring and Drilling Co. Inc	DATE STARTED	1/14/2008	DATE FINISHED	1/14/2008
DRILLING EQUIPMENT	Truck Mounted Drill Mobile Rig (B61)	COMPLETION DEPTH		ROCK DEPTH	
SIZE AND TYPE OF BIT	3 7/8" Tri Cone Rollerbit	LOCATION			
CASING		NO. SAMPLES	DIST.	UNDIST.	CORE
CASING HAMMER		WATER LEVEL	FIRST	COMPL.	24 HR
SAMPLER	2" O.D. Splitspoon	FOREMAN	Dave O.		
SAMPLER HAMMER	140 lb. Donut hammer, 30" drop	INSPECTOR	Peter Mountanos		

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			1 2 3 4 5 6 7 8 9 10 11 12 13 14					• START @ 12:00 PM • CONTINUOUS DRILLING TO 52' * NO SAMPLES WILL BE TAKEN

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JOB NO. 5821201
DATE: 1/14/08

LOG OF BORING NO. B-16A

SHEET 2 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DE+G291 PTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV.FT.	SAMPLES PENETR. RESIST BL/6 IN.	REMARKS (ORILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30					

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/14/08

LOG OF BORING NO. B-16A

SHEET 3 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
			31					
			32					
			33					
			34					
			35					
			36					
			37					
			38					
			39					
			40					
			41					
			42					
			43					
			44					
			45					
			46					
			47					

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Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/14/08

LOG OF BORING NO. B-16A
SHEET 4 OF 4

MATERIAL SYMBOL	NYCBC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	2-65	ROCK gray, hard schist Some green schist Some weathered soft rock	48–52					
			52–57	C1	CORE BARREL	REC: 100% RQD: 72%	35 min	
ROCK	2-65	ROCK gray, hard, fresh Mica Schist	57–62	C2	CORE BARREL	REC = 68% RQD: 58%	40 min	FINISH @ 2:00 PM
			62–64					

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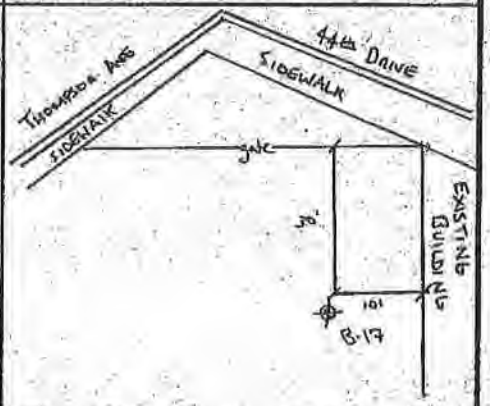
LOG OF BORING B-17 SHEET 1 OF 4

PROJECT 4430 Purves Street		PROJECT NO. 5821201	
LOCATION 4430 Purves Street, Queens		ELEVATION AND DATUM ≈19.9± (NAVD88)	
DRILLING AGENCY Craig Test Boring		DATE STARTED 1/8/08	DATE FINISHED 1/9/08
DRILLING EQUIPMENT TRUCK MOUNTED MOBILE B61 RIG		COMPLETION DEPTH 65'	ROCK DEPTH 49'
SIZE AND TYPE OF BIT 3 7/8" Tri-Cone Rollerbit		NO. SAMPLES DIST. 12	UNDIST. CORE 3
CASING		WATER LEVEL FIRST	COMPL. 24 HR.
CASING HAMMER WEIGHT	DROP	FOREMAN Dave O.	
SAMPLER		INSPECTOR Peter Mountanos	
SAMPLER HAMMER WEIGHT 140 lb	DROP 30"		

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BLOWS/6 in.
FILL	11-65	FILL [11-65] (SP) black, Sandy gravel Some black Sand	1				
		FILL [11-65] (SP) black coarse Sand Some gravel Some brick	2	S1	SS	20"	25 27 30 21
		FILL [11-65] (SP) black coarse Sand Some gravel trace of red brick	3	S2	SS	7"	13 13 12 5
		FILL [11-65] (SP) black m-c Sand, trace of brick	4	S3	SS	5"	2 2 1 1
SAND	7-65	SAND [11-65] (SP) black, m-c, Sand trace of red brick trace of brown silt trace of gravel	5	S4	SS	2"	1 3 4 3
			6	S5	SS	8"	2 3 2 1
			7				
			8				
			9				
			10				
			11				
			12				
			13				
			14				

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



1/8/08

- BEGIN DRILLING @ 11:30 AM
- S1 @ 11:35 AM
- S2 @ 11:40 AM
- S3 @ 11:45 AM
- S4 @ 11:50 AM
- S5 @ 11:55 AM

→ DRILL TO 15'
(BROWN WASH)
(SMOOTH DRILLING)

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/8/08

LOG OF BORING NO. B-17
SHEET 2 OF 4

MATERIAL SYMBOL	UNIFIED CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV-FT.	SAMPLES PENETR. RESIST BLWS IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	**SILT** green/brown, moist, organic, silt Some wood pieces Some gravel (multi. colors) trace of brown sand [10-65] (OL)	14 15 16 17 18 19	S6	SS	14"	1 4 9 14	· S6 @ 1:00 → drill to 20' (smooth drilling to 18') (brown wash) (some chattering @ 18'-19')
SILT	10-65	**SILT** gray, moist silt trace of organic silt trace of wood m-c trace of brown gravel trace of brown sand m-f Some rock, schist green [10-65] (MH)	20 21 22 23 24 25	S7	SS	8"	22 14 12 12	· S7 @ 1:15 → drill to 25' (smooth to 23') (some chattering (23'-25') (brown wash
SAND	7-65	**SAND** gray/black moist m-c sand some gravel trace of gray silt trace of green schist rock [7-65] (SP)	26 27 28 29 30	S8	SS	13"	22 14 17 23	· S8 @ 1:25 → drill to 30' (some chattering at 28') (brown wash

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ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821201
DATE 1/8/2008

LOG OF BORING NO. B-17

SHEET 3 OF 4

SYMBOL	NYCBC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/ft.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
SILT	10-65	**SILT** gray, brown, coarse, Sandy silt trace of medium sand trace of coarse gravel [10-65] [ML]	30					END DAY @ 2:45 PM
			31	S9	SS	12"	22 32	1/9/08
			32				55 24	→ DRILL TO 35' (SOME CHATTERING) (BROWN WASH)
			33					
			34					• S10 @ 8:00 AM
SILT	10-65	**SILT** gray, black, moist, sandy silt trace of gravel trace of sand [10-65] [ML]	35				6'	
			36	S10	SS	8"	12 13	→ DRILL TO 40' (BROWN WASH) (SOME CHATTERING)
			37				18	
			38					
			39					• S11 @ 8:20 AM
SILT	10-65	**SILT** gray, black, moist silt trace of gravel [10-65] [ML]	40				33	
			41	S11	SS	10"	34 34	→ DRILL TO 45'
			42				30	
			43					
			44					
			45					(NO RECOVERY PAST 46')
SILT	10-65	**SILT** [10-65] [ML] gravely silt Some rock fragments	46	S12	SS	2"	100/3 N/A	→ DRILL TO 50'
			47					

Langan
Engineering and Environmental Services

JOB NO. 5821201
DATE: 1/9/08

LOG OF BORING NO. B-17
SHEET 4 OF 4

MATERIAL SYMBOL	NYC BC CLASSIFICATION	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC	SAMPLES TYPE	SAMPLES RECOV./FT.	SAMPLES PENETR. RESIST BLG/6 IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
ROCK	2-65	ROCK Medium gray schist Some soft rock, Weathered zones	48 49 50 51 52 53 54 55	C1		REC: 100% RQD: 90%	20 min	Rollerbit to 50' BEGIN CORE @ 50 *Rock @ 48' Consistant core · C1 @ 10:00
	2-65	ROCK hard, fresh, gray schist trace of M hard rock	56 57 58 59 60	C2		REC. 75% RQD: 35%	20 min	· C2 @ 10:45
	1-65	ROCK Hard, fresh, gray schist	61 62 63 64 65	C3		REC=100% RQD: 97%	20 min	· C3 @ 12:00 · STOP @ 12:30 PM → 65'

WELL CONSTRUCTION SUMMARY

Well No. B-4 (OW)

PROJECT: 4430 Purves Street	PROJECT NO.: 5821201
LOCATION: 4430 Purves Street, L.I.C., Queens	ELEVATION AND DATUM: el 11.6 (NAVD88)
DRILLING AGENCY: Craig Test Boring	DATE STARTED: 1/23/2008 / DATE FINISHED: 1/24/2008
DRILLING EQUIPMENT: Mounted B61 Mobile Rig	DRILLER: Dave O.
SIZE AND TYPE OF BIT: 3 7/8" Tri-Cone Rollerbit	INSPECTOR: Peter Mountanos

METHOD OF INSTALLATION

Borehole was advanced to 54-ft (44-ft soil and 10-ft rock), using 3 7/8-inch roller bit and drilling mud

METHOD OF WELL DEVELOPMENT

Manual Bailer

TYPE OF CASING: PVC	DIAMETER: 2-INCH	TYPE OF BACKFILL MATERIAL: SAND	
TYPE OF SCREEN: PVC	DIAMETER: 2-INCH	TYPE OF SEAL MATERIAL: N/A	
BOREHOLE DIAMETER: 4-INCH		TYPE OF FILTER MATERIAL: N/A	

	ELEVATION	DEPTH (ft)
TOP OF CASING	11.6	0
TOP OF SEAL	-4.4	16
TOP OF FILTER	-6.4	18
TOP OF SCREEN	-6.4	18
BOTTOM OF BORING	-42.4	54

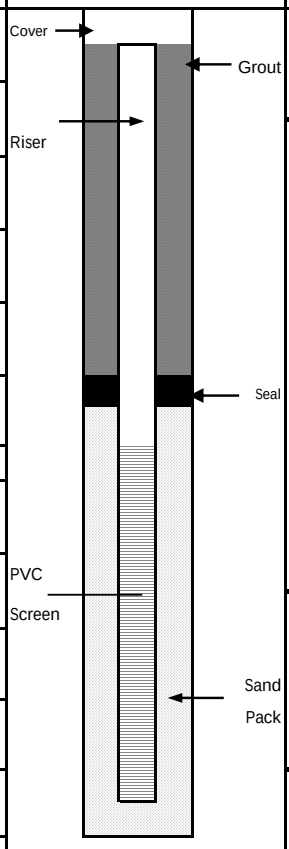
SCREEN LENGTH: 10-FT

SLOT SIZE: 10 - SLOT

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
2.27	1/23/2008	9.33
2.1	1/24/2008	9.5

WELL DETAILS



SUMMARY SOIL CLASSIFICATION

FILL [11-65]

brown, medium, SAND [7-65]

gray, sandy silt [10-65]

DEPTH (FT)

0.0

10.0

20.0

30.0

LANGAN Engineering, Environmental, Survey and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

WELL CONSTRUCTION SUMMARY

Well No. B-10 (OW)

PROJECT: 4430 Purves Street	PROJECT NO.: 5821201
LOCATION: 4430 Purves Street, L.I.C., Queens	ELEVATION AND DATUM: el 10.7 (NAVD88)
DRILLING AGENCY: Craig Test Boring	DATE STARTED: 1/7/2008 / DATE FINISHED: 1/7/2008
DRILLING EQUIPMENT: Mounted B61 Mobile Rig	DRILLER: Dave O.
SIZE AND TYPE OF BIT: 3 7/8" Tri-Cone Rollerbit	INSPECTOR: Peter Mountanos

METHOD OF INSTALLATION

Borehole was advanced to 54-ft (44-ft soil and 10-ft rock), using 3 7/8-inch roller bit and drilling mud

METHOD OF WELL DEVELOPMENT

Manual Bailer

TYPE OF CASING: PVC	DIAMETER: 2-INCH	TYPE OF BACKFILL MATERIAL: SAND	
TYPE OF SCREEN: PVC	DIAMETER: 2-INCH	TYPE OF SEAL MATERIAL: N/A	
BOREHOLE DIAMETER: 4-INCH		TYPE OF FILTER MATERIAL: N/A	

	ELEVATION	DEPTH (ft)
TOP OF CASING	10.7	0
TOP OF SEAL	-22.3	33
TOP OF FILTER	-24.3	35
TOP OF SCREEN	-24.3	35
BOTTOM OF BORIN	-54.3	65

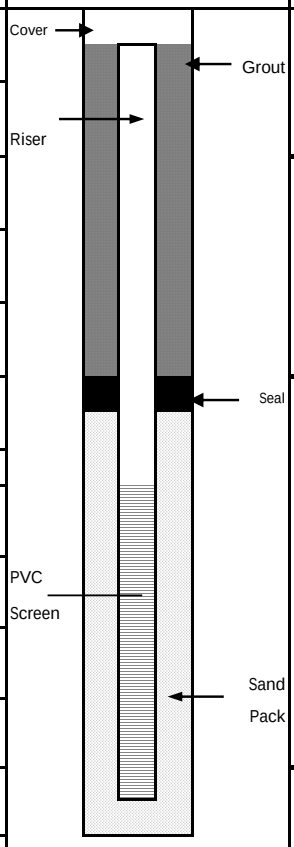
SCREEN LENGTH: 10-FT

SLOT SIZE: 10 - SLOT

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
1.70	1/7/2008	9.00
1.37	1/8/2008	9.33
1.28	1/10/2008	9.42
1.12	1/15/2008	9.58
1.03	1/21/2008	9.67
1.03	1/24/2008	9.67

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL [11-65]	0.0
brown, m-f, SAND [7-65]	10.0
brown, reddish stiff silt [10-65]	20.0
	30.0

LANGAN Engineering, Environmental, Survey and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

WELL CONSTRUCTION SUMMARY

Well No. B-16 (OW)

PROJECT: 4430 Purves Street	PROJECT NO.: 5821201
LOCATION: 4430 Purves Street, L.I.C., Queens	ELEVATION AND DATUM: el 10.7 (NAVD88)
DRILLING AGENCY: Craig Test Boring	DATE STARTED: 1/9/2008 / DATE FINISHED: 1/10/2008
DRILLING EQUIPMENT: Mounted B61 Mobile Rig	DRILLER: Dave O.
SIZE AND TYPE OF BIT: 3 7/8" Tri-Cone Rollerbit	INSPECTOR: Peter Mountanos

METHOD OF INSTALLATION

Borehole was advanced to 54-ft (44-ft soil and 10-ft rock), using 3 7/8-inch roller bit and drilling mud

METHOD OF WELL DEVELOPMENT

Manual Bailer

TYPE OF CASING: PVC	DIAMETER: 1-INCH	TYPE OF BACKFILL MATERIAL: SAND	
TYPE OF SCREEN: PVC	DIAMETER: 1-INCH	TYPE OF SEAL MATERIAL: N/A	
BOREHOLE DIAMETER: 4-INCH		TYPE OF FILTER MATERIAL: N/A	

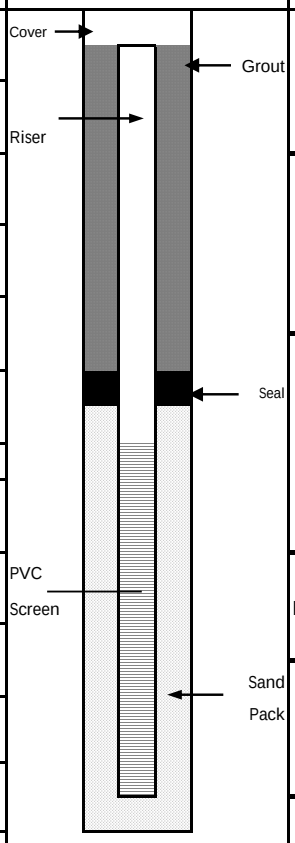
	ELEVATION	DEPTH (ft)
TOP OF CASING	10.7	0
TOP OF SEAL	-7.3	18
TOP OF FILTER	-9.3	20
TOP OF SCREEN	-9.3	20
BOTTOM OF BORING	-51.3	62

SCREEN LENGTH: 10-FT

SLOT SIZE: 10 - SLOT

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
3.03	1/9/2008	7.67
2.87	1/10/2008	7.83
2.70	1/11/2008	8.00
2.53	1/14/2008	8.17
2.37	1/21/2008	8.33
2.37	1/24/2008	8.33



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	0.0
FILL [11-65]	
black, m-c SAND [7-65]	10.0
gray, organic, soft CLAY [9-65]	
	20.0
brown, m-c, moist SAND [7-65]	
gray, semi-hard, silty CLAY [9-65]	
	30.0

LANGAN Engineering and Environmental Services, PC
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

APPENDIX C

TEST PIT DESCRIPTIONS

Test Pit #1

Test Pit #1 was excavated, from about el 11 NAVD88, next to the 16.5-foot-high Thomson Avenue retaining wall approximately 25 feet west of the existing two story brick building on Purves Street. The test pit had approximate plan dimensions of 10 by 2.5 feet and was excavated to a depth of about 8.5 feet below ground surface. The ground surface consisted of about 1.5 feet of fill material of brown medium to fine sand, some silt, some gravel and brick. The fill is designated as Building Code Class 7. At a depth of about 1.5 feet below the surface, a 6-inch-thick concrete slab was encountered. Underlain the concrete slab brown coarse to medium sand with some silt and gravel was encountered. This material is designated as Building Code Class 3, sands. Groundwater was encountered at about 7.5 feet below existing grade, corresponding to el 3.5 NAVD88.

At a depth of about 2 feet below the concrete slab, or 4 feet below the ground surface, the remnant concrete extended about 9 inches beyond the face of the retaining wall. A 10-inch-diameter wood pile in relatively good condition was encountered at the bottom of the remnant pile cap. At a distance of about 2.4 feet northeast of the retaining wall and directly below the concrete slab, a 1-foot-thick concrete remnant foundation wall was encountered.

Test Pit #2

Test Pit #2 was excavated, from about el 10 NAVD88, next to the 15.5-foot-high 44th Drive retaining wall, about 30 feet south of the existing 2-story brick building to the north. The test pit had approximate plan dimensions of 12.5 by 14.5 feet and was excavated to a depth of about 13.5 feet below the ground surface. The surface materials consisted of about 1.5 feet of brown medium to fine sand, some silt, some gravel and trace brick and is classified as fill material, designated as Building Code Class 7. Underlain the fill material is about 3 feet of brown medium to fine sand, some silt. This material is classified as Building Code Class 3. Underlain the sand is about 1.5 feet of brown fine sand and then a black clayey silt (Building Code Class 5) to the bottom of the excavation. Groundwater was encountered about 5.5 feet below the existing ground surface, corresponding to el 4.5 NAVD88.

A 2-foot-thick remnant concrete pile cap located about 1.5 feet below the existing grade. The cap extends 5 feet into the site from the face of the retaining wall. The retaining wall extends down behind this remnant pile cap. The bottom of pile cap elevation is at el 6.5 NAVD88, and it is supported by either 10- or 12-inch-diameter wood piles. The wood piles were spaced about 3 feet center-to-center (east-west) and about 12 feet center-to-center (north-south). The excavation was continue to a depth of about 13 feet below the ground surface, but was not able to determine the bottom of the retaining wall because of shallow groundwater conditions.

Test Pit TP-3

Test pit TP-3 was excavated adjacent to the 16.5-foot-high retaining wall near the intersection of Thomson Avenue and 44th Drive at about el 10.5 NAVD88. The test pit had the approximate

plan dimensions of 16 feet along Thomson Avenue, 8 feet along 44th Drive, and 12 feet perpendicular from the retaining wall along both streets in the intersection. Excavation stopped at about 5 feet below ground surface where groundwater was encountered, which was about el 5.5 NAVD88. Material encountered in the excavation was fill, which consisted of brown coarse to fine sand, some coarse to fine gravel, and trace amounts of silt, boulder fragments, and brick fragments. A four-inch-thick concrete slab was encountered at the ground surface. About 1.5 feet below ground surface was a 2.5-foot-thick remnant pile cap that was along the retaining wall. The plan dimensions of the pile cap measured to be 2.5 to 5 feet perpendicular to the retaining wall. Below the pile cap was an existing 10-inch-diameter wood pile that was about 1 foot from the face of the pile cap. The extents of the retaining wall were not encountered. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-4

Test pit TP-4 was excavated at the intersection at the 16.5-foot-high retaining wall near 44th Drive and the adjacent two-story building (27-21 44th Drive) at the northwest corner of the site from about el 10.5 NAVD88. The test pit had approximate plan dimensions of 12 feet in the east-west direction, and 16.5 feet in the north-south direction. Excavation stopped about 5 feet below the ground surface, corresponding to about el 5 NAVD88. Groundwater was encountered at about el. 5 NAVD88. Material encountered in the excavation was brown coarse to fine sand, some coarse to fine gravel, with trace amounts of boulder fragments. A four-inch-thick concrete slab was encountered at the ground surface. About 1 foot below ground surface was a remnant 1.5- to 2-foot-thick pile cap that followed the length of the retaining wall. The plan dimensions of the pile cap were 2 to 6.7 feet perpendicular to the retaining wall. Below the pile cap were existing 10- and 12-inch-diameter wood piles, uncovered 6 to 24 inches from the face of the pile cap. The extents of the retaining wall were not encountered. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-5

Test pit TP-5 was excavated from about el 11.5 NAVD88at the south side of the existing two-story brick building (27-21 44th Drive), about 52 feet from the retaining wall. The test pit had the approximate plan dimensions of 9 by 9 feet. The excavation stopped at about 5.5 feet below ground surface where groundwater was encountered, which was at about el. 5 NAVD88. Materials encountered in the excavation were fill, which consisted of brown coarse to fine sand, some coarse to fine gravel, and trace amounts of silt, boulder fragments, building debris, and brick fragments. A four-inch-thick concrete slab was encountered at the ground surface. About 2.5 feet below the ground surface was an existing 2-foot-thick remnant concrete foundation wall that bisects the test pit. The depth of the wall could not be determined. About 4 feet below ground surface, the top of the adjacent building foundation was encountered. The foundation extends 4 inches horizontally from the face of the wall, and the bottom of foundation is about el 5 NAVD88. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-6

Test pit TP-6 was excavated from about el 11.5 NAVD88 at the east side of the two-story brick building (27-21 44th Drive), about 95 feet from the west property line. The test pit had the approximate plan dimensions of 8 feet in the east-west direction, and 5 feet in the north-south direction. Excavation stopped at about 7 feet below ground surface where groundwater was encountered at about el 4.5 NAVD88. Materials encountered in the excavation were brown coarse to fine sand, some coarse to fine gravel, with trace amounts of silt, boulder fragments, and tree roots. An approximately 9-inch-thick concrete slab was encountered from ground surface. The test pit exposed a concrete strip footing for the adjacent building, which ended at about el 5 NAVD88. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-7

Test pit TP-7 was excavated from about el 11 NAVD88 at the northeast face of the two-story brick building (44-46 Purves Street), about 23-feet from the west property line. The test pit had the approximate plan dimensions of 8 by 8 feet. The excavation stopped at 6 feet below ground surface where groundwater was encountered at about el 5 NAVD88. Materials encountered in the excavation were brown coarse to fine sand, some coarse to fine gravel, with trace amounts of boulder fragments. A four-inch-thick concrete slab was encountered at ground surface. The test pit slightly exposed the bottom of the building's strip footing at about el 5 NAVD88. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-8

Test pit TP-8 was excavated from about el 11 NAVD88 at the northwest face of the two-story brick building (44-46 Purves Street), about 33 feet from the east property line. The test pit had the approximate plan dimensions of 10 by 7 feet. The excavation stopped at about el. 4 NAVD88, after the bottom of adjacent building foundation was exposed. Materials encountered in the excavation were fill, which consisted of brown coarse to fine sand, some coarse to fine gravel, and trace amounts of silt, boulder fragments, and brick fragments. A four-inch-thick concrete slab was encountered at ground surface. The test pit uncovered the bottom of the adjacent building's brick wall, at about el. 9 NAVD88, and the bottom of the building's strip footing, at about el. 6 NAVD88. The test pit was backfilled with excavated material and compacted upon completion.

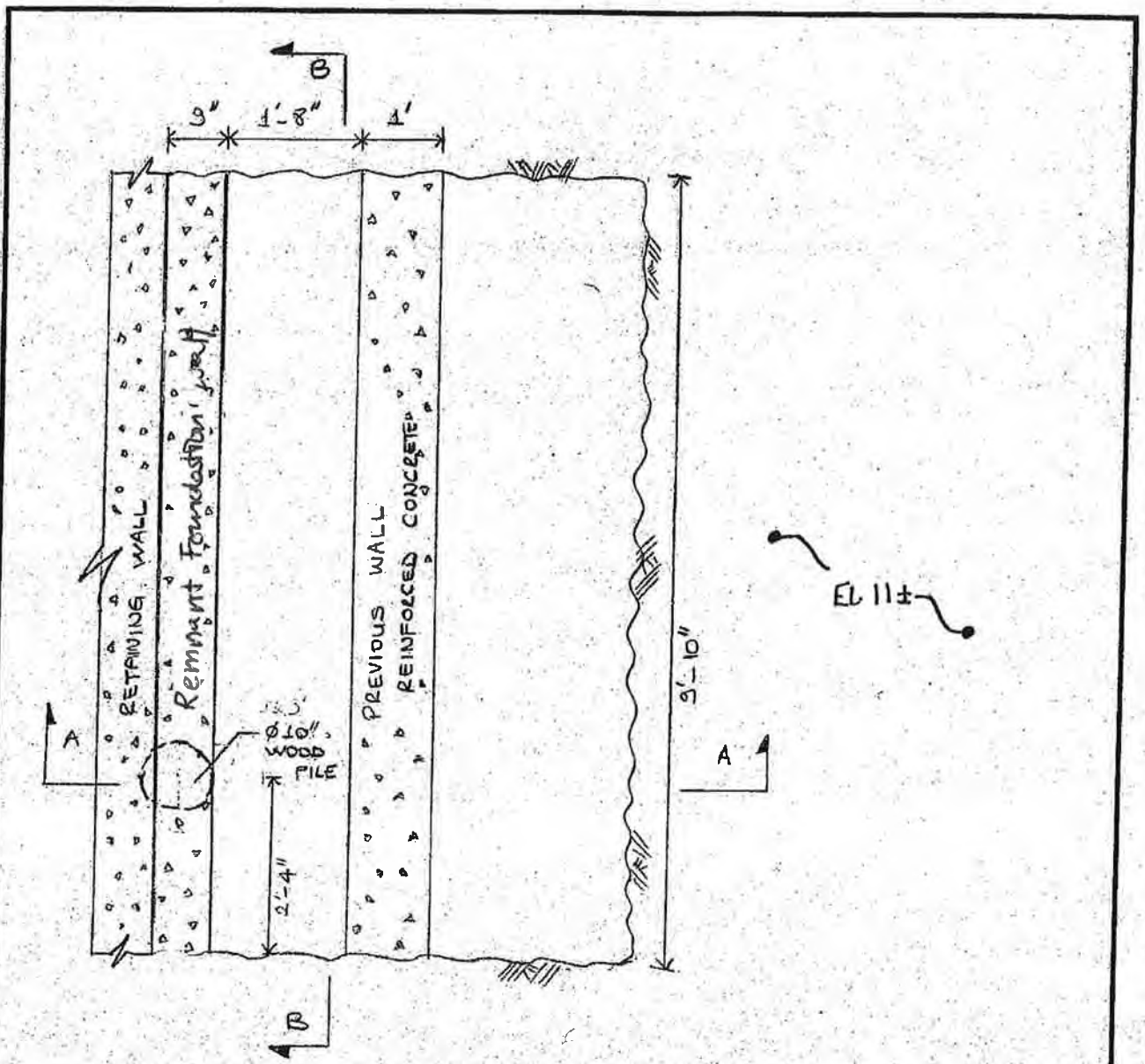
Test Pit TP-9

Test pit TP-9 was excavated from about el 11 NAVD88 at the southwest corner of the site at the intersection of the two-story brick building (44-46 Purves Street), and the retaining wall fronting Thomson Avenue. The test pit had the approximate plan dimensions of 15 by 12 feet. The excavation went to about 7 feet below ground surface where groundwater was encountered at about el. 4 NAVD88. Materials encountered in the excavation were brown coarse to fine sand, some coarse to fine gravel, with trace amounts of silt and boulder fragments. The test pit uncovered the remnant foundation. The remnants were unearthed at various depths, and extended to about 3.4 feet from the face of the retaining wall. The extents

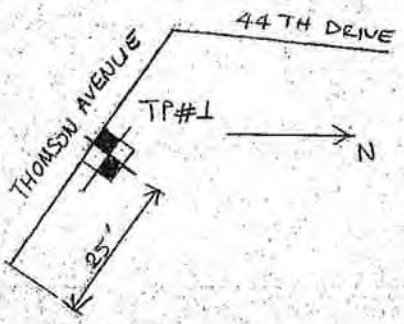
of the retaining wall were not uncovered. The test pit was backfilled with excavated material and compacted upon completion.

Test Pit TP-10

Test pit TP-10 was excavated from about el. 11 NAVD88 adjacent to the 16.5-foot-high retaining wall fronting Thomson Avenue, and about 106 feet from the south property line. The test pit had the triangular dimensions of 24 and 21 feet from the retaining wall, 25 feet along the retaining wall. The excavation went to about 8 feet below grade, corresponding to about el 3 NAVD88. Groundwater was encountered a foot above the bottom of excavation, at about el. 4 NAVD88. Material encountered in the excavation was brown coarse to fine sand, some coarse to fine gravel, with trace amounts of silt, boulder fragments, and tree roots. A four-inch-thick concrete slab was encountered at ground surface. Remnants of the existing foundation were encountered, which consisted of a 1-foot-thick concrete foundation wall, and a 1-foot thick concrete pile cap that extended up to 3 feet from the retaining wall. The extents of the retaining wall were not uncovered. The test pit was backfilled with excavated material and compacted upon completion.

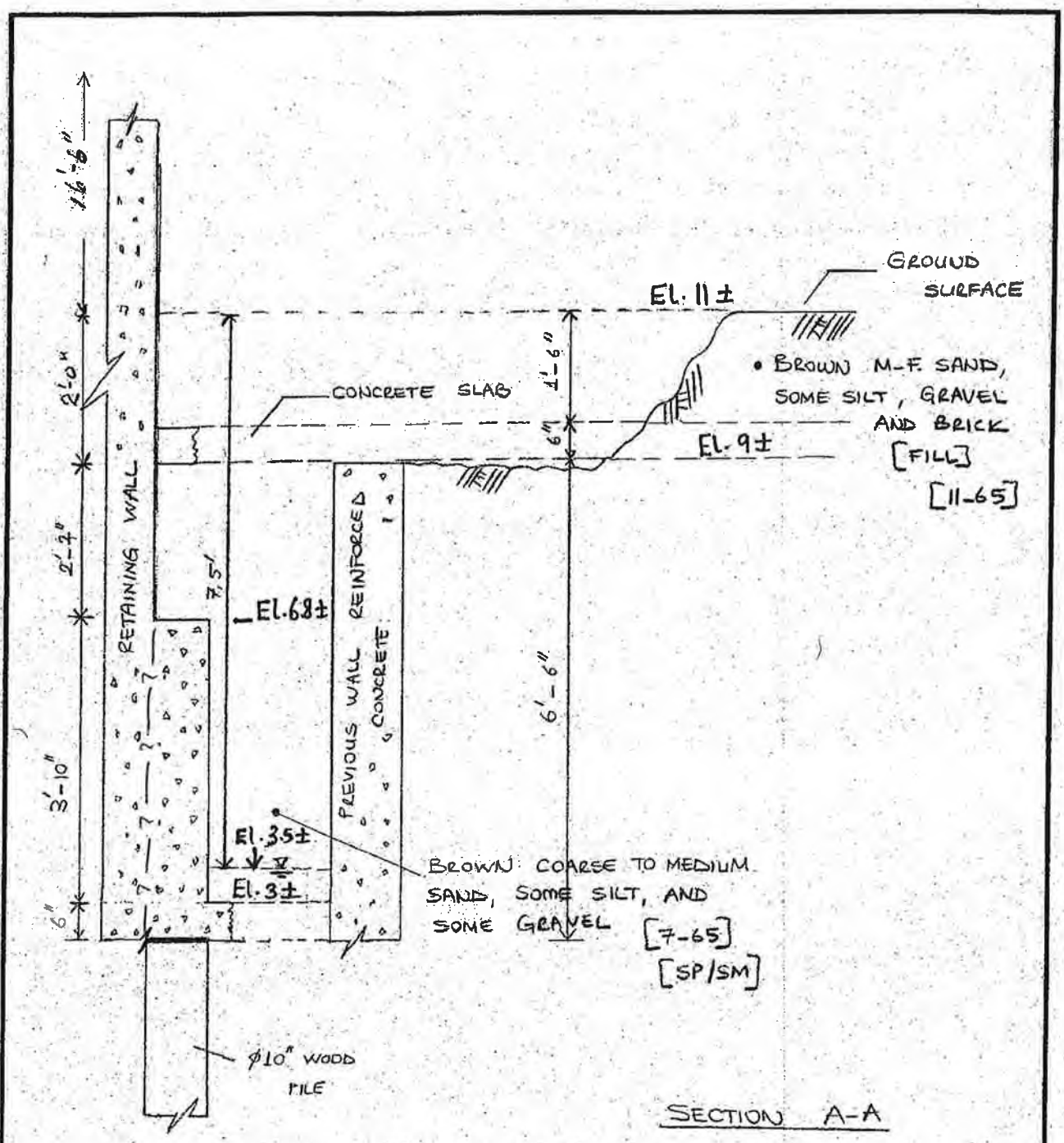


PLAN VIEW



TEST PIT #1 [SCALE = 1:20]	BY NE DATE 02/07/08	PROJ. NO. 5821201
4430 PURVES STREET	CKD. DATE	SHEET 1 OF 3

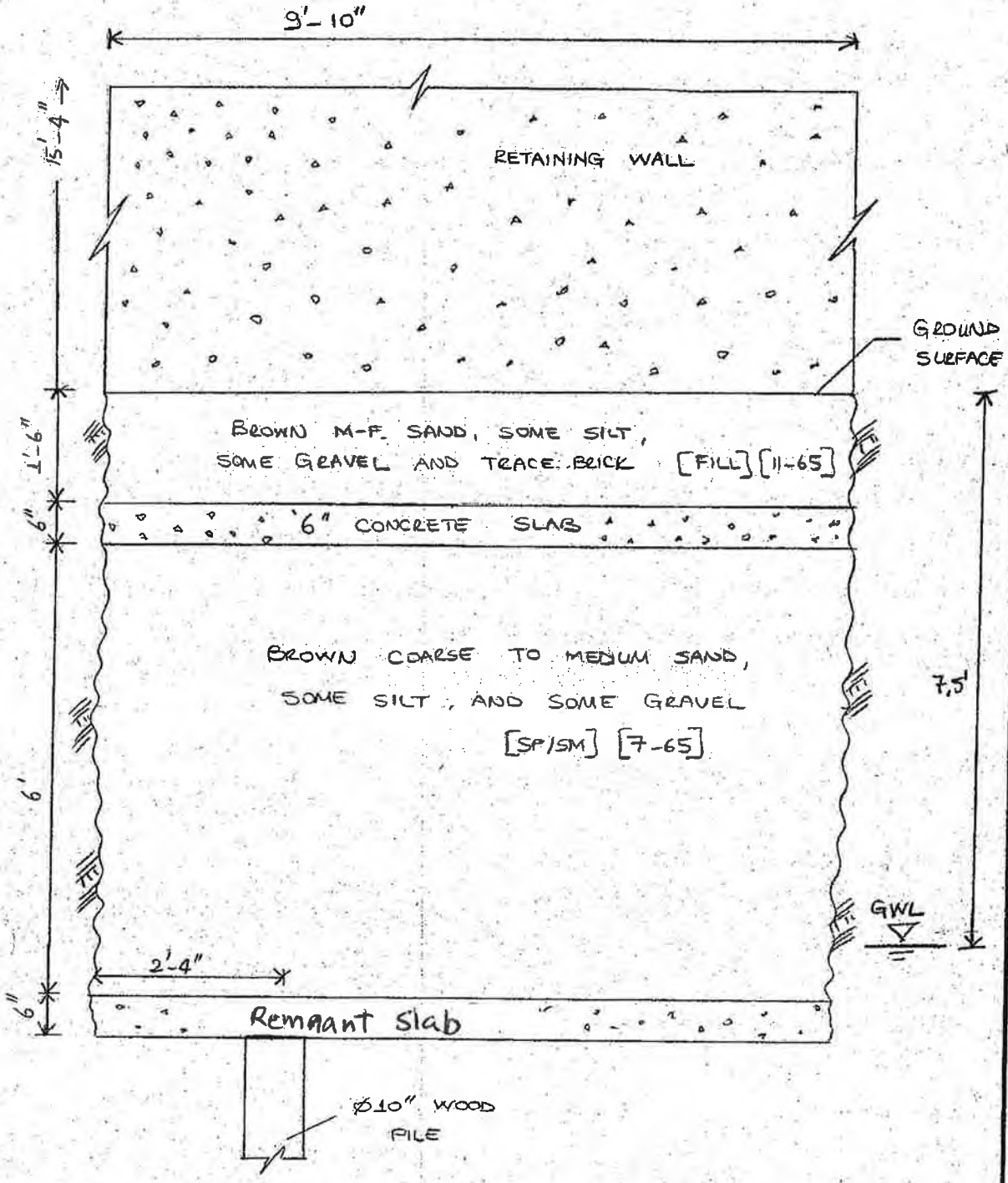
LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES



SECTION A-A

TEST PIT #1 [SCALE = 1:20]	BY N.E. DATE 02/07/08	PROJ. NO. 5821201
4430 PURVES STREET	CKD. ____ DATE ____	SHEET 2 OF 3

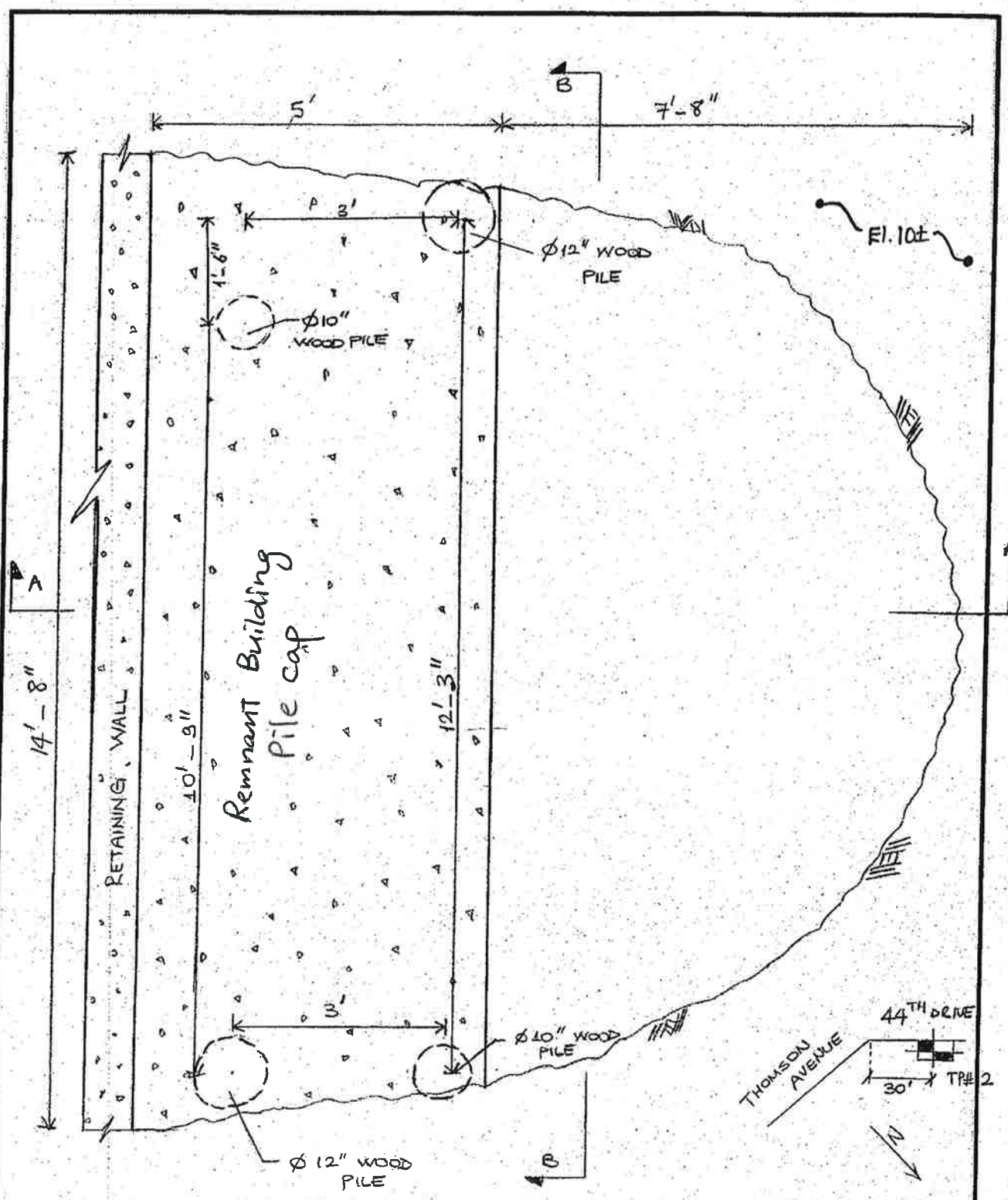
LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES



SECTION B-B

TEST PIT #1 [SCALE = 1:20]	BY N.E DATE 02/07/08	PROJ. NO. 582120
4430 PURVES STREET	CKD. DATE	SHEET 3 OF 3

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES



PLAN VIEW

TEST PIT #2 [SCALE = 1:20]	BY N.E DATE 02/07/08	PROJ. NO. 5821201
4430 PURVES STREET	CKD. ____ DATE ____	SHEET 1 OF 3

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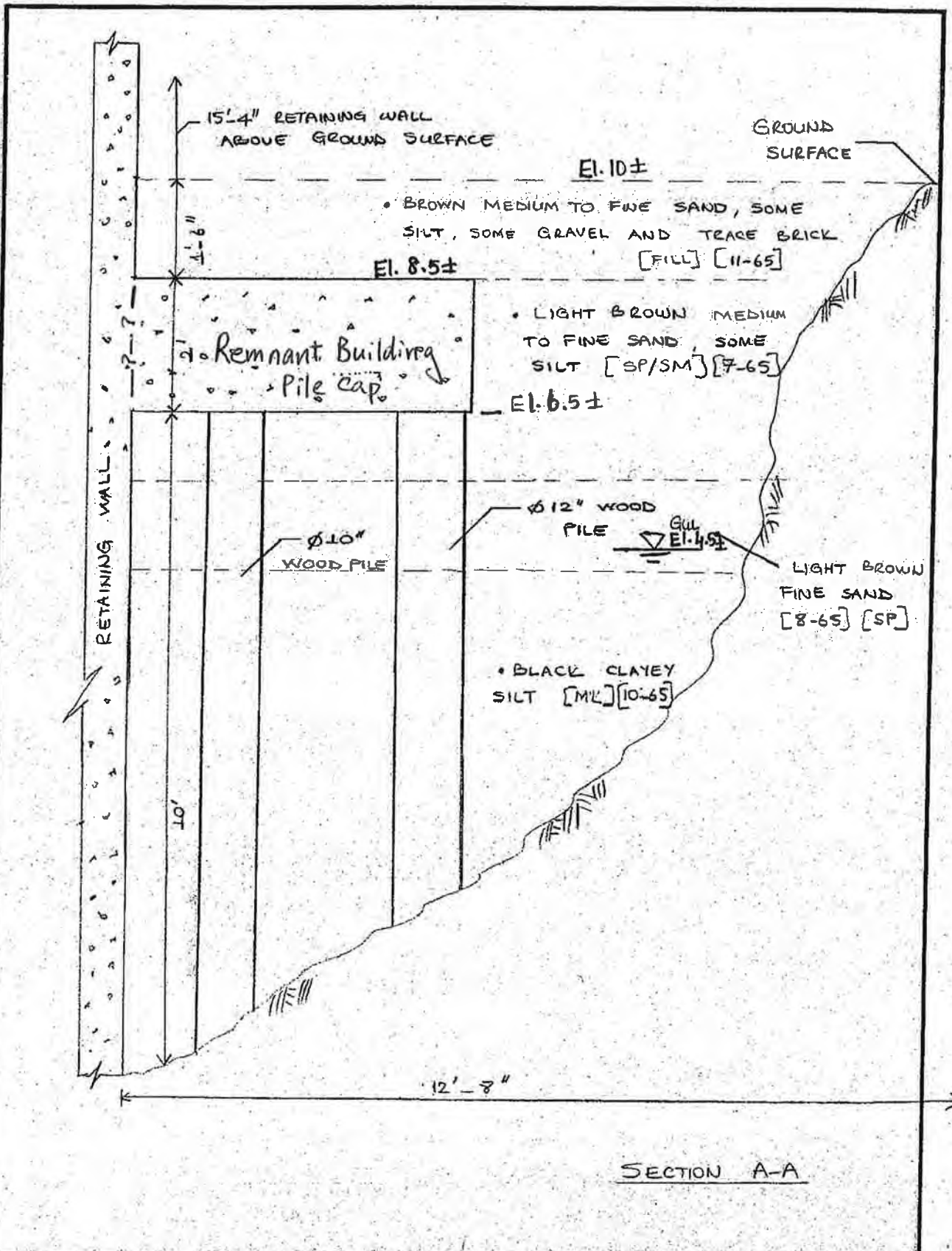
ENGINEERING & ENVIRONMENTAL SERVICES



SECTION A-A

TEST PIT #2	BY NE DATE 02/07/08	PROJ. NO. 5821201	
4430 PURVES STREET	CKD. DATE	SHEET 2 OF 3	

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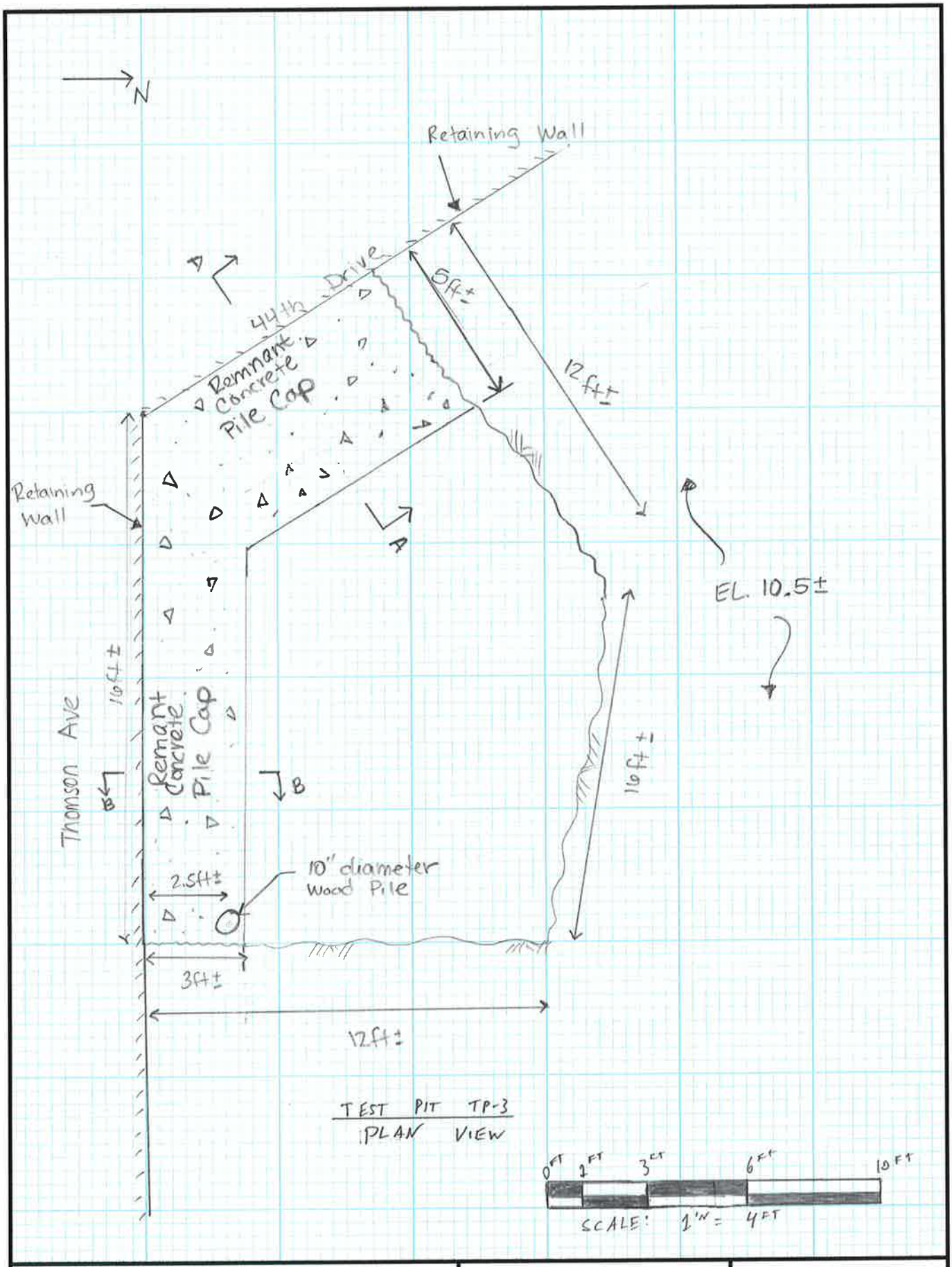
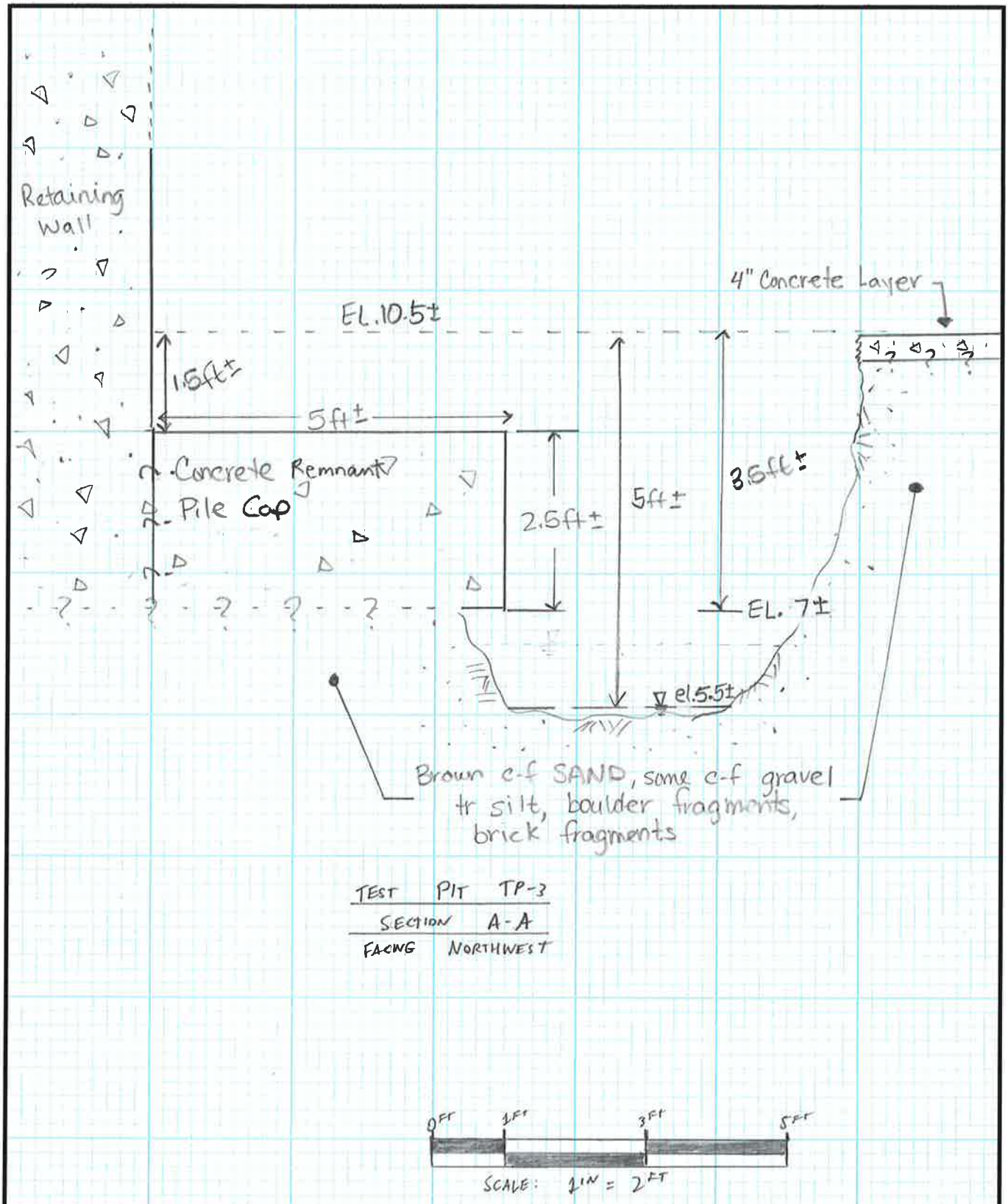
TEST PIT #2 [SCALE = 1:20]	BY NE DATE 02/07/08	PROJ. NO. 5821201
4430 PURVES STREET	CKD. DATE	SHEET 3 OF 3

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES



4430 Purves St	BY MLM DATE 4/8/14	PROJ. NO. 170282501
TP-3 Plan View [1"= 4']	CKD. ____ DATE ____	SHEET 1 OF 11

LANGAN



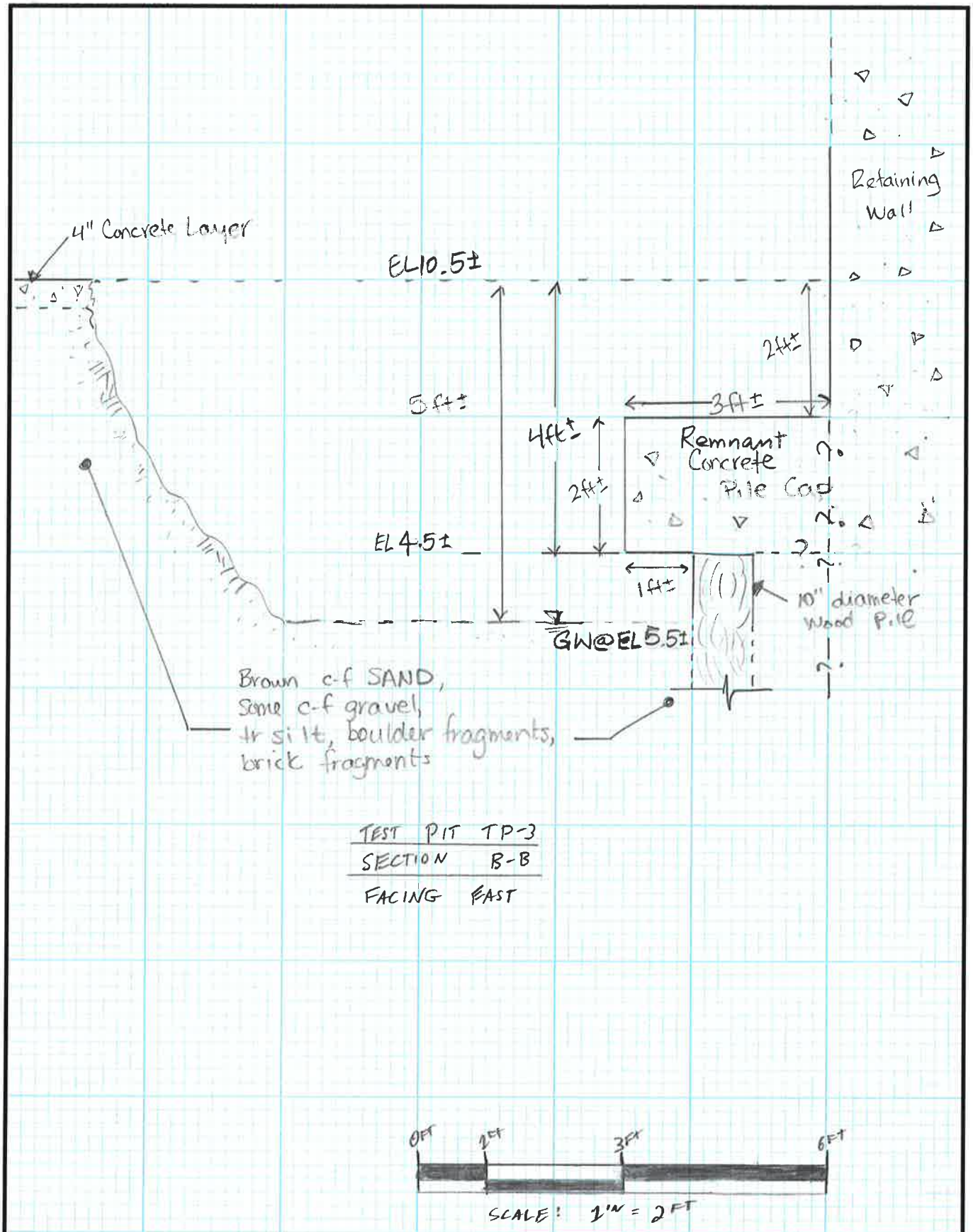
TEST PIT TP-3

SECTION A-A

FACING NORTHWEST

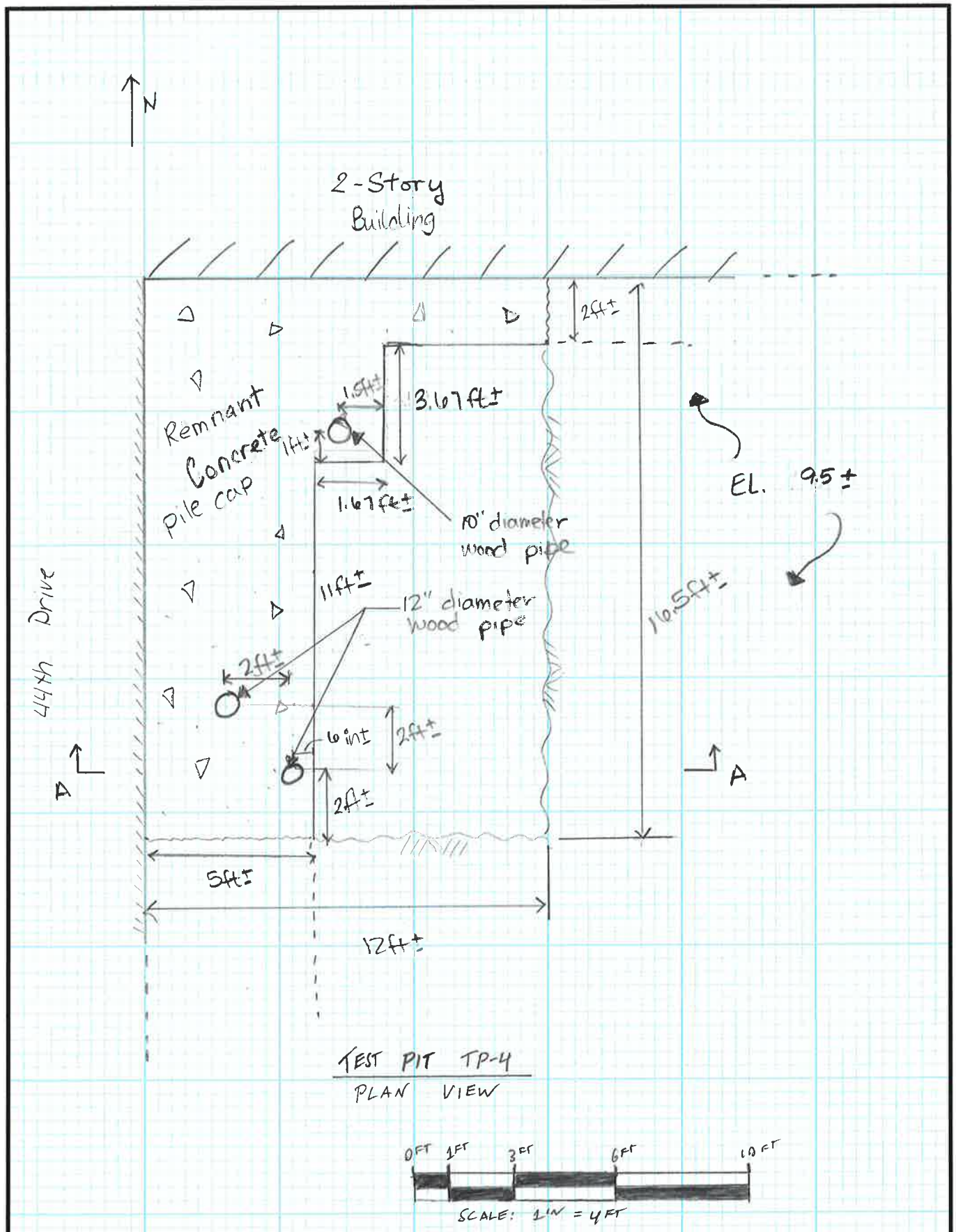
4430 Purves St - Section A-A	BY MLM DATE 4/8/14	PROJ. NO. 17028501
TP-3 (facing NW) [1"=2']	CKD. ____ DATE ____	SHEET 2 OF 11

LANGAN



4430 Purves St - Section B-B TP-3 (facing east) [1":2']	BY MLM DATE 4/8/14 CKD. DATE	PROJ. NO. 1028251 SHEET 3 OF 11	

LANGAN

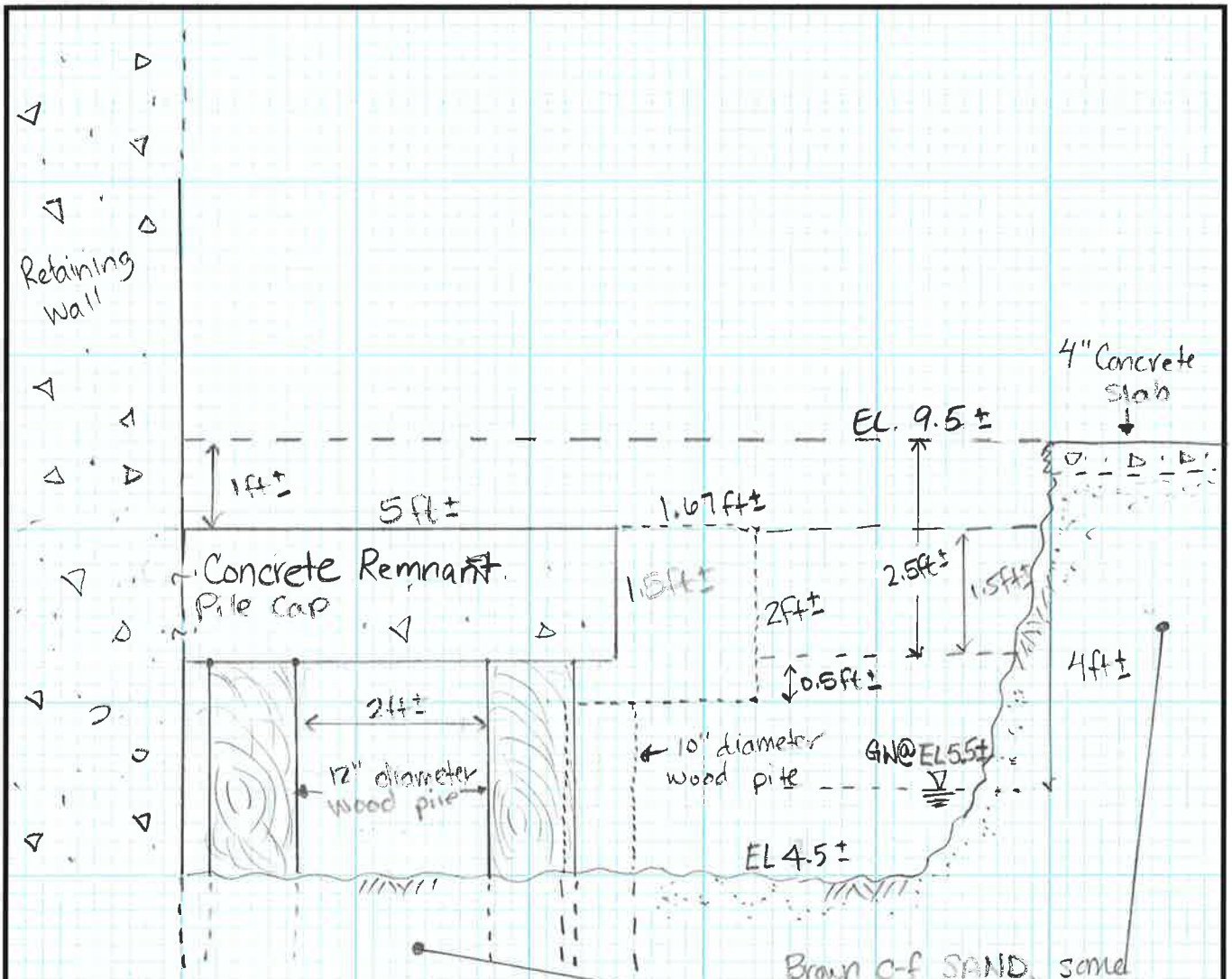


TEST PIT TP-4
PLAN VIEW

SCALE: 1"=4FT

4430 Purves St	BY MLM DATE 4/8/14	PROJ. NO. 170282501
TP-4 Plan View [1"=4']	CKD. DATE	SHEET 4 OF 11

LANGAN



TEST PIT TP-4

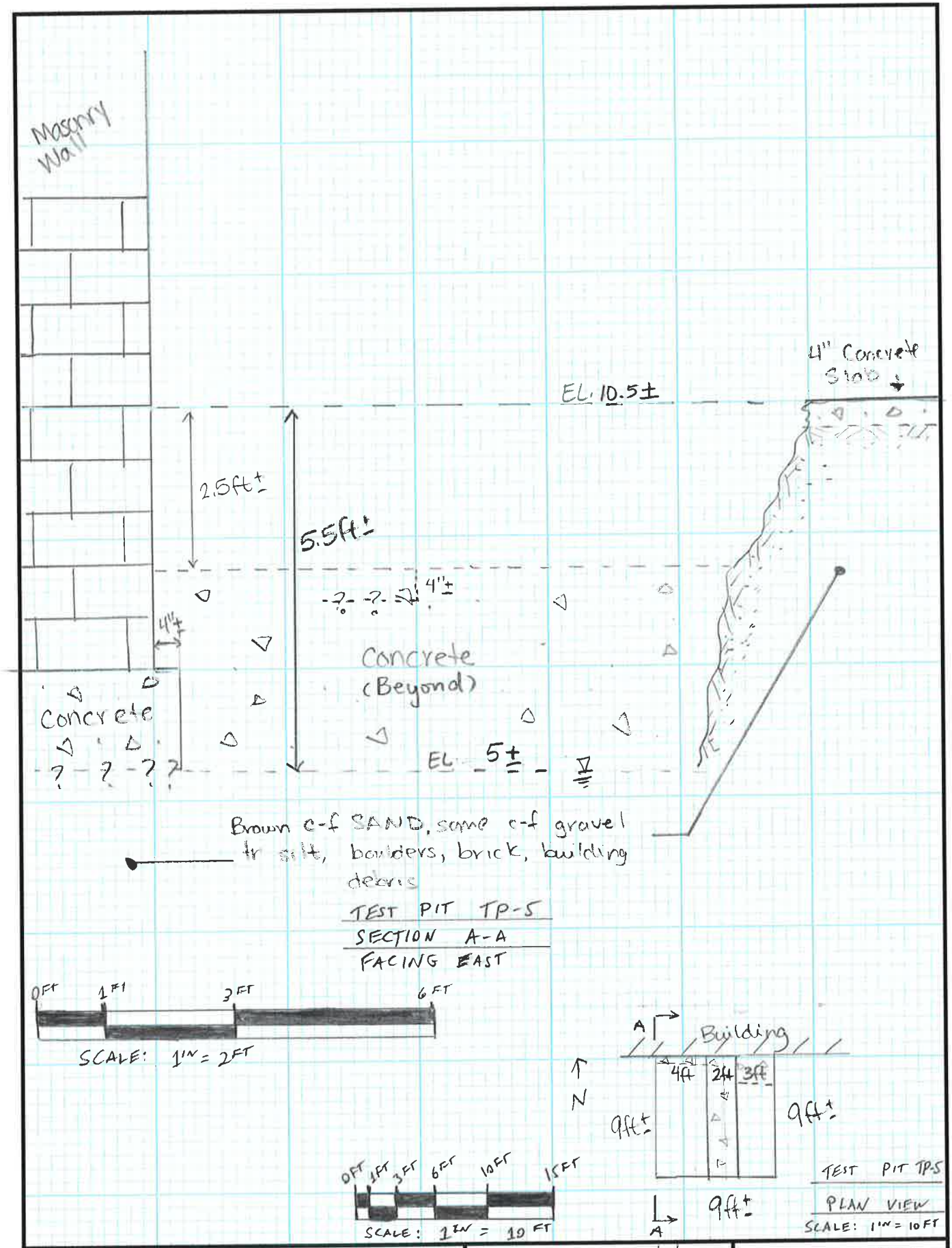
SECTION A-A

FACING NORTH

SCALE: 1IN = 2FT

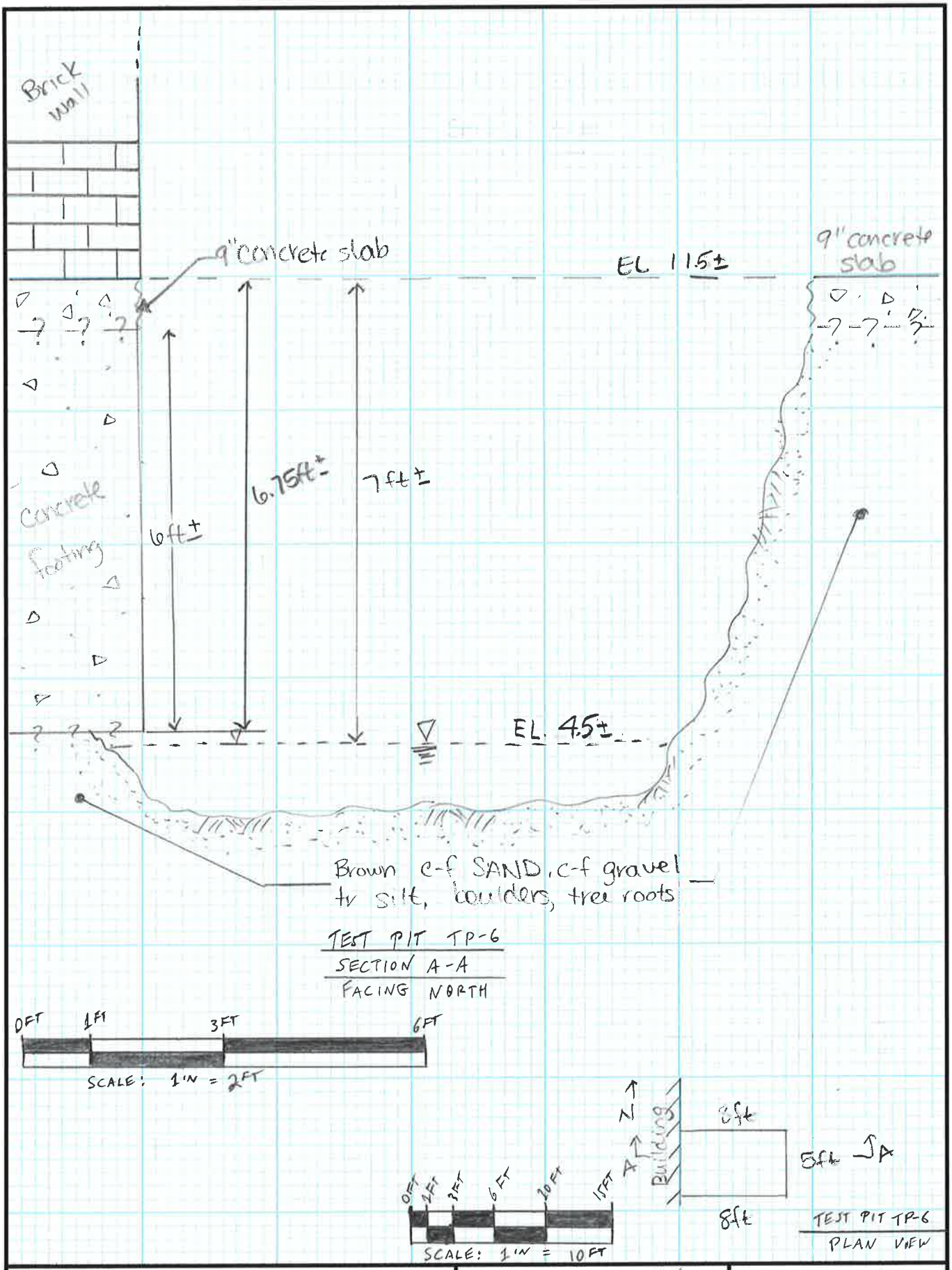
4430 Purves St - Section A-A TP-4 (facing north) [1"=2']	BY MLM DATE 4/8/14 CKD. ____ DATE ____	PROJ. NO. 170282501 SHEET 5 OF 11

LANGAN



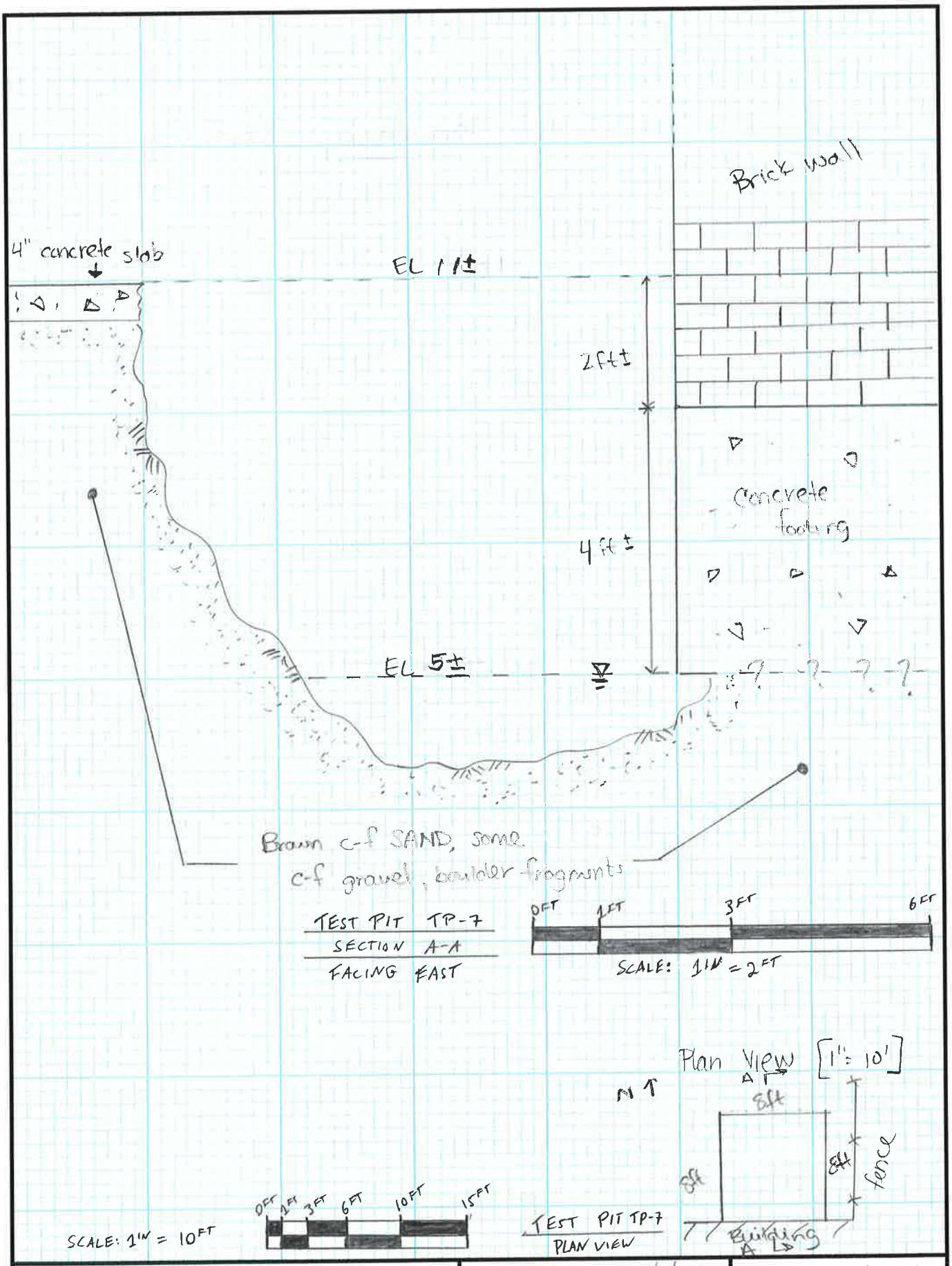
4430 Prince St TP-5 (facing east) [1":2']	BY MLM DATE 4/8/14 CKD. ____ DATE ____	PROJ. NO. 1-10282501 SHEET 6 OF 11

LANGAN



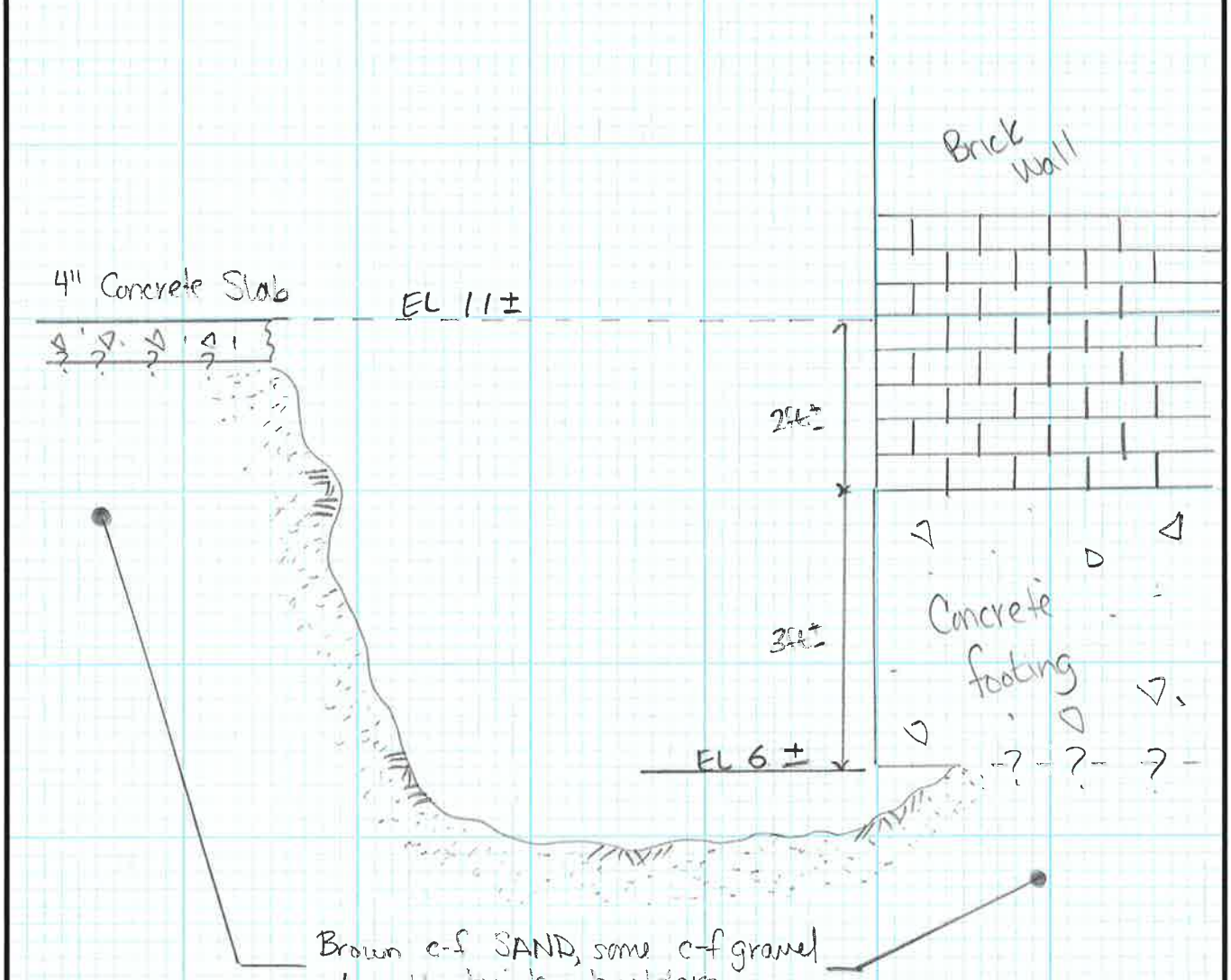
4420 Purves St	BY MLM DATE 4/8/14	PROJ. NO. 1702825.01
TP-6 (facing north) [1"=2']	CKD. DATE	SHEET 7 OF 11

LANGAN

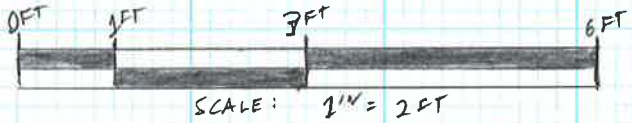


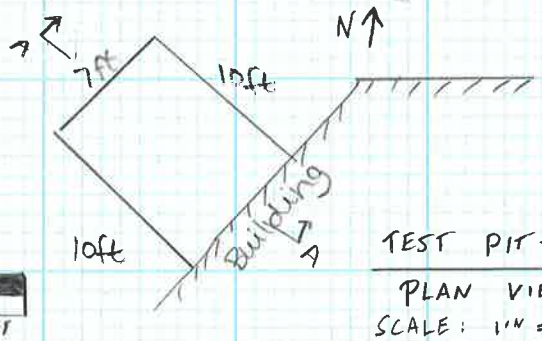
14130 Puves St TP-7 (facing east) [1"=2']	BY MLM DATE 4/8/14 CKD. DATE	PROJ. NO. 170282501 SHEET 8 OF 11	

LANGAN



TEST PIT TP-8
SECTION A-A
FACING NORTHEAST
SCALE: 1" = 2FT

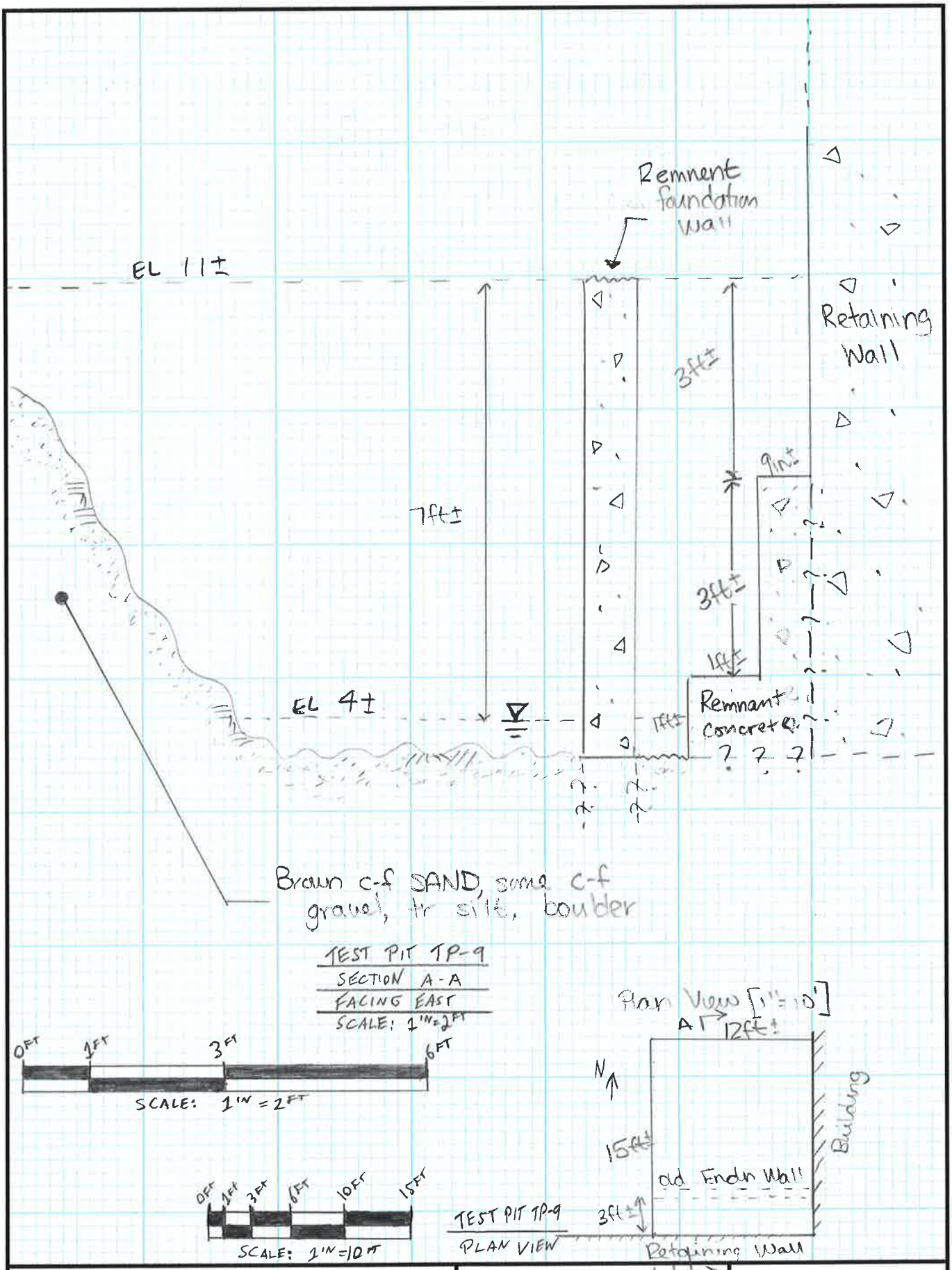




TEST PIT TP-8
PLAN VIEW
SCALE: 1" = 10FT

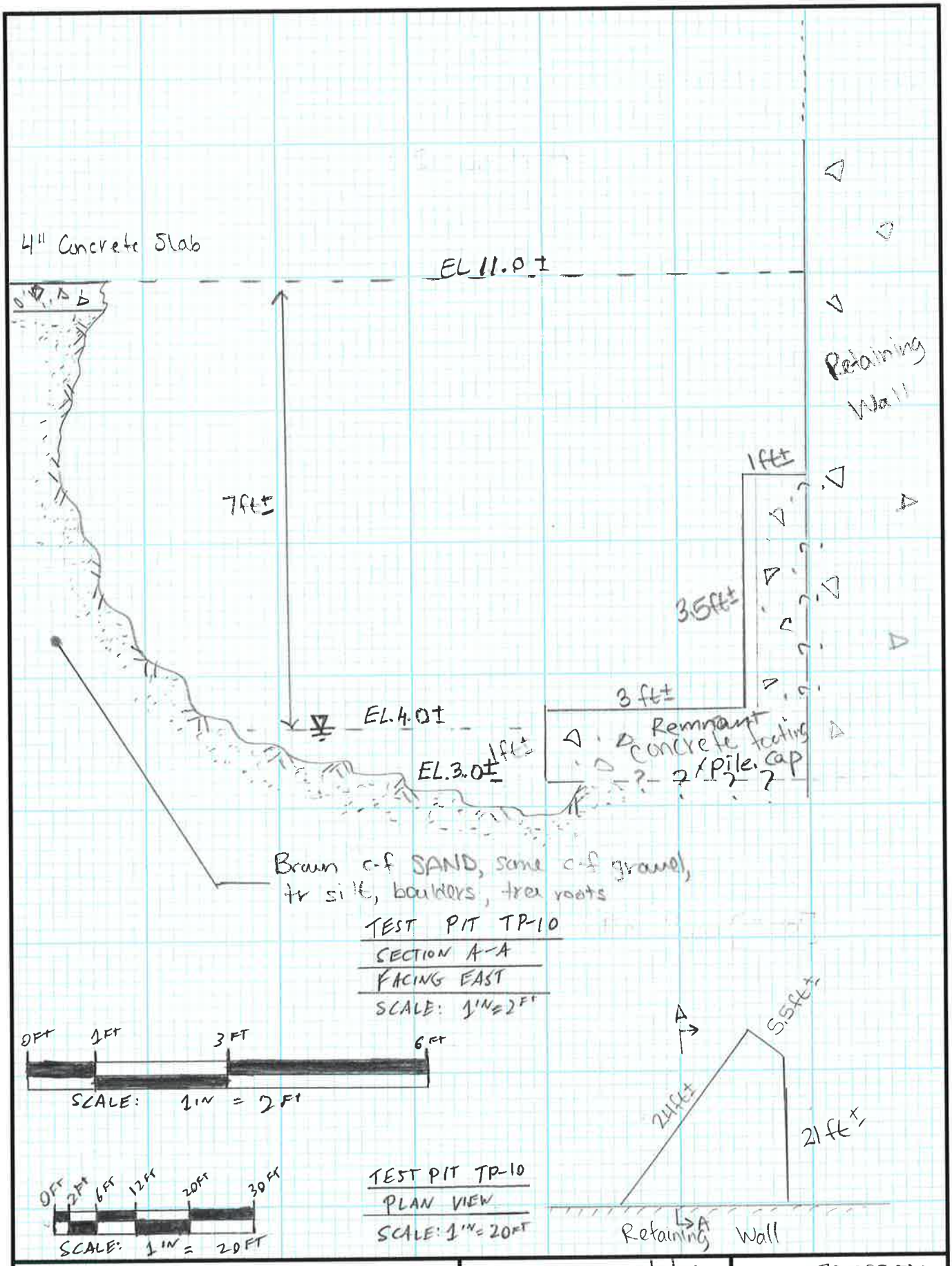
4430 Purves St TP-8 (facing NE) [1"=2']	BY MLM DATE 4/8/14 CKD. DATE	PROJ. NO. 170282501 SHEET 9 OF 11

LANGAN



4430 Parkes St.	BY MLM DATE 4/8/14	PROJ. NO. 1702825.01
TP-9 (facing east) [1"=2']	CKD. DATE	SHEET 10 OF 11

LANGAN



4430 Purves St TP-10 (facing east) [1":2"]	BY MLM DATE 4/8/14 CKD. ____ DATE ____	PROJ. NO. 170282501 SHEET 11 OF 11

LANGAN

Photo 1: General view of TP-1 (facing north)

Photo 2: Bottom of excavation at TP-1 (looking down)

Photo 3: General view of TP-2 (facing north)

Photo 4: Bottom of remnant pile cap at TP-2 (facing northwest)

Photo 1: General view of TP-3 (facing west)

Photo 2: Bottom of pile cap at TP-3 (facing west)

Photo 3: General view of TP-4 (facing north)

Photo 4: Bottom of pile cap at TP-4 (facing north)

Photo 5: General view of TP-5 (facing north)

Photo 6: General view of TP-6 (facing east)

Photo 7: General view of TP-7 (facing south)

Photo 8: General view of TP-8 (facing south)

Photo 9: General view of TP-9 (facing southwest)

Photo 10: General view of TP-10 (facing west)

APPENDIX D

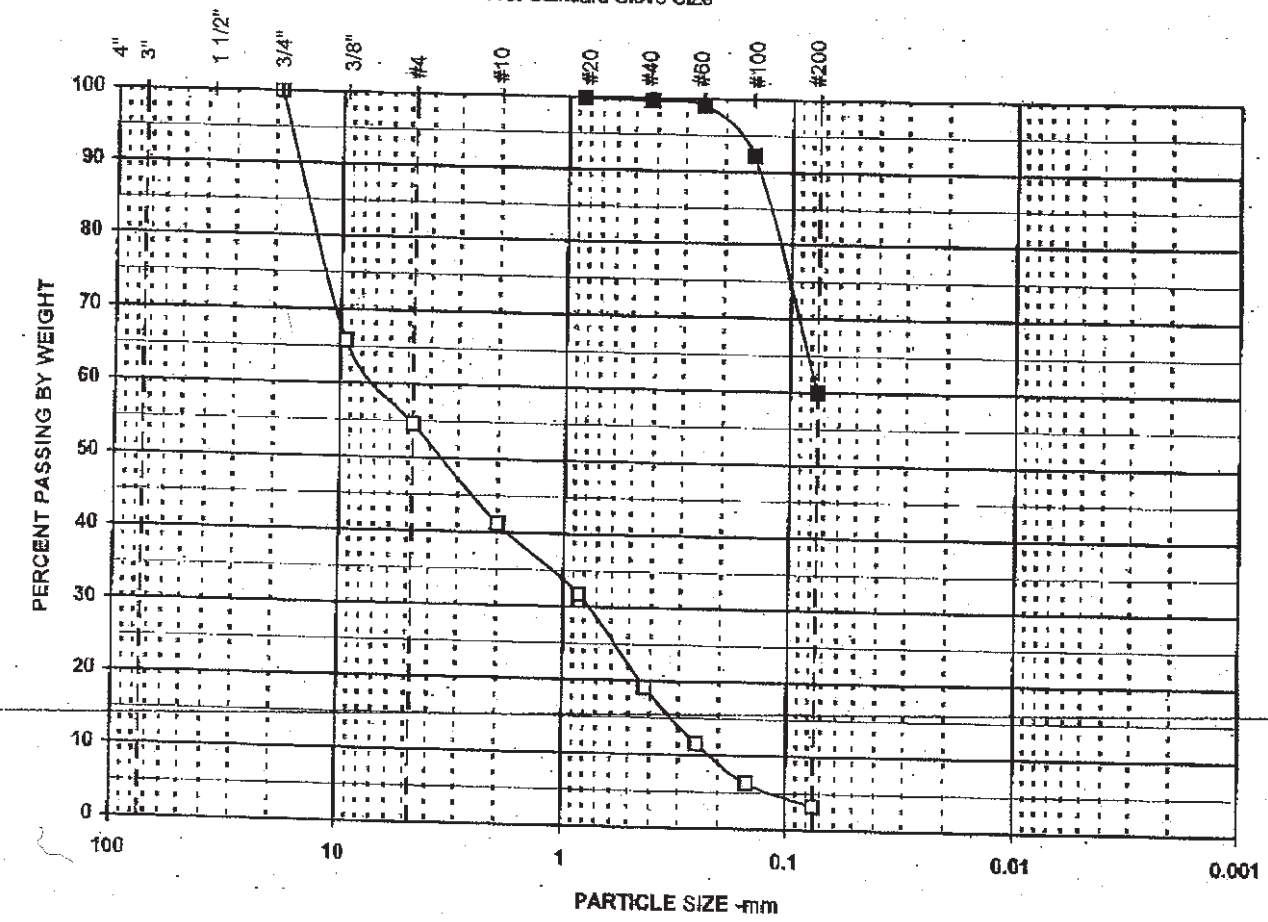
Project No.: 31737700-808 File: Indx1.xls

Langan #5821201
4430 Purves Street
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS						REMARKS
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	
B-2	S-2	2-4	7.5				SP	3.2	
B-2	S-7	15-17	29.4				ML	60.0	
B-2	S-13	45-47	30.6	39	24	15	CL		
B-4	S-8	25-27	13.6				SM	33.4	
B-5	S-5	9-11	24.5				SP	2.3	
B-5	S-11	40-42	22.2	25	20	5	CL-ML		
B-8	S-8	25-27	33.0	26	22	4	ML		
B-10	S-5	8-10	19.1				SM	19.0	
B-12	S-6	15-16	19.7				SM	17.1	
B-12	S-10	35-37	25.4	25	20	5	CL-ML		

Note: (1) USCS symbol based on visual observation and Sieve and Atterberg limits reported.

Prepared by: JR Reviewed by: CMS Date: 2/12/2008



SYMBOL	DESCRIPTION AND REMARKS
□	black gravelly c-f SAND, trace silt.
■	brown f. sandy SILT.
○	

Symbol	□	■	○
Boring	B-2	B-2	
Sample	S-2	S-7	
Spec			
Depth	2-4	15-17	
% +3"			
% Gravel	45.5		
% SAND	51.3	40.0	
% FINES	3.2	60.0	
% -2μ			
Cc	0.4		
Cu	32.1		
LL			
PL			
PI			
USCS	SP	ML	
w (%)	7.5	29.4	

Particle Size	PERCENT FINER		
(Sieve #)	□	■	○
4"			
3"			
1 1/2"			
3/4"	100.0		
3/8"	65.8		
4	54.5		
10	41.2		
20	31.7	100.0	
40	19.1	99.7	
60	11.6	99.1	
100	6.3	92.2	
200	3.2	60.0	

PARTICLE SIZE DISTRIBUTION

Langan #5821201 - 4430 Purves Street

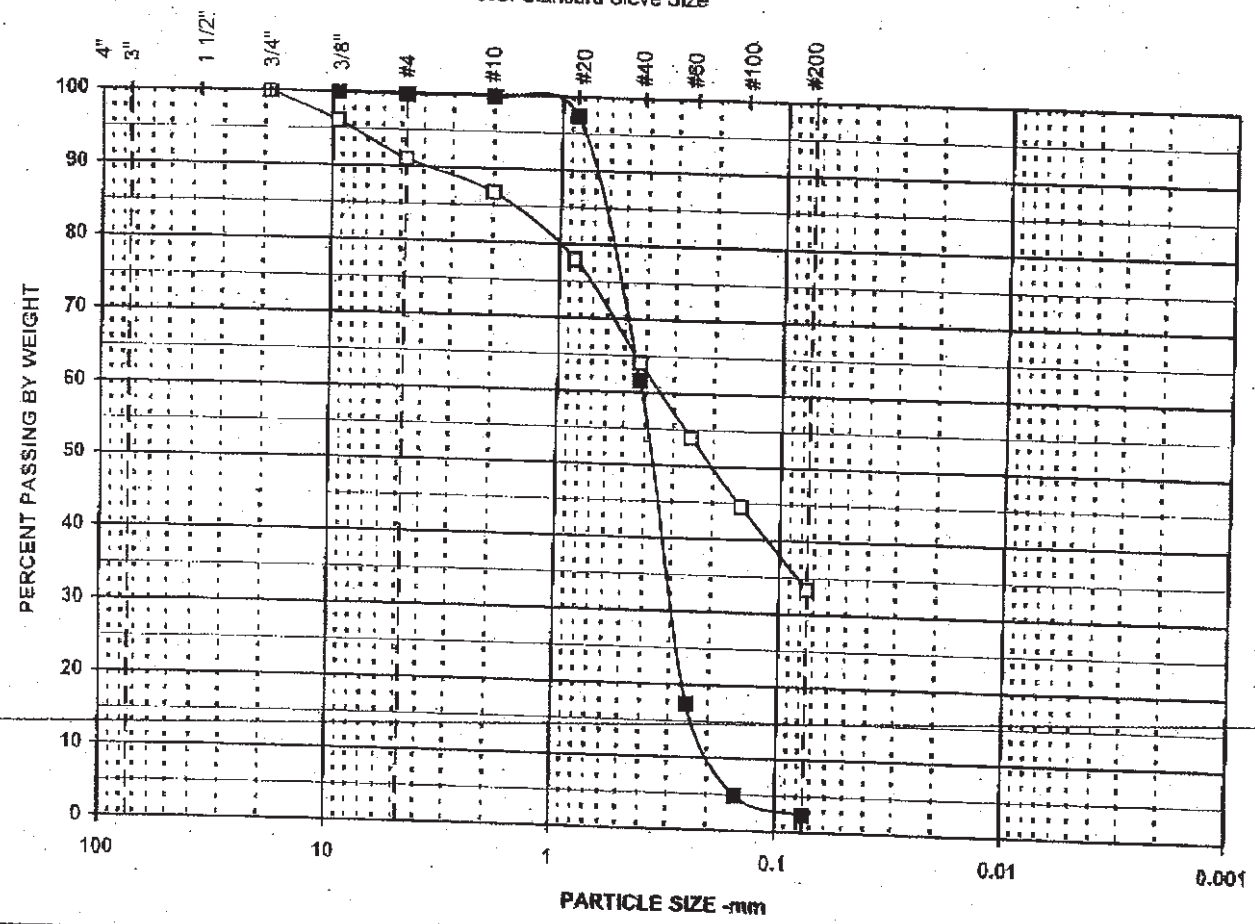
Project No.		
31737700-808	January 2008	Figure

Geotesting Services, Inc.

Siev1a.xls 1/31/2008

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

U.S. Standard Sieve Size



SYMBOL	DESCRIPTION AND REMARKS
□	brown silty c-f SAND, trace f. gravel.
■	brown m-f SAND, trace silt.
○	

Symbol	□	■	○
Boring	B-4	B-5	
Sample	S-8	S-5	
Spec			
Depth	25-27	9-11	
% +3"			
% Gravel	9.0	0.2	
% SAND	57.6	97.5	
% FINES	33.4	2.3	
% -2μ			
Cc		1.1	
Cu		2.2	
LL			
PL			
PI			
USCS	SM	SP	
w (%)	13.6	24.5	

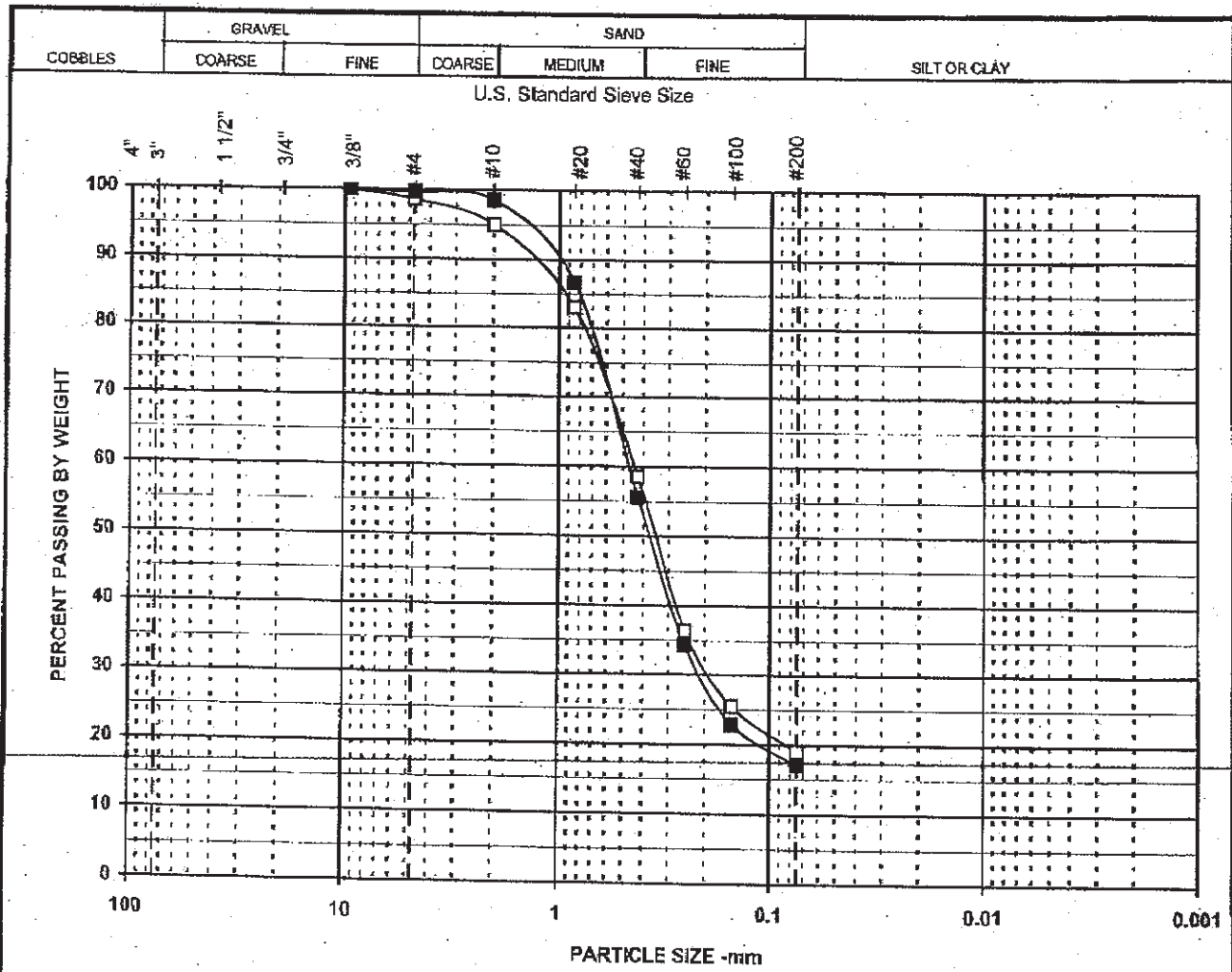
Particle Size	PERCENT FINER		
(Sieve #)	□	■	○
4"			
3"			
1 1/2"			
3/4"	100.0		
3/8"	96.1	100.0	
4	91.0	99.8	
10	86.7	99.7	
20	77.9	97.4	
40	64.0	61.6	
60	53.8	17.3	
100	44.5	4.8	
200	33.4	2.3	

PARTICLE SIZE DISTRIBUTION

Langan #5821201 - 4430 Purves Street

Project No.		
31737700-808	February 2008	Figure

Geotesting Services, Inc.



SYMBOL	DESCRIPTION AND REMARKS
□	brown c-f SAND, some silt; trace f. gravel.
■	gray c-f SAND, some silt.
○	

Symbol	□	■	○
Boring	B-10	B-12	
Sample	S-5	S-6	
Spec			
Depth	8-10	15-17	
% +3"			
% Gravel	1.4	0.4	
% SAND	79.6	82.5	
% FINES	19.0	17.1	
% -2μ			
Cc			
Cu			
LL			
PL			
PI			
USCS	SM	SM	
w (%)	19.1	19.7	

Particle Size	PERCENT FINER		
(Sieve #)	□	■	○
4"			
3"			
1 1/2"			
3/4"			
3/8"	100.0	100.0	
4	98.6	99.6	
10	95.0	98.5	
20	83.0	86.7	
40	58.6	55.6	
60	36.4	34.3	
100	25.5	22.9	
200	19.0	17.1	

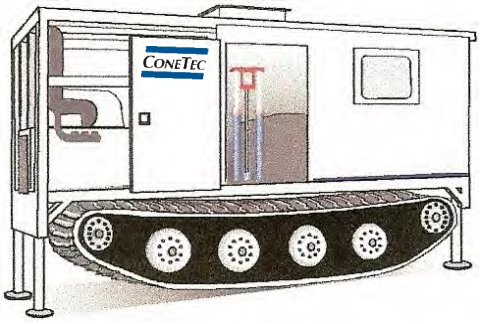
PARTICLE SIZE DISTRIBUTION

Langan #5821201 - 4430 Purves Street

Project No.		Figure
31737700-808	January 2008	

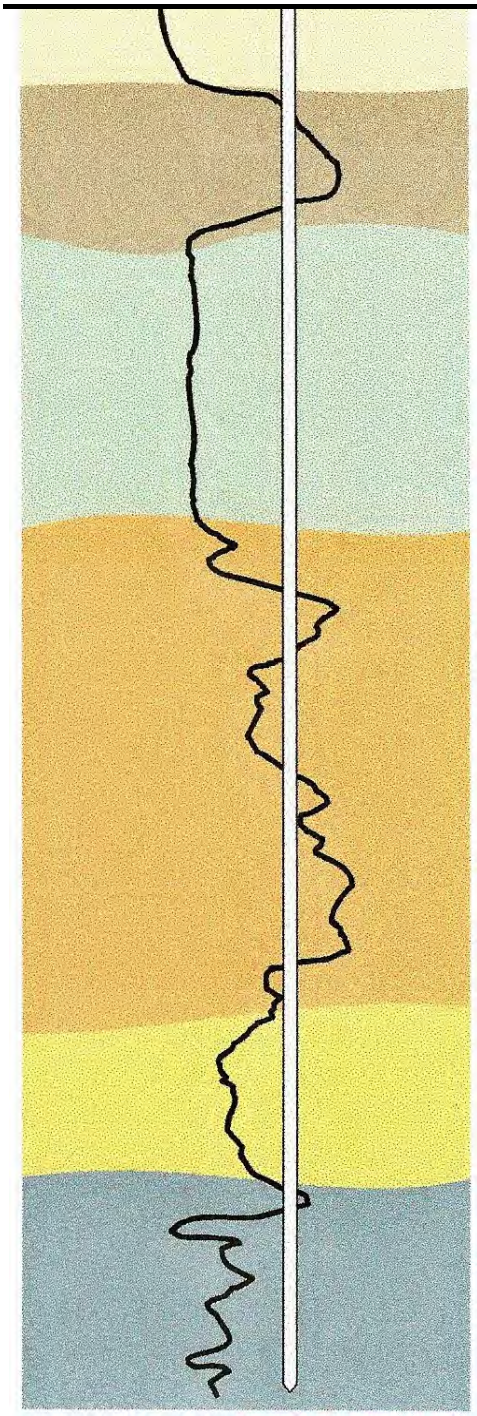
Geotesting Services, Inc.

APPENDIX E



ConeTec

Geotechnical and Environmental In Situ Testing Contractors



ConeTec Field Report

Presentation of In Situ Test Results for:

4430 Purves Street
Long Island City, New York

Presented to:	Langan Engineering
Date:	April 22nd, 2014
Presented by:	ConeTec, Inc. 436 Commerce Lane Unit C West Berlin, NJ 08091 (856) 767-8600

PRESENTATION OF IN-SITU PROGRAM TESTING RESULTS

4430 Purves Street
Long Island City, New York

Project performed on:

April 15th, 2014

Prepared for:

Langan Engineering
New York, New York

Prepared by:

ConeTec, Inc.
West Berlin, NJ

April 22nd, 2014

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1.0 INTRODUCTION

This report presents the results of a geotechnical site investigation program conducted by ConeTec, Inc. (ConeTec) of West Berlin, New Jersey for Langan Engineering on April 15th, 2014. The work took place at the 4430 Purves Street Site located in Long Island City, New York. The program consisted of two cone penetration tests (CPTs) and four seismic cone penetration tests (SCPTs).

2.0 FIELD EQUIPMENT AND PROCEDURES

2.1 Cone Penetration Test

Cone penetration testing (CPT) was conducted by ConeTec using an integrated electronic cone penetration testing and data acquisition system. A ConeTec cone penetrometer (Figure 1) was used during this investigation. The CPT soundings were completed in accordance with ASTM D5778. The cone was deployed using one of ConeTec's 25 ton, unitized, purpose-built, truck-mounted CPT rigs. The cone and rods were pushed into the ground using hydraulic ramset inside the rig at a steady rate of two centimeters per second.

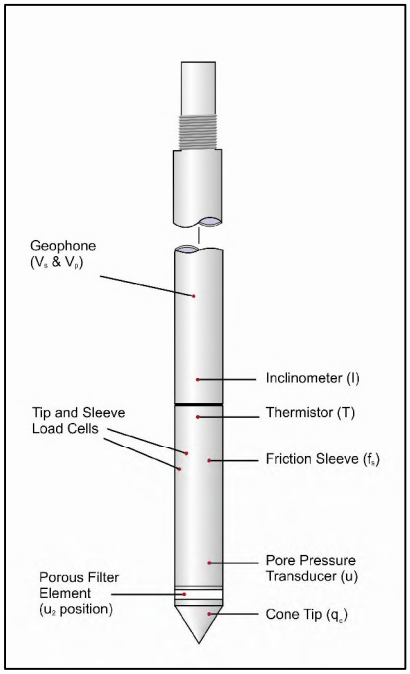


Figure 1 – Cone Penetrometer

The cone that was used had a maximum tip capacity of 1,500 bar, a tip area (A_c) of 15 cm^2, a friction sleeve area (A_s) of 225 cm^2, and a pore pressure transducer capacity of 500 psi. A pore pressure filter located directly behind the cone tip in the "u_2" position was also used (Figure 2). The six millimeter thick pore pressure filter, which is composed of porous plastic, enables the cone penetrometer to measure dynamic pore pressures during penetration, and record pore pressure dissipations at selected depths. The function of the filter is to allow rapid movements of the extremely small volumes of water needed to activate the pressure transducer while preventing soil ingress or blockage. Each pore pressure filter was saturated in silicone fluid under vacuum pressure prior to testing and the pore pressure cavity within the cone was filled with silicone fluid to maintain a compliant pore pressure measuring system. A viscous fluid is used to try to maintain saturation of the system. The data acquisition system automatically records and displays the pore pressure dissipation traces in real time (at five second intervals) during pauses in penetration.

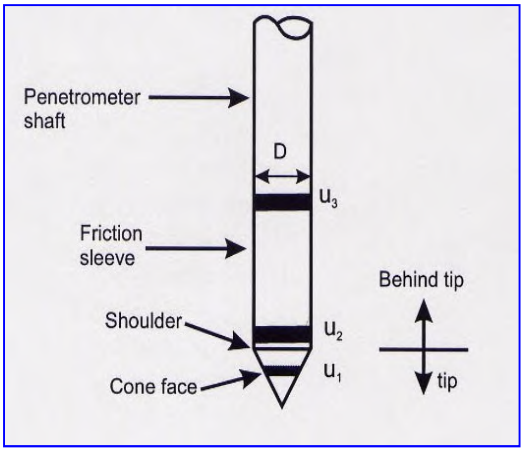


Figure 2 – Pore Pressure Filter Locations

ConeTec compression cones are designed with an equal end area friction sleeve; hence no corrections are required for friction sleeve data. ConeTec compression cones experience unequal area effects on the tip resistance due to the tip and load cell geometry. The unequal area is represented by the cone net area ratio (a) of 0.80. The net area ratio of ConeTec's compression cone has been verified through laboratory testing by subjecting the cone to a known pressure then measuring the load recorded on the tip. Refer to section 3.1 Cone

Penetration Test Results for a detailed explanation of the use of the net end area ratio in correcting CPT data.

The cone system used during the program recorded the following parameters in units selected by the client at five centimeter depth increments:

- Tip resistance (q_c)
- Sleeve friction (f_s)
- Dynamic pore pressure (u_2)

A complete set of baseline readings were taken before and after each sounding to determine if a zero load offset had occurred due to a temperature change in the probe. Establishing the presence of temperature shifts and load offsets enables the operator to make corrections to the cone data as necessary. Since the probes are temperature compensated, load shifts due to changes in probe temperature are only a problem when extreme temperature changes occur.

2.2 Seismic Cone Penetration Test

The seismic cone penetration test (SCPT) equipment and procedures used for determining seismic wave velocities were generally the same as those reported by Robertson et al. (1986). The procedure was incorporated with CPT testing and conducted when penetration was stopped at the end of each one meter stroke. Within the first few meters (depending on the ground conditions), initial shear wave velocity measurement was made and subsequent measurements were typically made at one meter intervals until refusal. Before taking any seismic wave measurements, the rods were decoupled from the CPT rig, serving to minimize any rig induced background noise.

The shear waves were generated using an automated hydraulic seismic beam that was coupled to the ground using a hydraulic cylinder in the CPT rig (Figure 3). An automated piston hammer striking each end of the beam acted as an electrical contact trigger, initiating the recording of the seismic wave traces. The offset of the beam from the cone was taken into account during calculation of the seismic wave velocities.

Multiple hits were recorded to enable the operator to check the consistency of the waveforms. The wave receiver used was a horizontally active geophone located in the body of the cone

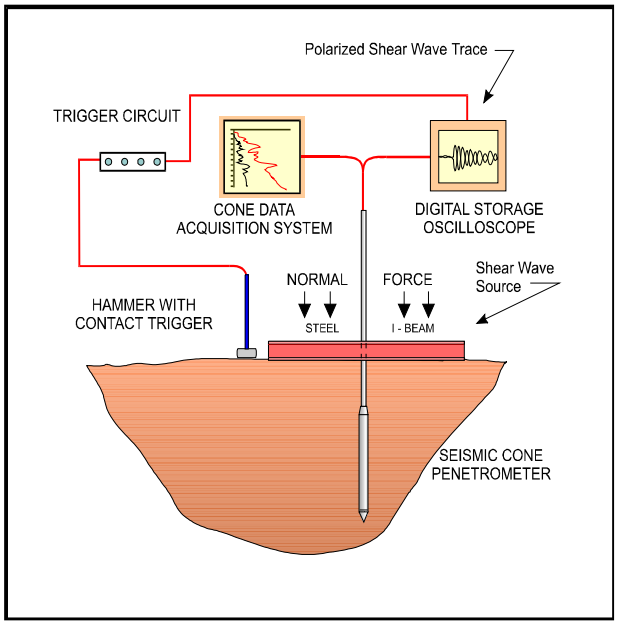


Figure 3 - Seismic CPT

penetrometer. The geophone is located 0.2 meters behind the cone tip. This offset was accounted for in all calculations. Shear wave data was sampled at a frequency of 20 kHz (i.e. 20,000 samples per second). Because the shear wave signals experienced attenuation in the soils, input sensitivity (gain) of the receiver was increased with depth to maintain the desired signal resolution.

3.0 TEST RESULTS

3.1 Cone Penetration Test Results

A summary of the cone penetration testing work is provided in Appendix A. The penetration depths are referenced to the existing ground surface at the time of the investigation.

All of the CPT data are presented in graphical form in the attached appendices and stored in Excel™ format in the release folder. A detailed set of CPT interpretations were generated and

are provided in Excel™ format files in the release folder. The CPT interpretations are based on values of corrected tip (q_t), sleeve friction (f_s) and pore pressure averaged over a user specified interval (this interval is specified in the header of each file). Data from equilibrium and dynamic pore pressure profiles were used to interpret phreatic surface depths that are used in the interpretation tables. Further details on the description of parameters and methods used for the interpretations are provided in Appendix B. The contents of the release folder and file formats are detailed in Appendix E.

The CPT plots presented in Appendix A consist of corrected tip resistance (q_t), sleeve friction (f_s), friction ratio (R_f), dynamic pore pressure (u_2) and Soil Behavior Type (SBT) are plotted versus depth. The measured readings may or may not be averaged in these plots. The averaging interval is specified in the plot footnotes.

The cone tip (q_t) reading is the total force acting on the cone tip divided by the projected plan area of the tip. It indicates the relative density, or stiffness, of the soil. The sleeve friction (f_s) is the frictional force the soil is imposing on the friction sleeve divided by the surface area of the friction sleeve. The friction ratio (R_f), expressed as a percentage, is a ratio of the sleeve friction readings divided by the cone tip readings. The friction ratio gives an indication of the grain size characteristics of the material. Generally, fine-grained soils have a higher friction ratio than coarse-grained soils. The dynamic pore pressures generated behind the cone tip, during cone penetration, are recorded by a pore pressure transducer. In freely draining soils the dynamic pore pressure will often be similar to the equilibrium pore pressure, while in fine grained soils penetration is undrained and the dynamic pore pressure will deviate from the equilibrium pore pressure profile. To record equilibrium or static water pressures, the penetration must be stopped to allow the dynamic pore pressures to stabilize. The rate at which this will occur is a function of the permeability of the soil.

Due to the inner geometry of the cone penetrometer, the ambient pore water pressure will act on the shoulder area behind the cone tip and on the ends of the friction sleeve. This results in an imbalance of stresses and is known as the “unequal area effect”. This effect influences the total stress determined from the cone and friction sleeve. For the cone resistance, the unequal area is represented by the cone net area ratio ‘a’, which is approximately equal to the ratio of

the cross-sectional area of the load cell or shaft divided by the projected area of the cone. The corrected total cone resistance, q_t, is given by the equation:

$$q_t = q_c + u_2 (1-a)$$

As stated earlier in the report, the net area ratio for ConeTec's compression cone penetrometers is 0.80. All of the calculations and plots use the corrected cone resistance, q_t.

The stratigraphic interpretations included on the plots are based on a soil behavior chart described in Robertson (1990) as illustrated in Figure 4. The chart relates cone tip resistance to friction ratio in order to determine Soil Behavior Type (SBT). It should be noted that it is not always possible to clearly identify a soil type based on these parameters. In these situations, experience, judgment, the use of auxiliary modules and an assessment of pore pressure dissipation data should be used to infer Soil Behavior Type.

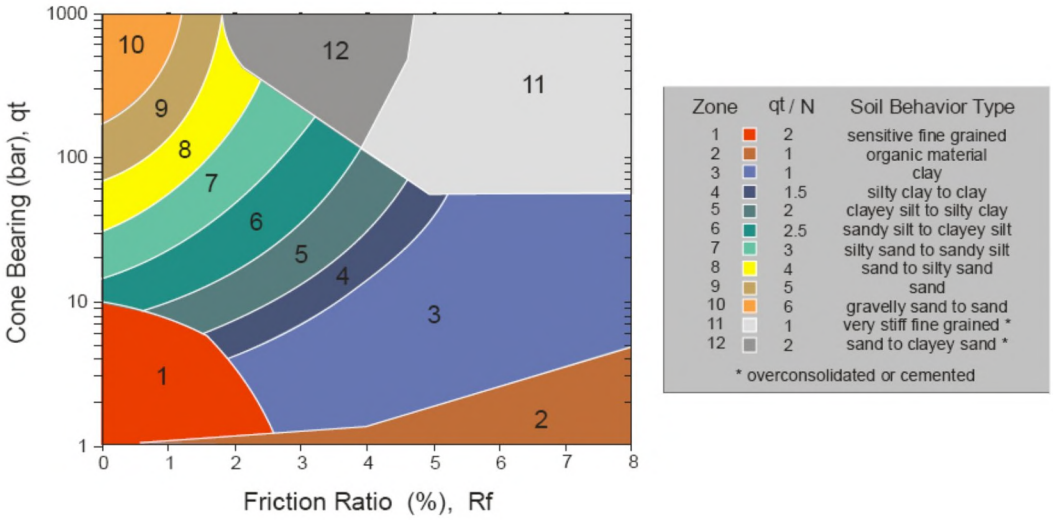


Figure 4 - Soil Behavior Type Chart, Robertson (1990)

3.2 Pore Pressure Dissipation Test Results

The penetration of the piezocone was halted at specific depths to carry out pore pressure dissipation tests. The variation of the pore pressure (u) with time was measured and recorded. All pore pressure data was recorded immediately behind the cone tip at the u_2 location. A tabular summary of these results is provided along with the individual pore pressure dissipation

plots in Appendix C. All of the dissipation data is provided in the release folder along with a summary of the results in both Excel™ and PDF format.

3.3 Seismic Cone Penetration Test Results

Tabular shear wave velocity results are presented in Appendix D and the seismic CPT (SCPT) plots are presented in Appendix A. The calculated shear wave velocities (Vs) are plotted against depth together with tip (q_t), friction sleeve (f_s), dynamic pore pressure (u_2) and SBT.

The shear wave velocity is directly related to the small strain shear modulus and can be used with Poisson's Ratio to calculate the small strain Elastic Modulus. These parameters are used as input variables to analyze soil deformation under both static and dynamic loads.

4.0 ABANDONMENTS

The annular space of all CPT soundings was grouted in accordance with the regulations.

5.0 CLOSING

Thank you very much for the opportunity to perform this work. We trust that the information presented in this report is sufficient for your purposes. If you have any questions regarding the contents of this report, please contact our office.

Sincerely,

ConeTec, Inc.

6.0 BIBLIOGRAPHY

ASTM D5778-12 2012. "Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils". ASTM, West Conshohocken, US.

Lunne, T., Robertson, P.K. and Powell, J.J.M., 1997, “Cone Penetration Testing in Geotechnical Practice”, E & FN Spon, ISBN 0 419 23750, www.sponpress.com, 312 pages, 3rd printing.

Robertson, P.K., “Soil Classification using the Cone Penetration Test”, Canadian Geotechnical Journal, Vol 27, 1990 pp 151-158.

Robertson, P.K., Campanella, R.G., Gillespie, D. and Rice, A., “Seismic CPT to Measure In-Situ Shear Wave Velocity”, Journal of Geotechnical Engineering ASCE, Vol. 112, No. 8, 1986 pp 791-803.

Appendix A

Job No:	14-53021
Client:	Langan Engineering
Project:	4430 Purves Street, Long Island City, NY
Date:	April 15, 2014

CPT SUMMARY

CPT Sounding	File Name	Date	Cone	Assumed Phreatic Surface (ft)	Final Depth (ft)	Shear Wave Velocity Tests	Northing UTM Zone 18	Easting UTM Zone 18
SCPT-01	14-53021_SP01	4/15/14	361:T1500F15U500	9.00	44.62	13	4511133	589382
SCPT-02	14-53021_SP02	4/15/14	361:T1500F15U500	8.01	49.54	13	4511175	589380
SCPT-03	14-53021_SP03	4/15/14	361:T1500F15U500	11.21	49.21	14	4511158	589398
SCPT-04	14-53021_SP04	4/15/14	361:T1500F15U500	8.50	47.41	14	4511138	589405
CPT-05	14-53021_CP05	4/15/14	361:T1500F15U500	9.00	45.11		4511144	589362
CPT-06	14-53021_CP06	4/15/14	361:T1500F15U500	8.00	46.92		4511148	589379
	6				282.81	54		

Note: Hydrostatic water table assumed for interpretation tables and based on pore pressure dissipations and piezometer measurements.

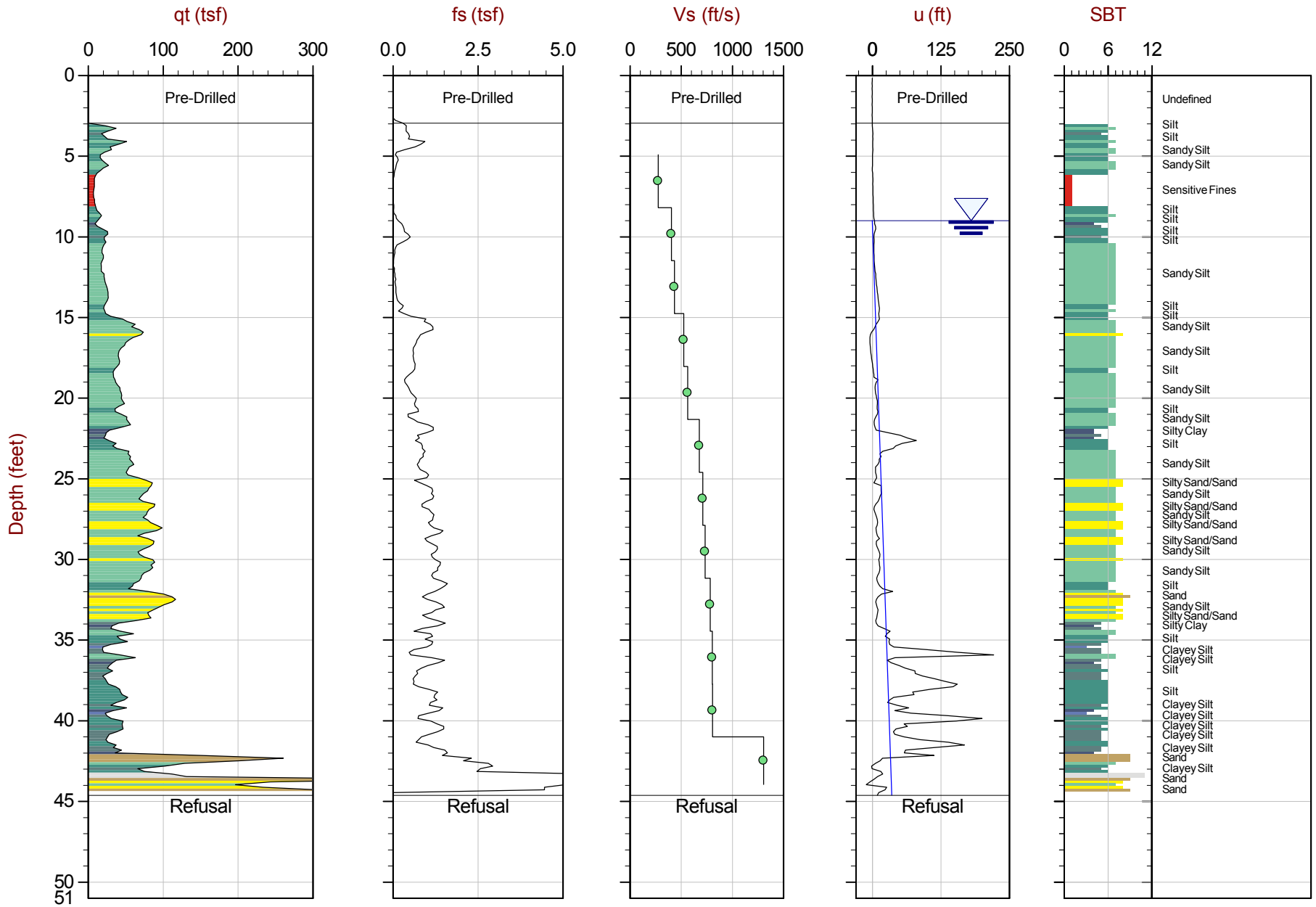
Shear Wave Velocity CPT Plots

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 07:50
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-01
Cone: 361:T1500F15U500



Max Depth: 13.600 m / 44.62 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP01.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511133 E: 589382

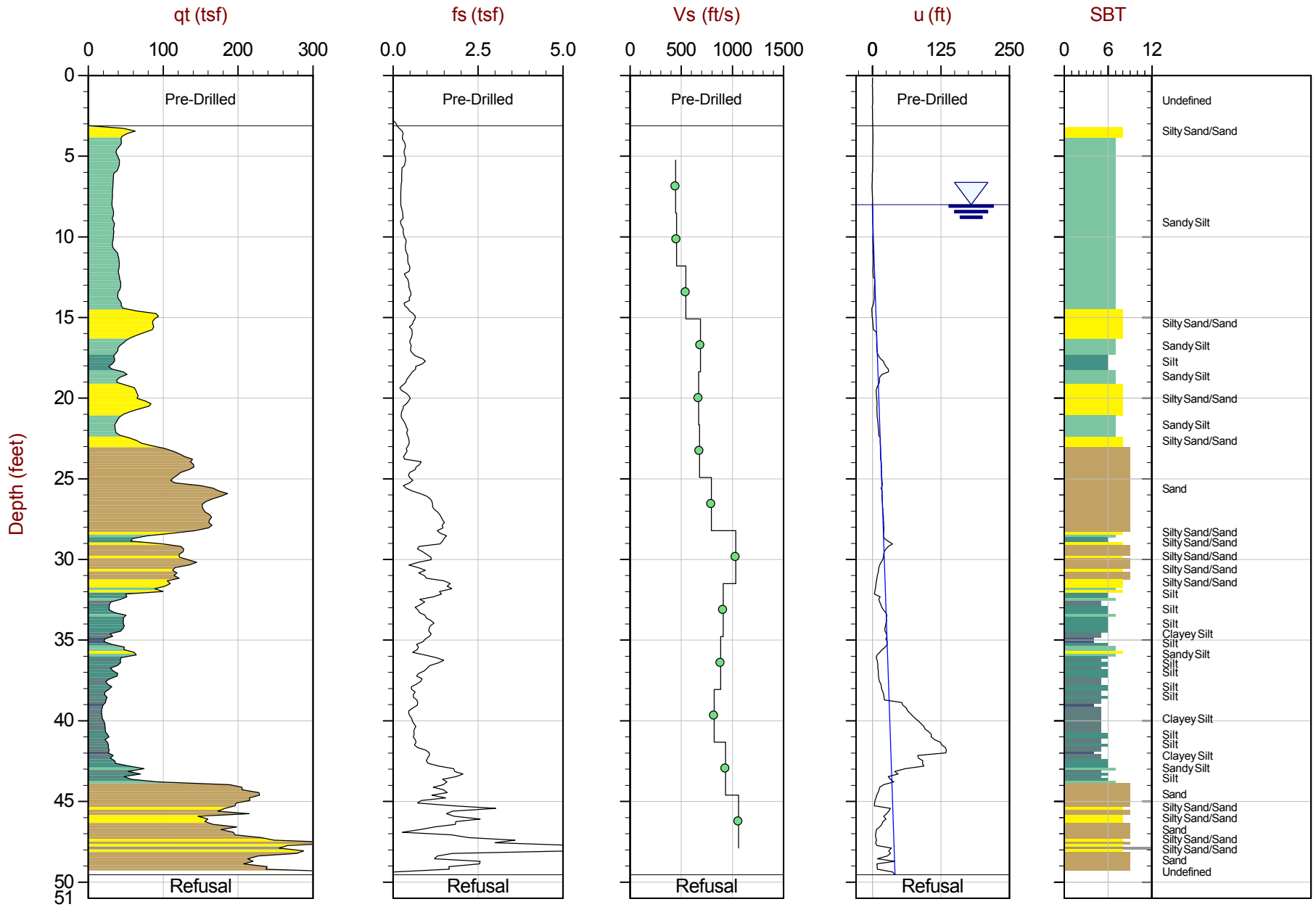
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 09:07
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-02
Cone: 361:T1500F15U500



Max Depth: 15.100 m / 49.54 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP02.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511175 E: 589380

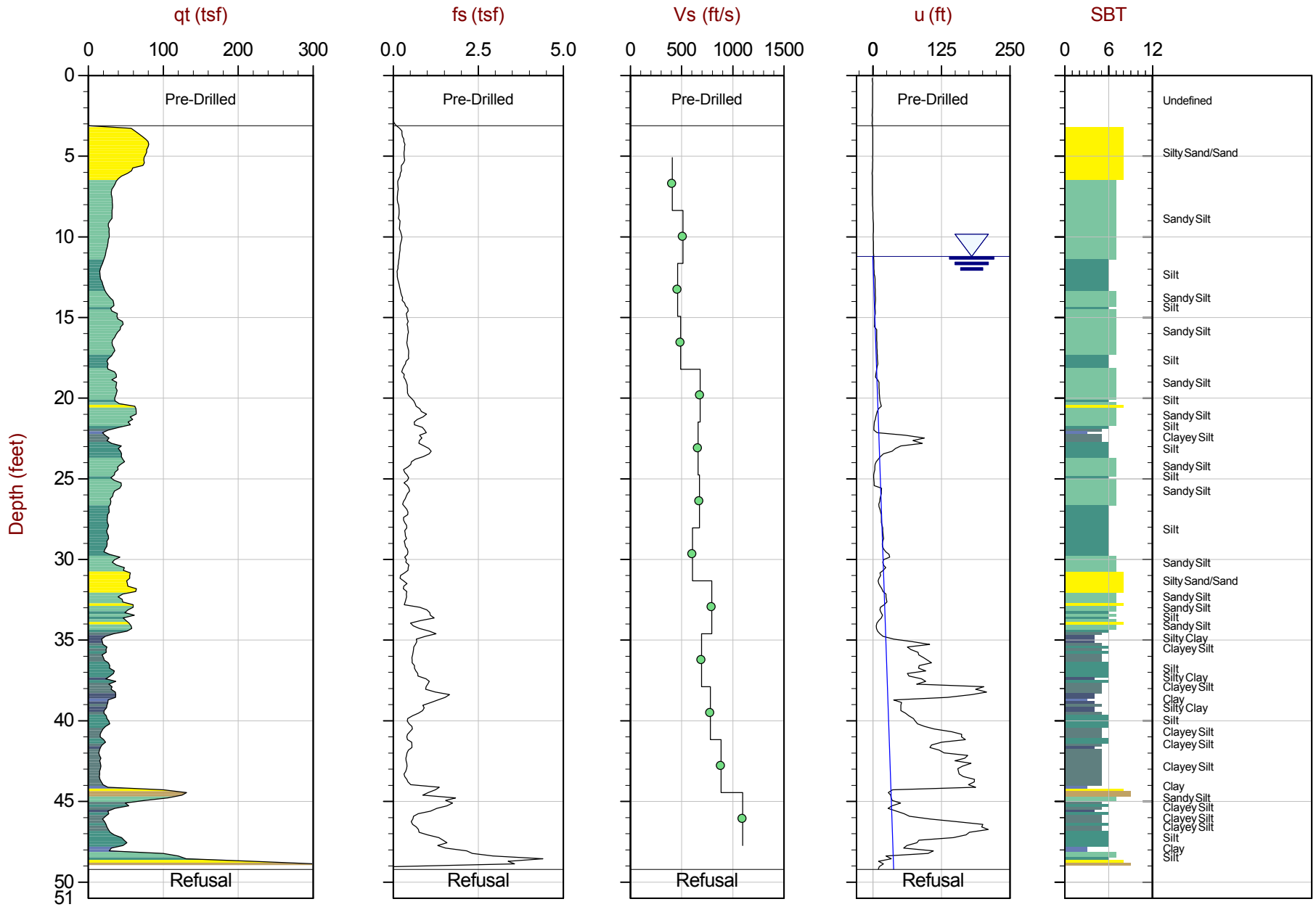
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 10:35
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-03
Cone: 361:T1500F15U500



Max Depth: 15.000 m / 49.21 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP03.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511158 E: 589398

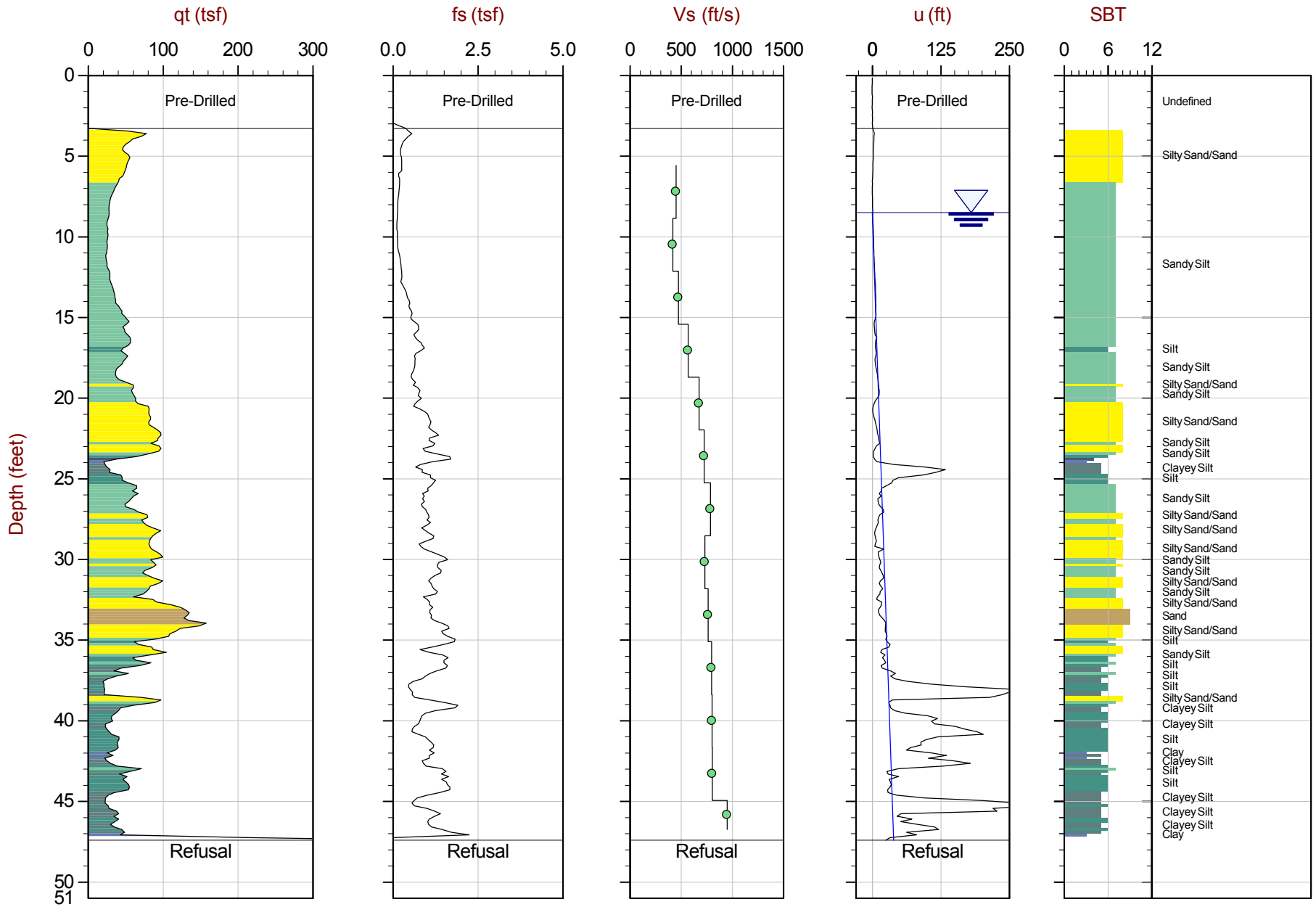
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 12:25
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-04
Cone: 361:T1500F15U500



Max Depth: 14.450 m / 47.41 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP04.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511138 E: 589405

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

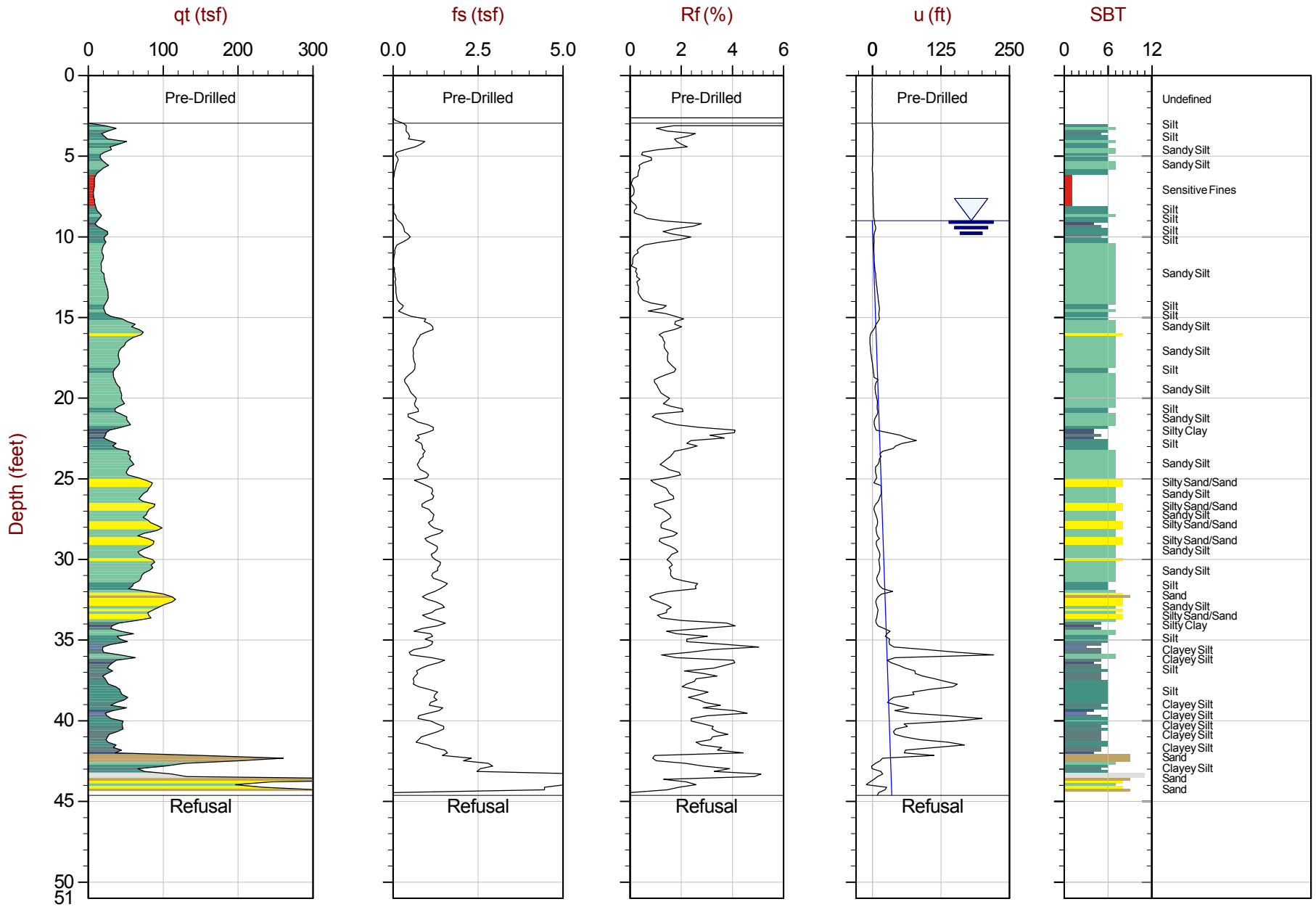
Non-Normalized CPT Plots

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 07:50
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-01
Cone: 361:T1500F15U500



Max Depth: 13.600 m / 44.62 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP01.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511133 E: 589382

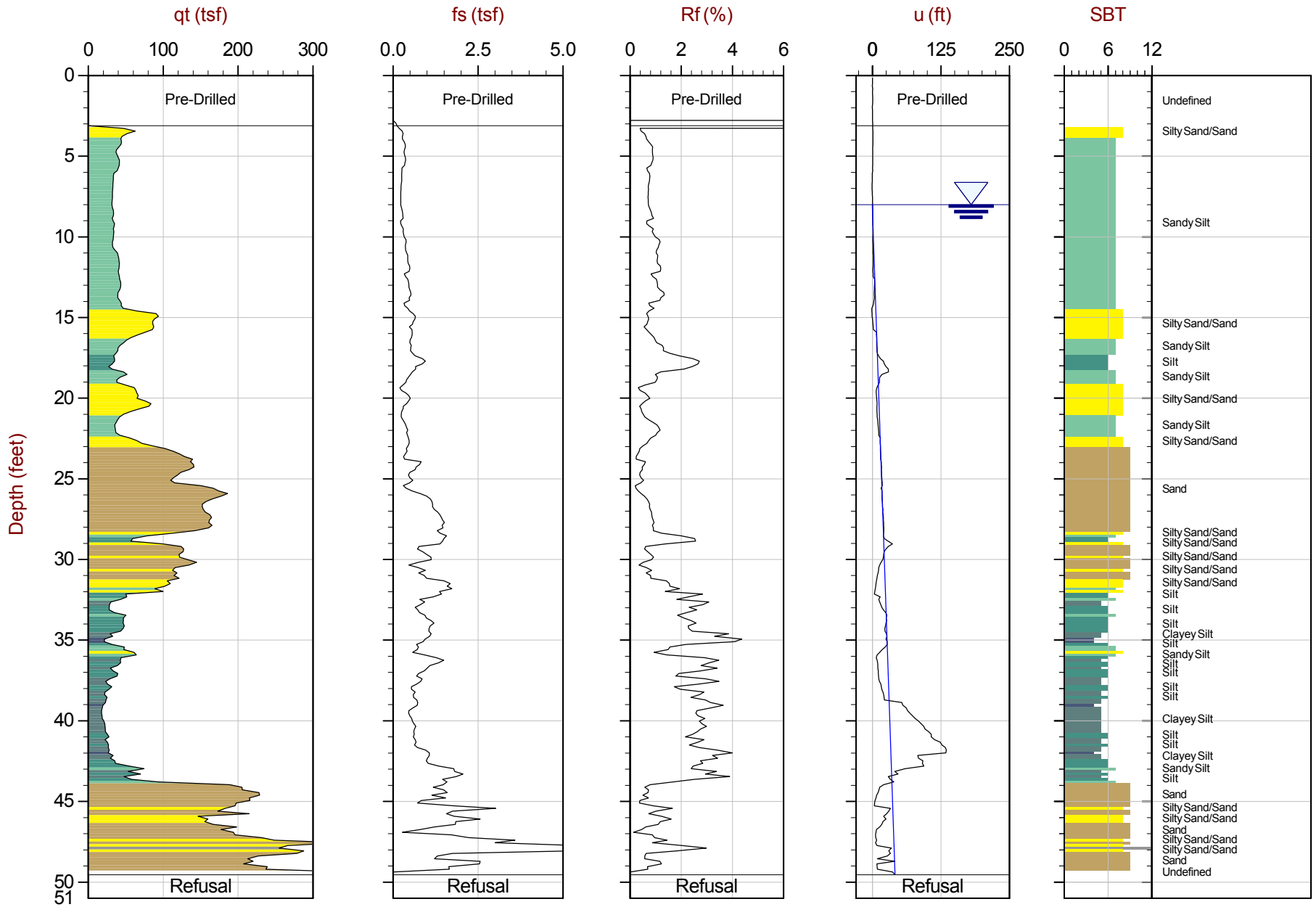
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 09:07
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-02
Cone: 361:T1500F15U500



Max Depth: 15.100 m / 49.54 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP02.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511175 E: 589380

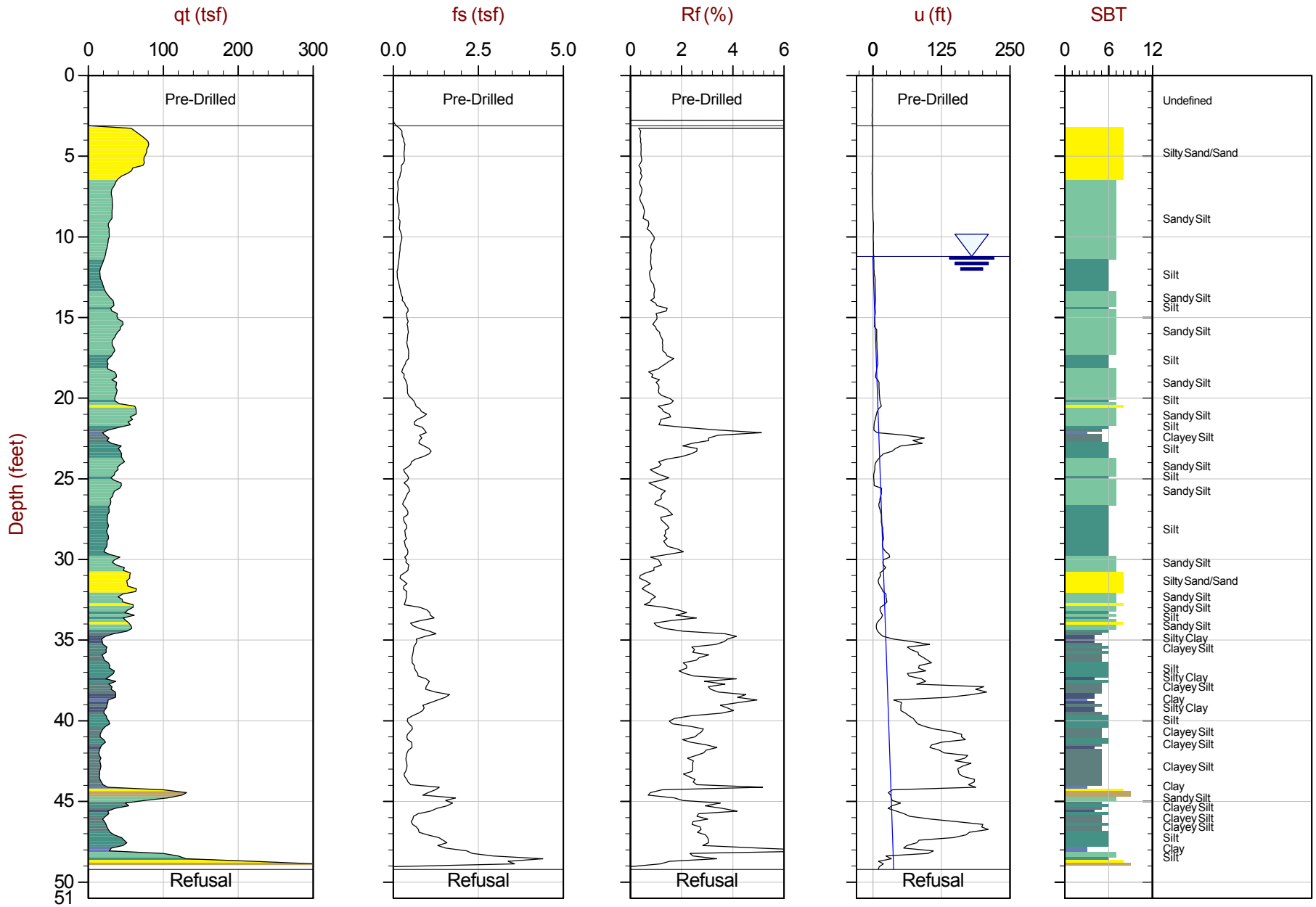
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 10:35
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-03
Cone: 361:T1500F15U500



Max Depth: 15.000 m / 49.21 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP03.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511158 E: 589398

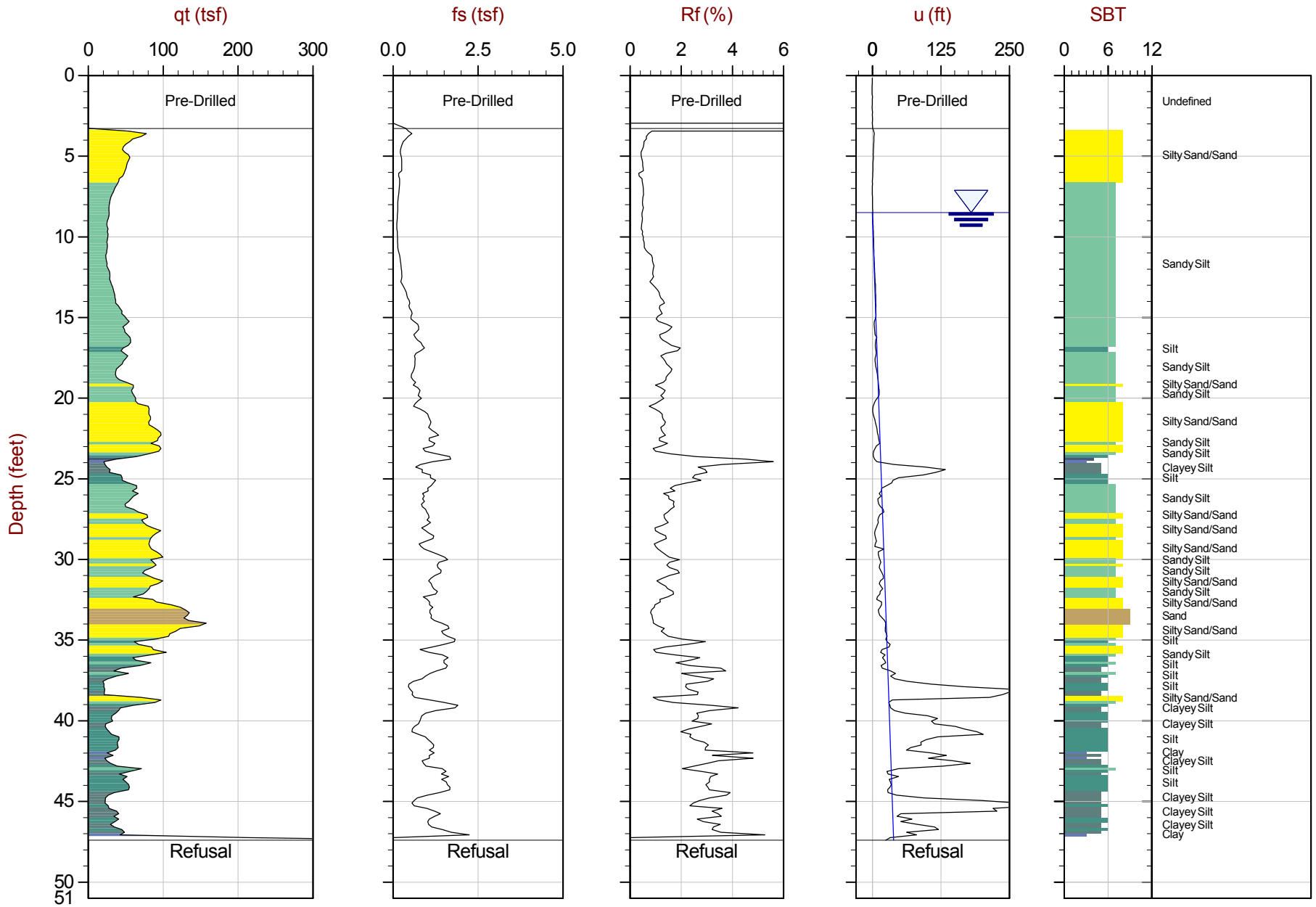
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 12:25
Site: 4430 Purves St. Long Island City, NY

Sounding: SCPT-04
Cone: 361:T1500F15U500



Max Depth: 14.450 m / 47.41 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_SP04.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511138 E: 589405

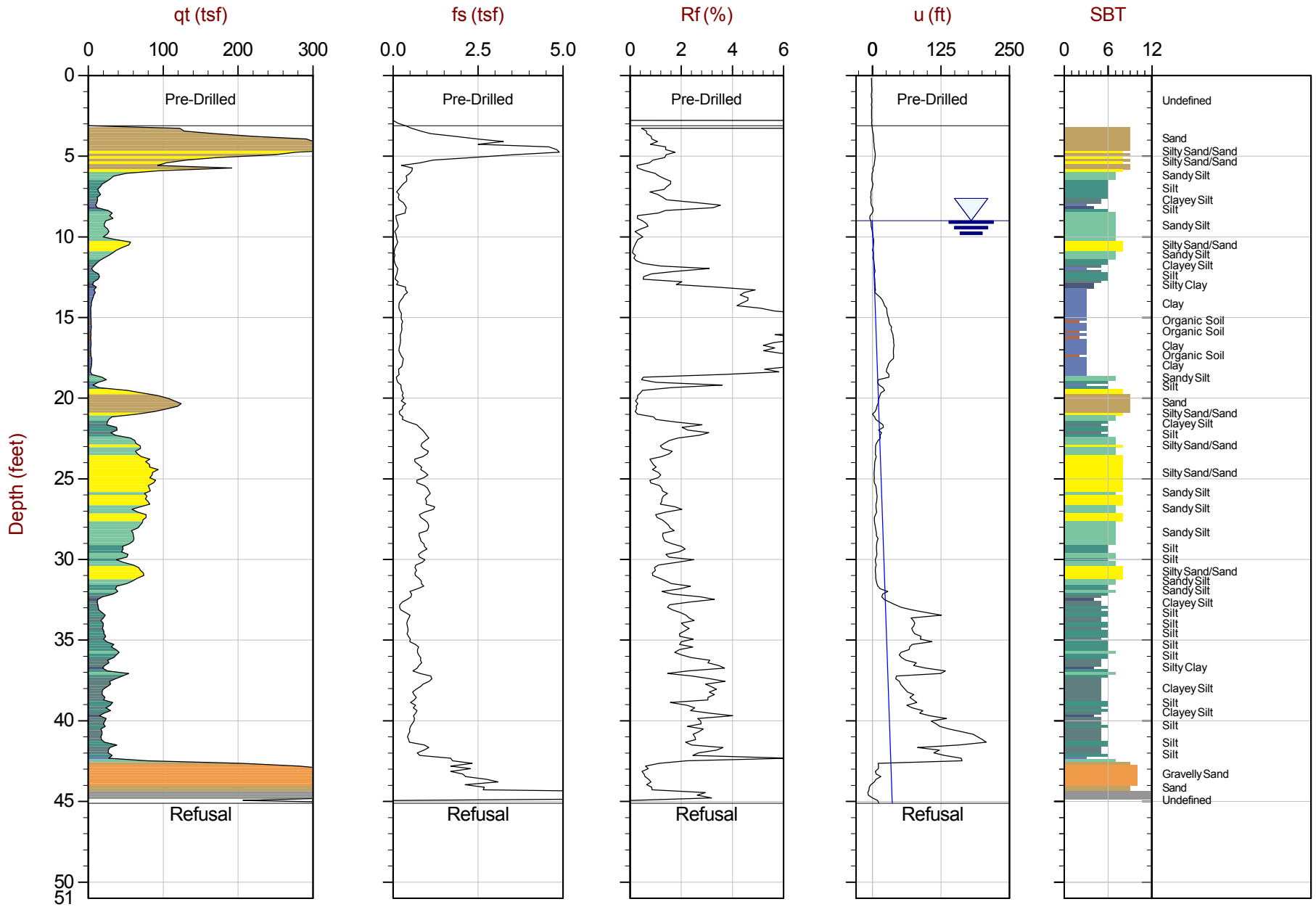
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 13:21
Site: 4430 Purves St. Long Island City, NY

Sounding: CPT-05
Cone: 361:T1500F15U500



Max Depth: 13.750 m / 45.11 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_CP05.COR

SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511144 E: 589362

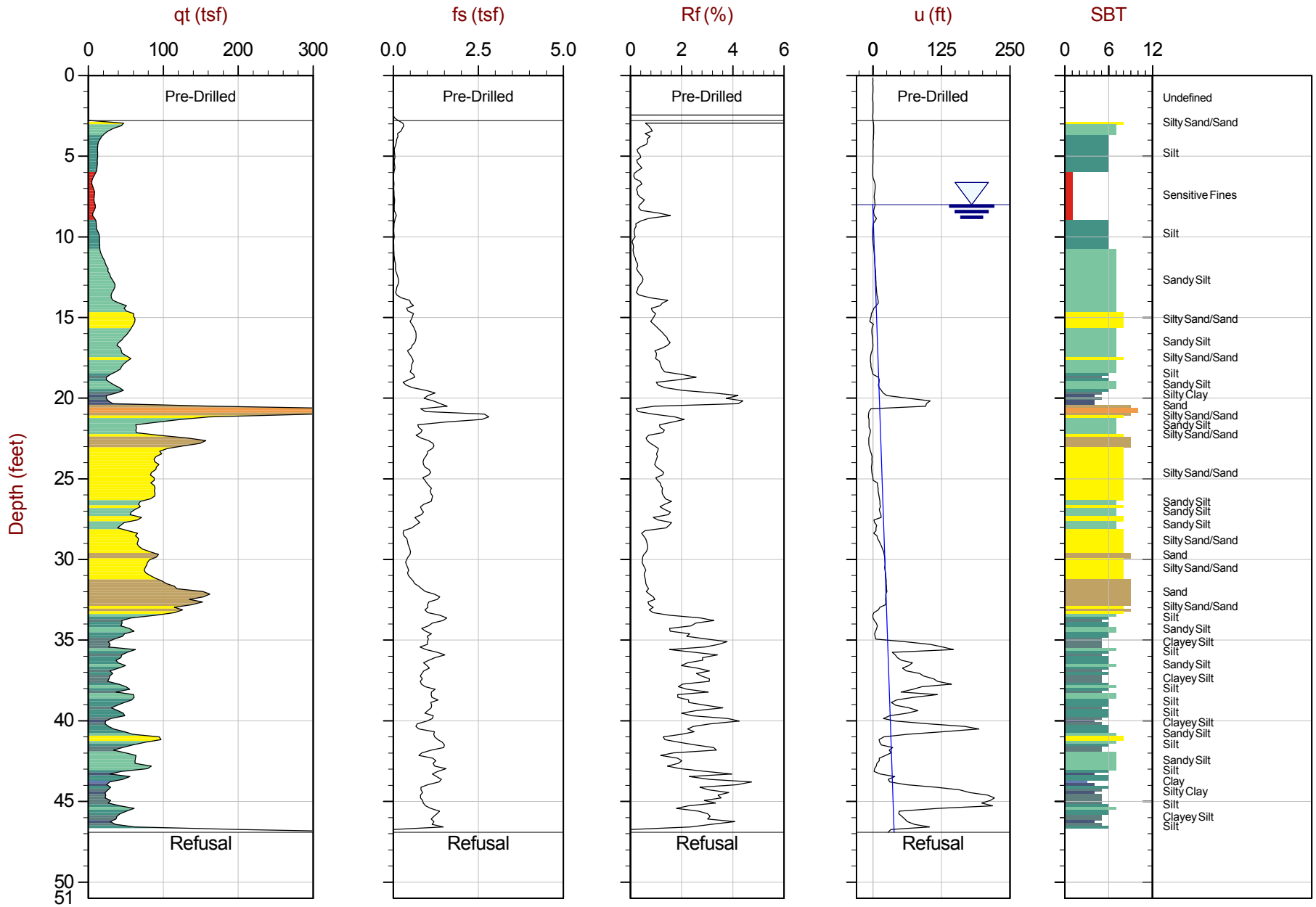
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04:15:14 13:56
Site: 4430 Purves St. Long Island City, NY

Sounding: CPT-06
Cone: 361:T1500F15U500



Max Depth: 14.300 m / 46.92 ft
Depth Inc: 0.050 m / 0.164 ft

File: 14-53021_CP06.COR

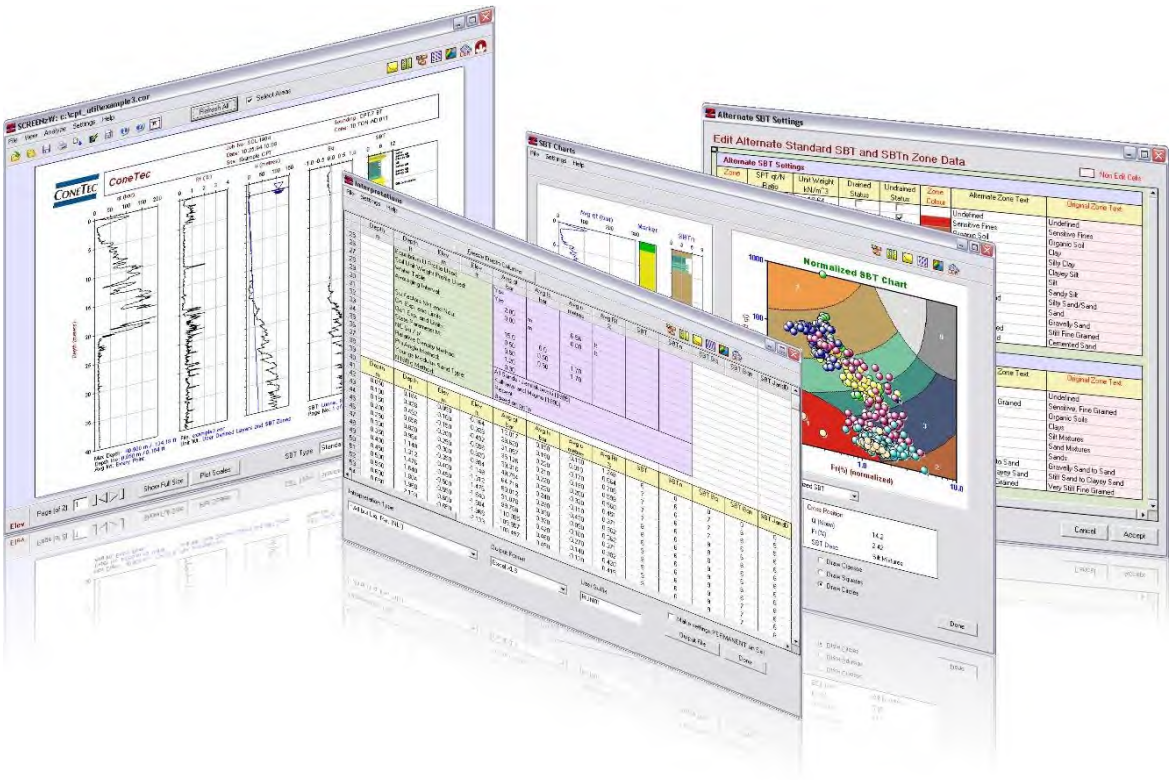
SBT: Lunne, Robertson and Powell, 1997
Coords: UTM Zone 18 N: 4511148 E: 589379

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Appendix B

CONETEC INTERPRETATION METHODS

A Detailed Description of the Methods Used in ConeTec's CPT Interpretation and Plotting Software



Revision SZW-Rev 05A
April 8, 2011

Prepared by Jim Greig

CONETEC

ConeTec Interpretations as of April 8, 2011

ConeTec's interpretation routine provides a tabular output of geotechnical parameters based on current published CPT correlations and is subject to change to reflect the current state of practice. The interpreted values are not considered valid for all soil types. The interpretations are presented only as a guide for geotechnical use and should be carefully scrutinized for consideration in any geotechnical design. Reference to current literature is strongly recommended. ConeTec does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the program and does not assume liability for any use of the results in any design or review. Representative hand calculations should be made for any parameter that is critical for design purposes. The end user of the interpreted output should also be fully aware of the techniques and the limitations of any method used in this program. The purpose of this document is to inform the user as to which methods were used and what the appropriate papers and/or publications are for further reference.

The CPT interpretations are based on values of tip, sleeve friction and pore pressure averaged over a user specified interval (e.g. 0.20m). Note that q_t is the tip resistance corrected for pore pressure effects and q_c is the recorded tip resistance. Since all ConeTec cones have equal end area friction sleeves, pore pressure corrections to sleeve friction, f_s, are not required.

The tip correction is: $q_t = q_c + (1\text{-}a) \cdot u_2$

where: q_t is the corrected tip resistance
q_c is the recorded tip resistance
u_2 is the recorded dynamic pore pressure behind the tip (u_2 position)
a is the Net Area Ratio for the cone (typically 0.80 for ConeTec cones)

The total stress calculations are based on soil unit weights that have been assigned to the Soil Behavior Type zones, from a user defined unit weight profile or by using a single value throughout the profile.

Effective vertical overburden stresses are calculated based on a hydrostatic distribution of equilibrium pore pressures below the water table or from a user defined equilibrium pore pressure profile (this can be obtained from CPT dissipation tests). For over water projects the effects of the column of water have been taken into account as has the appropriate unit weight of water. How this is done depends on where the instruments were zeroed (i.e. on deck or at mud line).

Details regarding the interpretation methods for all of the interpreted parameters are provided in Table 1. The appropriate references cited in Table 1 are listed in Table 2. Where methods are based on charts or techniques that are too complex to describe in this summary the user should refer to the cited material.

The Soil Behavior Type classification charts (normalized and non-normalized) shown in Figures 1 and 2 are based on the charts developed by Dr. Robertson and Dr. Campanella at the University of British Columbia. These charts appear in many publications, most notably: Robertson, Campanella, Gillespie and Greig (1986); Robertson (1990) and Lunne, Robertson and Powell (1997). The Bq classification charts shown in Figures 3a and 3b are based on those described in Robertson (1990) and Lunne, Robertson and Powell (1997). The Jefferies and Davies SBT chart shown in Figure 3c is based on that discussed in Jefferies and Davies, 1993.

Where the results of a calculation/interpretation are declared *'invalid'* the value will be represented by the text strings "-9999" or "-9999.0". In some cases the value 0 will be used. Invalid results will occur because of (and not limited to) one or a combination of:

1. Invalid or undefined CPT data (e.g. drilled out section or data gap).

2. Where the interpretation method is inappropriate, for example, drained parameters in an undrained material (and vice versa).

3. Where interpretation input values are beyond the range of the referenced charts or specified limitations of the interpretation method.

4. Where pre-requisite or intermediate interpretation calculations are invalid.

The parameters selected for output from the program are often specific to a particular project. As such, not all of the interpreted parameters listed in Table 1 may be included in the output files delivered with this report.

The output files are provided in Microsoft Excel XLS format. The ConeTec software has several options for output depending on the number or types of interpreted parameters desired. Each output file will be named using the original COR file basename followed by a three or four letter indicator of the interpretation set selected (e.g. BSC, TBL, NLI or IFI) and possibly followed by an operator selected suffix identifying the characteristics of the particular interpretation run.

Table 1
CPT Interpretation Methods

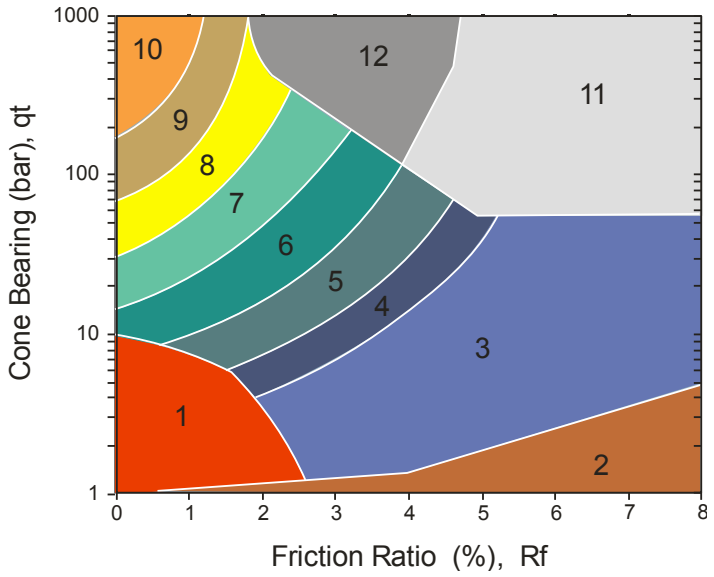
Interpreted Parameter	Description	Equation	Ref
Depth	Mid Layer Depth *(where interpretations are done at each point then Mid Layer Depth = Recorded Depth)*	*Depth (Layer Top) + Depth (Layer Bottom) / 2.0*	
Elevation	Elevation of Mid Layer based on sounding collar elevation supplied by client	Elevation = Collar Elevation - Depth	
Avgqc	Averaged recorded tip value (q_c)	$Avgqc = \frac{1}{n}\sum_{i=1}^{n} q_c$ *n=1 when interpretations are done at each point*	
Avgqt	Averaged corrected tip (q_t) where: $q_t = q_c + (1-a) \bullet u$	$Avgqt = \frac{1}{n}\sum_{i=1}^{n} q_t$ *n=1 when interpretations are done at each point*	
Avgfs	Averaged sleeve friction (f_s)	$Avgfs = \frac{1}{n}\sum_{i=1}^{n} fs$ *n=1 when interpretations are done at each point*	
AvgRf	Averaged friction ratio (Rf) where friction ratio is defined as: $Rf = 100\% \bullet \frac{fs}{qt}$	$AvgRf = 100\% \cdot \frac{Avgfs}{Avgqt}$ *n=1 when interpretations are done at each point*	
Avgu	Averaged dynamic pore pressure *(u)*	$Avgu = \frac{1}{n}\sum_{i=1}^{n} u_i$ *n=1 when interpretations are done at each point*	
AvgRes	Averaged Resistivity (this data is not always available since it is a specialized test requiring an additional module)	$Avgu = \frac{1}{n}\sum_{i=1}^{n} RESISTIVITY_i$ *n=1 when interpretations are done at each point*	
AvgUVIF	Averaged UVIF ultra-violet induced fluorescence (this data is not always available since it is a specialized test requiring an additional module)	$Avgu = \frac{1}{n}\sum_{i=1}^{n} UVIF_i$ *n=1 when interpretations are done at each point*	
AvgTemp	Averaged Temperature (this data is not always available since it is a specialized test)	$Avgu = \frac{1}{n}\sum_{i=1}^{n} TEMPERATUR\,E_i$ *n=1 when interpretations are done at each point*	

Interpreted Parameter	Description	Equation	Ref
AvgGamma	Averaged Gamma Counts (this data is not always available since it is a specialized test requiring an additional module)	$Avgu = \frac{1}{n}\sum_{i=1}^{n} GAMMA_i$ *n=1 when interpretations are done at each point*	
SBT	Soil Behavior Type as defined by Robertson and Campanella	See Figure 1	2, 5
U.Wt.	Unit Weight of soil determined from one of the following user selectable options: 1) uniform value 2) value assigned to each SBT zone 3) user supplied unit weight profile	See references	5
T. Stress σ_v	Total vertical overburden stress at Mid Layer Depth. *A layer is defined as the averaging interval specified by the user. For data interpreted at each point the Mid Layer Depth is the same as the recorded depth.*	$TStress = \sum_{i=1}^{n} \gamma_i h_i$ *where* γ_i is layer unit weight h_i is layer thickness	
E. Stress σ_v'	Effective vertical overburden stress at Mid Layer Depth	*Estress = Tstress - u_{eq}*	
Ueq	Equilibrium pore pressure determined from one of the following user selectable options: 1) hydrostatic from water table depth 2) user supplied profile	For hydrostatic option: $u_{eq} = \gamma_w \cdot (D - D_{wt})$ where u_{eq} is equilibrium pore pressure γ_w is unit weight of water D is the current depth D_{wt} is the depth to the water table	
Cn	SPT N_{60} overburden correction factor	*$Cn=(\sigma_v')^{-0.5}$* where *σ_v' is in tsf* *$0.5 < C_n < 2.0$*	
N_{60}	SPT N value at 60% energy calculated from qt/N ratios assigned to each SBT zone. This method has abrupt N value changes at zone boundaries.	*See Figure 1*	4, 5
$(N_1)_{60}$	SPT N_{60} value corrected for overburden pressure	*$(N_1)_{60} = Cn \cdot N_{60}$*	4
$N_{60}I_c$	SPT N_{60} values based on the Ic parameter	(qt/pa)/ N_{60} = 8.5 (1 – Ic/4.6)	5
$(N_1)_{60}$Ic	SPT N_{60} value corrected for overburden pressure (using N_{60} I_c). User has 2 options.	*1) $(N_1)_{60}Ic = Cn \cdot (N_{60}\, Ic)$* 2) q_{c1n}/ *$(N_1)_{60}Ic$* = 8.5 (1 – Ic/4.6)	4 5
$(N_1)_{60cs}$Ic	Clean sand equivalent SPT $(N_1)_{60}$Ic. User has 3 options.	1) $(N_1)_{60cs}Ic = \alpha + \beta((N_1)_{60}Ic)$ 2) $(N_1)_{60cs}Ic = K_{SPT} * ((N_1)_{60}Ic)$ 3) q_{c1ncs})/ $(N_1)_{60cs}Ic = 8.5 (1 – Ic/4.6)$ FC ≤ 5%: α = 0, β=1.0 FC ≥ 35% α = 5.0, β=1.2 5% < FC < 35% $\alpha = \exp[1.76 – (190/FC^2)]$ $\beta = [0.99 + (FC^{1.5}/1000)]$	10 10 5
Su	Undrained shear strength based on q_t Su factor N_{kt} is user selectable	$Su = \frac{qt - \sigma_v}{N_{kt}}$	1, 5
Su	Undrained shear strength based on pore pressure Su factor $N_{\Delta u}$ is user selectable	$Su = \frac{u_2 - u_{eq}}{N_{\Delta u}}$	1, 5
k	Coefficient of permeability (assigned to each SBT zone)		5

Interpreted Parameter	Description	Equation	Ref
Bq	Pore pressure parameter	$Bq = \frac{\Delta u}{qt - \sigma_v}$ *where:* $\Delta u = u - u_{eq}$ *and u = dynamic pore pressure* *u_{eq} = equilibrium pore pressure*	1, 5
Q_t	Normalized q_t for Soil Behavior Type classification as defined by Robertson, 1990	$Qt = \frac{qt - \sigma_v}{\sigma'_v}$	2, 5
F_r	Normalized Friction Ratio for Soil Behavior Type classification as defined by Robertson, 1990	$Fr = 100\% \cdot \frac{fs}{qt - \sigma_v}$	2, 5
Net qt	Net tip resistance	$qt - \sigma_v$	
qe	Effective tip resistance	$qt - u_2$	
qeNorm	Normalized effective tip resistance	$\frac{qt - u_2}{\sigma'_v}$	
SBTn	Normalized Soil Behavior Type as defined by Robertson and Campanella	See Figure 2	2, 5
SBT-BQ	Non-normalized Soil Behavior type based on the Bq parameter	See Figure 3	2, 5
SBT-BQn	Normalized Soil Behavior based on the Bq parameter	See Figure 3	2, 5
SBT-JandD	Soil Behaviour Type as defined by Jeffries and Davies	See Figure 3	7
SBT-BQn	Normalized Soil Behavior base on the Bq parameter	See Figure 3	2, 5
I_c	Soil index for estimating grain characteristics	$Ic = [(3.47 - \log_{10}Q)^2 + (\log_{10} Fr + 1.22)^2]^{0.5}$ *Where:* $Q = \left(\frac{qt - \sigma_v}{P_{a2}}\right)\left(\frac{P_a}{\sigma'_v}\right)^n$ *And Fr is in percent* *P_a = atmospheric pressure* *P_{a2} = atmospheric pressure* *n varies from 0.5 to 1.0 and is selected in an iterative manner based on the resulting I_c*	3, 8
FC	Apparent fines content (%)	*FC=1.75($Ic^{3.25}$) - 3.7* *FC=100 for Ic > 3.5* *FC=0 for Ic < 1.26* *FC = 5% if 1.64 < Ic < 2.6 AND F_r<0.5*	3
Ic Zone	This parameter is the Soil Behavior Type zone based on the Ic parameter (valid for zones 2 through 7 on SBTn chart)	Ic < 1.31 Zone = 7 1.31 < Ic < 2.05 Zone = 6 2.05 < Ic < 2.60 Zone = 5 2.60 < Ic < 2.95 Zone = 4 2.95 < Ic < 3.60 Zone = 3 Ic > 3.60 Zone = 2	3
PHI ϕ	Friction Angle determined from one of the following user selectable options: a) Campanella and Robertson b) Durgunoglu and Mitchel c) Janbu d) Kulhawy and Mayne	See reference	5 5 5 11

Interpreted Parameter	Description	Equation	Ref
Dr	Relative Density determined from one of the following user selectable options: a) Ticino Sand b) Hokksund Sand c) Schmertmann 1976 d) Jamiolkowski - All Sands	See reference	5
OCR	Over Consolidation Ratio	a) Based on Schmertmann's method involving a plot of S_u/σ_v' /($S_u/\sigma_v')_{NC}$ and OCR where the Su/p' ratio for NC clay is user selectable	9
State Parameter	The state parameter is used to describe whether a soil is contractive (SP is positive) or dilative (SP is negative) at large strains based on the work by Been and Jefferies	See reference	8, 6, 5
Es/qt	Intermediate parameter for calculating Young's Modulus, E, in sands. It is the Y axis of the reference chart.	Based on Figure 5.59 in the reference	5
Young's Modulus E	Young's Modulus based on the work done in Italy. There are three types of sands considered in this technique. The user selects the appropriate type for the site from: a) OC Sands b) Aged NC Sands c) Recent NC Sands Each sand type has a family of curves that depend on mean normal stress. The program calculates mean normal stress and linearly interpolates between the two extremes provided in the Es/qt chart.	Mean normal stress is evaluated from: $\sigma_m' = \frac{1}{3}(\sigma_v' + \sigma_h' + \sigma_h')$ where σ_v'= vertical effective stress σ_h'= horizontal effective stress and $\sigma_h = K_o \cdot \sigma_v'$ with Ko assumed to be 0.5	5
q_{c1}	q_t normalized for overburden stress used for seismic analysis	$q_{c1} = q_t \cdot (Pa/\sigma_v')^{0.5}$ where: Pa = atm. Pressure q_t is in MPa	3
q_{c1n}	q_{c1} in dimensionless form used for seismic analysis	$q_{c1n} = (q_{c1} / Pa)(Pa/\sigma_v')^n$ where: Pa = atm. Pressure and n ranges from 0.5 to 0.75 based on Ic.	3
K_{SPT}	Equivalent clean sand factor for $(N_1)60$	$K_{SPT} = 1 + ((0.75/30) \cdot (FC - 5))$	10
K_{CPT}	Equivalent clean sand correction for q_{c1N}	$K_{cpt} = 1.0$ for $I_c \leq 1.64$ $K_{cpt} = f(I_c)$ for $I_c > 1.64$ (see reference)	10
q_{c1ncs}	Clean sand equivalent q_{c1n}	$q_{c1ncs} = q_{c1n} \cdot K_{cpt}$	3
CRR	Cyclic Resistance Ratio (for Magnitude 7.5)	$q_{c1ncs} < 50$: $CRR_{7.5} = 0.833\ [(q_{c1ncs}/1000] + 0.05$ $50 \leq q_{c1ncs} < 160$: $CRR_{7.5} = 93\ [(q_{c1ncs}/1000]^3 + 0.08$	10

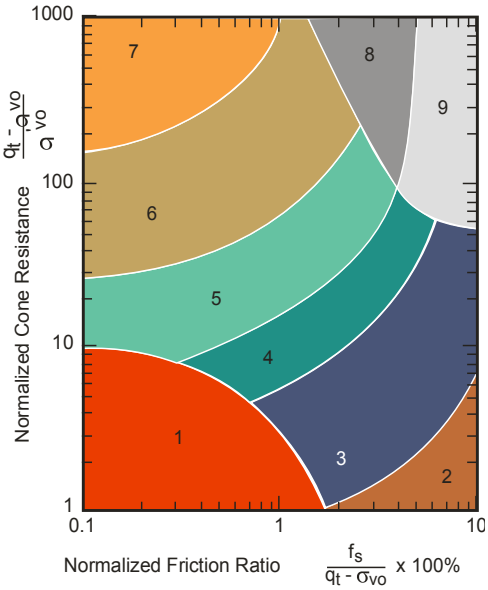
Interpreted Parameter	Description	Equation	Ref
CSR	Cyclic Stress Ratio	$CSR = (\tau_{av}/\sigma_v') = 0.65\ (a_{max} / g)\ (\sigma_v/ \sigma_v')\ r_d$ $r_d = 1.0 - 0.00765\ z$ $\quad z \leq 9.15m$ $r_d = 1.174 - 0.0267\ z$ $\quad 9.15 < z \leq 23m$ $r_d = 0.744 - 0.008\ z$ $\quad 23 < z \leq 30m$ $r_d = 0.50$ $\quad z > 30m$	10
MSF	Magnitude Scaling Factor	See Reference	10
FofS	Factor of Safety against Liquefaction	$FS = (CRR_{7.5} / CSR)\ MSF$	10
Liquefaction Status	Statement indicating possible liquefaction	Takes into account FofS and limitations based on I_c and q_{c1ncs}.	10
Cont/Dilat Tip	Contractive / Dilative qc1 Boundary based on $(N_1)_{60}$	$(\sigma_v')_{boundary} = 9.58 \times 10^{-4}\ [(N_1)_{60}]^{4.79}$ qc1 is calculated from specified qt(MPa)/N ratio	13
Cq	Normalizing Factor	$Cq = 1.8 / (0.8 + ((\sigma_v'/Pa))$	12
qc1 (Cq)	Normalized tip resistance based on Cq	$q_{c1} = C_q * q_t$ (some papers use q_c)	12
Su(Liq)/s'v	Liquefied Shear Strength Ratio	$\frac{Su(Liq)}{\sigma_v'} = 0.03 + 0.0143(q_{c1})$	13



Zone	qt / N	Soil Behavior Type
1	2	sensitive fine grained
2	1	organic material
3	1	clay
4	1.5	silty clay to clay
5	2	clayey silt to silty clay
6	2.5	sandy silt to clayey silt
7	3	silty sand to sandy silt
8	4	sand to silty sand
9	5	sand
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

* overconsolidated or cemented

Figure 1 Non-Normalized Behavior Type Classification Chart



Zone	Normalized Soil Behavior Type
1	sensitive fine grained
2	organic material
3	clay to silty clay
4	clayey silt to silty clay
5	silty sand to sandy silt
6	clean sands to silty sands
7	gravelly sand to sand
8	very stiff sand to clayey sand
9	very stiff fine grained

Figure 2 Normalized Behavior Type Classification Chart

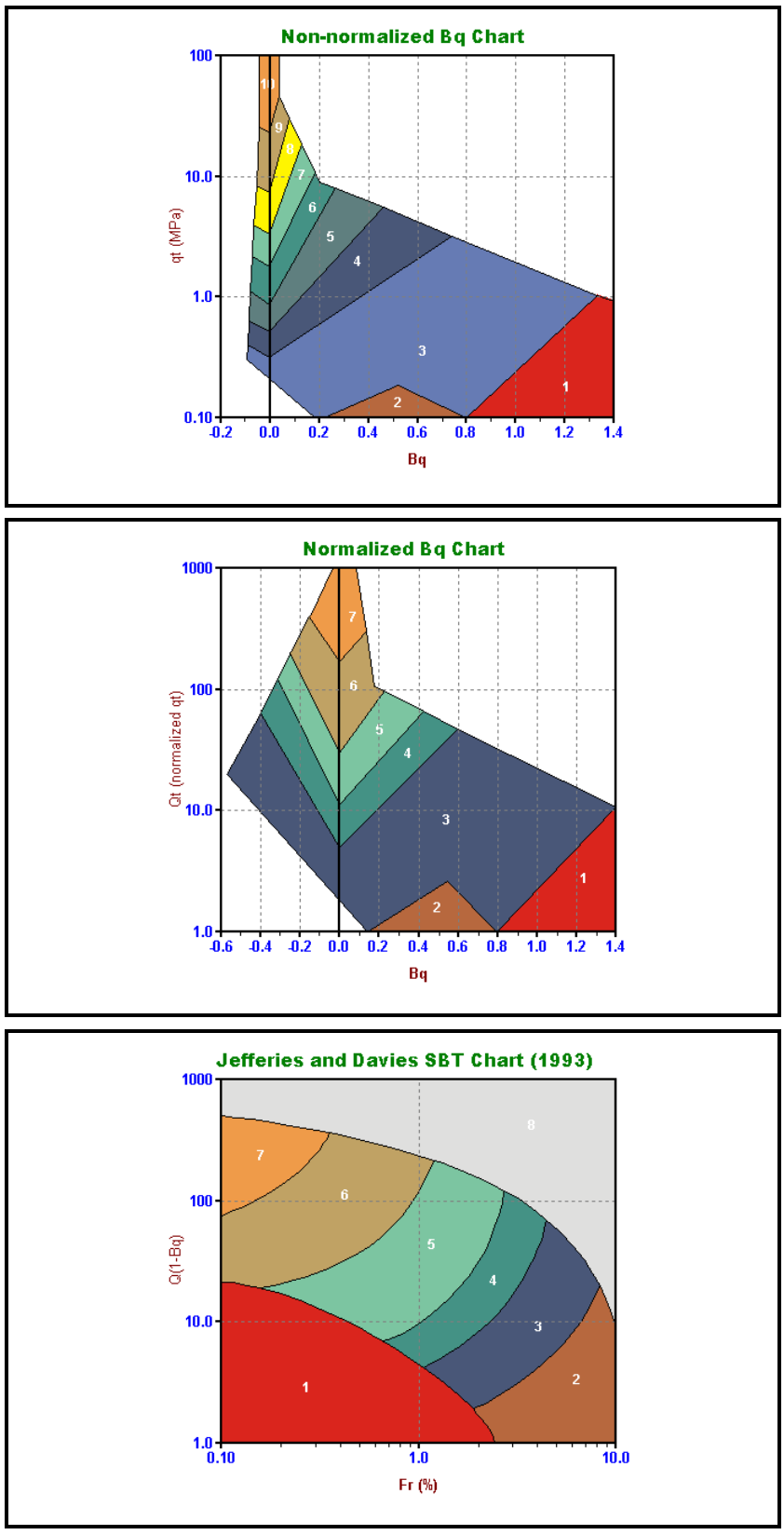


Figure 3 – Alternate Soil Behaviour Type Charts

Table 2 References

No.	References
1	Robertson, P.K., Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of InSitu 86, ASCE Specialty Conference, Blacksburg, Virginia.
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10	Proceedings of theNCEER Workshop on Evaluation of Liquefaction Resistance of Soils, Salt LakeCity, 1996. Chaired by Leslie Youd. 11
11	Kulhawy, F.H. and Mayne, P.W. ,1990, "Manual on Estimating Soil Properties for Foundation Design, *Report No. EL-6800"*, Electric Power Research Institute, Palo Alto, CA, August 1990, 306 p.
12	Olson, S.M. and Stark, T.D., 2002, "Liquefied strength ratio from liquefied flow filaure case histories", Canadian Geotechnical Journal, 39: 951-966.
13	Oslon, Scott M. and Stark, Timothy D., 2003, "Yield Strength Ratio and Liquefaction Analysis of Slopes and Embankments", Journal of Geotechnical and Geoenvironmental Engineering, ASCE, August 2003.

Appendix C

Job No: 14-53021
Client: Langan Engineering
Project: 4430 Purves St., Long Island City, NY
Date: April 15, 2014

Table 2 - DISSIPATION TRACE SUMMARY

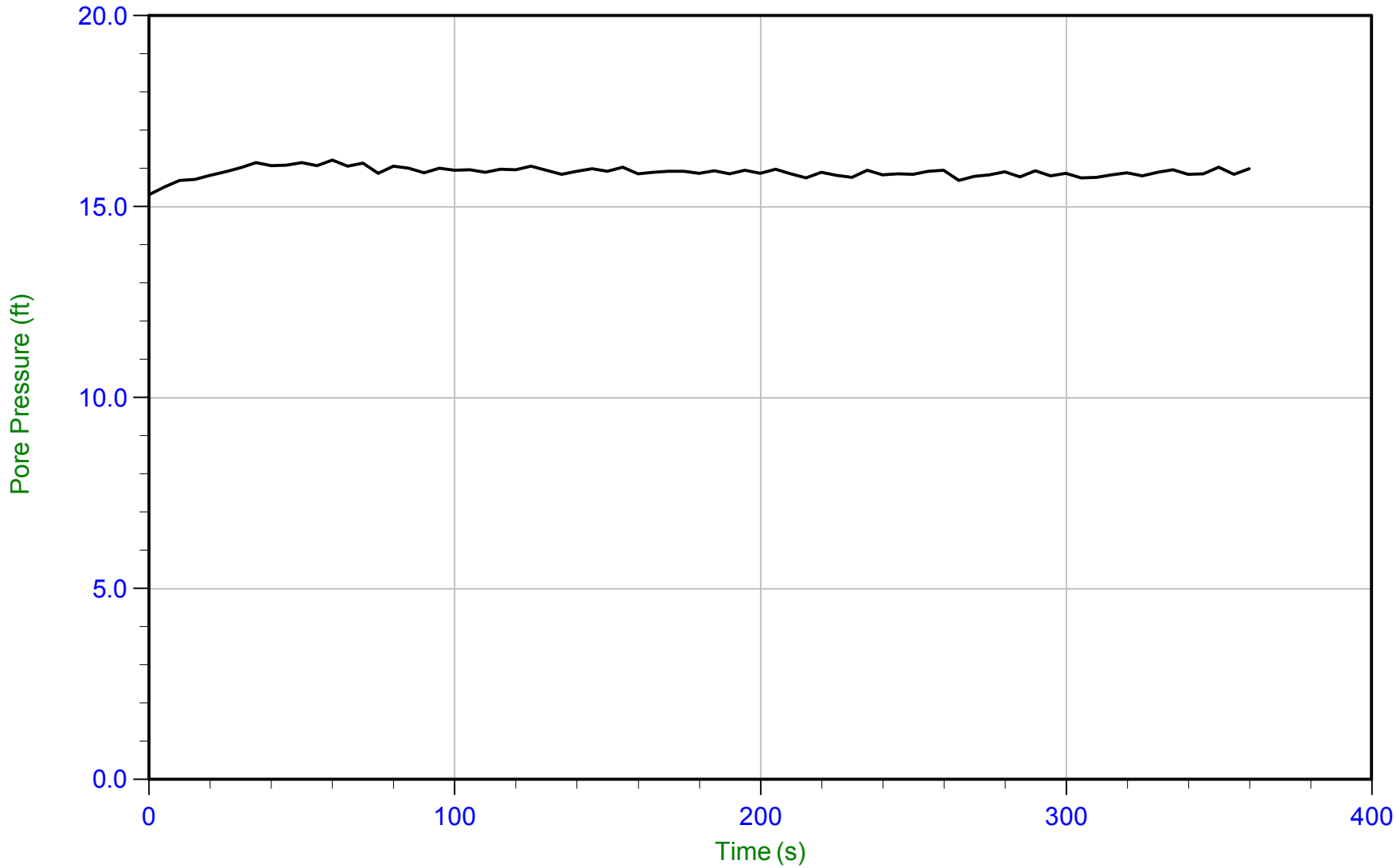
Sounding ID	Duration	Depth	Min. U	Max. U	Calc. Phrea. Surface	Est. Phrea. Surface	T50	Ch
	sec.	ft	ft	ft	ft	ft	sec.	cm^2/min.
SCPT-02	360	7.25	15.32	16.22	8.0			
SCPT-03	305	15.00	8.88	39.26	11.2			
	665	sec.						
	0.18	hr.						

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04/15/2014 09:07
Site: 4430 Purves St.

Sounding: SCPT-02
Cone: 361:T1500F15U500
Cone Area: 15 sq cm



Trace Summary:

Filename: 14-53021_SP02.PPD
Depth: 7.250 m / 23.786 ft
Duration: 360.0 s

U Min: 15.3 ft
U Max: 16.2 ft

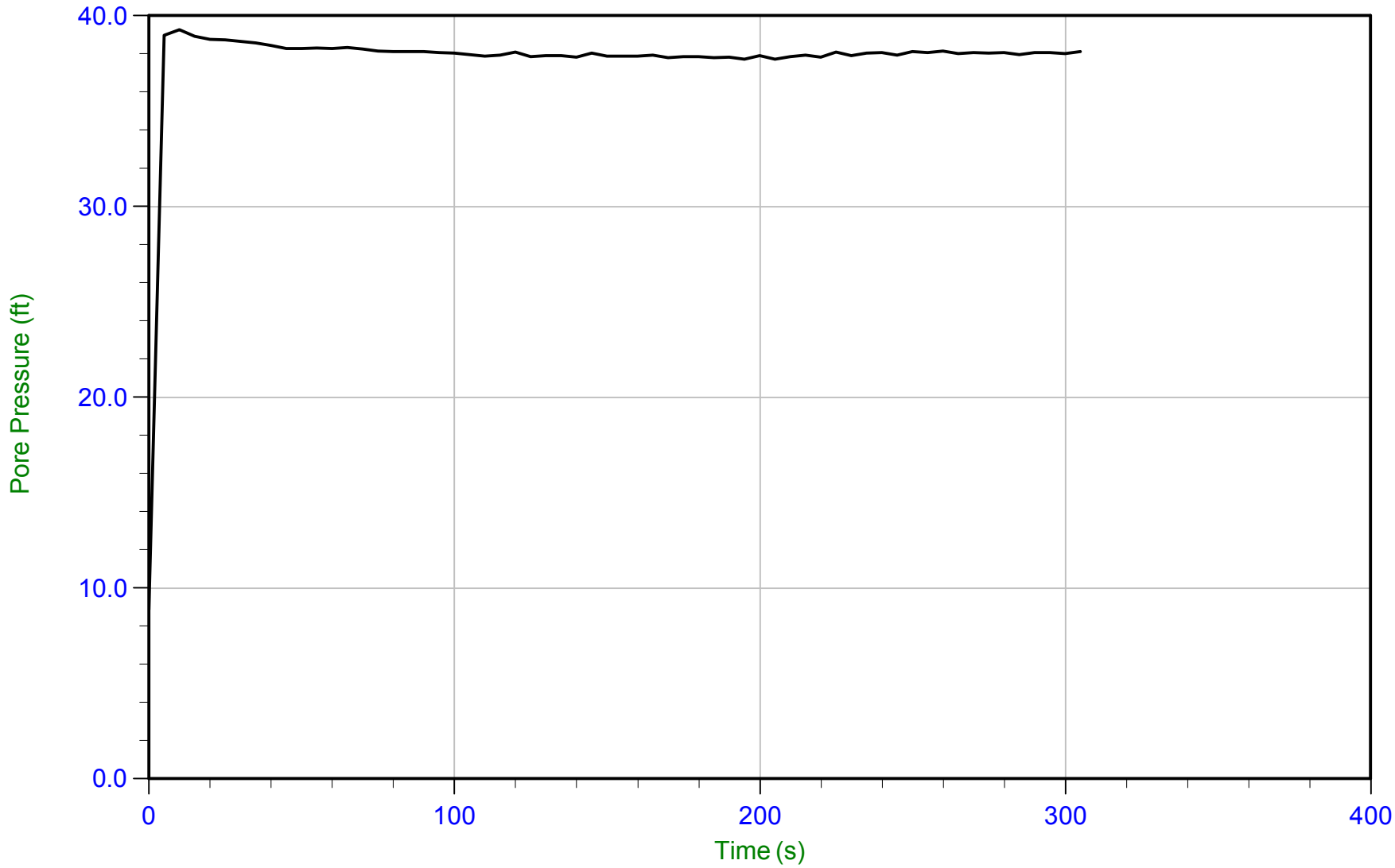
WT: 2.441 m / 8.008 ft
Ueq: 15.8 ft

CONETEC

Langan Engineering

Job No: 14-53021
Date: 04/15/2014 10:35
Site: 4430 Purves St.

Sounding: SCPT-03
Cone: 361:T1500F15U500
Cone Area: 15 sq cm



Trace Summary:

Filename: 14-53021_SP03.PPD
Depth: 15.000 m / 49.212 ft
Duration: 305.0 s

U Min: 8.9 ft
U Max: 39.3 ft

WT: 3.416 m / 11.207 ft
Ueq: 38.0 ft

Appendix D

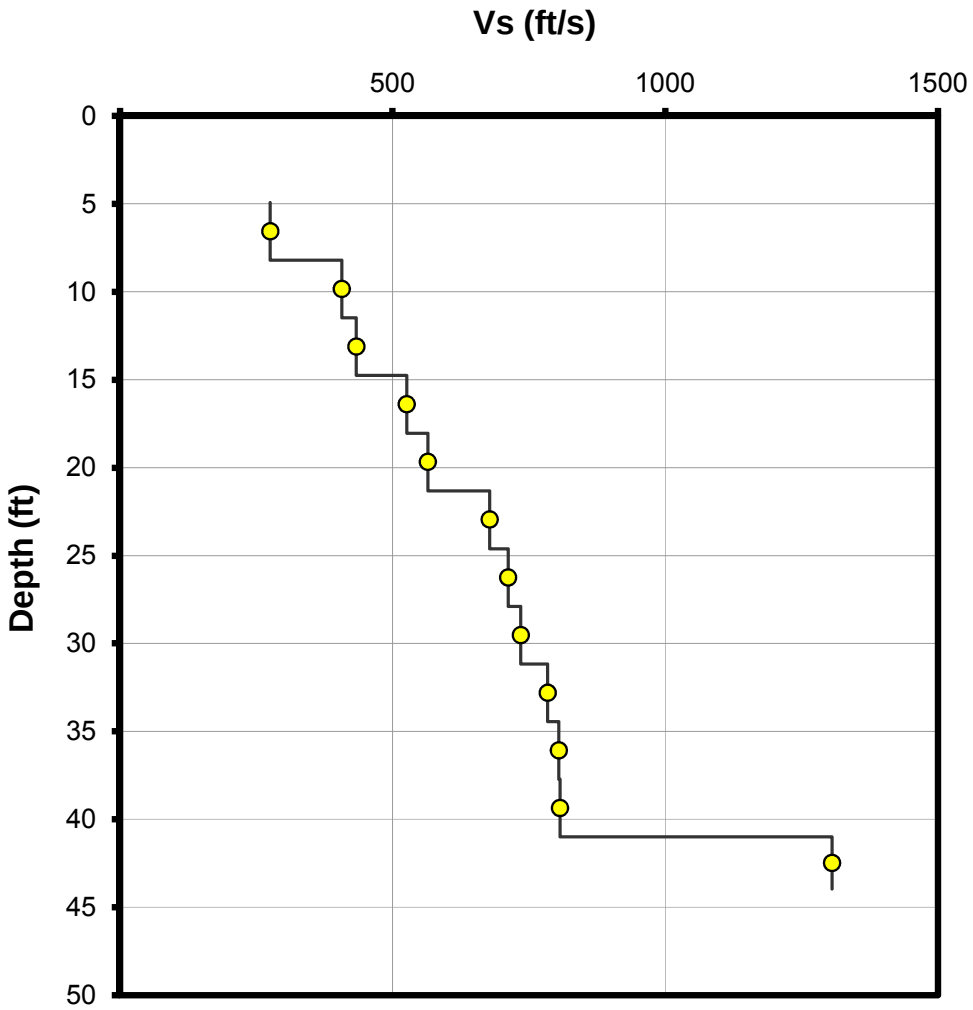
Client:	Langan Engineering
Project:	4430 Purves St., Long Island City, NY
Sounding:	SCPT-01
Date:	April 15, 2014

Seismic Source:	Beam	
Source Offset:	1.60	(ft)
Source Depth:	0.00	(ft)
Geophone Offset:	0.66	(ft)

SEISMIC - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Depth Interval (ft)	Time Interval (ms)	Mid-layer Depth (ft)	Vs Interval Velocity (ft/s)
5.58	4.92	5.17				
8.86	8.20	8.36	3.18	11.55	6.56	275
12.14	11.48	11.59	3.24	7.97	9.84	406
15.42	14.76	14.85	3.26	7.51	13.12	434
18.70	18.04	18.12	3.27	6.21	16.40	526
21.98	21.33	21.39	3.27	5.79	19.68	565
25.26	24.61	24.66	3.27	4.83	22.97	678
28.54	27.89	27.93	3.27	4.60	26.25	712
31.82	31.17	31.21	3.28	4.46	29.53	735
35.10	34.45	34.49	3.28	4.18	32.81	784
38.39	37.73	37.76	3.28	4.07	36.09	805
41.67	41.01	41.04	3.28	4.06	39.37	807
44.62	43.96	43.99	2.95	2.26	42.49	1306

Client:	Langan Engineering
Location:	4430 Purves St., Long Island City, NY
CPT Sounding:	SCPT-01
Date:	April 15, 2014



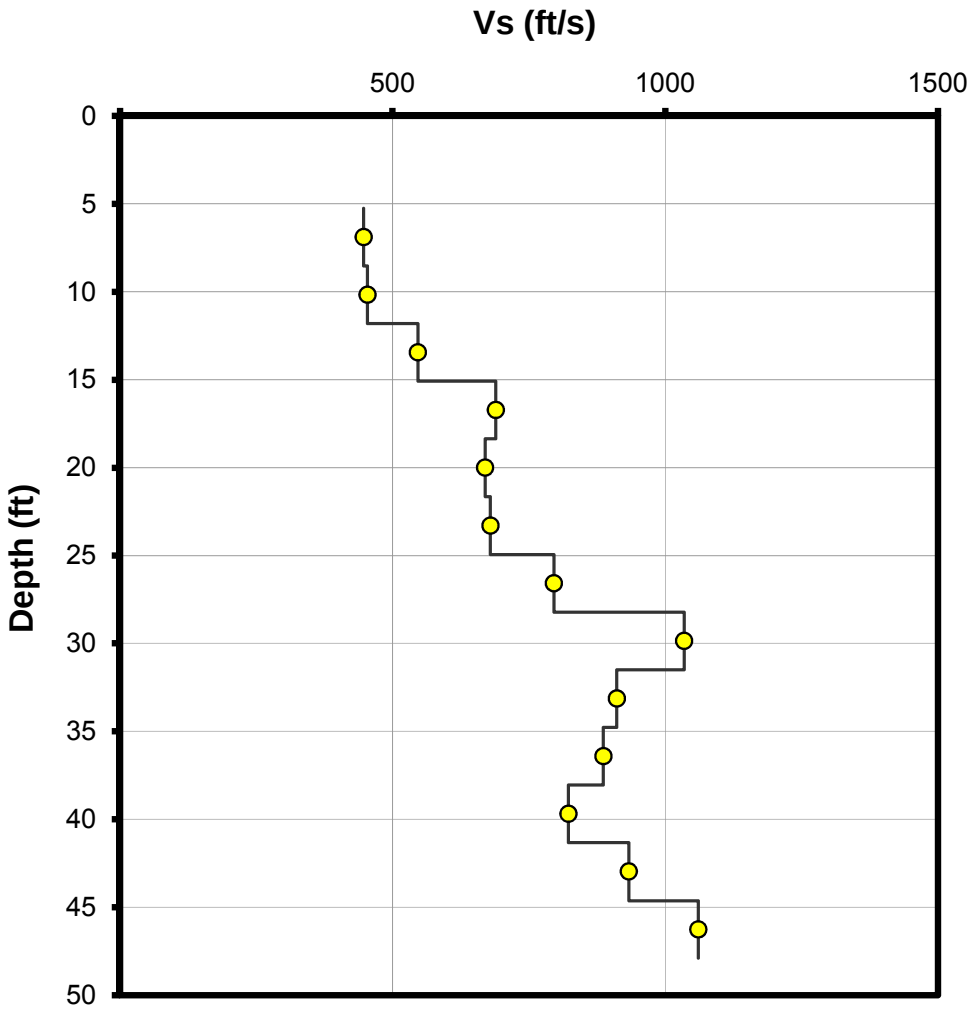
Client:	Langan Engineering
Project:	4430 Purves St., Long Island City, NY
Sounding:	SCPT-02
Date:	April 15, 2014

Seismic Source:	Beam	
Source Offset:	1.60	(ft)
Source Depth:	0.00	(ft)
Geophone Offset:	0.66	(ft)

SEISMIC - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Depth Interval (ft)	Time Interval (ms)	Mid-layer Depth (ft)	Vs Interval Velocity (ft/s)
5.91	5.25	5.49				
9.19	8.53	8.68	3.19	7.14	6.89	447
12.47	11.81	11.92	3.24	7.14	10.17	454
15.75	15.09	15.18	3.26	5.97	13.45	546
19.03	18.37	18.44	3.27	4.74	16.73	689
22.31	21.65	21.71	3.27	4.88	20.01	670
25.59	24.93	24.99	3.27	4.82	23.29	680
28.87	28.22	28.26	3.27	4.12	26.57	796
32.15	31.50	31.54	3.28	3.17	29.86	1034
35.43	34.78	34.81	3.28	3.60	33.14	911
38.71	38.06	38.09	3.28	3.70	36.42	887
41.99	41.34	41.37	3.28	3.99	39.70	822
45.28	44.62	44.65	3.28	3.51	42.98	933

Client:	Langan Engineering
Location:	4430 Purves St., Long Island City, NY
CPT Sounding:	SCPT-02
Date:	April 15, 2014



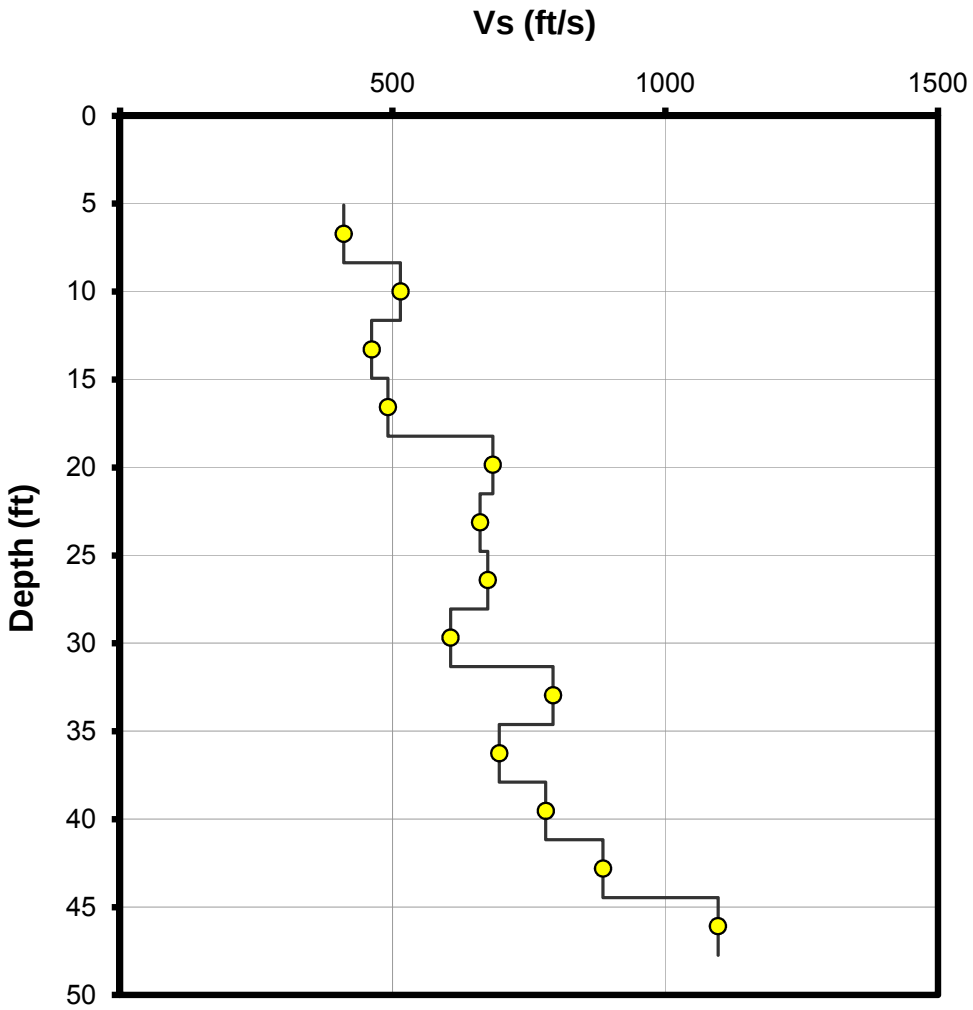
Client:	Langan Engineering
Project:	4430 Purves St., Long Island City, NY
Sounding:	SCPT-03
Date:	April 15, 2014

Seismic Source:	Beam	
Source Offset:	1.60	(ft)
Source Depth:	0.00	(ft)
Geophone Offset:	0.66	(ft)

SEISMIC - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Depth Interval (ft)	Time Interval (ms)	Mid-layer Depth (ft)	Vs Interval Velocity (ft/s)
5.74	5.09	5.33				
9.02	8.37	8.52	3.19	7.77	6.73	410
12.30	11.65	11.76	3.24	6.29	10.01	515
15.58	14.93	15.01	3.26	7.05	13.29	462
18.86	18.21	18.28	3.27	6.65	16.57	491
22.15	21.49	21.55	3.27	4.78	19.85	683
25.43	24.77	24.82	3.27	4.96	23.13	661
28.71	28.05	28.10	3.27	4.86	26.41	674
31.99	31.33	31.37	3.28	5.41	29.69	606
35.27	34.61	34.65	3.28	4.12	32.97	795
38.55	37.89	37.93	3.28	4.71	36.25	695
41.83	41.17	41.21	3.28	4.20	39.53	781
45.11	44.46	44.48	3.28	3.70	42.81	886
48.39	47.74	47.76	3.28	2.99	46.10	1097

Client:	Langan Engineering
Location:	4430 Purves St., Long Island City, NY
CPT Sounding:	SCPT-03
Date:	April 15, 2014



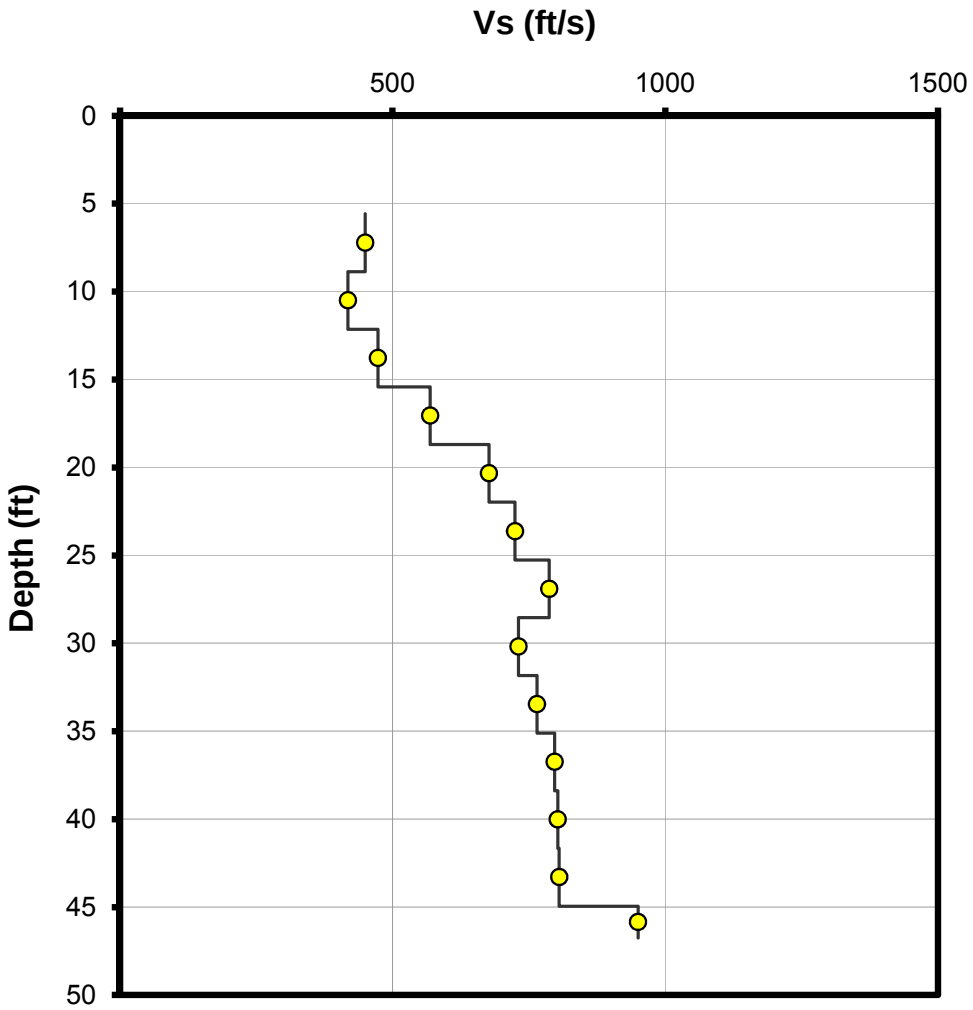
Client:	Langan Engineering
Project:	4430 Purves St., Long Island City, NY
Sounding:	SCPT-04
Date:	April 15, 2014

Seismic Source:	Beam	
Source Offset:	1.60	(ft)
Source Depth:	0.00	(ft)
Geophone Offset:	0.66	(ft)

SEISMIC - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Depth Interval (ft)	Time Interval (ms)	Mid-layer Depth (ft)	Vs Interval Velocity (ft/s)
6.23	5.58	5.80				
9.51	8.86	9.00	3.20	7.12	7.22	450
12.80	12.14	12.24	3.24	7.76	10.50	418
16.08	15.42	15.50	3.26	6.89	13.78	473
19.36	18.70	18.77	3.27	5.74	17.06	569
22.64	21.98	22.04	3.27	4.84	20.34	676
25.92	25.26	25.31	3.27	4.52	23.62	724
29.20	28.54	28.59	3.27	4.16	26.90	787
32.48	31.82	31.86	3.28	4.48	30.18	731
35.76	35.10	35.14	3.28	4.29	33.46	764
39.04	38.39	38.42	3.28	4.11	36.75	797
42.32	41.67	41.70	3.28	4.08	40.03	803
45.60	44.95	44.98	3.28	4.07	43.31	805
47.41	46.75	46.78	1.80	1.90	45.85	950

Client:	Langan Engineering
Location:	4430 Purves St., Long Island City, NY
CPT Sounding:	SCPT-04
Date:	April 15, 2014



Appendix E

Electronic Data Files

The released data contains the following folders:

1. CPT Data - .cor files in ASCII format, and or .xls files.
2. Pore Pressure Dissipation Data - .ppd files in Excel format
3. CPT Plots - .pdf files
4. Data Interpretation - .xls files contain common engineering values
5. Shear Wave Velocity Data - .pdf files of tabular and graphical seismic data.

[illegible] (O [illegible])

ConeTec data files are stored in ASCII text files that are readable by almost any text editor. ConeTec CPT data files are named such that the first 3 characters contain the job number, the next two characters are CP followed by two characters indicating the sounding number. The last 8th character position is reserved for the letters a, b, c, d etc to uniquely identify multiple soundings at the same location. The CPT sounding file has the extension COR, and pore pressure dissipation files have the extension PPD or PPF. As an example, for job number 06-127 the first sounding will have file names 127CP01.COR and 127CP01.PPD.

The sounding (COR) file consists of the following components:

1. Two lines of header information
2. Data records
3. End of data marker
4. Units information

[illegible]

Line 1: Columns 1-6 may be blank or may indicate the version number of the recording software
Columns 7-21 contain the sounding Date and Time
Columns 22-36 contain the sounding Operator

Line 2: Columns 1-16 contain the Job Location
Columns 17-31 contain the Cone ID
Columns 32-47 contain the sounding number

[illegible]

The data records contain 4 or more columns of data in floating point format. A comma (and spaces) separates each data item:

Column 1: Sounding Depth (meters)
Column 2: Tip (q_c) data uncorrected for pore pressure effects. Recorded in units selected by the operator.
Column 3: Sleeve (f_s) data. Recorded in units selected by the operator
Column 4: Dynamic pore pressure readings. Recorded in units selected by the operator
Column 5: Empty, Resistivity, UVIF or Gamma data

[illegible]

After the last line of data there will be a line containing ASCII 26 (CTL-Z) and a newline (carriage return/ line feed) character. This is used to mark the end of data.

[illegible]

The last section of the file contains information about the units that were selected for the sounding. A separator bar makes up the first line. The second line contains the type of units used for depth, q_c, f_s and u. The third line contains the conversion values required for ConeTec's software to convert the recorded data to an internal set of base units (bar for q_c, bar for f_s and meters for u).

CPT Dissipation Files (PPD, PPF, PPM)

CPT Dissipation files have the same naming convention as the CPT sounding files and have the extension PPD, PPF or PPM. PPF (PPM and PPD) files consist of the following components:

1. Two lines of header information
2. Data records

Header Records (Line 1 and Line 2)

Line 1: Columns 1-6 may be blank or may indicate the version number of the recording software
Columns 7-21 contain the sounding Date and Time
Columns 22-36 contain the sounding Operator

Line 2: Columns 1-16 contain the Job Location
Columns 17-31 contain the Cone ID
Columns 32-47 contain the sounding number

Data Records

The data records immediately follow the header lines. Each data record can occupy several lines in the file and is a complete record of a dissipation test at a particular depth. Each data record starts with a line containing two values separated by spaces; the first value being an index number (not currently used by the Software) and the second being the dissipation test depth in meters. Following this line are the dissipation pore pressure values stored at 5 second intervals with a maximum of 12 entries per line. The last line of the dissipation record may not contain a full 12 entries. The data record is terminated with an ASCII 30 character (appears as a triangle in some editors).

This sequence is repeated for every dissipation test in the sounding. No marker is used to indicate end of file. Units information is not stored in this file. Users need to check the CPT file for the units that were used.

Basic Interpretation Files (Basic Interpretation)

ConeTec's basic CPT interpretation output files are generally delivered in text files with a TBL extension. The root file name is the same as the COR files. A number of calculated geotechnical parameters are presented in these files. The files are stored as ASCII text files that can be viewed using any text editor such as Notepad or Wordpad. The files do not contain any page formatting. These files are not distributed if the enhanced interpretation files are provided.

Enhanced Interpretation Files (Enhanced Interpretation)

ConeTec's enhanced CPT interpretation output files are delivered in several formats, each file type containing the exact same information but formatted slightly differently. The files typically have any of the following file extensions:

1. IFI — an importable TAB delimited ASCII text file containing approximately 47 data columns of geotechnical interpretations. The file is designed for easy import to Excel. A companion document describes the techniques used for the interpretations (usually reproduced at the beginning of the Interpretation Appendix). Text editors can be used to view the file contents, however, they may remove the tabs or replace the tabs with spaces upon saving the file destroying the feature that makes them easy to import into Excel.

   Because Excel imports the data as text and the sheet is protected two steps may be necessary to modify the data or use the values in certain Excel functions:

   a) Under Tools (Excel 2000) Select the Protection Option and then Unprotect the sheet
   b) Select the entire sheet, copy and then use Paste Special to paste as values to a second sheet.

   Future versions of our interpretation routine will address these inconveniences.

2. IFP — a printable ASCII text file containing the same 47 columns of geotechnical interpretations as the IFI file. This file type has been formatted as a multi-page document with up to 132 characters per line and up to 68 lines per page. Each page has been separated into multiple sections to accommodate all the data fields. Each physical page has a header section and a page/section number. The file is designed for direct printing to laser printers set into compressed font mode. This output is typically provided in the Interpretation Appendix.

   An abbreviated set of interpretations (containing 36 columns of output) may be generated instead. These files usually have the extensions NLI and NLP. XLS files can be generated from these as well.

3. XLS — an Excel format file that has been generated directly from the corresponding IFI file. IFI and IFP files are not distributed if the XLS files are generated. The XLS files may have been generated from abbreviated NLI interpretation files.

In each case root file name is the same as the COR files.

[illegible] (Excel Format)

ConeTec's latest software (September 2007) outputs CPT interpretations directly to Excel format (XLS extension) without creating intermediate ASCII files. Because of the desires of various clients, there are several different configurations of output parameters in ConeTec's interpretation files. Since the Excel format file must have the XLS extension a suffix is used after the basename of the source CPT data file (COR) to identify the format of the file. The configurations still follow the formats described above and use the same extensions but now as suffixes. To allow for various runs (e.g. using a different water table, or user supplied equilibrium profile, or different methods for a particular parameter) of the same data an additional suffix may be specified by the engineer post processing the data to identify each particular run. This suffix will follow the one used to identify the format of the file.

For example:

If the selected format is ConeTec's TBL configuration and each run is identified by a run number. The resultant files generated for 278CP01.COR would be:

78CP01-TBL-RUN01.XLS
78CP01-TBL-RUN02.XLS
78CP01-TBL-RUN03.XLS

[illegible] Excel Format

ConeTec can now provide the equivalent of the ASCII COR files in Excel Format. These files will have the same basename as the COR files and an XLS extension.

[illegible] Excel Format

ConeTec can now provide the equivalent of the ASCII PPD format files in Excel format. These files will contain each dissipation trace that exceeds a minimum duration (selected by the engineer during post-processing) in a particular Excel spreadsheet column. The first column (Column A) will contain the time in seconds and the second column (Column B) will contain the time in minutes. Subsequent columns will contain dissipation trace data. The time columns will extend to the longest trace of the data set.

Detailed header information is provided at the top of the spreadsheet. The test depth in meters and feet, the number of points in the trace and the particular units are identified at the top of each trace column.

The Excel format file names will have the same basename as the original PPD format file followed by the suffix -PPD and then followed by a second suffix that the engineer doing the post processing can specify. Because the engineer can select various types of units for the dissipation data output (which can be different from the units used in the original recording) the secondary suffix is often used to identify the units in the XLS file, however, the original recorded units and the output units are clearly identified within the XLS spreadsheet file.

APPENDIX D
GEOPHYSICAL REPORT

GEOPHYSICAL ENGINEERING SURVEY REPORT

COMMERCIAL PROPERTY

44 Park Street

Long Island City, New York

NOVA PROJECT NUMBER

24XXXX

DATED

December 4, 2024

PREPARED FOR:

LANGAN

One Penn Plaza

250 West 34th Street

New York, New York

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
www.nova-gsi.com

February 27, 2014

P□□□M□M□□□□
S□□□□E□□□□□r
L□NG□N
21 Penn Plaza –
360 West 31st Street
New York, NY 10001
Direct: 212.479.5451
Mobile: 914.433.1157
Email: pmcmahon@langan.com

Re: Geophysical Survey Report
Commercial Property-
4430 Purves Street
Long Island City, New York 11101

Dear Mr. McMahon:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical survey at the above referenced project site located at 4430 Purves Street, Long Island City, New York (the "Sites"). Please see attached Geophysical Survey map for more details.

INTRODU□TION TO □EOPH□SI□A□ SURVE□

NOVA performed a Geophysical survey consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to clear and marked proposed environmental boring areas and to identify any anomalies, and subsurface structures located at the project site on February 19th, 2014.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (a magnetic detector), Ditch-Witch utility locator, Electromagnetic detector (Geonics EM61), Software and Sensor's 250 MHz ground-penetrating radar (GPR).

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

□EOPH□SI□A□ METHODS

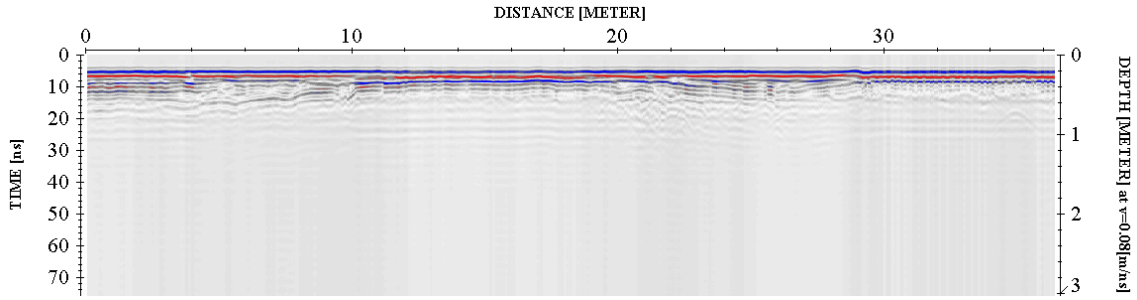
The project site was screened using the GPR by carrying the instrument over the project area at the site in 4' x 4' traverses. When evidence of anomalies were observed, they were clearly marked for further evaluation. A Ditch-witch(tm) utility locator would then be used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved areas with concrete (interior of the site building) and none paved areas.

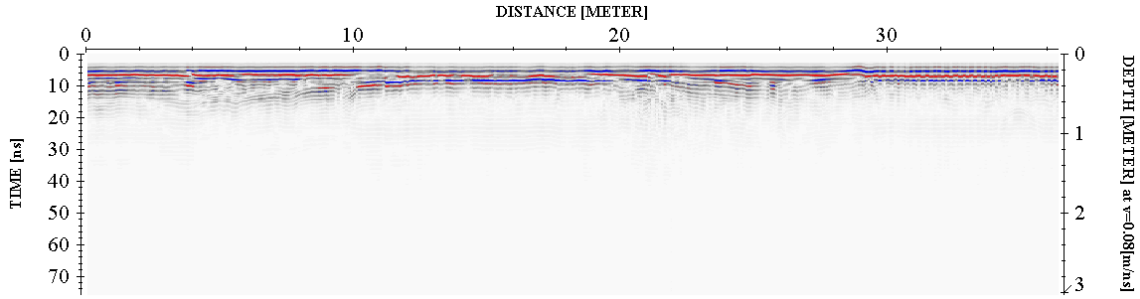
DATA PRO□ESSIN□

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

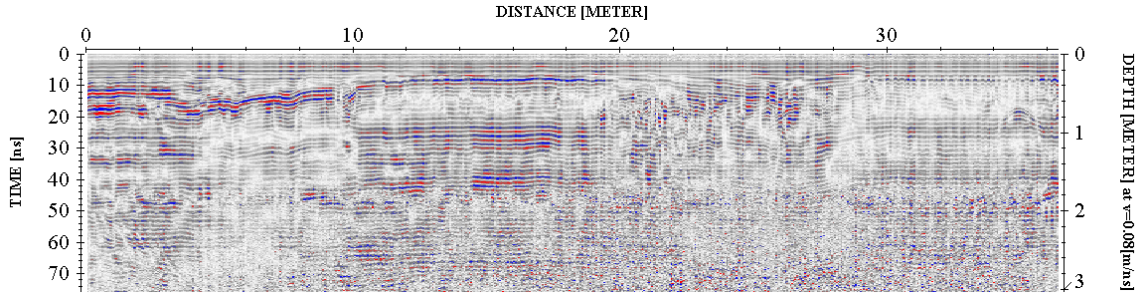
S□□□ □□Import raw RAMAC data to standard processing format



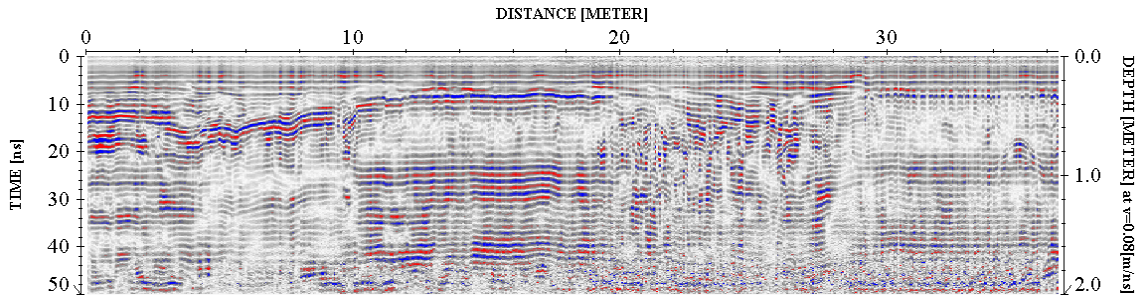
S□□□ □□Remove instrument noise *(dewow)*

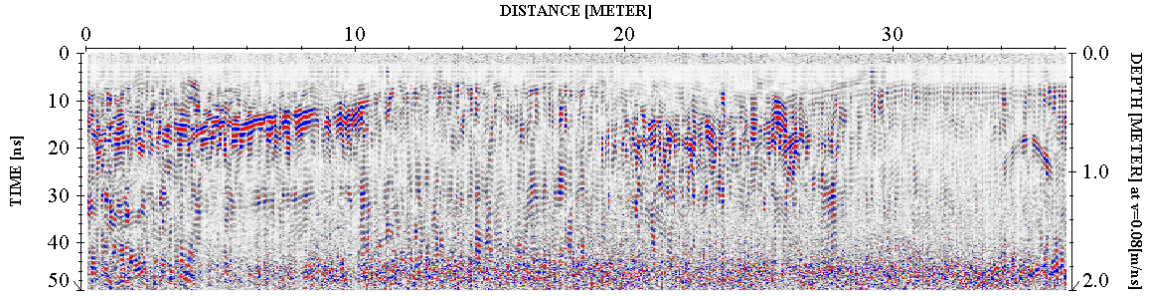


S□□□ □□Correct for attenuation losses *(energy decay function)*



S□□□ 4□Remove static from bottom of profile *(time cut)*





Step 5. Mute horizontal ringing/noise *(subtracting average)*

The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PH□SI□A□ SETTIN□S

Nova observed following physical conditions at the time of the survey:

The weathe r: Mostly sunny
Temp: 22 degrees
Su**r**face: None paved. Covered with approximately 2 feet of snow.
Geophysical **N**oise Level (G **N**L): Geophysical Noise Level (GNL) low to medium (existing snow and unseen dumped materials) at the time of the survey.

RESU□TS

The results of the geophysical survey identified following at the project Site:

- Geophysical survey identified anomalies with the EM located along the center of the project site. Due to excessive amount of snow and other geophysical noises, Nova could not verify the nature of these anomalies. All of the identified anomalies were clearly marked during the survey.

- Geophysical survey identified minor anomalies located throughout of the project areas.

- Geophysical survey identified scattered anomalies located throughout of the project areas. All of these anomalies were consistent with surficial (approximately 1 feet bgs) metal containing materials (such as nails, jersey barriers, metal sticks, and etc.)

- Geophysical survey identified utilities located throughout of the project area. All of these anomalies (utilities) were clearly marked during the survey.
- Nova cleared and marked all of the proposed boring locations at the time of the survey.
- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.
Sincerely,

NOVA □ □□□□□□□□□□□S□r□□□□

Levent Eskicakit, P.G., E.P.
Project Engineer

A□□□□□□ □□□□

Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Survey Images

FIGURE 1

SITE LOCATION MAP

NOVA

Subsurface Mapping Solutions

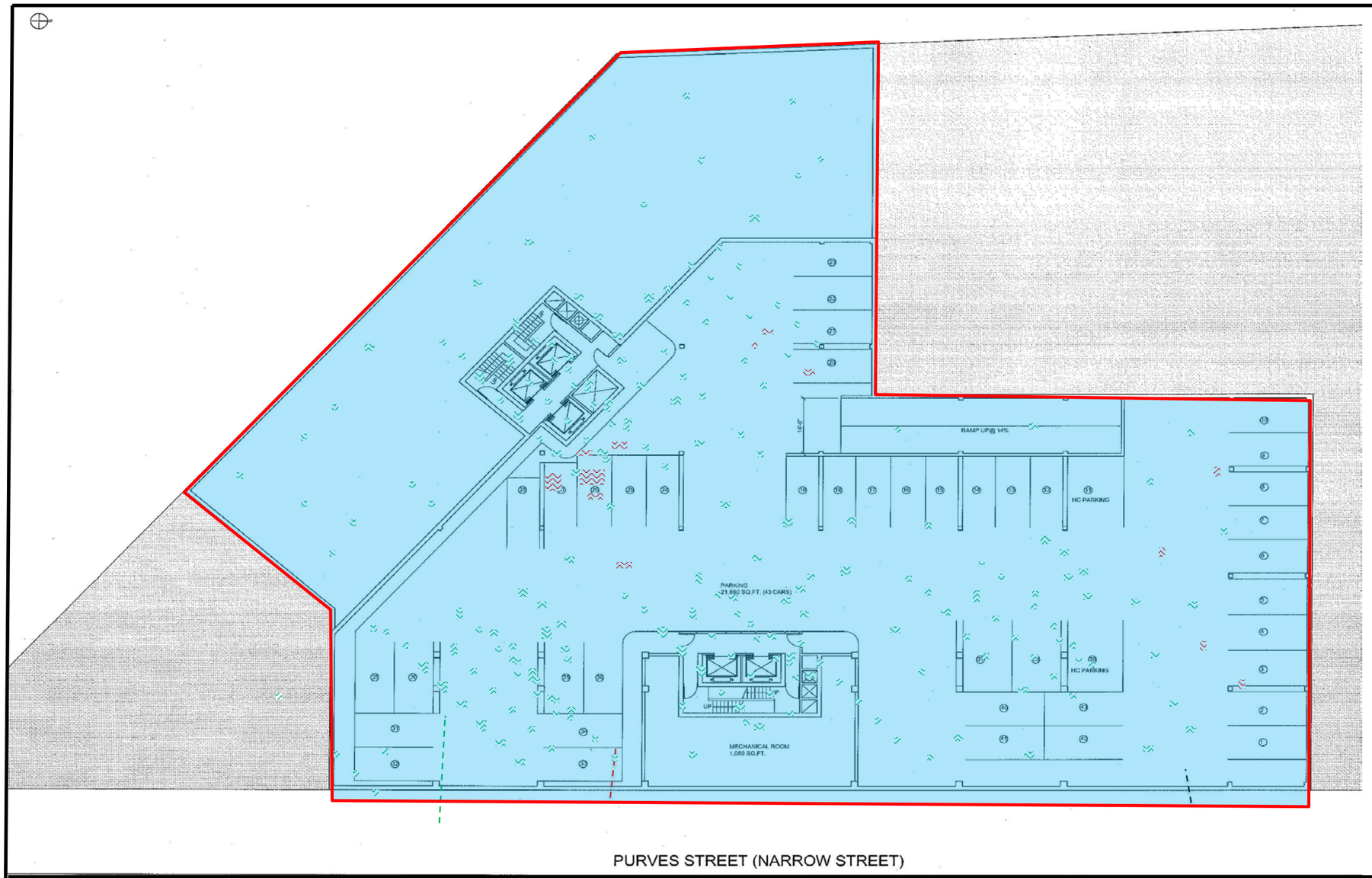
56-01 Marathon Pkwy, # 765, Douglaston, NY11362

(718) 261-1527 Fax (718) 261-1528

www.nova-gsi.com

SITE 4430 Purves Street
Long Island City, New York 11101

SCALE See Map



N

Note: All anomalies were marked in the field.

NOVA

S□□□r□□□□ M□□□□□ S□□□□□□

56-01 Marathon Parkway, PO Box 765
Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

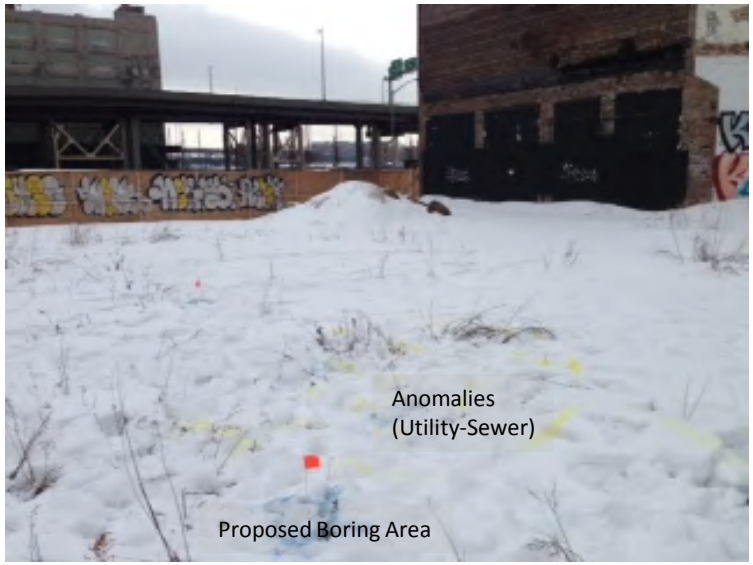
□EOPH□SI□A□ SURVE□ P□AN

SITE □ □□□ □ □r□□□Pr□□□r□□
44□□ P□r□□□ S□r□□□□□□□ l□□□d □ □□□N□ □□□□□

CLIENT: Langan Engineering & Environmental Services
DATE: February 19, 2014
Scale See Map

IN□ORMATION

- Project Areas
- Scattered Anomalies
- Geophysical Noise Areas (Accumulated Water)
- Underground Utilities/Pipes
- Anomalies detected with EM



NOVA □EOPH□SI□A□SERVI□ES
□□□□

Proposed Boring Area

Proposed Boring Area

Proposed Boring Area

Proposed Boring Area

APPENDIX E
SOIL BORING LOGS

LANGAN

Log of Boring **SB01/MW01** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.36 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7.5 — Completion ▼ — 24 HR. ▼ 7
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.4	0-3" - dark brown F-M SAND, some gravel and brick [FILL] 3-10" - pulverized concrete	0						BEGIN AT 08:47
		10-14" - dark brown/black F-M SAND with some brick and gravel [FILL]	1					0.0	
		14-19" - white and green heavily weathered rock	2					0.0	
		19-24" - dark brown F-M SAND with some gravel (wet) [FILL]	3	1	MC	26		0.0	
		0-12" - light to dark brown F-M SAND with some gravel and rock fragments [FILL]	4					0.0	0925: COLLECT SAMPLE SB01_4-6
	+4.4		5						
		12-35" - dark brown and black fine SAND, some silt (saturated)	6					0.0	
			7					5.8	
			8	2	MC	35		14.9	PETROLEUM ODOR/STAINING 7-9 FEET BGS
			9					1.2	
			10					0.0	0915: COLLECT SAMPLE SB01_7-9
	-0.6	0-6" - brown fine SAND with some silt (saturated)	11					0.0	
		6-14" - brown M-C SAND (saturated)	12						
			13	3	MC	19		0.0	
			14						
	-3.6	NO RECOVERY	15						
			16						
			17						
			18	4	MC	0			
			19						
			20						
	-8.6								

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Log of Boring **SB01/MW01** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 11.36 feet North American Vertical Datum of 1988 (NAVD88)

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-4" brown M-C SAND	20						
	-9.6	brown CLAY	21					0.0	
			22					0.1	
	-11.6	18-30" - brown M-C SAND	23	5	MC	30			END OF BORING AT 25 FEET BGS. ATTACH AUGERS FOR WELL INSTALLATION.
	-13.6		24					0.1	
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

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Log of Boring **SB02/MW02** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.4 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/21/14 — Date Finished: 2/21/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 15 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 5 — Completion ▼ — 24 HR. ▼ 5.1
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.4	0-24" - dark brown to black F-C SAND, some silt, trace slag/ash [FILL]	0					0.0	
			1					0.0	
		24-32" - black SILT with some wood, some sand [FILL]	2					0.0	1015: COLLECT SAMPLE SB02_2-4
		32-42" - black F-C SAND, some gravel, trace slag/ash [FILL]	3	1	MC	48		0.0	
		42-48" - BRICK	4					0.0	CHEMICAL ODOR APPROX. 2-4 FEET BGS
		0-24" - dark brown and black SANDY SILT with trace brick and gravel [FILL] (saturated)	5 ▼					0.0	
			6					0.0	1025: COLLECT SAMPLE SB02_6-8
			7					0.0	
		24-30" - black CLAY, organic odor (soft)	8	2	MC	32		0.0	ORGANIC ODOR APPROX. 8-15 FEEET BGS
			9					0.0	
		30-32" - black F-C gravelly SAND, some slag/ash [FILL] (wet)	10					0.0	
		0-10" - black F-C gravelly SAND, some slag/ash [FILL] (wet)	11					0.0	1035: COLLECT SAMPLE SB02_11-13
	-0.6	10-18" - black CLAY, strong organic odor	12					0.0	
			13	3	MC	36		0.0	
	-2.1	18-36" - PEAT	14					0.0	
			15					0.0	END OF BORING AT 15 FEET. INSTALL WELL TO 14 FEET BGS.
	-4.6		16						
			17						
			18						
			19						
			20						

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Log of Boring **SB03/MW03** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.96 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼ 5.9
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.0	0-2" - brown F-C SAND and GRAVEL [FILL] 2-5" CONCRETE 5-27" - dark brown and black F-C SAND, some gravel, some slag/ash, trace silt [FILL]	0					0.0	1010: BEGIN DRILLING
			1					0.0	
			2					0.0	1040: COLLECT SAMPLE SB03_1-3
			3	1	MC	33		0.0	
		27-33" - tan and dark brown F-C SAND and GRAVEL, trace silt (wet) [FILL]	4					0.0	
			5					0.0	
	+5.5	0-3" - same as above							
		3-8" - tan M-C SAND (wet)	6					4.8	
		8-30" - black M-C SAND (saturated)	7					49.8 79.6	STRONG PETROLEUM-LIKE ODOR/STAINING AT 6 TO 9FEET BGS
		30-54" - grayish brown F-M SAND, trace silt (saturated)	8	2	MC	54		91.7 22.4	1050: COLLECT SAMPLE SB03_6-8
			9					7.0	WEAK PETROLEUM-LIKE ODOR 9 TO 14 FEET BGS
		0-30" - grayish brown F-M SAND, trace silt, trace rock fragments (saturated)	10						
			11					9.5	
			12					4.7	
	-1.5	gray/black PEAT	13	3	MC	60		2.5	
	-2.5	grayish brown F-M SAND	14					1.6	
			15						
	-4.0	0-4" - brown SILTY SAND	16					1.7	
	-5.0	4-24" - brown SILT, trace fne sand	17						
			18	4	MC	24		1.3	END OF BORING AT 20 FEET BGS INSTALL WELL AT 14 FEET BGS
			19						
			20					0.0	
	-9.0								

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Log of Boring **SB04/MW04** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.07 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 10 — Completion ▼ — 24 HR. ▼ 6.4
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.1	0-2" - tan F-C SAND with some gravel, trace silt [FILL] 2-8" - CONCRETE 8-20" - light to dark brown and black M-C SAND, some gravel, trace slag/ash [FILL]	0					0.0	
			1					0.0	
			2					0.0	
		20-32" - brown SILT, some sand, trace gravel [FILL]	3	1	MC	36		0.0	0825: COLLECT SAMPLE SB04_1-4 AND DUP01_022014
			4					0.0	
		32-36" - light to dark brown and black F-M SAND, some gravel [FILL]	5					0.0	
		0-6" - light to dark brown and black F-M SAND, some gravel [FILL]	6					0.0	
	+5.1	light brown F-M SAND (moist), trace silt	7					0.0	
			8	2	MC	38		0.0	0845: COLLECT SAMPLE SB04_4-6
			9					0.0	
			10					0.0	
		0-30" - brown/dark brown F-M SAND, trace gravel (saturated)	11					0.0	
			12					0.0	
	-1.4		13	3	MC	60		0.0	
		30-48" - brown SANDY SILT, trace mica	14					0.0	
	-2.9		15					0.0	
		48-60" - brown fine SAND, trace silt (saturated)	16					0.0	
		0-18" - brown F-M SAND (saturated)	17					0.0	
	-5.4		18	4	MC	60		0.0	END OF BORING AT 20 FEET BGS INSTALL WELL MW04 AT 14 FEET BGS.
		brown SANDY SILT (saturated)	19					0.0	
	-7.9		20					0.0	
		brown SILT, some fine sand (dry)							
	-8.9								

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Log of Boring **SB05** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.03 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 3 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 1 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First N/A — Completion — 24 HR.
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.0	0-8" - tan SILTY SAND (wet) 8-18" CONCRETE 18-24" - brown/dark brown F-C SAND, some brick and concrete, trace slag/ash, trace silt [FILL] 24-36" - black F-C SAND, some brick and concrete, trace silt [FILL]	0						1352: BEGIN SB05 REFUSAL ENCOUNTERED AT 3 FEET BGS RECOVERED SOIL EXHIBITED STRONG PETRO-LIKE ODOR, STAINING, AND PID READINGS UP TO 240 PPM. 14:15: SAMPLE COLLECTED SB05_1-3. BORING OFFSET APPROX 3 FEET NORTH (SB05A) PETROLEUM STAINING AND ODOR
			1					0.0	
			2	1	MC	36			
	+8.0		3					240	
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB05A** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.03 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/20/14 — Date Finished: 2/20/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.0	0-8" - tan SILTY SAND (wet) 8-18" CONCRETE 18-36" - brown/dark brown F-C SAND, some brick and concrete, trace slag/ash, trace silt [FILL]	0					1.7	BORING OFFSET APPROX 3 FEET NORTH FROM SB05 DUE TO REFUSAL
			1					0.0	
			2					0.0	
			3	1	MC	36		0.0	
			4					0.0	
			5					0.0	
	+6.0	0-54" - tan F-M SAND (saturated at 6' bgs)	6 ▽					0.0	1425: COLLECT SAMPLE SB05A_2-4
			7					0.0	
			8	2	MC	54		0.0	
			9					0.0	
			10					0.0	
		0-54" - gray F-M SAND	11					0.0	1435: COLLECT SAMPLE SB05A_11-13
			12					0.0	
			13	3	MC	60		0.0	
			14					0.0	
	-3.5		15					0.0	
		54-60" - gray SILT, some fine sand 0-36" - gray SILT, trace sand	16					0.0	
			17					0.0	
			18	4	MC	60		0.0	
		36-60" - brown SILT, trace sand	19					0.0	
	-9.0		20					0.0	

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Log of Boring **SB06** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.8 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.8	0-14" - tan F-M SAND with some gravel, trace silt, trace brick [FILL]	0					0.0	
		14-23" - pulverized concrete	1					0.0	
		23-37" - dark grey/black F-C SAND with some silt and gravel, trace slag/ash	2					0.0	
			3	1	MC	37		0.0	
			4					0.0	1455: COLLECT SAMPLE SB06_3-5
			5					0.0	
		0-36" - black and dark grey SILT, some sand, some wood, trace ceramic fragments, trace gravel (wet) [FILL]	6					0.0	ORGANIC ODOR 5-9 FEET BGS
			7 ▽					0.0	
			8	2	MC	44		0.0	1505: COLLECT SAMPLE SB06_6-8
	+1.8		9					0.0	
		36-44" - greyish brown F-M SAND	10					0.0	
		0-48" - greyish brown F-M SAND	11					0.0	
			12					0.0	
			13	3	MC	60		0.0	
	-3.2		14					0.0	
		48-60" - PEAT	15					0.0	
	-4.2		16					0.0	
		0-42" - grey F-M SAND, trace silt	17					0.0	POSSIBLE SLOUGHING
			18	4	MC	60		0.0	
			19					0.3	
	-7.7	42-60" - PEAT	20					1.8	
	-9.2								

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Log of Boring **SB06** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 10.8 feet North American Vertical Datum of 1988 (NAVD88)

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-8" - grey F-M SAND	20						
	-10.2	8-48" - grey SANDY SILT, trace clay	21					0.0	
			22					0.0	
			23	5	MC	54		0.0	
			24					0.0	
	-13.7		25					0.0	
	-14.2	48-54" - brown/tan medium SAND	26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

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Log of Boring **SB07** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.2 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.2	0-9" - pulverized CONCRETE	0						1300: BEGIN SB07, HEAVY RAIN
		9-17" - grey-dark grey F-C SAND, trace gravel	1					0.0	
	+9.7	17-29" - brown medium SAND, with trace weathered rock	2					0.0	
		29-44" - brown medium SAND	3	1	MC	46		0.0	1325: COLLECT SAMPLE SB07_1-3
		0-12" - brown medium SAND	4					0.0	
			5					0.0	
			6 ▽					0.0	13:40: COLLECT SAMPLE SB07_5-7
	+4.7	12-38" - brown sandy SILT (saturated)	7					0.0	
			8	2	MC	38		0.0	
			9					0.0	
	+1.2	0-54" - brown SILTY SAND (saturated)	10					0.0	
			11					0.0	
			12					0.0	
			13	3	MC	54		0.0	
			14					0.0	
	-3.8	0-48" - brown SANDY SILT	15					0.0	
			16					0.0	
			17					0.0	
			18	4	MC	54		0.0	
			19					0.0	
	-7.8	48-54" - brown CLAY	20					0.0	
	-8.8								

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Log of Boring **SB08** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.7 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Laurel Environmental Associates, Ltd.	Date Started: 2/19/14 — Date Finished: 2/19/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 2 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Steve Bitetto
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.7	0-16" - dark brown and black F-C SAND, trace gravel and brick, trace slag [FILL]	0					0.4	
			1					0.0	
	+8.2	16-32" - brown/orange-brown medium SAND	2					0.0	
			3	1	MC	32		0.0	
			4					0.0	1400: COLLECT SAMPLE SB08_0-2
		0-26" - brown M-C SAND, trace weathered rock (saturated)	5					0.0	
			6					0.0	
			7 ▽					0.0	
			8	2	MC	36		0.0	
	+2.2	26-36" - brown fine SAND, some silt, trace mica (saturated)	9					0.0	
		0-36" - brown fine SAND, some silt, trace mica (saturated)	10					0.0	
			11					0.0	
			12					0.0	
			13	3	MC	46		0.0	
	-2.8	36-46" - brown SANDY SILT	14					0.0	
			15					0.0	
	-4.3	0-16" - brown SILT, some fine sand	16					0.0	1420: COLLECT SAMPLE SB08_15-17
	-5.6	16-34" - grey CLAY	17					0.0	
			18	4	MC	60		0.0	
	-7.1	34-60" - grey CLAYEY SILT	19					0.0	
			20					0.0	
	-9.3								

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Log of Boring **SB09/MW09** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.07 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/16/14 — Date Finished: 4/16/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼ 6.4
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.1		0						
	+10.6	6" Concrete slab							
		0-24" - dark brown F-M SAND with some gravel, some slag/ash, trace silt [FILL]	1					0.0	Begin at 1142, break through slab
			2					0.0	
	+8.6		3	1	MC	30		0.0	
	+8.1	24-30" - light brown F-M SAND, trace coarse sand and gravel, trace silt							
		30-54" - no recovery	4						
			5						
		0-36" - no recovery							1155 - collect sample SB09_0.5-2.5
			6						
			7						
			8	2	MC	24			
	+3.1								
		36-54" - light brown F-M SAND, trace coarse sand and gravel, trace silt (wet)	9					0.0	1205 - collect sample SB09_8-9
		54-60" - gray F SAND, trace gravel and silt (wet)	10					0.0	
			11					0.0	
			12					0.0	
	-1.9		13	3	MC	60		0.0	
		36-60" - brown SILTY F SAND (saturated)	14					0.0	
	-3.9		15					0.0	S-3 stuck in casing, drill for S-4 at 12:30
		0-60" brown F SAND, some silt	16					0.0	
			17					0.0	
			18	4	MC	60		0.0	1250 - collect sample SB09_19-20
			19					0.0	
			20					0.0	End of boring at 20'
	-8.9								

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Log of Boring **SB10/MW10** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.27 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/16/14 — Date Finished: 4/16/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 6.8 — Completion ▼ — 24 HR. ▼ 6.6
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.3	0-12" - brown silty F SAND with trace gravel and roots [FILL]	0					0.0	0730 - Begin SB10/MW10
		12-15" - concrete fragments	1					0.0	
		15-21" - dark brown silty F SAND with some gravel [FILL]	2					0.0	
		21-32" - black F-M SAND, some slag/ash and gravel [FILL]	3	1	MC	48		0.0	
		32-60" - brown and dark brown F-M SAND, some silt, trace gravel and brick [FILL]	4					0.0	
		0-12" - no recovery	5						0745 - collect sample SB10_0-2
		12-21" - dark brown F-M SAND with trace coarse sand and gravel [FILL]	6						
	+4.5	21-49" - brown F-M SAND (wet)	7					0.0	
			8	2	MC	48		0.0	
		49-60" - light grey F-M SAND (wet)	9					0.0	0805 - collect sample SB10_9-11 + DUPRI01_041614
		0-24" - grey F-M SAND (wet)	10					0.0	
			11					0.0	
	-0.7	24-60" - grey F SAND, some silt (saturated)	12					0.0	
			13	3	MC	60		0.0	
			14					0.0	
	-3.7	0-60" - brown SANDY SILT	15					0.0	
			16					0.0	
			17					0.0	0820 - collect sample SB10_19-20
			18	4	MC	60		0.0	
			19					0.0	
	-8.7		20					0.0	End of boring at 20'

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Log of Boring **SB11/MW11** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.87 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/16/14 — Date Finished: 4/16/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7 — Completion ▼ — 24 HR. ▼ 7.5
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.9	0-8" - concrete fragments	0					0.3	Begin at 1000
		8-14" - light and dark brown F-M SAND, some silt and gravel [FILL]	1					0.0	
		14-22" - concrete fragments	2					0.0	
		22-42" - dark brown and brown F SAND with some silt, trace gravel [FILL]	3	1	MC	42		0.0	
		42-60" - no recovery	4					0.0	1020 - collect sample SB11_2-3.5
		0-12" - concrete fragments	5					0.0	
	+5.9	12-24" - brown SANDY SILT (wet)	6					0.0	
		24-60" - brown and dark brown SILT, some sand, trace clay (saturated)	7 ▽					0.0	
			8 ▼	2	MC	60		0.0	1035 - collect sample SB11_6-7
			9					0.0	
		0-6" - no recovery	10					0.0	
		6-54" - light brown SILT, some sand, trace clay (wet)	11					0.0	
			12					0.0	
			13	3	MC	54		0.0	
			14					0.0	
		54-60" - brown and grey SILT and F SAND	15					0.0	
	-3.1	0-60" - brown F-M SAND, trace coarse sand and gravel, trace silt	16					0.0	
			17					0.0	1040 - collect sample SB11_17-18
			18	4	MC	60		0.0	
			19					0.0	
			20					0.0	End of boring at 20'
	-8.1								

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Log of Boring **SB12/MW12** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.76 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/16/14 — Date Finished: 4/16/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7 — Completion ▼ — 24 HR. ▼ 6.1
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.8	0-5" - brown sandy SILT with trace gravel and wood [FILL] 5-8" - concrete 8-24" - dark brown F-M SAND, some silt, gravel and brick, trace anthracite coal [FILL]	0					0.0	0900 - Begin drilling
	+8.8	24-42" - tan/brown F-M SAND, trace mica	1					0.0	
		42-60" - no recovery	2	1	MC	42		0.0	
		0-12" - no recovery	3					0.0	0915 - collect sample SB12_1-2
		12-24" - brown/dark brown F-M SAND, trace gravel	4					0.0	
		24-54" - light brown F-M SAND, trace coarse sand and gravel (wet)	5					0.0	
		54-60" - brown F SAND, trace silt (saturated)	6					0.0	
		0-60" - brown F SAND, trace gravel, trace mica	7					0.0	
			8	2	MC	48		0.0	0930 - collect sample SB12_6-8
			9					0.0	
			10					0.0	
			11					0.0	
			12					0.0	
			13	3	MC	60		0.0	0940 - collect sample SB12_12-14
			14					0.0	
			15					0.0	
	-4.2	0-60" - brown SANDY SILT with trace clay	16					0.0	
			17					0.0	
			18	4	MC	60		0.0	
			19					0.0	
			20					0.0	End of boring at 20'
	-9.2								

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Log of Boring **SB13/MW13** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.61 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/17/14 — Date Finished: 4/17/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 15 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 5.5 — Completion ▼ — 24 HR. ▼ 6.2
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist.	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.6	0-24" - dark brown F-M SAND with some silt, large wood piece (6"), trace brick and gravel [FILL]	0					0.0	0740 - begin drilling
	+8.6	24-48" - brown F SAND, trace silt	2					0.0	
			3	1	MC	48		0.0	0800 - collect sample SB13_0-2
		48-60" - no recovery	4					0.0	
		0-6" - no recovery	5						
		6-14" - brown/dark brown F SAND, trace silt and mica (wet)	6					0.0	
		14-24" - dark brown F-M SAND and GRAVEL	7					0.3	
	+3.6	24-48" - tan F SAND, some silt (saturated)	8	2	MC	54		0.2	0815 - collect sample SB13_9-10
	+1.6	48-60" - tan/brown SILTY SAND, trace red-brown F SAND	9					2.5	
	+0.6	0-8" - no recovery	10					5.8	slight petroleum-like odor 9-10 feet
		8-18" - brown F-M SAND, trace silt (saturated)	11					0.0	
	-0.9	18-60" - tan SILT, very compact, moist, trace clay	12					0.0	
			13	3	MC	52		0.0	0825 - collect sample SB13_14-15
			14					0.8	
	-4.4		15					0.3	End of boring at 15'
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB14** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.24 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/15/14 — Date Finished: 4/15/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7.3 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.2	0-15" - brown F-C SAND, some gravel, trace brick, concrete, and wood [FILL]	0					0.0	1310 - collect sample SB14_0-1
		15-20" - dark brown F-M SAND, some gravel, trace slag/ash [FILL]	1					0.0	
		20-25" - tan F SAND, some silt [FILL]	2					0.0	
		25-42" - dark brown and dark grey F-C SAND, some slag/ash, trace silt, trace concrete [FILL]	3	1	MC	42		0.0	
		42-60" - no recovery	4						
		0-12" - no recovery	5						
		12-27" - grey F-C SAND, some gravel, trace silt, trace slag/ash [FILL]	6						
		27-32" - black clay, trace sand (saturated) [FILL]	7 ▽					0.5	
		32-45" - black F-C SAND, some gravel	8	2	MC	48		8.9	strong petroleum/tar-like odor w/ black staining at approx 7.5-9 feet
	+1.5	45-60" - dark grey F-M SAND, trace gravel	9					5.5	
		0-44" - dark grey F-M SAND, trace coarse sand and gravel	10					2.5	1300 - collect sample SB14_8-9
			11					0.0	
			12					0.0	
			13	3	MC	60		0.0	
	-3.4	44-60" - dark grey SILTY CLAY	14					0.0	
		0-24" - no recovery	15					0.0	1330 - collect sample SB14_14-15
			16						
			17						
		24-36" - dark grey SILTY CLAY	18	4	MC	36		0.0	
	-7.8	36-60" - dark grey CLAY, trace silt	19					0.0	
			20					0.0	End of boring at 20'
	-9.8								

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Log of Boring **SB15** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.39 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/15/14 — Date Finished: 4/15/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 7.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.4	0-6" - brown F-M SAND, some gravel, trace brick [FILL] 6-32" - dark brown F-C SAND, some concrete fragments and gravel, trace anthracite coal, trace slag (wet) [FILL]	0						
			1					0.0	
			2					0.0	1110 - collect sample SB15_0-3
			3	1	MC	32		0.0	
		32-60" - no recovery	4						
		0-22" - no recovery	5						
			6						
			7						
	+3.9	22-29" - brown F-M SAND, some gravel and rock fragments, trace silt [FILL]	8						1125 - collect sample SB15_8-10
		29-60" - dark grey and black F-M SAND, some silt (wet)	9	2	MC	38		0.0	
			10					0.0	organic odor at 8-10 feet
	+1.4	0-24" - no recovery	11						
			12						
	-0.6	24-60" - grey F-M SAND, trace silt, trace mica	13	3	MC	36		0.0	
			14					0.0	
			15					0.0	
		0-12" - no recovery	16						
		12-30" - grey F-M SAND, trace silt, trace mica	17					0.0	1210 - collect sample SB15_16-17.5
	-6.1	30-60" - grey CLAY, trace wood	18	4	MC	48		0.0	organic odor at 17.5 to 20
			19					0.0	
	-8.6		20					0.0	End of boring at 20'

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Log of Boring **SB16** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.89 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/16/14 — Date Finished: 4/16/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 15 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.9	0-30" - brown F-C SAND with some silt, gravel, concrete, trace brick [FILL]	0					0.0	
			1					0.0	
			2					0.0	1345 - collect sample SB16_0-2
		30-42" - dark brown and black F-C SAND with some slag/ash/cinders, trace silt, gravel and brick [FILL]	3	1	MC	42		0.0	
		42-60" - no recovery	4						
			5						
		0-12" - no recovery	6						
		12-18" - dark brown and black F-C SAND with some slag/ash/cinders, trace silt, gravel and brick [FILL]	7					0.0	
		18-26 - black F-C SAND with some silt and clay, trace gravel and anthracite coal	8 ▽	2	MC	48		0.0	1330 - collect sample SB16_6.5-8 + DUPRI02_041614
	+2.9		9					0.0	
		36-60" - grey F-M SAND	10					0.0	
		0-12" - no recovery	11					0.0	
		12-36" - grey F-M SAND, trace gravel	12						
			13	3	MC	48		0.0	1355 - collect sample SB16_14-15
	-2.1		14					0.0	
		36-60" - dark grey PEAT	15					0.0	End of boring at 15'
	-4.1		16						
			17						
			18						
			19						
			20						

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Log of Boring **SB17** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.02 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/15/14 — Date Finished: 4/15/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.0		0					2.4	
	+10.5	6" concrete slab							
		0-12" - brown F-M SAND, some F-M gravel [FILL]	1					0.0	
		12-21" - concrete fragments/weathered concrete	2						
		21-38" - dark brown F-C SAND with brick and concrete, some gravel [FILL]	3	1	MC	44		0.1	0855 - collect sample SB17_0-2
		38-44" - brown F-M SAND, trace gravel and brick [FILL]	4					0.0	
		44-60" - no recovery	5						
		0-12" - no recovery	6						
		12-20" - brown F-M SAND, trace gravle and brick [FILL]	7					0.1	
		20-24" - light brown F-C SAND, some gravel [FILL]							
	+4.0	24-60" - brown F-M SAND, trace gravel (wet)	8 ▽	2	MC	48		0.0	
			9					0.0	910 - collect sample SB17_9-10
	+1.0		10					0.2	
		0-60" - greyish-brown F SAND, some silty clay @ 17-20", trace silt, trace mica	11					0.0	slight petroleum odor at 10 feet
			12					0.1	
			13	3	MC	60		0.0	
			14					0.1	
			15					0.2	
	-4.0	0-36" - brown F SAND, trace mica, (saturated)	16					0.0	
			17					0.0	925 - collect sample SB17_16-18
	-7.0	36-54" - brown F SAND, some silt (saturated)	18	4	MC	60		0.0	
	-8.5		19					0.0	
	-9.0	54-60" - brown SILT, compact (wet)	20					0.0	

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Log of Boring **SB18** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 10.89 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/15/14 — Date Finished: 4/15/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+10.9	0-8" - dark brown F-M SAND, some gravel [FILL] 8-60" - no recovery	0					0.0	
			1						
			2						
			3	1	MC	8			1000 - Collect sample SB18_0-5
			4						
		0-20" - no recovery	5						
			6						
		20-33" - dark brown F-C SAND, some gravel, trace ceramic fragments [FILL]	7					0.0	
	+3.1		8 ▽	2	MC	40		0.0	
		33-60" - light brown F-C SAND, some gravel (wet)	9					0.0	
			10					0.0	
		0-6" - no recovery 6-36" - dark brown F-M SAND (saturated)	11					0.3	
			12					0.3	1010 - collect sample SB18_11-13
	-2.1		13	3	MC	54		0.0	
		36-60" - brown F SAND with some silt, trace mica (saturated)	14					0.0	
			15					0.0	
		0-24" - brown F SAND, some silt, trace mica	16					0.0	S-4 liner stuck in Macrocore, redrill 15-20 with dual tube
	-6.1		17					0.0	
		24-60" - brown SANDY SILT	18	4	MC	60		0.0	1055 - collect sample SB18_17-19
			19					0.0	
			20					0.0	End of boring at 20'
	-9.1								

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Log of Boring **SB19** Sheet 1 of 1

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.59 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 4/15/14 — Date Finished: 4/15/14
Drilling Equipment: Geoprobe 7822DT	Completion Depth: 20 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tom Seckel
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist.	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.6	0-20" - dark brown/grey F-C SAND, some gravel and concrete, trace brick, slag/ash [FILL]	0					0.0	1350 - collect sample SB19_0-2
	+9.9	20-48" - light brown F SAND, some silt	1					0.0	
			2					0.0	
	+7.6	48-60" - no recovery	3	1	MC	48		0.0	
	+6.6	0-10" - no recovery	4						
	+5.8	10-50" - brown F SAND, trace silt	5						
			6					0.0	
			7					0.0	1415 - collect sample SB19_7-9
	+2.4	50-60" - brown SILTY F SAND	8 ▽	2	MC	50		0.0	
	+1.6	0-30" - no recovery	9					0.0	
			10					0.0	
			11						
	-0.9	30-60" - brown SILT, trace f sand and mica	12						
			13	3	MC	30		0.0	
			14					0.0	
	-3.4	0-24" - no recovery	15					0.0	
			16						
	-5.4	24-60" - soft brown SILTY CLAY, trace fine sand	17						1425 - collect sample SB19_17-19
			18	4	MC	36		0.0	
			19					0.0	
	-8.4		20					0.0	End of boring at 20'

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APPENDIX F
MONITORING WELL CONSTRUCTION LOGS

WELL CONSTRUCTION SUMMARY

Well No. MW01

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 11.62 feet NAVD88
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/19/2014 **DATE FINISHED** 2/19/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

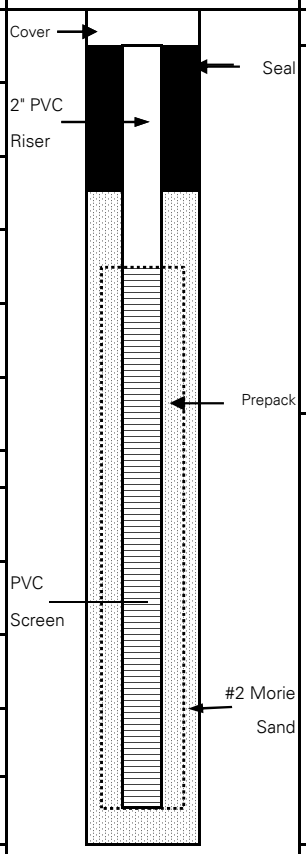
Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION** 11.36	**DEPTH (ft)** 0.26	**WELL DETAILS**	**SUMMARY SOIL CLASSIFICATION** / **DEPTH (FT)**
TOP OF SEAL	**ELEVATION** 10.1	**DEPTH (ft)** 1.26		
TOP OF FILTER	**ELEVATION** 8.6	**DEPTH (ft)** 2.76		
TOP OF SCREEN	**ELEVATION** 7.1	**DEPTH (ft)** 4.26		
BOTTOM OF BORING	**ELEVATION** -3.19	**DEPTH (ft)** 14.55		



	1.3
FILL	2.8
	4.3
	7.0
SAND some silt	
	14.6

SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.92	2/28/2014	6.44 feet
4.89	2/28/2014	6.47
4.24	4/24/2014	7.12

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WELL CONSTRUCTION SUMMARY

Well No. MW02

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 10.4 feet NAVD88
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/21/2014 **DATE FINISHED** 2/21/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 30 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	10.11	0.29
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	8.82	1.29
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	7.32	2.79
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	5.82	4.29
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-3.98	14.09

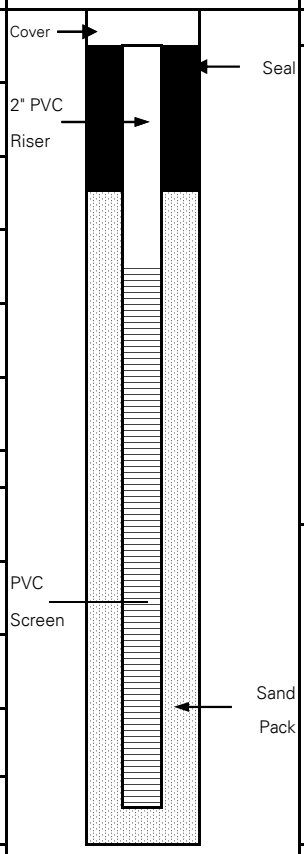
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
6.59	2/21/2014	3.52 feet
6.09	2/28/2014	4.02
5.32	4/24/2014	4.79

WELL DETAILS



SUMMARY SOIL CLASSIFICATION

FILL

Clay and Peat

DEPTH (FT)
1.3
2.8
4.3
9.0
14.1

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WELL CONSTRUCTION SUMMARY

Well No. MW03

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 10.96 feet NAVD88
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/20/2014 **DATE FINISHED** 2/20/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear. Total purge volume = 10 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	10.7	0.26
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	9.44	1.26
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	7.94	2.76
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	6.44	4.26
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-3.65	14.35

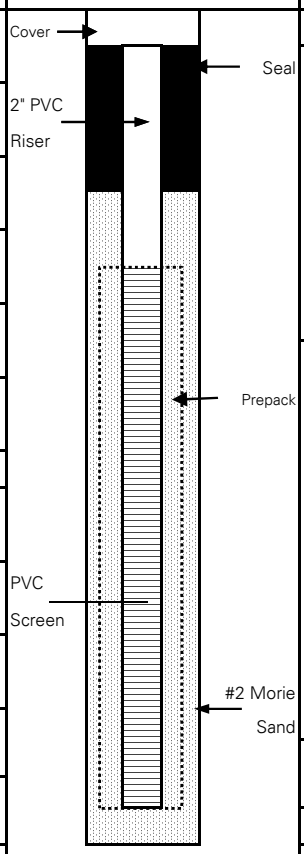
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
5.78	2/28/2014	4.92 feet
5.76	2/28/2014	4.94
5.10	4/24/2014	5.60

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL	1.3
	2.8
	4.3
	5.0
SAND	
	12.5
PEAT	
	13.5
SAND	14.4

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WELL CONSTRUCTION SUMMARY

Well No. MW04

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 11.1 feet NAVD88
DRILLING AGENCY Laurel Environmental Services, Ltd.	**DATE STARTED** 2/20/2014 **DATE FINISHED** 2/20/2014
DRILLING EQUIPMENT Geoprobe 6610DT	**DRILLER** Steve Bitetto
SIZE AND TYPE OF BIT 4" I.D. Auger	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance augers to 14 feet bgs. Insert 10' PVC prepack screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 48 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cutttings and filter sand	
TYPE OF SCREEN Prepack PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION** 10.84	**DEPTH (ft)** 0.26
TOP OF SEAL	**ELEVATION** 9.58	**DEPTH (ft)** 1.26
TOP OF FILTER	**ELEVATION** 8.08	**DEPTH (ft)** 2.76
TOP OF SCREEN	**ELEVATION** 6.58	**DEPTH (ft)** 4.26
BOTTOM OF BORING	**ELEVATION** -3.43	**DEPTH (ft)** 14.27

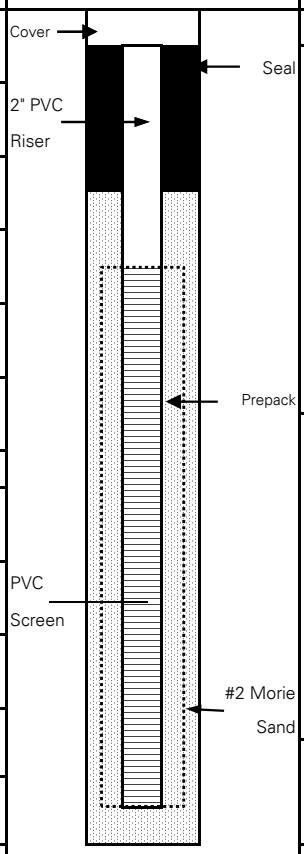
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
5.11	2/21/2014	5.73 feet
5.07	2/28/2014	5.77
4.72	4/24/2014	6.12

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL	1.3 2.8 4.3
SAND	6.0 12.5
SANDY SILT	14.3

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WELL CONSTRUCTION SUMMARY

Well No. MW09

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 11.07 feet NAVD88
DRILLING AGENCY Aarco Environmental Services Corp.	**DATE STARTED** 4/16/2014 **DATE FINISHED** 4/16/2014
DRILLING EQUIPMENT Geoprobe 7822DT	**DRILLER** Tom Seckel
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cuttings and filter sand
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand

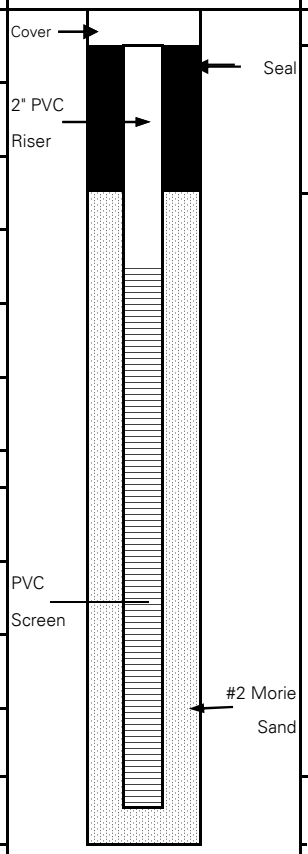
TOP OF CASING	**ELEVATION** 10.59	**DEPTH (ft)** 0.48
TOP OF SEAL	**ELEVATION** 9.11	**DEPTH (ft)** 1.48
TOP OF FILTER	**ELEVATION** 7.61	**DEPTH (ft)** 2.98
TOP OF SCREEN	**ELEVATION** 6.11	**DEPTH (ft)** 4.48
BOTTOM OF BORING	**ELEVATION** -3.49	**DEPTH (ft)** 14.08

SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.85	4/17/2014	5.74 feet
4.71	4/24/2014	5.88



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
FILL	1.5
	3.0
SAND	4.5
	13.0
SILTY SAND	14.1

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WELL CONSTRUCTION SUMMARY

Well No. MW10

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 11.27 feet NAVD88
DRILLING AGENCY Aarco Environmental Services Corp.	**DATE STARTED** 4/16/2014 **DATE FINISHED** 4/16/2014
DRILLING EQUIPMENT Geoprobe 7822DT	**DRILLER** Tom Seckel
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cuttings and filter sand	
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite	
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	11.01	0.26
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	9.75	1.26
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	8.25	2.76
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	6.75	4.26
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-3.22	14.23

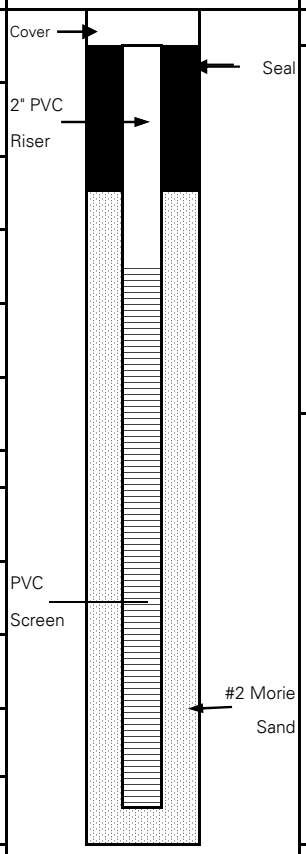
SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.88	4/16/2014	6.13 feet
4.7	4/24/2014	6.31

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	1.3
FILL	2.8
	4.3
	7.0
SAND	14.2

LANGAN Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
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WELL CONSTRUCTION SUMMARY

Well No. MW11

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 11.87 feet NAVD88
DRILLING AGENCY Aarco Environmental Services Corp.	**DATE STARTED** 4/16/2014 **DATE FINISHED** 4/16/2014
DRILLING EQUIPMENT Geoprobe 7822DT	**DRILLER** Tom Seckel
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cuttings and filter sand
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand

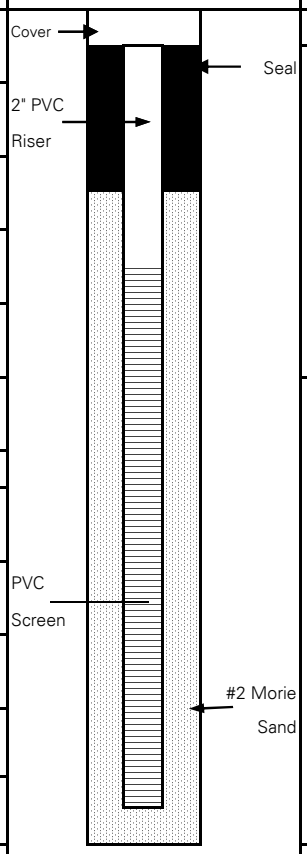
TOP OF CASING	**ELEVATION**	**DEPTH (ft)**
	11.41	0.46
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**
	9.95	1.46
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**
	8.45	2.96
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**
	6.95	4.46
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**
	-2.76	14.17

SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.46	4/18/2014	6.95 feet
4.38	4/24/2014	7.03



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	1.5
FILL	3.0
	4.5
	6.0
SILT, some sand	14.2

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WELL CONSTRUCTION SUMMARY

Well No. MW12

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 10.76 feet NAVD88
DRILLING AGENCY Aarco Environmental Services Corp.	**DATE STARTED** 4/16/2014 **DATE FINISHED** 4/16/2014
DRILLING EQUIPMENT Geoprobe 7822DT	**DRILLER** Tom Seckel
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC	**DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cuttings and filter sand
TYPE OF SCREEN PVC	**DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite
BOREHOLE DIAMETER Approx. 6"		**TYPE OF FILTER MATERIAL** #2 Morie Sand

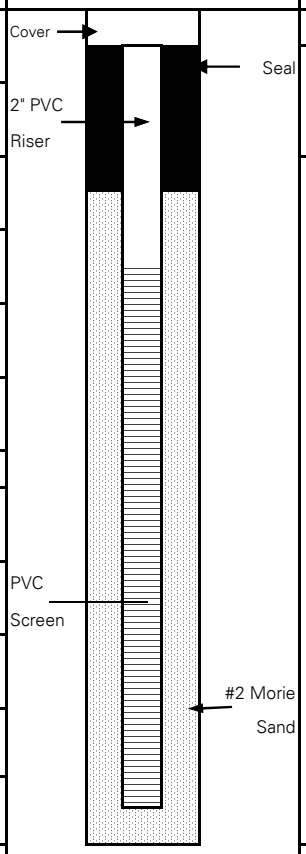
TOP OF CASING	**ELEVATION** 10.39	**DEPTH (ft)** 0.37
TOP OF SEAL	**ELEVATION** 9.02	**DEPTH (ft)** 1.37
TOP OF FILTER	**ELEVATION** 7.52	**DEPTH (ft)** 2.87
TOP OF SCREEN	**ELEVATION** 6.02	**DEPTH (ft)** 4.37
BOTTOM OF BORING	**ELEVATION** -3.08	**DEPTH (ft)** 13.47

SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.67	4/24/2014	5.72 feet



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
Fill	1.4
	2.0
	2.9
SAND	4.4
	13.5

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WELL CONSTRUCTION SUMMARY

Well No. MW13

PROJECT 4430 Purves Street	**PROJECT NO.** 170282501
LOCATION Long Island City, NY	**ELEVATION AND DATUM** 10.64 feet NAVD88
DRILLING AGENCY Aarco Environmental Services Corp.	**DATE STARTED** 4/17/2014 **DATE FINISHED** 4/17/2014
DRILLING EQUIPMENT Geoprobe 7822DT	**DRILLER** Tom Seckel
SIZE AND TYPE OF BIT 3.25" O.D. Macrocore	**INSPECTOR** Paul McMahon

METHOD OF INSTALLATION

Advance Macrocore to 14 feet bgs. Insert 10' PVC screen and 4' PVC riser into the borehole. Pour #2 Morie filter sand into the annulus to a depth of 2.5 ft bgs. Install 1.5' hydrated bentonite seal above the sand filter. Backfill and place well cover in cement mix.

METHOD OF WELL DEVELOPMENT

Surged and purged with a Monsoon pump until recharge was observed and water became clear.
Total purge volume = 15 gallons

TYPE OF CASING PVC **DIAMETER** 2"	**TYPE OF BACKFILL MATERIAL** Soil Cuttings and filter sand
TYPE OF SCREEN PVC **DIAMETER** 2"	**TYPE OF SEAL MATERIAL** Hydrated bentonite
BOREHOLE DIAMETER Approx. 6"	**TYPE OF FILTER MATERIAL** #2 Morie Sand

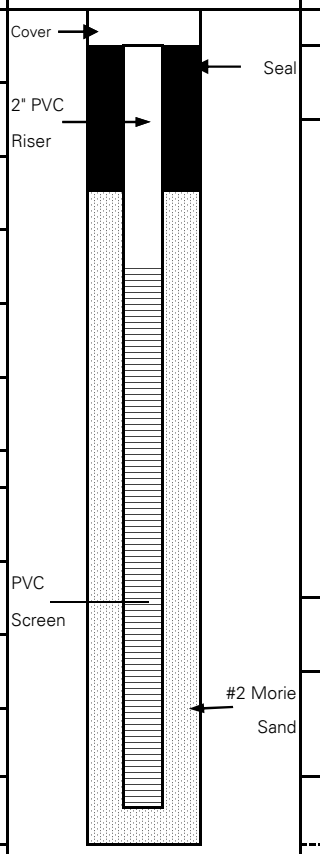
	ELEVATION	DEPTH (ft)
TOP OF CASING	9.91	0.73
TOP OF SEAL	8.18	1.73
TOP OF FILTER	6.68	3.23
TOP OF SCREEN	5.18	4.73
BOTTOM OF BORING	-3.62	13.53

SCREEN LENGTH
10 feet

SLOT SIZE
.01 inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
4.56	4/17/2014	5.35 feet
4.4	4/24/2014	5.51



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	1.7
Fill	2.0
	3.2
	4.7
SAND	
	9.0
SILTY SAND	
	10.0
SAND	
	12.0
SILT	13.5

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APPENDIX G
GROUNDWATER SAMPLING LOGS

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW01	**Date:**	2/28/2014	**Total Depth (ft):**	14.29
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	10.65
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	6.47	**Purge Volume (gal):**	5.50

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
9:30								6.47	
9:32	6.12	2.660	337.0	3.01	10.76	113	1000	6.37	
9:39	6.66	1.810	59.6	2.21	12.24	105	660	7.01	
9:44	6.71	1.710	34.4	1.80	11.41	106	500	6.90	
9:49	6.74	1.640	20.5	1.48	12.72	104	800	6.91	
9:54	6.75	1.590	10.9	1.32	12.64	104	800	6.40	Average Purge Rate ~ 600 mL/min
9:56									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW02	**Date:**	2/28/2014	**Total Depth (ft):**	13.80
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	10.90
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	4.02	**Purge Volume (gal):**	5.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
10:54								4.02	
10:55	7.67	0.505	460.0	4.01	6.00	31	2000	4.06	
11:00	7.70	0.494	0.0	2.00	6.08	0	1200	4.08	
11:05	7.71	0.496	0.0	1.66	6.14	-2	800	4.07	
11:10	7.72	0.494	0.0	1.46	5.98	-3	500	4.04	
11:15	7.72	0.494	0.0	1.42	6.18	-2	500	4.05	
11:16									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW03	**Date:**	2/28/2014	**Total Depth (ft):**	14.09
Project Number:	170282501	**PID Headspace Reading:**	12.8	**Pump Intake Depth (ft):**	11.69
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	4.93	**Purge Volume (gal):**	5.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
11:45								4.94	
12:00	7.37	0.799	231.0	2.93	9.28	-19	750	5.14	
12:05	7.23	0.786	40.5	1.79	8.93	-49	600	5.24	
12:10	7.21	0.795	9.1	1.60	8.66	-70	600	5.21	
12:15	7.20	0.802	1.8	1.38	8.84	-78	600	5.29	
12:20	7.20	0.805	0.0	1.29	8.69	-86	600	5.32	
12:20									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

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MONITORING WELL SAMPLING FORM

Well No:	MW04	**Date:**	2/28/2014	**Total Depth (ft):**	14.01
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	11.20
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	5.77	**Purge Volume (gal):**	4.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
12:44								5.77	
12:55	7.17	1.000	93.8	3.07	8.36	83	500	5.88	
13:00	7.07	1.030	49.4	1.58	10.01	40	800	5.93	
13:05	7.08	1.030	5.3	1.33	9.99	38	1200	5.91	
13:10	7.08	1.030	0.0	1.36	9.92	39	800	5.94	
13:10									Start Sampling

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

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MONITORING WELL SAMPLING FORM

Well No:	MW09	**Date:**	4/24/2014	**Total Depth (ft):**	13.60
Project Number:	170282501	**PID Headspace Reading:**	2.9	**Pump Intake Depth (ft):**	10.80
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	5.88	**Purge Volume (gal):**	6.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
15:14									Start Pump
15:15	7.53	0.686	>1000	6.01	11.88	-95	1500		water silty
15:20	7.32	0.717	350	3.77	11.27	-77	660	5.94	clearing up
15:25	7.20	0.709	0.0	2.63	10.78	-78	660	5.92	
15:30	7.24	0.699	0.0	2.37	10.86	-84	660		
15:35	7.24	0.699	0.0	2.24	10.71	-84	660		
15:40	Collect sample								Start Sampling
									Sample time 15:45

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW10	**Date:**	4/24/2014	**Total Depth (ft):**	13.97
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	11.50
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	6.31	**Purge Volume (gal):**	4.25

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
14:17									Start Pump
14:19	7.31	0.903	589	12.32	13.18	-101			
14:24	7.23	0.920	769	4.22	12.35	-115	570	6.35	
14:29	7.20	0.935	212	2.91	12.03	-114			
14:34	7.20	0.947	57.2	2.49	12.12	-114		6.36	14 L purged @ 14:42
14:39	7.19	0.932	26.4	2.32	12.15	-112			
14:44	7.17	0.916	1.1	2.18	12.39	-108	560		
14:49	7.17	0.917	0.0	2.19	12.18	-107		6.36	
14:50	Collect sample								Sample time 14:50

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW11	**Date:**	4/24/2014	**Total Depth (ft):**	13.71
Project Number:	170282501	**PID Headspace Reading:**	0.4	**Pump Intake Depth (ft):**	9.80
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	7.02	**Purge Volume (gal):**	0.60

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
10:08	Set up at MW-11								
10:11	Start pump							6.96	
10:14	Stop pump - Horiba flow cell overflowing								
10:15	Start pump								
10:17	Stop pump - Horiba flow cell overflowing - leaking from side due to loose buckle								
10:24	Start pump - Horiba not working correctly								
10:45	Call Pine - new flow cell on way								
10:46	Start pump without horiba set up							8.5	
10:48	No water							9.75	poor recharge
10:50	Move pump intake to 12.33 feet								2.1 liters purged
									no recharge
10:51	Well dry - move to MW13								
13:50	return to MW11-check DTW							7.05	
16:00	Collect sample MW11_042414 - water is slightly silty								

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW12	**Date:**	4/24/2014	**Total Depth (ft):**	13.10
Project Number:	170282501	**PID Headspace Reading:**	0.2	**Pump Intake Depth (ft):**	11.80
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	6.31	**Purge Volume (gal):**	3.75

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
13:26	Start pump - Horiba overflowing, reattach and restart								Start Pump
13:32	Start pump								
13:33	7.71	0.690	386	10.75	12.85	111		5.79	
13:38	7.35	0.691	191	7.10	12.41	126	500		
13:43	7.27	0.704	9.4	6.47	11.32	134		5.79	1.75 gallons purged
13:48	7.24	0.704	0.0	6.63	11.52	136			
13:53	7.22	0.705	0.0	6.70	11.72	136	600		
13:58	7.22	0.704	0.0	6.26	11.84	137	650		
14:00	Collect sample								Sample time 14:00

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

MONITORING WELL SAMPLING FORM

Well No:	MW13	**Date:**	4/24/2014	**Total Depth (ft):**	12.80
Project Number:	170282501	**PID Headspace Reading:**	0.0	**Pump Intake Depth (ft):**	11.50
Site Location:	Long Island City, NY	**Initial Water Level (ft):**	5.51	**Purge Volume (gal):**	6.00

TIME	pH *	COND. (ms/cm)	Turbidity (NTUs)	Dis. Oxygen (ppm)	TEMP. (°C)	ORP (mV)	PURGE RATE mL/min	Depth to Water feet	NOTES
	+/- 0.1 unit	+/- 3%	+/- 10%	+/- 10%	+/- 3%	+/- 10 mV	approx. 250 mL/min	stable	
11:28	Insert pump and tubing into well							5.45	
11:29	Start pump						600		
11:34	Flow cell not working, test in calibration bucket periodically						570	5.95	
11:39								6.00	
11:44	7.11	1.26	280.0	15.60	16.94	131	650		1.75 gallons purged
11:49							650	6.41	
11:54	7.21	1.32	21.5	13.93	16.09	108	650	6.53	
11:59								6.54	5 gallons purged
12:02	7.16	1.37	0.0	13.24	11.37	110			
12:05								6.42	
12:09								6.4	
	Collect sample MW12_042414 +MS/MSD and DUPRI03_042414								

NOTES:

1. Stabilization is achieved after all parameters have stabilized for three successive readings.
2. Dissolved Oxygen stabilization = 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized)
3. Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized)
4. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (every five minutes). Flow cell volume for the Horiba U-52 is 250 mL.

APPENDIX H
SOIL VAPOR CONSTRUCTION AND SAMPLE LOGS

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV01

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 10.39 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

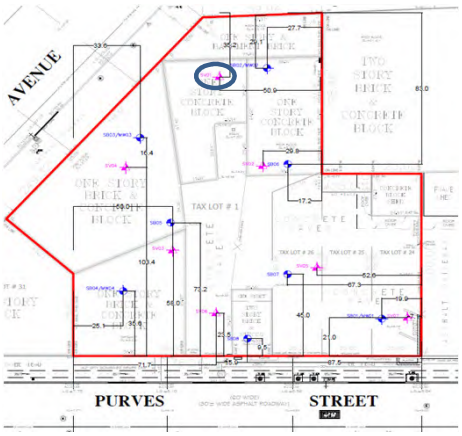
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 14.1 After Sample: 20.9
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	11:05
SAMPLE STOP TIME:	13:05
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	197
REGULATOR SERIAL NUMBER:	0103
CAN START VACUUM PRESS. (" HG):	-29.6
CAN STOP VACUUM PRESS. (" HG):	-13.24

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

Vacuum did not equalize at expected rate, no water in tubing

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV03

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.1 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

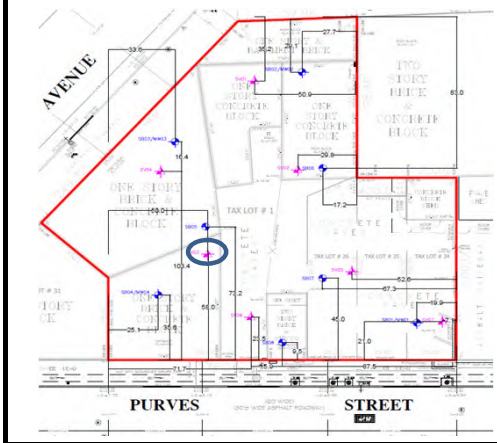
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 8.2 After Sample: 14.4
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:38
SAMPLE STOP TIME:	12:35
TOTAL SAMPLE TIME (MIN):	117
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	382
REGULATOR SERIAL NUMBER:	0100
CAN START VACUUM PRESS. (" HG):	-29.67
CAN STOP VACUUM PRESS. (" HG):	-2.3

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV04

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.1 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

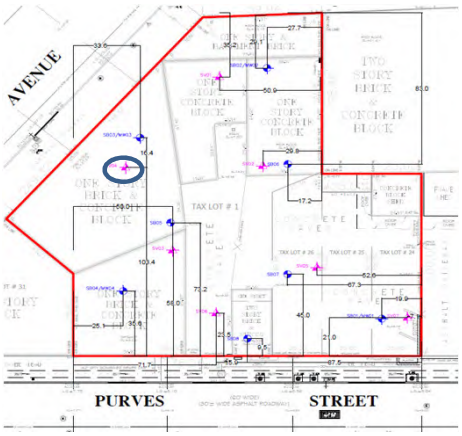
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 16.4 After Sample: 15.4
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:55
SAMPLE STOP TIME:	12:55
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	384
REGULATOR SERIAL NUMBER:	0150
CAN START VACUUM PRESS. (" HG):	-28.66
CAN STOP VACUUM PRESS. (" HG):	-5.29

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV06

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 10.8 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

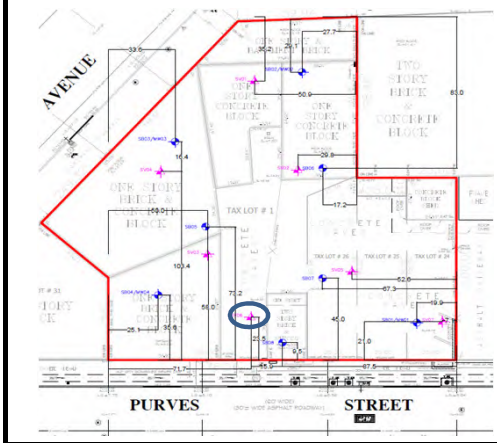
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 7.4 After Sample: 12.2
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	10:20
SAMPLE STOP TIME:	12:20
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	396
REGULATOR SERIAL NUMBER:	0697
CAN START VACUUM PRESS. (" HG):	-29.44
CAN STOP VACUUM PRESS. (" HG):	-3.87

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	4	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV07

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.5 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental Services, Ltd.	**INSTALLATION DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION FOREMAN: Steve Bitetto	**SAMPLE DATE STARTED:** 2/21/2014 **DATE FINISHED:** 2/21/2014
INSTALLATION EQUIPMENT: Geoprobe 6610DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Patrick Farnham
POTENTIAL SAMPLE INTERFERENCES: Drill Rig Activity, high moisture content in soil due to significant snow melt	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 30's °F, Fog, Humidity=93%

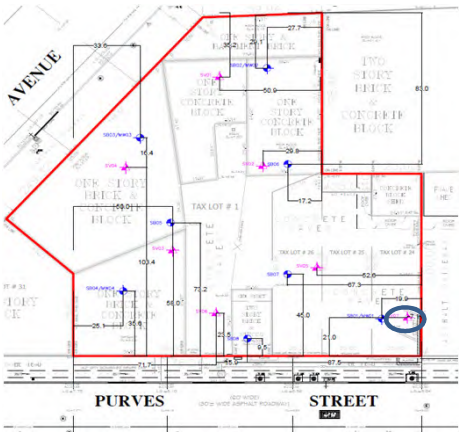
METHOD OF INSTALLATION AND PURGING:
Drill a 1.25-inch diameter steel probe rod to 4 feet bgs. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1 foot bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 11.7 After Sample: 11.3
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	9:40
SAMPLE STOP TIME:	23:40
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	N/A
VOLUME OF SAMPLE (LITERS):	N/A
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	237
REGULATOR SERIAL NUMBER:	0391
CAN START VACUUM PRESS. (" HG):	-29.4
CAN STOP VACUUM PRESS. (" HG):	-4.93

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
Top of Pack	1	Historic Fill
	5	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV08

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 9.8 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

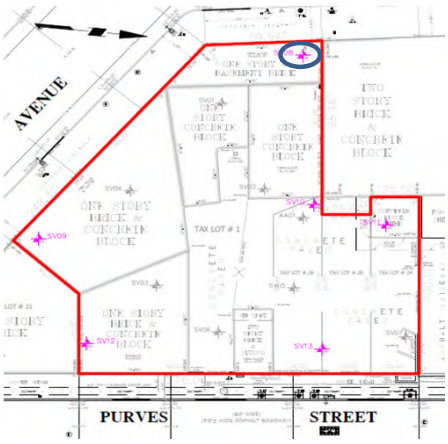
METHOD OF INSTALLATION AND PURGING:
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	2.6
HELIUM TEST IN BUCKET(%):	Before Sample: 5.7 After Sample: 17.8
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 After Sample: 0
SAMPLE START TIME:	8:53
SAMPLE STOP TIME:	11:05
TOTAL SAMPLE TIME (MIN):	132
FLOW RATE (L/MIN):	0.03891
VOLUME OF SAMPLE (LITERS):	5.14
PID AFTER SAMPLE (PPM):	2.3
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	Y75
REGULATOR SERIAL NUMBER:	Y47
CAN START VACUUM PRESS. (" HG):	-29
CAN STOP VACUUM PRESS. (" HG):	-9

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV09

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.05 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

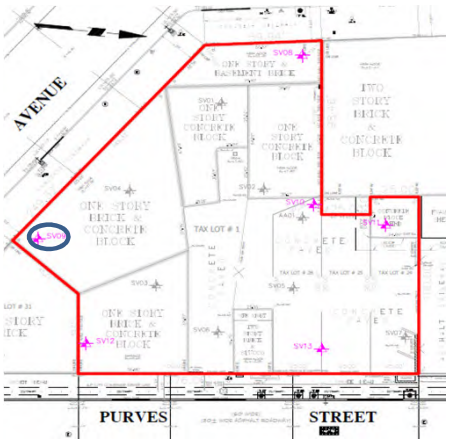
METHOD OF INSTALLATION AND PURGING:
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	9.4
HELIUM TEST IN BUCKET(%):	Before Sample: 31.0 After Sample: 45.7
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 Before Sample: 100
SAMPLE START TIME:	9:05
SAMPLE STOP TIME:	11:12
TOTAL SAMPLE TIME (MIN):	127
FLOW RATE (L/MIN):	0.04
VOLUME OF SAMPLE (LITERS):	5.08
PID AFTER SAMPLE (PPM):	6.7
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	Y79
REGULATOR SERIAL NUMBER:	Y18
CAN START VACUUM PRESS. (" HG):	-31
CAN STOP VACUUM PRESS. (" HG):	-6

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV10

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.15 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

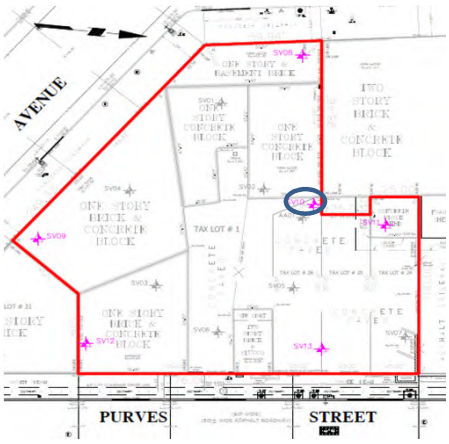
METHOD OF INSTALLATION AND PURGING:
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.0
HELIUM TEST IN BUCKET(%):	Before Sample: 32.4 After Sample: 8.9
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 Before Sample: 0
SAMPLE START TIME:	8:40
SAMPLE STOP TIME:	10:41
TOTAL SAMPLE TIME (MIN):	121
FLOW RATE (L/MIN):	0.04358
VOLUME OF SAMPLE (LITERS):	5.27
PID AFTER SAMPLE (PPM):	0.1
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	S27
REGULATOR SERIAL NUMBER:	Y27
CAN START VACUUM PRESS. (" HG):	-29.5
CAN STOP VACUUM PRESS. (" HG):	-6

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV11

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.75 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

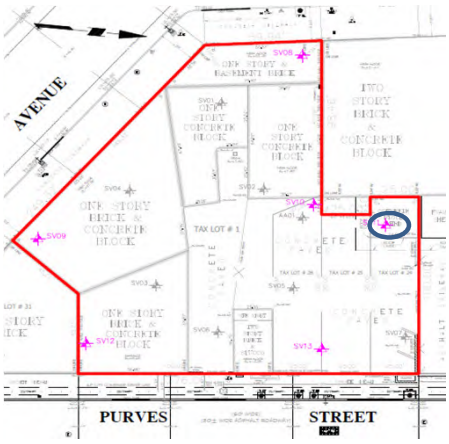
METHOD OF INSTALLATION AND PURGING:
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.6
HELIUM TEST IN BUCKET(%):	Before Sample: 10.7 After Sample: 26.4
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 Before Sample: 0
SAMPLE START TIME:	8:33
SAMPLE STOP TIME:	10:26
TOTAL SAMPLE TIME (MIN):	113
FLOW RATE (L/MIN):	0.04567
VOLUME OF SAMPLE (LITERS):	5.16
PID AFTER SAMPLE (PPM):	2.5
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	YAL-011
REGULATOR SERIAL NUMBER:	Y35
CAN START VACUUM PRESS. (" HG):	-30
CAN STOP VACUUM PRESS. (" HG):	-4.5

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV12

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 10.9 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

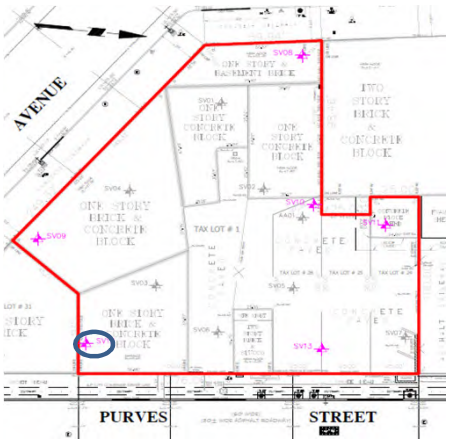
METHOD OF INSTALLATION AND PURGING:
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	4.2
HELIUM TEST IN BUCKET(%):	Before Sample: 62.3 After Sample: 28.3
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 Before Sample: 0
SAMPLE START TIME:	9:15
SAMPLE STOP TIME:	11:20
TOTAL SAMPLE TIME (MIN):	125
FLOW RATE (L/MIN):	0.03978
VOLUME OF SAMPLE (LITERS):	4.97
PID AFTER SAMPLE (PPM):	4.3
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	YAL-011
REGULATOR SERIAL NUMBER:	Y35
CAN START VACUUM PRESS. (" HG):	-36
CAN STOP VACUUM PRESS. (" HG):	-14

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

Gauge read -6 when closed and prior to sample collection.

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV13

PROJECT: 4430 Purves Street	**PROJECT NO.:** 170282501
LOCATION: Long Island City, New York	**SURFACE ELEVATION AND DATUM:** Approx. 11.5 feet NAVD88
DRILLING FIRM OR LANGAN INSTALLER: Aarco Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/17/2014 **DATE FINISHED:** 4/17/2014
INSTALLATION FOREMAN: Tom Seckel	**SAMPLE DATE STARTED:** 4/18/2014 **DATE FINISHED:** 4/18/2014
INSTALLATION EQUIPMENT: Geoprobe 7822DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa® Canisters
INSPECTOR: Paul McMahon	**SAMPLER:** Paul McMahon
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** 40's °F, Partly Cloudy, Humidity=58%

METHOD OF INSTALLATION AND PURGING:

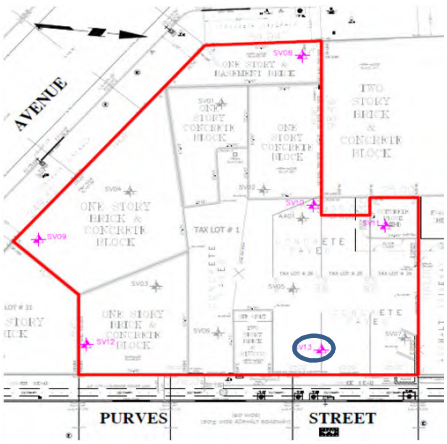
Drill a 2.25-inch O.D MacroCore to approximately 3.5 feet bgs. Backfilll to 3 feet bgs with #2 Morie filter sand. Insert 6" steel soil vapor implant with attached tubing. Pour #2 Morie filter sand into the annulus to approximately 1.5 feet bgs. Seal with hydrated bentonite. Purge with a miniRAE 3000 PID at a rate of 200 mL/min for approximately 1 minute.

TUBING TYPE/DIAMETER: Poly (1/4" OD, 3/16" ID)	**TYPE OF MATERIAL ABOVE SEAL:** N/A
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 6" Stainless Steel	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2.25"	**FILTER PACK MATERIAL (Sand or Glass Beads):** #2 Morie Sand

PURGE VOLUME (L):	0.20
PURGE FLOW RATE (ML/MIN):	200
PID AFTER PURGE (PPM):	0.5
HELIUM TEST IN BUCKET(%):	Before Sample: 25.4 After Sample: 21.3
HELIUM TEST IN TUBE (PPM):	Before Sample: 0 Before Sample: 0
SAMPLE START TIME:	8:23
SAMPLE STOP TIME:	10:23
TOTAL SAMPLE TIME (MIN):	120
FLOW RATE (L/MIN):	0.04443
VOLUME OF SAMPLE (LITERS):	5.33
PID AFTER SAMPLE (PPM):	1.0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	S14
REGULATOR SERIAL NUMBER:	Y9
CAN START VACUUM PRESS. (" HG):	-35
CAN STOP VACUUM PRESS. (" HG):	-10.5

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0	
		Historic Fill
Top of Pack	1.5	
	3	

SAMPLE LOCATION SKETCH



NOTES

Gauge read -5 when closed and prior to sample collection.

Collect DUPSV01_042414

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

APPENDIX I
DATA USABILITY SUMMARY REPORTS

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 8, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected February 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on February 19 and 20, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7473
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14B0504	14B0504-01	SB01_4-6	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
14B0504	14B0504-02	SB01_7-9	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-03	SB06_3-5	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-04	SB06_6-8	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-05	SB07_1-3	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-06	SB07_5-7	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-07	SB08_0-2	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-08	SB08_15-17	2/19/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-09	FB_022014	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-10	TB_022014	2/20/2014	VOCs
14B0504	14B0504-11	SB04_1-3	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-12	SB04_4-6	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0504	14B0504-13	DUP01_022014	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB01_4-6	VOCs	Acetone	67-64-1	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB01_4-6	VOCs	Methylene chloride	75-09-2	U (0.011)
SB01_4-6	SVOCs	Phenanthrene	85-01-8	J
SB01_4-6	SVOCs	Chrysene	218-01-9	J
SB01_7-9	VOCs	Acetone	67-64-1	J
SB01_7-9	VOCs	Methylene chloride	75-09-2	U (0.012)
SB01_7-9	SVOCs	Phenanthrene	85-01-8	UJ
SB01_7-9	Metals	Beryllium	7440-41-7	UJ
SB01_7-9	Metals	Silver	7440-22-4	UJ
SB06_3-5	VOCs	Acetone	67-64-1	J
SB06_3-5	VOCs	Methylene chloride	75-09-2	U (0.0067)
SB06_3-5	SVOCs	Phenanthrene	85-01-8	J
SB06_3-5	SVOCs	Chrysene	218-01-9	J
SB06_3-5	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB06_3-5	Pest	4,4'-DDD	72-54-8	UJ
SB06_3-5	Pest	4,4'-DDE	72-55-9	UJ
SB06_3-5	Pest	4,4'-DDT	50-29-3	UJ
SB06_3-5	Pest	Aldrin	309-00-2	UJ
SB06_3-5	Pest	alpha-BHC	319-84-6	UJ
SB06_3-5	Pest	beta-BHC	319-85-7	UJ
SB06_3-5	Pest	alpha-Chlordane	5103-71-9	UJ
SB06_3-5	Pest	delta-BHC	319-86-8	UJ
SB06_3-5	Pest	Dieldrin	60-57-1	UJ
SB06_3-5	Pest	Endosulfan I	959-98-8	UJ
SB06_3-5	Pest	Endosulfan II	33213-65-9	UJ
SB06_3-5	Pest	Endosulfan sulfate	1031-07-8	UJ
SB06_3-5	Pest	Endrin	72-20-8	UJ
SB06_3-5	Pest	Gamma-BHC	58-89-9	UJ
SB06_3-5	Pest	Heptachlor	76-44-8	UJ
SB06_6-8	VOCs	Acetone	67-64-1	J
SB06_6-8	VOCs	Methylene chloride	75-09-2	U (0.006)
SB06_6-8	VOCs	2-Butanone	78-93-3	J
SB06_6-8	SVOCs	Phenanthrene	85-01-8	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB06_6-8	SVOCs	Chrysene	218-01-9	J
SB06_6-8	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB06_6-8	Pest	4,4'-DDD	72-54-8	UJ
SB06_6-8	Pest	4,4'-DDE	72-55-9	UJ
SB06_6-8	Pest	4,4'-DDT	50-29-3	UJ
SB06_6-8	Pest	Aldrin	309-00-2	UJ
SB06_6-8	Pest	alpha-BHC	319-84-6	UJ
SB06_6-8	Pest	beta-BHC	319-85-7	UJ
SB06_6-8	Pest	alpha-Chlordane	5103-71-9	UJ
SB06_6-8	Pest	delta-BHC	319-86-8	UJ
SB06_6-8	Pest	Dieldrin	60-57-1	UJ
SB06_6-8	Pest	Endosulfan I	959-98-8	UJ
SB06_6-8	Pest	Endosulfan II	33213-65-9	UJ
SB06_6-8	Pest	Endosulfan sulfate	1031-07-8	UJ
SB06_6-8	Pest	Endrin	72-20-8	UJ
SB06_6-8	Pest	Gamma-BHC	58-89-9	UJ
SB06_6-8	Pest	Heptachlor	76-44-8	UJ
SB06_6-8	PCBs	Aroclor 1016	12674-11-2	UJ
SB06_6-8	PCBs	Arochlor 1221	11104-28-2	UJ
SB06_6-8	PCBs	Aroclor 1232	11141-16-5	UJ
SB06_6-8	PCBs	Aroclor 1242	53469-21-9	UJ
SB06_6-8	PCBs	Aroclor 1248	12672-29-6	UJ
SB06_6-8	PCBs	Aroclor 1254	11097-69-1	UJ
SB06_6-8	PCBs	Aroclor 1260	11096-82-5	UJ
SB06_6-8	PCBs	Total PCBs	1336-36-3	UJ
SB07_1-3	VOCs	Methylene chloride	75-09-2	U (0.0095)
SB07_1-3	SVOCs	Phenanthrene	85-01-8	J
SB07_1-3	SVOCs	Chrysene	218-01-9	J
SB07_1-3	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB07_5-7	VOCs	Acetone	67-64-1	J
SB07_5-7	VOCs	Methylene chloride	75-09-2	U (0.0087)
SB07_5-7	SVOCs	Phenanthrene	85-01-8	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB08_0-2	VOCs	Acetone	67-64-1	J
SB08_0-2	VOCs	Methylene chloride	75-09-2	U (0.0069)
SB08_0-2	SVOCs	Phenanthrene	85-01-8	J
SB08_0-2	SVOCs	Chrysene	218-01-9	J
SB08_0-2	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB08_15-17	VOCs	Acetone	67-64-1	J
SB08_15-17	VOCs	Methylene chloride	75-09-2	U (0.0088)
SB08_15-17	SVOCs	Phenanthrene	85-01-8	UJ
FB_022014	VOCs	Acetone	67-64-1	J
FB_022014	SVOCs	Pentachlorophenol	87-86-5	R
FB_022014	SVOCs	Hexachlorobenzene	118-74-1	R
FB_022014	SVOCs	Dibenz(a,h)anthracene	53-70-3	UJ
SB04_1-3	VOCs	Tetrachloroethene	127-18-4	J
SB04_1-3	VOCs	Methylene chloride	75-09-2	U (0.010)
SB04_1-3	VOCs	Trichloroethene	79-01-6	J
SB04_1-3	VOCs	n-Propylbenzene	103-65-1	UJ
SB04_1-3	VOCs	1,3,5-Trimethylbenzene	108-67-8	UJ
SB04_1-3	VOCs	tert-Butylbenzene	98-06-6	UJ
SB04_1-3	VOCs	1,2,4-Trimethylbenzene	95-63-6	UJ
SB04_1-3	VOCs	sec-Butylbenzene	135-98-8	UJ
SB04_1-3	VOCs	1,3-Dichlorobenzene	541-73-1	UJ
SB04_1-3	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
SB04_1-3	VOCs	n-Butylbenzene	104-51-8	UJ
SB04_1-3	SVOCs	Phenanthrene	85-01-8	J
SB04_1-3	SVOCs	Chrysene	218-01-9	J
SB04_1-3	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB04_1-3	SVOCs	Benzo(g,h,i)perylene	191-24-2	J
SB04_1-3	SVOCs	Dibenz(a,h)anthracene	53-70-3	J
SB04_1-3	VOCs	1,1,1-Trichloroethane	71-55-6	J
SB04_1-3	Metals	Mercury	7439-97-6	J
SB04_1-3	Metals	Nickel	7440-02-0	J
SB04_1-3	Metals	Arsenic	7440-38-2	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB04_1-3	Metals	Barium	7440-39-3	J
SB04_1-3	Metals	Cadmium	7440-43-9	J
SB04_1-3	Metals	Copper	7440-50-8	J
SB04_1-3	Metals	Zinc	7440-66-6	J
SB04_4-6	VOCs	Acetone	67-64-1	J
SB04_4-6	VOCs	Methylene chloride	75-09-2	U (0.014)
SB04_4-6	SVOCs	Phenanthrene	85-01-8	J
SB04_4-6	SVOCs	Chrysene	218-01-9	J
SB04_4-6	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB04_4-6	SVOCs	Benzo(g,h,i)perylene	191-24-2	J
SB04_4-6	SVOCs	Dibenz(a,h)anthracene	53-70-3	J
DUP01_022014	VOCs	Acetone	67-64-1	J
DUP01_022014	VOCs	Methylene chloride	75-09-2	U (0.0077)
DUP01_022014	SVOCs	Phenanthrene	85-01-8	J
DUP01_022014	SVOCs	Chrysene	218-01-9	J
DUP01_022014	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
DUP01_022014	SVOCs	Benzo(g,h,i)perylene	191-24-2	J
DUP01_022014	SVOCs	Dibenz(a,h)anthracene	53-70-3	J
DUP01_022014	VOCs	1,1,1-Trichloroethane	71-55-6	J
DUP01_022014	Metals	Mercury	7439-97-6	J
DUP01_022014	Metals	Nickel	7440-02-0	J
DUP01_022014	Metals	Arsenic	7440-38-2	J
DUP01_022014	Metals	Barium	7440-39-3	J
DUP01_022014	Metals	Cadmium	7440-43-9	J
DUP01_022014	Metals	Copper	7440-50-8	J
DUP01_022014	Metals	Zinc	7440-66-6	J
DUP01_022014	VOCs	Trichloroethene	79-01-6	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. The section below describes the major deficiencies that were identified.

SVOCs by SW-846 Method 8270D:

The continuing calibration analyzed on 2/28/14 displayed continuing relative response factors less than the control limit for hexachlorobenzene and pentachlorophenol. The associated non-detect field blank sample results are qualified as "R" for rejected.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Sample SB04_1-3 displayed a surrogate recovery greater than the upper control limit (i.e., 118%) for toluene-d8 at 138%. The associated positive detections are qualified as "J."

Laboratory control sample/control sample duplicate (LCS/LCSD) BB40810-BS1 displayed recoveries greater than the upper control limits for 1,2,4-trimethylbenzene (117%), 2-butanone (158% and 157%), acetone (151% and 168%), and o-xylene (112%). The associated positive detections were qualified as "J."

Method blank sample BB40810-BLK1 displayed a positive detection for methylene chloride at 0.0092 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BB40891-BLK1 displayed positive detections for methylene chloride at 0.0027 mg/kg and acetone at 0.010 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Sample SB04_1-3 displayed internal standard area counts less than the lower control limit (i.e., 50%) for 1,2-dichlorobenzene-d4 at 30%. The associated target compounds were qualified as estimated.

SVOCs by SW-846 Method 8270D:

The initial calibration analyzed on 1/17/14 displayed a percent relative standard deviation (RSD) greater than the control limit (i.e., 20%) for phenanthrene at 20.52%. The associated positive detections are qualified as "J" and non-detects are qualified as "UJ."

The initial calibration analyzed on 2/28/14 displayed RSDs greater than the control limit for pentachlorophenol at 99.19% and dibenz(a,h)anthracene at 20.53%. The associated dibenz(a,h)anthracene non-detect in the field blank sample is qualified as "UJ." The pentachlorophenol result was previously rejected; no further action is needed.

The continuing calibration analyzed on 2/24/14 at 9:02 displayed percent deviations (%Ds) greater than the control limit with positive biases for chrysene (38.8%), indeno(1,2,3-cd)pyrene (58.4%), dibenz(a,h)anthracene (62.9%), and benzo(g,h,i)perylene (59.4%). The associated positive detections are qualified as "J."

Pesticides by SW-846 Method 8081B:

Samples SB06_3-5 and SB06_6-8 displayed surrogate recoveries for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 27.2% and 13.9%, respectively. The associated sample results were non-detect and are qualified as "UJ."

PCBs by SW-846 Method 8082A:

Sample SB06_6-8 displayed a surrogate recovery for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 26.1%. The associated sample results were non-detect and are qualified as "UJ."

Metals by SW-846 Method 6010C:

Matrix spike sample SB01_7-9 displayed recoveries less than the lower control limit (i.e., 75%) for beryllium and silver at 70.8% and 44.4%, respectively. The associated sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

LCS/LCSD BB40817-BS1 displayed recoveries greater than the upper control limit for 1,4-dioxane (379% and 342%) and 1,2-dichlorobenzene (121%). The associated sample results were non-detect; no qualification is required.

Method blank sample BB40817-BLK1 displayed a positive detection for 1,4-dioxane at 680 µg/L. The associated trip blank and field blank samples were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270D:

LCS/LCSD sample BB40798-BSD1 displayed relative percent differences (RPDs) greater than the control limit (i.e., 30%) for benzo(a)anthracene (54.4%), dibenzofuran(35.6%), and naphthalene (46.5%). The LCS and LCSD recoveries were within control; no qualification is necessary.

Metals by SW-846 Method 6010C:

Continuing calibration blank Y4B2401-CCB3 displayed a positive detection for lead at 8 µg/L. The associated sample results are orders of magnitude greater than the blank concentration; no qualification is necessary.

Comments:

A field duplicate and parent sample pair (SB04_1-3 and DUP01_022014) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±2X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 50%. Tetrachloroethene, 1,1,1-trichloroethane, mercury, nickel, arsenic, barium, cadmium, copper, zinc, and trichloroethene failed the precision criteria. The associated positive detections were qualified as "J."

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 99%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 8, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected February 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on February 20, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7473
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14B0543	14B0543-01	SB03_1-3	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14B0543	14B0543-02	SB03_6-8	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0543	14B0543-03	SB05_1-3	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0543	14B0543-04	SB05A_2-4	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0543	14B0543-05	SB05A_11-13	2/20/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0543	14B0543-06	TB02_022114	2/21/2014	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB03_1-3	VOCs	Acetone	67-64-1	U (0.011)
SB03_1-3	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB03_6-8	VOCs	Methylene chloride	75-09-2	U (1.4)
SB03_6-8	SVOCs	Phenanthrene	85-01-8	J
SB03_6-8	SVOCs	Pentachlorophenol	87-86-5	UJ
SB05_1-3	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB05_1-3	SVOCs	Benzo(g,h,i)perylene	191-24-2	J
SB05A_2-4	VOCs	Methylene chloride	75-09-2	U (0.012)
SB05A_2-4	VOCs	n-Propylbenzene	103-65-1	UJ
SB05A_2-4	VOCs	1,3,5-Trimethylbenzene	108-67-8	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB05A_2-4	VOCs	tert-Butylbenzene	98-06-6	UJ
SB05A_2-4	VOCs	1,2,4-Trimethylbenzene	95-63-6	UJ
SB05A_2-4	VOCs	sec-Butylbenzene	135-98-8	UJ
SB05A_2-4	VOCs	1,3-Dichlorobenzene	541-73-1	UJ
SB05A_2-4	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
SB05A_2-4	VOCs	n-Butylbenzene	104-51-8	UJ
SB05A_2-4	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	J
SB05A_2-4	SVOCs	Benzo(g,h,i)perylene	191-24-2	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BB40913-BLK1 displayed a positive detection for methylene chloride at 0.0039 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BB40948-BLK1 displayed a positive detection for methylene chloride at 0.0027 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BB41008-BLK1 displayed positive detections for methylene chloride at 0.0025 mg/kg and acetone at 0.0029 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Sample SB05A_2-4 displayed internal standard area counts less than the lower control limit (i.e., 50%) for 1,2-dichlorobenzene-d4 at 43%. The associated target compounds were qualified as estimated.

SVOCs by SW-846 Method 8270D:

The continuing calibration analyzed on 2/25/14 at 9:24 displayed a percent deviation (%D) greater than the control limit (i.e., 25%) with a negative bias for pentachlorophenol at 26.1%. The associated sample result was non-detect and is qualified as "UJ."

The continuing calibration analyzed on 2/24/14 at 9:22 displayed %Ds greater than the control limit with positive biases for indeno(1,2,3-cd)pyrene at 34.3% and 55.4%, respectively. The associated positive detections are qualified as "J."

The initial calibration analyzed on 1/17/14 displayed a percent relative standard deviation greater than the control limit (i.e., 20%) for phenanthrene at 20.52%. The associated positive detection is qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Sample SB05A_2-4 displayed a surrogate recovery greater than the upper control limit for toluene-d8 at 123%. The associated target compounds were non-detect; no qualification is required.

Laboratory control sample/control sample duplicate (LCS/LCSD) BB40945-BSD1 displayed a recovery greater than the upper control limit for 1,4-dioxane at 146%. The LCS/LCSD relative percent difference for 1,4-dioxane was also greater than the control limit at 43.5%. The associated sample results were non-detect; no qualification is required.

Method blank sample BB40945-BLK1 displayed a positive detection for acetone at 1.4 µg/L. The associated trip blank sample was non-detect; no qualification is required.

The continuing calibration analyzed on 2/27/14 displayed %Ds greater than the control limit with positive biases for 1,4-dioxane and m,p-xylenes. The associated trip blank sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270D:

Sample SB03_6-8 displayed a surrogate recovery greater than the control limit (i.e., 148%) for nitrobenzene-d5 at 182%. No target compounds are associated with the surrogate; qualification is not necessary.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 8, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected February 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on February 21, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7473
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14B0579	14B0579-01	SB02_2-4	2/21/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14B0579	14B0579-01	SB02_6-8	2/21/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0579	14B0579-01	SB02_11-13	2/21/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0579	14B0579-01	TB02_022114	2/21/2014	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB02_2-4	VOCs	Acetone	67-64-1	U (0.042)
SB02_2-4	VOCs	Methylene chloride	75-09-2	U (0.018)
SB02_2-4	VOCs	Trichloroethene	79-01-6	UJ
SB02_2-4	VOCs	1,4-Dioxane	123-91-1	UJ
SB02_2-4	VOCs	Toluene	108-88-3	UJ
SB02_2-4	VOCs	Tetrachloroethene	127-18-4	UJ
SB02_2-4	VOCs	Chlorobenzene	108-90-7	UJ
SB02_2-4	VOCs	Ethylbenzene	100-41-4	UJ
SB02_2-4	VOCs	Xylenes	1330-20-7	UJ
SB02_2-4	VOCs	n-Propylbenzene	103-65-1	UJ
SB02_2-4	VOCs	1,3,5-Trimethylbenzene	108-67-8	UJ
SB02_2-4	VOCs	tert-Butylbenzene	98-06-6	UJ
SB02_2-4	VOCs	1,2,4-Trimethylbenzene	95-63-6	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB02_2-4	VOCs	sec-Butylbenzene	135-98-8	UJ
SB02_2-4	VOCs	1,3-Dichlorobenzene	541-73-1	UJ
SB02_2-4	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
SB02_2-4	VOCs	n-Butylbenzene	104-51-8	UJ
SB02_2-4	SVOCs	Pyrene	129-00-0	UJ
SB02_6-8	VOCs	Methylene chloride	75-09-2	U (0.0082)
SB02_6-8	SVOCs	Pyrene	129-00-0	UJ
SB02_6-8	Pest	4,4'-DDD	72-54-8	UJ
SB02_6-8	Pest	4,4'-DDE	72-55-9	UJ
SB02_6-8	Pest	4,4'-DDT	50-29-3	UJ
SB02_6-8	Pest	Aldrin	309-00-2	UJ
SB02_6-8	Pest	alpha-BHC	319-84-6	UJ
SB02_6-8	Pest	beta-BHC	319-85-7	UJ
SB02_6-8	Pest	alpha-Chlordane	5103-71-9	UJ
SB02_6-8	Pest	delta-BHC	319-86-8	UJ
SB02_6-8	Pest	Dieldrin	60-57-1	UJ
SB02_6-8	Pest	Endosulfan I	959-98-8	UJ
SB02_6-8	Pest	Endosulfan II	33213-65-9	UJ
SB02_6-8	Pest	Endosulfan sulfate	1031-07-8	UJ
SB02_6-8	Pest	Endrin	72-20-8	UJ
SB02_6-8	Pest	Gamma-BHC	58-89-9	UJ
SB02_6-8	Pest	Heptachlor	76-44-8	UJ
SB02_11-13	SVOCs	Pyrene	129-00-0	UJ
SB02_11-13	Pest	4,4'-DDD	72-54-8	UJ
SB02_11-13	Pest	4,4'-DDE	72-55-9	UJ
SB02_11-13	Pest	4,4'-DDT	50-29-3	UJ
SB02_11-13	Pest	Aldrin	309-00-2	UJ
SB02_11-13	Pest	alpha-BHC	319-84-6	UJ
SB02_11-13	Pest	beta-BHC	319-85-7	UJ
SB02_11-13	Pest	alpha-Chlordane	5103-71-9	UJ
SB02_11-13	Pest	delta-BHC	319-86-8	UJ
SB02_11-13	Pest	Dieldrin	60-57-1	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB02_11-13	Pest	Endosulfan I	959-98-8	UJ
SB02_11-13	Pest	Endosulfan II	33213-65-9	UJ
SB02_11-13	Pest	Endosulfan sulfate	1031-07-8	UJ
SB02_11-13	Pest	Endrin	72-20-8	UJ
SB02_11-13	Pest	Gamma-BHC	58-89-9	UJ
SB02_11-13	Pest	Heptachlor	76-44-8	UJ
SB02_11-13	PCBs	Aroclor 1016	12674-11-2	UJ
SB02_11-13	PCBs	Arochlor 1221	11104-28-2	UJ
SB02_11-13	PCBs	Aroclor 1232	11141-16-5	UJ
SB02_11-13	PCBs	Aroclor 1242	53469-21-9	UJ
SB02_11-13	PCBs	Aroclor 1248	12672-29-6	UJ
SB02_11-13	PCBs	Aroclor 1254	11097-69-1	UJ
SB02_11-13	PCBs	Aroclor 1260	11096-82-5	UJ
SB02_11-13	PCBs	Total PCBs	1336-36-3	UJ
TB02_022114	VOCs	Acetone	67-64-1	U (2.2)

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BB40945-BLK1 displayed a positive detection for acetone at 1.4 µg/L. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BB40948-BLK1 displayed a positive detection for methylene chloride at 0.0027 mg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BB41008-BLK1 displayed positive detections for methylene chloride and acetone at 0.0025 mg/kg and 0.0029 mg/kg, respectively. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Sample SB02_2-4 displayed internal standard area counts less than the lower control limit (i.e., 50%) for chlorobenzene-d5 at 49.4% and 1,2-dichlorobenzene-d4 at 21.4%. The associated target compounds were qualified as estimated.

SVOCs by SW-846 Method 8270D:

The continuing calibration analyzed on 2/25/14 displayed a %D greater than the control limit (i.e., 20%) with a negative bias for pyrene at 30.1%. The associated sample results were non-detect and are qualified as "UJ."

Pesticides by SW-846 Method 8081B:

Samples SB02_6-8 and SB02_11-13 displayed surrogate recoveries for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 27.2% and 24.6%, respectively. The associated sample results were non-detect and are qualified as "UJ."

PCBs by SW-846 Method 8082A:

Samples SB02_11-13 displayed a surrogate recovery for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 29.1%. The associated sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Sample SB02_2-4 displayed surrogate recoveries greater than the upper control limit for p-bromofluorobenzene at 172% and toluene-d8 at 138%. The associated target compounds were non-detect; no qualification is required.

Laboratory control sample/control sample duplicate (LCS/LCSD) BB40945-BSD1 displayed a recovery greater than the upper control limit for 1,4-dioxane at 146%. The LCS/LCSD RPD for 1,4-dioxane was also greater than the control limit at 43.5%. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed on 2/27/14 displayed %Ds greater than the control limit with positive biases for 1,4-dioxane and m,p-xylenes. The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270D:

LCS/LCSD BB40902-BSD1 displayed a RPD greater than the control limit for pentachlorophenol at 43%. The LCS and LCSD recoveries were within control; no qualification is required.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 9, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected April 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on April 15, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7471/7470
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14D0616	14D0616-01	SB17_0-2	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14D0616	14D0616-02	SB17_9-10	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-03	SB17_16-18	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-04	SB18_0-5	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-05	SB_18_11-13	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-06	SB18_17-19	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-07	SB19_0-2	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-08	SB19_7-9	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-09	SB19_17-19	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-10	SB14_0-1	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-11	SB14_8-9	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-12	SB14_14-15	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-13	SB15_0-3	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-14	SB15_8-10	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0616	14D0616-15	SB15_16-17.5	4/15/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP

#HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB17_0-2	VOCs	Acetone	67-64-1	U (18)
SB17_0-2	SVOCs	Pentachlorophenol	87-86-5	UJ
SB17_9-10	VOCs	Acetone	67-64-1	U (5)
SB17_9-10	SVOCs	Pentachlorophenol	87-86-5	UJ
SB17_16-18	VOCs	Acetone	67-64-1	U (2.4)
SB17_16-18	SVOCs	Pentachlorophenol	87-86-5	UJ
SB18_0-5	SVOCs	Pentachlorophenol	87-86-5	UJ
SB_18_11-13	VOCs	Acetone	67-64-1	U (10)
SB_18_11-13	SVOCs	Pentachlorophenol	87-86-5	UJ
SB18_17-19	VOCs	Acetone	67-64-1	U (2.3)
SB18_17-19	SVOCs	Acenaphthylene	208-96-8	UJ
SB18_17-19	SVOCs	Acenaphthene	83-32-9	UJ
SB18_17-19	SVOCs	Fluorene	86-73-7	UJ
SB18_17-19	Metals	Silver	7440-22-4	UJ
SB18_17-19	SVOCs	Pentachlorophenol	87-86-5	UJ
SB19_0-2	VOCs	Acetone	67-64-1	U (3.0)
SB19_0-2	SVOCs	Pentachlorophenol	87-86-5	J
SB19_7-9	SVOCs	Pentachlorophenol	87-86-5	UJ
SB19_17-19	SVOCs	Pentachlorophenol	87-86-5	UJ
SB14_0-1	VOCs	Acetone	67-64-1	U (4.2)
SB14_0-1	SVOCs	Pentachlorophenol	87-86-5	UJ
SB14_8-9	VOCs	Acetone	67-64-1	U (320)
SB14_8-9	SVOCs	Pentachlorophenol	87-86-5	UJ
SB14_14-15	VOCs	Acetone	67-64-1	U (64)
SB14_14-15	Pest	4,4'-DDD	72-54-8	UJ
SB14_14-15	Pest	4,4'-DDE	72-55-9	UJ
SB14_14-15	Pest	4,4'-DDT	50-29-3	UJ
SB14_14-15	Pest	Aldrin	309-00-2	UJ
SB14_14-15	Pest	alpha-BHC	319-84-6	UJ
SB14_14-15	Pest	beta-BHC	319-85-7	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB14_14-15	Pest	alpha-Chlordane	5103-71-9	UJ
SB14_14-15	Pest	delta-BHC	319-86-8	UJ
SB14_14-15	Pest	Dieldrin	60-57-1	UJ
SB14_14-15	Pest	Endosulfan I	959-98-8	UJ
SB14_14-15	Pest	Endosulfan II	33213-65-9	UJ
SB14_14-15	Pest	Endosulfan sulfate	1031-07-8	UJ
SB14_14-15	Pest	Endrin	72-20-8	UJ
SB14_14-15	Pest	Gamma-BHC	58-89-9	UJ
SB14_14-15	Pest	Heptachlor	76-44-8	UJ
SB14_14-15	PCBs	Aroclor 1016	12674-11-2	UJ
SB14_14-15	PCBs	Arochlor 1221	11104-28-2	UJ
SB14_14-15	PCBs	Aroclor 1232	11141-16-5	UJ
SB14_14-15	PCBs	Aroclor 1242	53469-21-9	UJ
SB14_14-15	PCBs	Aroclor 1248	12672-29-6	UJ
SB14_14-15	PCBs	Aroclor 1254	11097-69-1	UJ
SB14_14-15	PCBs	Aroclor 1260	11096-82-5	UJ
SB14_14-15	PCBs	Total PCBs	1336-36-3	UJ
SB14_14-15	SVOCs	Pentachlorophenol	87-86-5	UJ
SB15_0-3	SVOCs	Pentachlorophenol	87-86-5	UJ
SB15_8-10	VOCs	Acetone	67-64-1	U (11)
SB15_8-10	SVOCs	Pentachlorophenol	87-86-5	UJ
SB15_16-17.5	VOCs	Acetone	67-64-1	U (11)
SB15_16-17.5	SVOCs	Pentachlorophenol	87-86-5	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BD40893-BLK1 displayed a positive detection for acetone at 4.3 µg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Method blank sample BD41005-BLK1 displayed a positive detection for acetone at 6.0 µg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

SVOCs by SW-846 Method 8270D:

The initial calibration analyzed on 4/9/14 displayed a percent relative standard deviation greater than the control limit for pentachlorophenol at 27.22%. In addition, the continuing calibration analyzed on instrument BNA#1 displayed a percent differenc greater than the control limit with a positive bias for pentachlorophenol at 35.6%. The associated sample results were non-detect and were qualified as "UJ" on the basis of the initial calibration anomaly.

Sample SB17_0-2 displayed a surrogate recovery for 2,4,6-tribromophenol less than the lower control limit at 8.61%. The non-detect result for pentachlorophenol was qualified as "UJ."

Sample SB18_17-19 displayed a surrogate recovery for 2-fluorobiphenyl less than the lower control limit at 9.48%. The non-detect results acenaphthene. acenaphthylene, and flourene were qualified as "UJ."

Pesticides by SW-846 Method 8081B:

Sample SB14_14-15 displayed surrogate recoveries for decachlorobiphenyl and tetrachloro-m-xylene less than the lower control limit (i.e., 30%) at 12.5% and 15.7%, respectively. The associated sample results were non-detect and are qualified as "UJ."

PCBs by SW-846 Method 8082A:

Sample SB14_14-15 displayed surrogate recoveries for decachlorobiphenyl and tetrachloro-m-xylene less than the lower control limit (i.e., 30%) at 12.5% and 15.7%, respectively. The associated sample results were non-detect and are qualified as "UJ."

Metals by SW-846 Method 6010C:

Matrix spike sample SB18_17-19 displayed a recovery less than the lower control limit (i.e., 75%) for silver at 61.2%. The associated sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

SVOCs by SW-846 Method 8270D:

Matrix spike/spike duplicate (MS/SD) sample SB17_0-2 did not recover (i.e., 0%) for pentachlorophenol. Data is not qualified on the basis of MS/SD recoveries alone.

Metals by SW-846 Method 6010C:

Continuing calibration blanks Y4D1801-CCBC and Y4D1801-CCBD displayed positive detections for lead at 3 μg/L. The associated sample results are orders of magnitude greater than the blank concentration; no qualification is necessary.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 8, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected April 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on April 16, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7471/7470
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14D0679	14D0679-01	SB16_0-2	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14D0679	14D0679-02	SB16_6.5-8	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-03	SB16_14-15	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-04	SB09_0.5-2.5	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-05	SB09_8-9	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-06	SB09_19-20	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-07	SB11_2-3.5	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-08	SB11_6-7	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-09	SB11_17-18	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-10	SB12_1-2	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-11	SB12_6-8	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-12	SB12_12-14	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-13	SB10_0-2	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-14	SB10_9-11	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-15	SB10_19-20	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-16	DUPRI01_041614	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-17	DUPRI02_041614	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0679	14D0679-18	FBRI01_041614	4/16/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB16_0-2	SVOCs	Pentachlorophenol	87-86-5	UJ
SB16_0-2	Pest	delta-BHC	319-86-8	UJ
SB16_0-2	Pest	alpha-Chlordane	5103-71-9	UJ
SB16_0-2	Pest	4,4'-DDD	72-54-8	UJ
SB16_0-2	Pest	4,4'-DDE	72-55-9	UJ
SB16_0-2	Pest	Heptachlor	76-44-8	UJ
SB16_6.5-8	VOCs	Vinyl Chloride	75-01-4	UJ
SB16_6.5-8	SVOCs	Pentachlorophenol	87-86-5	UJ
SB16_6.5-8	Pest	delta-BHC	319-86-8	UJ
SB16_6.5-8	Pest	alpha-Chlordane	5103-71-9	UJ
SB16_6.5-8	Pest	4,4'-DDD	72-54-8	UJ
SB16_6.5-8	Pest	4,4'-DDE	72-55-9	UJ
SB16_6.5-8	Pest	Heptachlor	76-44-8	UJ
SB16_6.5-8	SVOCs	Anthracene	120-12-7	J
SB16_6.5-8	SVOCs	Pyrene	129-00-0	J
SB16_6.5-8	SVOCs	Benzo(b)fluoranthene	205-99-2	J
SB16_6.5-8	SVOCs	Fluoranthene	206-44-0	J
SB16_6.5-8	SVOCs	Benzo(k)fluoranthene	207-08-9	J
SB16_6.5-8	SVOCs	Chrysene	218-01-9	J
SB16_6.5-8	SVOCs	Benzo(a)pyrene	50-32-8	J
SB16_6.5-8	SVOCs	Benzo(a)anthracene	56-55-3	J
SB16_6.5-8	VOCs	Acetone	67-64-1	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB16_6.5-8	Metals	Barium	7440-39-3	J
SB16_6.5-8	Metals	Cadmium	7440-43-9	J
SB16_6.5-8	Metals	Zinc	7440-66-6	J
SB16_6.5-8	SVOCs	Phenanthrene	85-01-8	J
SB16_14-15	VOCs	Vinyl Chloride	75-01-4	UJ
SB16_14-15	SVOCs	Pentachlorophenol	87-86-5	UJ
SB16_14-15	Pest	4,4'-DDD	72-54-8	UJ
SB16_14-15	Pest	4,4'-DDE	72-55-9	UJ
SB16_14-15	Pest	4,4'-DDT	50-29-3	UJ
SB16_14-15	Pest	Aldrin	309-00-2	UJ
SB16_14-15	Pest	alpha-BHC	319-84-6	UJ
SB16_14-15	Pest	beta-BHC	319-85-7	UJ
SB16_14-15	Pest	alpha-Chlordane	5103-71-9	UJ
SB16_14-15	Pest	delta-BHC	319-86-8	UJ
SB16_14-15	Pest	Dieldrin	60-57-1	UJ
SB16_14-15	Pest	Endosulfan I	959-98-8	UJ
SB16_14-15	Pest	Endosulfan II	33213-65-9	UJ
SB16_14-15	Pest	Endosulfan sulfate	1031-07-8	UJ
SB16_14-15	Pest	Endrin	72-20-8	UJ
SB16_14-15	Pest	Gamma-BHC	58-89-9	UJ
SB16_14-15	Pest	Heptachlor	76-44-8	UJ
SB16_14-15	PCBs	Aroclor 1016	12674-11-2	UJ
SB16_14-15	PCBs	Arochlor 1221	11104-28-2	UJ
SB16_14-15	PCBs	Aroclor 1232	11141-16-5	UJ
SB16_14-15	PCBs	Aroclor 1242	53469-21-9	UJ
SB16_14-15	PCBs	Aroclor 1248	12672-29-6	UJ
SB16_14-15	PCBs	Aroclor 1254	11097-69-1	UJ
SB16_14-15	PCBs	Aroclor 1260	11096-82-5	UJ
SB16_14-15	PCBs	Total PCBs	1336-36-3	UJ
SB09_0.5-2.5	VOCs	Vinyl Chloride	75-01-4	UJ
SB09_0.5-2.5	SVOCs	Pentachlorophenol	87-86-5	UJ
SB09_0.5-2.5	Pest	delta-BHC	319-86-8	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB09_0.5-2.5	Pest	alpha-Chlordane	5103-71-9	UJ
SB09_0.5-2.5	Pest	4,4′-DDD	72-54-8	UJ
SB09_0.5-2.5	Pest	4,4′-DDE	72-55-9	UJ
SB09_0.5-2.5	Pest	Heptachlor	76-44-8	UJ
SB09_8-9	VOCs	Vinyl Chloride	75-01-4	UJ
SB09_8-9	SVOCs	Pentachlorophenol	87-86-5	UJ
SB09_8-9	Pest	delta-BHC	319-86-8	UJ
SB09_8-9	Pest	alpha-Chlordane	5103-71-9	UJ
SB09_8-9	Pest	4,4′-DDD	72-54-8	UJ
SB09_8-9	Pest	4,4′-DDE	72-55-9	UJ
SB09_8-9	Pest	Heptachlor	76-44-8	UJ
SB09_19-20	VOCs	Vinyl Chloride	75-01-4	UJ
SB09_19-20	SVOCs	Pentachlorophenol	87-86-5	UJ
SB09_19-20	Pest	delta-BHC	319-86-8	UJ
SB09_19-20	Pest	alpha-Chlordane	5103-71-9	UJ
SB09_19-20	Pest	4,4′-DDD	72-54-8	UJ
SB09_19-20	Pest	4,4′-DDE	72-55-9	UJ
SB09_19-20	Pest	Heptachlor	76-44-8	UJ
SB11_2-3.5	VOCs	Vinyl Chloride	75-01-4	UJ
SB11_2-3.5	SVOCs	Pentachlorophenol	87-86-5	UJ
SB11_2-3.5	Pest	delta-BHC	319-86-8	UJ
SB11_2-3.5	Pest	alpha-Chlordane	5103-71-9	UJ
SB11_2-3.5	Pest	4,4′-DDD	72-54-8	UJ
SB11_2-3.5	Pest	4,4′-DDE	72-55-9	UJ
SB11_2-3.5	Pest	Heptachlor	76-44-8	UJ
SB11_6-7	VOCs	Vinyl Chloride	75-01-4	UJ
SB11_6-7	SVOCs	Pentachlorophenol	87-86-5	UJ
SB11_6-7	Pest	delta-BHC	319-86-8	UJ
SB11_6-7	Pest	alpha-Chlordane	5103-71-9	UJ
SB11_6-7	Pest	4,4′-DDD	72-54-8	UJ
SB11_6-7	Pest	4,4′-DDE	72-55-9	UJ
SB11_6-7	Pest	Heptachlor	76-44-8	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB11_17-18	VOCs	Vinyl Chloride	75-01-4	UJ
SB11_17-18	SVOCs	Pentachlorophenol	87-86-5	UJ
SB11_17-18	Pest	delta-BHC	319-86-8	UJ
SB11_17-18	Pest	alpha-Chlordane	5103-71-9	UJ
SB11_17-18	Pest	4,4'-DDD	72-54-8	UJ
SB11_17-18	Pest	4,4'-DDE	72-55-9	UJ
SB11_17-18	Pest	Heptachlor	76-44-8	UJ
SB12_1-2	VOCs	Vinyl Chloride	75-01-4	UJ
SB12_1-2	SVOCs	Pentachlorophenol	87-86-5	UJ
SB12_1-2	Pest	delta-BHC	319-86-8	UJ
SB12_1-2	Pest	alpha-Chlordane	5103-71-9	UJ
SB12_1-2	Pest	4,4'-DDD	72-54-8	UJ
SB12_1-2	Pest	4,4'-DDE	72-55-9	UJ
SB12_1-2	Pest	Heptachlor	76-44-8	UJ
SB12_6-8	VOCs	Vinyl Chloride	75-01-4	UJ
SB12_6-8	SVOCs	Pentachlorophenol	87-86-5	UJ
SB12_6-8	Pest	delta-BHC	319-86-8	UJ
SB12_6-8	Pest	alpha-Chlordane	5103-71-9	UJ
SB12_6-8	Pest	4,4'-DDD	72-54-8	UJ
SB12_6-8	Pest	4,4'-DDE	72-55-9	UJ
SB12_6-8	Pest	Heptachlor	76-44-8	UJ
SB12_12-14	VOCs	Vinyl Chloride	75-01-4	UJ
SB12_12-14	SVOCs	Pentachlorophenol	87-86-5	UJ
SB12_12-14	Pest	delta-BHC	319-86-8	UJ
SB12_12-14	Pest	alpha-Chlordane	5103-71-9	UJ
SB12_12-14	Pest	4,4'-DDD	72-54-8	UJ
SB12_12-14	Pest	4,4'-DDE	72-55-9	UJ
SB12_12-14	Pest	Heptachlor	76-44-8	UJ
SB10_0-2	VOCs	Vinyl Chloride	75-01-4	UJ
SB10_0-2	SVOCs	Pentachlorophenol	87-86-5	UJ
SB10_0-2	Pest	delta-BHC	319-86-8	UJ
SB10_0-2	Pest	alpha-Chlordane	5103-71-9	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB10_0-2	Pest	4,4'-DDD	72-54-8	J
SB10_0-2	Pest	4,4'-DDE	72-55-9	UJ
SB10_0-2	Pest	Heptachlor	76-44-8	J
SB10_9-11	VOCs	Acetone	67-64-1	U (5.3)
SB10_9-11	SVOCs	Pentachlorophenol	87-86-5	UJ
SB10_9-11	Pest	delta-BHC	319-86-8	UJ
SB10_9-11	Pest	alpha-Chlordane	5103-71-9	UJ
SB10_9-11	Pest	4,4'-DDD	72-54-8	UJ
SB10_9-11	Pest	4,4'-DDE	72-55-9	UJ
SB10_9-11	Pest	Heptachlor	76-44-8	UJ
SB10_19-20	SVOCs	Pentachlorophenol	87-86-5	UJ
SB10_19-20	SVOCs	Pentachlorophenol	87-86-5	UJ
SB10_19-20	Pest	delta-BHC	319-86-8	UJ
SB10_19-20	Pest	alpha-Chlordane	5103-71-9	UJ
SB10_19-20	Pest	4,4'-DDD	72-54-8	UJ
SB10_19-20	Pest	4,4'-DDE	72-55-9	UJ
SB10_19-20	Pest	Heptachlor	76-44-8	UJ
SB10_19-20	Metals	Silver	7440-22-4	UJ
DUPRI01_041614	VOCs	Acetone	67-64-1	U (10)
DUPRI01_041614	SVOCs	Pentachlorophenol	87-86-5	UJ
DUPRI01_041614	Pest	delta-BHC	319-86-8	UJ
DUPRI01_041614	Pest	alpha-Chlordane	5103-71-9	UJ
DUPRI01_041614	Pest	4,4'-DDD	72-54-8	UJ
DUPRI01_041614	Pest	4,4'-DDE	72-55-9	UJ
DUPRI01_041614	Pest	Heptachlor	76-44-8	UJ
DUPRI02_041614	SVOCs	Pentachlorophenol	87-86-5	UJ
DUPRI02_041614	Pest	delta-BHC	319-86-8	UJ
DUPRI02_041614	Pest	alpha-Chlordane	5103-71-9	UJ
DUPRI02_041614	Pest	4,4'-DDD	72-54-8	UJ
DUPRI02_041614	Pest	4,4'-DDE	72-55-9	UJ
DUPRI02_041614	Pest	Heptachlor	76-44-8	UJ
DUPRI02_041614	Metals	Nickel	7440-02-0	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
DUPRI02_041614	SVOCs	Anthracene	120-12-7	J
DUPRI02_041614	SVOCs	Pyrene	129-00-0	J
DUPRI02_041614	SVOCs	Benzo(b)fluoranthene	205-99-2	J
DUPRI02_041614	SVOCs	Fluoranthene	206-44-0	J
DUPRI02_041614	SVOCs	Benzo(k)fluoranthene	207-08-9	J
DUPRI02_041614	SVOCs	Chrysene	218-01-9	J
DUPRI02_041614	SVOCs	Benzo(a)pyrene	50-32-8	J
DUPRI02_041614	SVOCs	Benzo(a)anthracene	56-55-3	J
DUPRI02_041614	VOCs	Acetone	67-64-1	J
DUPRI02_041614	Metals	Barium	7440-39-3	J
DUPRI02_041614	Metals	Cadmium	7440-43-9	J
DUPRI02_041614	Metals	Zinc	7440-66-6	J
DUPRI02_041614	SVOCs	Phenanthrene	85-01-8	J
FBRI01_041614	Metals	Arsenic	7440-38-2	J
FBRI01_041614	Pest	Aldrin	309-00-2	UJ
FBRI01_041614	Pest	alpha-BHC	319-84-6	UJ
FBRI01_041614	Pest	delta-BHC	319-86-8	UJ
FBRI01_041614	Pest	gamma-BHC	58-89-9	UJ
FBRI01_041614	Pest	Heptachlor	76-44-8	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BD40896-BLK1 displayed a positive detection for acetone at 3.8 µg/kg. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

The continuing calibration analyzed on 4/18/14 displayed a percent deviation (%D) greater than the control limit with a negative bias for vinyl chloride at 39.3%. The associated sample results were non-detect and are qualified as "UJ."

SVOCs by SW-846 Method 8270D:

The initial calibration analyzed on 4/14/14 displayed percent relative standard deviations (RSDs) greater than the control limit for hexachlorobenzene and pentachlorophenol at 40.09% and 40.38%, respectively. The associated field blank sample results are qualified as "UJ." Hexachlorobenzene was reported from BNA#2 and was not qualified.

The initial calibrations analyzed on 3/28/14 and 4/9/14 displayed RSDs greater than the control limit for pentachlorophenol at 32.68% and 27.22%, respectively. In addition, the continuing calibration analyzed on instrument BNA#1 displayed a %D greater than the control limit with a positive bias for pentachlorophenol at 65.9%. The associated sample results were non-detect and were qualified as "UJ" on the basis of the initial calibration anomaly.

Pesticides by SW-846 Method 8081B:

Sample SB16_14-15 displayed a surrogate recovery for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 20.7. The associated sample results were non-detect and are qualified as "UJ."

Laboratory control sample (LCS) BD409055-BS1 displayed recoveries less than the lower control limit for gamma-BHC (39.3%), alpha-Chlordane (39.5%), 4,4'-DDD (38.8%), 4,4'-DDE (39.0%), and heptachlor (39.9%). Associated positive detections were qualified as "J" and non-detects are qualified "UJ."

LCS BD409011-BS1 displayed recoveries less than the lower control limit for aldrin (30.6% and 31.7%), alpha-BHC (36.3% and 38.2%), delta-BHC (35.4% and 34.6%), gamma-BHC (38.0%

and 39.6%), and heptachlor (37.3% and 39.1%). The associated sample results were non-detects are qualified "UJ."

PCBs by SW-846 Method 8082A:

Sample SB16_14-15 displayed a surrogate recovery for decachlorobiphenyl less than the lower control limit (i.e., 30%) at 20.7%. The associated sample results were non-detect and are qualified as "UJ."

Metals by SW-846 Method 6010C:

Matrix spike sample SB10_19-20 displayed a recovery less than the lower control limit (i.e., 75%) for silver at 61.3%. The associated sample results were non-detect and are qualified as "UJ."

The ICP serial dilution for sample DUPRI02_041614 displayed a %D greater than the control limit (i.e., 10%) for nickel at 31.3%. The associated positive sample result is qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BD40989-BLK1 displayed a positive detection for sec-butylbenzene at 0.21 µg/L. The associated samples were non-detect; no qualification is required.

The field blank sample displayed positive detections for acetone at 4.0 µg/L and methylene chloride at 1.3 µg/L. The associated soil results were either non-detect or orders of magnitude greater than the blank amount; no qualification is required.

SVOCs by SW-846 Method 8270D:

Matrix spike/spike duplicate (MS/SD) sample SB10_19-20 displayed recoveries less than the lower control limit for pentachlorophenol at 6.66% and phenol at 2.96%. In addition, the MS/SD RPDs for pentachlorophenol and phenol were greater than the control limit at 174% and 185%, respectively. Data is not qualified on the basis of MS/SD recoveries or RPDs alone.

LCS/LCSD BD40881-BSD1 displayed a RPD greater than the control limit for benzo(b)fluoranthene at 24.9%. The LCS and LCSD recoveries were within control; no qualification is required.

The continuing calibration analyzed on 4/18/14 displayed a %D greater than the control limit with a positive bias for hexachlorobenzene at 52.6%. The associated sample result was previously qualified; no further action is required.

Metals by SW-846 Method 6010C:

Continuing calibration blanks Y4D1802-CCBC and Y4D1802-CCBD displayed positive detections for lead at 3 µg/L. The associated sample results are orders of magnitude greater than the blank concentration; no qualification is necessary.

The field blank sample displayed positive detections for lead at 3.0 µg/L and zinc at 10 µg/L. The associated soil results were either non-detect or orders of magnitude greater than the blank amount; no qualification is required.

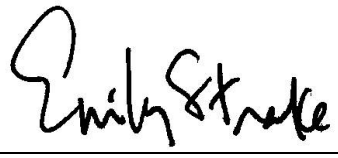
Comments:

A field duplicate and parent sample pair (SB10_9-11 and DUPRI01_041614) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±2X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 50%. All analytes met the precision criteria. A second field duplicate sample pair (SB16_6.5-8 and DUPRI02_041614) was collected and analyzed for all parameters. Anthracene, pyrene, benzo(b)fluoranthene, fluoranthene, benzo(k)fluoranthene, chrysene, benzo(a)pyrene, benzo(a)anthracene, acetone, barium, cadmium, zinc, and phenanthrene failed the precision criteria. The associated positive detections were qualified as "J."

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 9, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Soil Samples Collected April 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on April 17, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, hexavalent chromium (Cr6+), and percent solids.

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7471/7470
- Cyanide by SW-846 Method 9010C
- Hexavalent chromium by SW-846 Method 7196A
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14D0716	14D0716-01	SB13_0-2	4/17/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14D0716	14D0716-02	SB13_9-10	4/17/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0716	14D0716-03	SB13_14-15	4/17/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0716	14D0716-04	FBRI02_041714	4/17/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, and field blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB13_0-2	VOCs	Acetone	67-64-1	U (11)
SB13_9-10	VOCs	Acetone	67-64-1	U (16)
SB13_9-10	SVOCs	Fluorene	86-73-7	UJ
SB13_9-10	SVOCs	Pentachlorophenol	87-86-5	UJ
SB13_9-10	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	UJ
SB13_9-10	SVOCs	Dibenz(a,h)anthracene	53-70-3	UJ
SB13_9-10	SVOCs	Benzo(g,h,i)perylene	191-24-2	UJ
SB13_14-15	VOCs	Acetone	67-64-1	U (5.6)
SB13_14-15	Metals	Lead	7439-92-1	J
SB13_14-15	Metals	Nickel	7440-02-0	J
SB13_14-15	Metals	Zinc	7440-66-6	J
SB13_14-15	SVOCs	Fluorene	86-73-7	UJ
SB13_14-15	SVOCs	Pentachlorophenol	87-86-5	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SB13_14-15	SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	UJ
SB13_14-15	SVOCs	Dibenz(a,h)anthracene	53-70-3	UJ
SB13_14-15	SVOCs	Benzo(g,h,i)perylene	191-24-2	UJ
FBRI02_041714	VOCs	Acetone	67-64-1	U (3.0)
FBRI02_041714	VOCs	Ethylbenzene	100-41-4	UJ
FBRI02_041714	VOCs	o-Xylene	95-47-6	UJ
FBRI02_041714	VOCs	m,p-Xylene	179601-23-1	UJ
FBRI02_041714	Pest	Aldrin	309-00-2	UJ
FBRI02_041714	Pest	alpha-BHC	319-84-6	UJ
FBRI02_041714	Pest	delta-BHC	319-86-8	UJ
FBRI02_041714	Pest	gamma-BHC	58-89-9	UJ
FBRI02_041714	Pest	Heptachlor	76-44-8	UJ
FBRI02_041714	SVOCs	Pentachlorophenol	87-86-5	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Method blank sample BD40995-BLK1 displayed a positive detection for acetone at 3.6 µg/L. The associated positive field blank detection was qualified as "U" and was not used to assess contamination resulting for field activities.

Method blank sample BD41003-BLK1 displayed a positive detection for acetone at 16 µg/kg. The associated positive detections were qualified as "U" at the reporting limit or sample concentration.

Method blank sample BD41143-BLK1 displayed a positive detection for acetone at 5 µg/kg. The associated positive detections were qualified as "U" at the reporting limit or sample concentration.

Laboratory control sample/control sample duplicate (LCS/LCSD) BD40995-BS1 displayed recoveries less than the lower control limit for ethylbenzene (84.9%), o-xylene (76.5%/81.6%), and m,p-xylenes (80.8%/81.3%). The associated non-detect field blank sample results are qualified as "UJ."

SVOCs by SW-846 Method 8270D:

The initial calibrations analyzed on 3/28/14 and 4/14/14 displayed percent relative standard deviations (RSDs) greater than the control limit for pentachlorophenol at 32.68% and 40.38%, respectively. The initial calibration on 3/28/14 also displayed a RSD greater than the control limit for fluorine at 20.20%. In addition, the continuing calibration analyzed on instrument BNA#4 displayed percent deviations (%Ds) greater than the control limit with a negative biases for indeno(1,2,3-cd)pyrene at 41.4%, dibenz(a,h)anthracene at 37.8%, and benzo(g,h,i)perylene at 56.8%. The associated sample results were non-detect and were qualified as "UJ."

Pesticides by SW-846 Method 8081B:

LCS BD409011-BS1 displayed recoveries less than the lower control limit for aldrin (30.6% and 31.7%), alpha-BHC (36.3% and 38.2%), delta-BHC (35.4% and 34.6%), gamma-BHC (38.0% and 39.6%), and heptachlor (37.3% and 39.1%). The associated field blank sample results were non-detects are qualified "UJ."

Metals by SW-846 Method 6010C:

The ICP serial dilution for sample SB13_14-15 displayed %Ds greater than the control limit (i.e., 10%) for nickel at 10.1%, lead at 18.7%, and zinc at 11.9%. The associated positive sample results are qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

LCS/LCSD BD40995-BS1 displayed recoveries greater than the upper control limit for benzene and cis-1,2-dichloroethene. The associated sample results were non-detect; no qualification is required.

LCS/LCSD BD41003-BS1 displayed a relative percent difference (RPD) greater than the control limit (i.e., 30%) for methylene chloride at 45.5%. The LCS and LCSD recoveries were within control; no qualification is required.

SVOCs by SW-846 Method 8270D:

LCS/LCSD BD40959 associated with the field blank sample displayed RPDs greater than the controllimit for acenaphthene, acenaphthylene, anthracene, benzo(k)fluoranthene, and fluorene. The associated LCS/LCSD recoveries were within control; no qualification is required. Napthalene displayed a LCSD recovery greater than the upper control limit at 103% and a RPD greater than the control limit at 21.7%. The associated sample results were non-detect; no qualification is required.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 7, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Groundwater Samples Collected February 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected on February 28, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), and hexavalent chromium (Cr6+).

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7470
- Hexavalent chromium by SW-846 Method 7196A

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14B0822	14B0822-01	MW-01_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0822	14B0822-02	MW-02_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14B0822	14B0822-03	MW03_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0822	14B0822-04	MW04_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0822	14B0822-05	DUP01_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0822	14B0822-06	FB02_022814	2/28/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14B0822	14B0822-07	TB04_022814	2/28/2014	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, field duplicate, trip blank, and field blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW01_022814	VOCs	1,4-Dioxane	123-91-1	UJ
MW01_022814	SVOCs	Caprolactam	105-60-2	R
MW01_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ
MW01_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
MW02_022814	VOCs	1,4-Dioxane	123-91-1	UJ
MW02_022814	SVOCs	Caprolactam	105-60-2	R
MW02_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ
MW02_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
FB02_022814	VOCs	Acetone	67-64-1	U(2.0)
FB02_022814	VOCs	1,4-Dioxane	123-91-1	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
FB02_022814	SVOCs	Caprolactam	105-60-2	R
FB02_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ
FB02_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
TB04_022814	VOCs	Acetone	67-64-1	U(2.0)
MW03_022814	VOCs	Tetrachloroethene	127-18-4	U(0.50)
MW03_022814	VOCs	1,4-Dioxane	123-91-1	UJ
MW03_022814	SVOCs	Caprolactam	105-60-2	R
MW03_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ
MW03_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
MW03_022814	Pest	4,4'-DDD	72-54-8	UJ
MW03_022814	Pest	4,4'-DDE	72-55-9	UJ
MW03_022814	Pest	4,4'-DDT	50-29-3	UJ
MW03_022814	Pest	Aldrin	309-00-2	UJ
MW03_022814	Pest	alpha-BHC	319-84-6	UJ
MW03_022814	Pest	beta-BHC	319-85-7	UJ
MW03_022814	Pest	Chlordane	57-74-9	UJ
MW03_022814	Pest	delta-BHC	319-86-8	UJ
MW03_022814	Pest	Dieldrin	60-57-1	UJ
MW03_022814	Pest	Endosulfan I	959-98-8	UJ
MW03_022814	Pest	Endosulfan II	33213-65-9	UJ
MW03_022814	Pest	Endosulfan sulfate	1031-07-8	UJ
MW03_022814	Pest	Endrin	72-20-8	UJ
MW03_022814	Pest	Endrin aldehyde	7421-93-4	UJ
MW03_022814	Pest	Endrin ketone	53494-70-5	UJ
MW03_022814	Pest	Gamma-BHC	58-89-9	UJ
MW03_022814	Pest	Heptachlor	76-44-8	UJ
MW03_022814	Pest	Heptachlor epoxide	1024-57-3	UJ
MW03_022814	Pest	Methoxychlor	72-43-5	UJ
MW03_022814	Pest	Toxaphene	8001-35-2	UJ
MW04_022814	VOCs	1,4-Dioxane	123-91-1	UJ
MW04_022814	SVOCs	Caprolactam	105-60-2	R
MW04_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW04_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
DUP01_022814	VOCs	1,4-Dioxane	123-91-1	UJ
DUP01_022814	SVOCs	Caprolactam	105-60-2	R
DUP01_022814	SVOCs	2,4-Dinitrophenol	51-28-5	UJ
DUP01_022814	SVOCs	Pentachlorophenol	87-86-5	UJ
DUP01_022814	Pest	4,4'-DDD	72-54-8	UJ
DUP01_022814	Pest	4,4'-DDE	72-55-9	UJ
DUP01_022814	Pest	4,4'-DDT	50-29-3	UJ
DUP01_022814	Pest	Aldrin	309-00-2	UJ
DUP01_022814	Pest	alpha-BHC	319-84-6	UJ
DUP01_022814	Pest	beta-BHC	319-85-7	UJ
DUP01_022814	Pest	Chlordane	57-74-9	UJ
DUP01_022814	Pest	delta-BHC	319-86-8	UJ
DUP01_022814	Pest	Dieldrin	60-57-1	UJ
DUP01_022814	Pest	Endosulfan I	959-98-8	UJ
DUP01_022814	Pest	Endosulfan II	33213-65-9	UJ
DUP01_022814	Pest	Endosulfan sulfate	1031-07-8	UJ
DUP01_022814	Pest	Endrin	72-20-8	UJ
DUP01_022814	Pest	Endrin aldehyde	7421-93-4	UJ
DUP01_022814	Pest	Endrin ketone	53494-70-5	UJ
DUP01_022814	Pest	Gamma-BHC	58-89-9	UJ
DUP01_022814	Pest	Heptachlor	76-44-8	UJ
DUP01_022814	Pest	Heptachlor epoxide	1024-57-3	UJ
DUP01_022814	Pest	Methoxychlor	72-43-5	UJ
DUP01_022814	Pest	Toxaphene	8001-35-2	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. The section below describes the major deficiencies that were identified.

SVOCs by SW-846 Method 8270D:

Caprolactam did not recover (i.e., 0%) in the laboratory control sample/control sample duplicate (LCS/LCSD) associated with sample batch BC40084. The associated sample results were non-detect and are qualified as "R" for rejected.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Laboratory control sample/control sample duplicate (LCS/LCSD) BC40169-BS1 displayed recoveries less than the lower control limit for 1,4-dioxane at 33.2% and 39.7% respectively. The associated non-detect sample results are qualified as "UJ."

Method blank sample BC40231-BLK1 displayed a positive detection for acetone at 1.2 µg/L. The associated positive trip blank sample result is qualified as "U" at the reporting limit.

Method blank sample BC40169-BLK1 displayed a positive detection for acetone at 1.2 µg/L. The associated positive field blank sample result is qualified as "U" at the reporting limit.

Field blank sample FB02_022814 displayed a positive detection for Tetrachloroethene at 0.50 µg/L. The associated sample results less than the reporting limit are qualified as "U" at the reporting limit.

The continuing calibration analyzed on 3/5/2014 displayed a percent deviation (%D) greater than the control limit (i.e. 40%) with a negative bias for 1,4-dioxane at -66.7%. The associated non-detect results are qualified as "UJ."

SVOCs by SW-846 Method 8270D:

The initial calibration analyzed on instrument BNA 4 displayed a percent relative standard deviation (%RSD) greater than the control limit (i.e., 40%) for 2,4-dinitrophenol at 42.5%. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA 5 displayed a %RSD greater than the control limit (i.e., 20%) for pentachlorophenol at 40.38%. The associated sample results were non-detect and are qualified as "UJ."

Pesticides by SW-846 Method 8081B:

Samples MW03_022814 and DUP01_022814 displayed surrogate recoveries less than the lower control limit for decachlorobiphenyl at 24.7% and 28%, respectively. The associated sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

LCSD BC40169-BSD1 displayed recoveries greater than the upper control limit for 1,2,3-trichlorobenzene (119%) and 4-methyl-2-pentanone (115%). The associated sample results were non-detect no qualification is required.

LCS/LCSD BC40129-BS1/NSD1 displayed recoveries greater than the upper control limit for 1,2-dibromo-3-chloropropane, 2-hexanone, and 4-methyl-2-pentanone. The associated sample results were non-detect no qualification is required.

Trip blank sample TB04_022814 displayed a positive detection for methylene chloride at 1.5 µg/L. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed on 3/4/2014 at 11:26 displayed %Ds greater than the control limit with positive biases for 2-butanone and 2-hexanone at 52.2% and 49.5%, respectively. The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270D:

The LCS/LCSD relative percent difference (RPD) for phenol was greater than the control limit at 28.4%. The LCS and LCSD recoveries were within control; no qualification is required.

The continuing calibration analyzed at 8:59 displayed %Ds greater than the control limit with positive biases for 2-methylphenol and pentachlorophenol. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed at 6:39 displayed a %D greater than the control limit with a negative bias for pentachlorophenol at 58.1%. The associated samples were previously qualified on the basis of initial calibration anomalies; no further action is required.

Pesticides by SW-846 Method 8081B:

LCSD BC40040-BSD1 displayed a recovery less than the lower control limit (40%) for delta-BHC at 39.6%. On the basis of professional judgment, no qualification is required.

Comments:

A field duplicate and parent sample pair (MW01_022814 and DUP01_022814) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. All analytes in the field duplicate sample met the precision criteria.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 99%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 8, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Groundwater Samples Collected April 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected on April 24, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury (Hg), cyanide, and hexavalent chromium (Cr6+).

- NYSDEC Part 375 VOCs by SW-846 Method 8260C
- NYSDEC Part 375 SVOCs by SW-846 Method 8270D
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- NYSDEC Part 375 Metals by SW-846
- Mercury by SW-846 Method 7470
- Cyanide by SM 4500 CN C/E
- Hexavalent chromium by SW-846 Method 7196A

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14D0983	14D0983-01	MW09_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14D0983	14D0983-02	MW10_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-03	MW11_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-04	MW12_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-05	MW13_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-06	DUPRI03_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-07	FBRI03_042414	4/24/2014	VOCs, SVOCs, PCBs, Pest, Metals, Hg, Cr6+
14D0983	14D0983-08	Trip Blank	4/24/2014	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and

quantification, chromatograms, overall system performance, serial dilutions, dual column performance, field duplicate, trip blank, and field blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW09_042414	VOCs	sec-Butylbenzene	135-98-8	U (0.50)
MW09_042414	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
MW09_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
MW09_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
MW09_042414	VOCs	Tetrachloroethene	127-18-4	U (2.0)
MW09_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
MW09_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW09_042414	Pest	Aldrin	309-00-2	UJ
MW10_042414	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
MW10_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
MW10_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
MW10_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
MW10_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
MW10_042414	Pest	Aldrin	309-00-2	UJ
MW11_042414	VOCs	Acetone	67-64-1	U (19)
MW11_042414	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
MW11_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
MW11_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
MW11_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
MW11_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
MW11_042414	SVOCS	bis(2-Ethylhexyl)phthalate	117-81-7	U (1.05)
MW11_042414	Pest	Aldrin	309-00-2	UJ
MW12_042414	VOCs	Acetone	67-64-1	U (2.2)
MW12_042414	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
MW12_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
MW12_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
MW12_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
MW12_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
MW12_042414	Pest	Aldrin	309-00-2	UJ
MW12_042414	SVOCS	bis(2-Ethylhexyl)phthalate	117-81-7	U (1.28)
MW12_042414	Metals	Aluminum	7429-90-5	U (40)
MW13_042414	VOCs	1,2,4-Trichlorobenzene	120-82-1	U (3.8)
MW13_042414	VOCs	1,2-Dichlorobenzene	95-50-1	J
MW13_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
MW13_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
MW13_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
MW13_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
MW13_042414	Pest	Aldrin	309-00-2	UJ
MW13_042414	Metals	Iron	7439-89-6	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
DUPRI03_042414	VOCs	1,2,4-Trichlorobenzene	120-82-1	U (3.8)
DUPRI03_042414	VOCs	1,2-Dichlorobenzene	95-50-1	J
DUPRI03_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
DUPRI03_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
DUPRI03_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
DUPRI03_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
DUPRI03_042414	Pest	Aldrin	309-00-2	UJ
DUPRI03_042414	Metals	Iron	7439-89-6	J
FBRI03_042414	VOCs	1,2,4-Trichlorobenzene	120-82-1	U (0.5)
FBRI03_042414	VOCs	Acetone	67-64-1	U (5.7)
FBRI03_042414	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
FBRI03_042414	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
FBRI03_042414	VOCs	cis-1,2-Dichloroethene	156-59-2	U (0.80)
FBRI03_042414	VOCs	Methylene chloride	75-09-2	U (2.0)
FBRI03_042414	VOCs	Tetrachloroethene	127-18-4	U (1.1)
FBRI03_042414	SVOCs	Hexachlorocyclopentadiene	77-47-4	UJ
FBRI03_042414	SVOCS	2,4-Dinitrophenol	121-14-2	UJ
FBRI03_042414	Pest	Aldrin	309-00-2	UJ
Trip Blank	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
Trip Blank	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Laboratory control sample/control sample duplicate (LCS/LCSD) BD41477-BS1 displayed recoveries less than the lower control limit for 1,2-dichlorobenzene (81.1% and 80.2%), and 1,2-dibromo-3-chloropropane (58%). The associated non-detect sample results are qualified as "UJ."

Method blank sample BD41477-BLK1 displayed positive detections for 1,2,4-trichlorobenzene (0.68 µg/L), 1,2,4-trimethylbenzene (0.20 µg/L), acetone (3.9 µg/L), hexachlorobutadiene (0.49 µg/L), n-butylbenzene (0.40 µg/L), p-isopropyltoluene (0.27 µg/L), and sec-butylbenzene (0.24 µg/L). The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

The trip blank sample displayed positive detections for cis-1,2-dichloroethene (0.24 µg/L), methylene chloride (4.9 µg/L) and tetrachloroethene (0.31 µg/L). The associated positive detections were qualified as "U" at the reporting limit or the sample concentration, including the field blank sample results.

SVOCs by SW-846 Method 8270D:

The initial calibration analyzed on instrument BNA 1 displayed percent relative standard deviations (%RSD) greater than the control limit (i.e., 40%) for 2,4-dinitrophenol at 68.22% and hexachlorocyclopentadiene at 44.61%. The associated sample results were non-detect and are qualified as "UJ."

The field blank sample displayed a positive detection for bis(2-ethylhexyl)phthalate at 0.973 µg/L. The associated positive detections were qualified as "U" at the reporting limit or the sample concentration.

Pesticides by SW-846 Method 8081B:

LCS BD41318-BS1 displayed a recovery less than the lower control limit (40%) for aldrin at 38.9%. The associated sample results were non-detect and are qualified as "UJ."

Metals by SW-846 Method 6010C:

The field blank sample displayed a positive detection for aluminum at 40 µg/L. The associated positive detections were qualified as "U" at the sample concentration.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

The QA/QC samples associated with batch BD 41477 displayed slightly low recoveries for surrogate spike 1,2-dichloroethane-d4. The associated sample surrogates were within control; no qualification is required.

MS/SD sample MW13_042414 (batch BD41477) displayed recoveries greater than the upper control limit for the majority of analytes. The recoveries of cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene, were less than the lower control limit due to an initial sample concentration greater than 4X the spiked amount; no qualification is required.

MS/SD sample MW13_042414 (batch BE40073) displayed recoveries less than the lower control limit for 1,1,1-trichloroethane, 1,1-dichloroethane, 1,2-dichlorobenzene, cis-1,2-dichloroethene, dibromochloromethane, tetrachloroethene, trichloroethene and vinyl chloride. Recoveries of 2-butanone, acrylonitrile, bromomethane, carbon disulfide, chloroethane, and methyl acetate were greater than the upper control limits. In addition, the MS/SD RPD for 4-methyl-2-pentanone was greater than the control limit at 38.8%. Data is not qualified on the basis of MS/SD recoveries and RPDs alone.

LCS/LCSD BE40073-BS1 displayed recoveries outside of control limits for 1,2-dibromo-3-chloropropane, acetone, benzene, bromodichloromethane, and chloromethane. In addition, the LCS/LCSD RPD was greater than the control limit for 4-methyl-2-pentanone and acetone. The sample batch is not associated with any reported results; no qualification is required.

LCS/LCSD BD41477-BS1 displayed recoveries greater than the upper control limit for 1,4-dioxane and chloromethane. The associated sample results were non-detect; no qualification is required.

The method blank sample associated with sample batch BE40073 displayed several low-level positive detections for target analytes. The method blank is not associated with investigative samples; no qualification is required.

The continuing calibration analyzed on 4/29/2014 displayed %Ds greater than the control limit (i.e., 30%) with positive biases for bromomethane (32.3%) and acrylonitrile (46.7%). The continuing calibration analyzed on 5/1/2014 displayed %Ds greater than the control limit with positive biases for bromomethane (42.7%) and acrolein (66.0%). The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270D:

MS/SD sample MW13_042414 displayed recoveries less than the lower control limit for caprolactam at 7.94% and 7.62%, respectively. The MS/SD RPDs for bis(2-chloroethylether), 4-chlorophenyl phenyl ether, isophorone, 1,2,4-trichlorobenzene, and 4-nitrophenol were greater than the control limit. Data is not qualified on the basis of MS/SD recoveries alone.

The continuing calibration analyzed on 4/30/2014 at 9:31 displayed %Ds greater than the control limit with positive biases for 2-nitrophenol, naphthalene, caprolactam, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol. The associated sample results were non-detect; no qualification is required.

Comments:

A field duplicate and parent sample pair (MW13_042414 and DUPRI03_042414) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. Iron failed the precision criteria with a RPD of 72.2%. The associated positive detections were qualified as "J."

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 7, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Ambient Air and Soil Gas Samples Collected February 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of six ambient air and soil gas samples collected on February 21, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by Alpha Analytical (NYSDOH ELAP registration # 11627) for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
L1403948	L1403948-01	SV01_022114	2/21/2014	VOCs
L1403948	L1403948-02	SV03_022114	2/21/2014	VOCs
L1403948	L1403948-03	SV04_022114	2/21/2014	VOCs
L1403948	L1403948-04	SV06_022114	2/21/2014	VOCs
L1403948	L1403948-05	SV07_022114	2/21/2014	VOCs
L1403948	L1403948-06	AA01_022114	2/21/2014	VOCs
L1403948	L1403948-07	SV02_022114	2/21/2014	Not Analyzed
L1403948	L1403948-08	SV05_022114	2/21/2014	Not Analyzed

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (June 9, 2014, Revision 6), and the USEPA Contract Laboratory Program, "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, canister pressure, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently

valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SV04_022114	VOCs	Acetone	67-64-1	J
AA01_022114	VOCs	Acetone	67-64-1	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA TO-15:

Acetone could not be accurately quantitated in samples SV04_022114 and AA01_022114 due to the presence of an interfering analyte co-eluting from the chromatography column at approximately the same retention time. The associated sample results were positive detections and are qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by USEPA TO-15:

Tetrachloroethene was detected during the batch canister certification (CAN 373 SHELF 4) at a concentration of 0.258 $\mu g/m^3$. The associated sample results were more than an order of magnitude greater than the batch canister result; no qualification is required.

Comments:

The laboratory performed verification of the flow controller calibration as a performance standard under the Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup's quality control requirements. Samples SV01_022114 and SV04_022114 displayed relative percent differences greater than the control limit (i.e., 20%) for the pre- and post- flow rates at 39% and 32%, respectively. This may indicate uncertainty in the flow rates during the sampling period. Flow controller leak checks and clean canister certifications are provided as part of the standard analytical report.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: July 7, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street
Queens, New York
Ambient Air and Soil Gas Samples Collected April 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of six ambient air and soil gas samples collected on April 18, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
14D0779	14D0779-01	SV08_041814	4/18/2014	VOCs
14D0779	14D0779-02	SV09_041814	4/18/2014	VOCs
14D0779	14D0779-03	SV10_041814	4/18/2014	VOCs
14D0779	14D0779-04	SV11_041814	4/18/2014	VOCs
14D0779	14D0779-05	SV12_041814	4/18/2014	VOCs
14D0779	14D0779-06	SV13_041814	4/18/2014	VOCs
14D0779	14D0779-07	SVDUPRI_041814	4/18/2014	VOCs
14D0779	14D0779-08	AA02_041814	4/18/2014	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (June 9, 2014, Revision 6), and the USEPA Contract Laboratory Program, "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, canister pressure, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently

valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SV08_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SV08_041814	VOCs	Propylene	115-07-1	UJ
SV08_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SV08_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV08_041814	VOCs	2-Hexanone	591-78-6	UJ
SV09_041814	VOCs	Tetrahydrofuran	109-99-9	J
SV09_041814	VOCs	Propylene	115-07-1	UJ
SV09_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SV09_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV09_041814	VOCs	2-Hexanone	591-78-6	UJ
SV09_041814	VOCs	Acetone	67-64-1	J
SV09_041814	VOCs	Tetrachloroethene	127-18-4	J
SV09_041814	VOCs	Trichlorofluoromethane	75-69-4	J
SV10_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SV10_041814	VOCs	Propylene	115-07-1	UJ
SV10_041814	VOCs	p-Ethyltoluene	622-96-8	J
SV10_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV10_041814	VOCs	2-Hexanone	591-78-6	UJ
SV10_041814	VOCs	Trichlorofluoromethane	75-69-4	J
SV11_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SV11_041814	VOCs	Propylene	115-07-1	UJ
SV11_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SV11_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV11_041814	VOCs	2-Hexanone	591-78-6	UJ
SV11_041814	VOCs	1,1,1-Trichloroethane	71-55-6	J
SV11_041814	VOCs	Trichlorofluoromethane	75-69-4	J
SV12_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SV12_041814	VOCs	Propylene	115-07-1	UJ

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
SV12_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SV12_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV12_041814	VOCs	2-Hexanone	591-78-6	UJ
SV12_041814	VOCs	1,1,1-Trichloroethane	71-55-6	J
SV12_041814	VOCs	Trichlorofluoromethane	75-69-4	J
SV13_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SV13_041814	VOCs	Propylene	115-07-1	UJ
SV13_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SV13_041814	VOCs	Ethyl acetate	141-78-6	UJ
SV13_041814	VOCs	2-Hexanone	591-78-6	UJ
SV13_041814	VOCs	Styrene	100-42-5	J
SV13_041814	VOCs	Acetone	67-64-1	J
SVDUPRI_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
SVDUPRI_041814	VOCs	Propylene	115-07-1	UJ
SVDUPRI_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
SVDUPRI_041814	VOCs	Ethyl acetate	141-78-6	UJ
SVDUPRI_041814	VOCs	2-Hexanone	591-78-6	UJ
SVDUPRI_041814	VOCs	Styrene	100-42-5	UJ
SVDUPRI_041814	VOCs	Acetone	67-64-1	UJ
AA02_041814	VOCs	Tetrahydrofuran	109-99-9	UJ
AA02_041814	VOCs	Propylene	115-07-1	UJ
AA02_041814	VOCs	p-Ethyltoluene	622-96-8	UJ
AA02_041814	VOCs	Ethyl acetate	141-78-6	UJ
AA02_041814	VOCs	2-Hexanone	591-78-6	UJ
AA02_041814	VOCs	Trichlorofluoromethane	75-69-4	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate

qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA TO-15:

The following analytes were reported by the laboratory without contemporary certification and the results are qualified as estimated: tetrahydrofuran, propylene, p-ethyltoluene, ethyl acetate, 2-hexanone. Demonstration of capability to perform the testing was completed through the successful analysis of laboratory control samples for the above-listed compounds.

Sample SV09_041814 displayed concentrations greater than the linear range of the instrument calibration at a 2.06X dilution for tetrachloroethene and acetone. The reported results are qualified as "J."

Laboratory control sample BD41071-BS1 displayed recoveries greater than the upper control limit for trichlorofluoromethane at 106% and dibromochloromethane at 126%. The associated positive detections are qualified as "J."

Samples SV11_041814 and SV12_041814 displayed concentrations greater than the linear range of the instrument calibration for 1,1,1-trichloroethane at a 1.87X and 4.03X dilution, respectively. The reported results are qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by USEPA TO-15:

Method blank samples BD41071 and BD41109 displayed positive detections for acetone at 0.27 $\mu g/m^3$ and 0.24 $\mu g/m^3$, respectively. The associated sample concentrations were orders of magnitude greater than the blank amounts; no qualification is required.

Comments:

A field duplicate and parent sample pair (SV13_041814 and SVDUPRI_042414) was collected and analyzed for VOCs. For results less than 5X the RL, analytes meet the precision criteria if

the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. Styrene and acetone did not meet the precision criteria and the associated sample results were qualified as estimated.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All sample holdtimes were met and the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

APPENDIX K
COMPLETED FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS DECISION KEY

Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key		If YES Go to:	If NO Go to:
1.	Is the site or area of concern a discharge or spill event?	13	2
2.	Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13	3
3.	Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?	4	9
4.	Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5
5.	Has the contamination gone off-site?	6	14
6.	Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7	14
7.	Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8
8.	Does contamination exist at concentrations that could exceed ecological impact SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14
9.	Does the site or any adjacent or downgradient property contain any of the following resources? i. Any endangered, threatened or special concern species or rare plants or their habitat ii. Any DEC designated significant habitats or rare NYS Ecological Communities iii. Tidal or freshwater wetlands iv. Stream, creek or river v. Pond, lake, lagoon vi. Drainage ditch or channel vii. Other surface water feature viii. Other marine or freshwater habitat ix. Forest x. Grassland or grassy field xi. Parkland or woodland xii. Shrubby area xiii. Urban wildlife habitat xiv. Other terrestrial habitat	11	10
10.	Is the lack of resources due to the contamination?	3.10.1	14
11.	Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14	12
12.	Does the site have widespread surface soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	12
13.	Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact DEC for information regarding endangered species.)	Section 3.10.1	14
14.	No Fish and Wildlife Resources Impact Analysis needed.		

20 October 2014

Manfred Magloire
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, NY 11101
manfred.magloire@dec.ny.gov

Re: Supplemental Sampling Results
44-30 Purves Street
Long Island City, NY 11101
Brownfield Cleanup Program Site No. C241162
Langan Project No.: 170282501

Dear Mr. Magloire:

This letter provides the results associated with the supplemental soil borings and sampling performed at 44-30 Purves Street, Long Island City, NY (the "Site"). The supplemental borings and sampling were performed at the direction of the New York State Department of Environmental Conservation (NYSDEC) to determine whether chlorinated volatile organic compound (CVOC) source material exists within the Site boundaries. This letter contains a summary of sample collection methodology, analytical results, and discussion of the results. As explained below, we conclude that the supplemental soil sampling supports the conceptual site model offered in the RIR and demonstrates the absence of CVOC source material within the Site.

FIELD ACTIVITIES SUMMARY

On 23 September 2014, Langan field personnel observed and documented field activities in the presence of an NYSDEC representative. The scope of the supplemental investigation was preapproved by the NYSDEC on 18 September 2014 and consisted of two borings (SB20 and SB21) advanced to 25 feet below Site grade. The boring locations were chosen to further investigate potential CVOC soil contamination in the northeast Site corner. The sample collection depths were based on the following: 1) Field screening results and evidence of contamination; 2) comparable depths to remedial investigation boring SB-13; and, 3) boring termination depth.

The extracted sample cores were field screened for visual, olfactory or instrumental evidence (photoionization detector [PID]) of contamination. The PID used to screen the soil cores was equipped with a 10.6-electron Volt (eV) lamp and was calibrated using a 100-ppm isobutylene gas. Field screening observations were recorded on the attached soil boring logs (Attachment A). The supplemental boring locations are shown with previously-advanced soil boring locations

in the subject area on the enclosed Figure 1. Three soil samples were collected from SB20 and four soil samples were collected from SB21 for CVOC analysis. Two samples from each boring were also collected for fraction organic carbon (FOC) analysis. Sample collection depths are shown on Figure 1, listed in Table 1 and recorded in the attached soil boring logs.

RESULTS AND DISCUSSION

Results and observations are discussed in context to the results provided in the NYSDEC-approved September 2014 Remedial Investigation Report (RIR) and the associated conceptual site model. Sample results are summarized in the enclosed Table 1.

Field Screening and Geology

There was no visual or olfactory evidence of contamination in borings SB20 or SB21. Total organic vapor concentrations measured via a PID ranged from a non-detect to 21 parts per million (ppm) in SB20 and 11.5 ppm in SB21. Tetrachloroethene (PCE) and trichloroethene (TCE) have PID isobutylene correction factors of 0.57 and 0.55, respectively. As such, if the PID concentrations observed are attributable to PCE and TCE, then the results are biased high by more than 40%.

The observed geology in SB20 and SB21 is consistent with previous Site observations. SB20 found historic fill to 8 feet, sandy silt and sand layers to about 13.5 feet, and silts and clays to boring termination at 25 feet. SB21 found historic fill to roughly 2.25 feet, sand to 13 feet, and layers of silty clay and sand to 24.25 feet. SB21 was terminated in roughly 1 foot of sandy clay.

Analytical Results

Chlorinated Volatile Organic Compounds

The CVOC results are provided on Table 1 with comparison to the NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UU SCO). The analytical service protocol category B-compliant data package is provided in Attachment B. All reported data was validated and a data usability summary report is enclosed in Attachment C. The following three CVOCs were detected in one or more samples at concentrations exceeding their respective UU SCOs (maximum concentrations are shown for each boring):

Compound	UU SCO	SB-20	SB-21
DCE	0.25	NE	0.45
PCE	1.3	4.40	12
TCE	0.47	NE	1.1

DCE – cis-1,2-dichloroethene
NE – no exceedance
All concentrations shown in mg/kg

The samples with CVOC concentrations were collected below the water table and were saturated. As required by laboratory protocol, sample results are dry-weight adjusted, which for a saturated sample biases the concentrations high as a function of the percent solids. Percent solids are shown on Table 1 and range between 77 % and 88 %. When saturated samples are

prepared by U.S. Environmental Protection Agency (EPA) method 5035 and analyzed by method 8260, there is no discrimination between dissolved concentrations in the soil pore water or the absorbed onto the soil matrix, which can also bias results higher.

Fraction Organic Carbon

Fraction organic carbon (FOC) samples were collected from four distinct geologic layers to assess the potential for groundwater-to-soil contaminant partitioning. The FOC was highest at 1 % for the silty clay encountered at 13.5 feet in SB20 and the silty clay in SB21 encountered at 13 feet. For the sandy layers, FOC was measured to be 0.4 for medium to coarse sand and 1.1 % for fine to medium sand. For reference the U.S. Environmental Protection Agency recommends a general screening value of 0.2% to evaluate potential groundwater-to-soil contaminant partitioning.

Partitioning of CVOCs onto Soil or Aquifer Organic Carbon

Organic compounds dissolved in groundwater adsorb onto solid surfaces by what is referred to as the hydrophobic effect (Roy and Griffin 1985). When dissolved in water, hydrophobic compounds, such as PCE and TCE, tend to be attracted to surfaces that are less polar than water. The partitioning of a dissolved compound on saturated soil is almost exclusively a function of FOC. Values for FOC range from 0.2 % to 3% for sand, silt and clay The partition coefficient with respect to the organic fraction, Koc, can be defined as Koc = Kd/foc, where Kd is partition or distribution coefficient.

Assuming that adsorption is linear with respect to concentration, the sorbed concentration (Cs) onto Site soil can be calculated by Cs = Kd*Cw, where Cw is the contaminant concentration in water. For example, SB-01/MW-01 for PCE:

$Kd = Koc \times foc = 364\ L/kg \times 0.01 = 3.64\ L/kg$
$Cs = Kd \times Cw = 3.64\ L/kg \times 0.6\ mg/L = 2.1\ mg/kg$

Based on the above calculation, which assumes a conservative groundwater concentration of 0.6 mg/L, roughly 2 mg/kg of PCE is the result of partitioning. During periods of CVOC discharge through the sanitary sewer, groundwater concentration would likely have been substantially higher and thus resulted in higher soil concentrations.

References
U.S. EPA, Soil Screening Guidance: Technical Background Document, EPA/540/R95/128, May 1996
Fetter, C.W. Contaminant Hydrology, Second Edition. Waveland Press, Inc., 1999.

CONCLUSIONS

According to our analysis of the supplemental data, we made the following conclusions:

- The supplemental soil sampling supports the conceptual site model offered in the RIR and demonstrates the absence of CVOC source material within the Site. Specifically, CVOC concentrations in SB21, which is approximately 5 feet from the Site boundary, are higher than in SB20, which is approximately 16 feet from the Site. The CVOC

concentrations in soil are likely the result of long-term releases of chlorinated solvents from unidentified, off-site sources. Potential off-site sources include:

  - As shown on Sanborn fire insurance maps from 1936 through 2006, upstream to this Site, are historic and recent Site uses on Lot 33 for chromium plating and auto body. Chlorinated solvents were and are extensively used in the chromium plating industry to clean and degrease metal substrates before plating and before polishing. Chlorinated solvents are used by the auto body repair industry to clean and degrease parts, thin paints, and clean paint spray lines.

  - The sanitary sewer beneath the Purves Street sidewalk was constructed circa 1911 of reinforced concrete pipe. Given the industrial history of the Site's surrounding neighborhood, there are likely upstream chlorinated solvent sources that could be impacting Site groundwater and soil through breaches in the sewer.

- The concentrations of CVOC found in Site do not exceed the Part 375 Restricted Residential SCOs, which constitute the Track 4 remedial objectives for this Site, and are not considered source material as defined in 6 NYCRR Part 375-1.2(au); the soil concentrations are not sufficient to migrate, release significant levels of contaminants to another environmental medium, or pose a threat to public health or the environment. The conclusion that the CVOC concentrations are not indicative of source material is further supported by the following:

  - CVOC soil concentrations are likely biased high because samples were water-saturated and dry-weight adjusted.

  - In SB20, the only CVOC concentration that exceeded the UU SCO was PCE at 4.4 mg/kg from the silty clay sample at 14 to 15 feet. This concentration is likely the result of groundwater contamination and groundwater-to-soil contaminant partitioning.

  - In SB21, analysis of the sandy clay layer at the boring termination interval of 24 to 25 feet revealed PCE and TCE concentrations in excess of the UU SCO. These concentrations are consistent with conceptual site model, which attributes onsite soil and groundwater contamination to the infiltration of chlorinated solvent discharges from an off-site source to the east.

- This area of the Site does not have a historic use that would typically be associated with chlorinated solvent environmental impacts. Sanborn fire insurance maps from 1947 and 1950 show a small structure labeled with "Fine Chemical Manufacturing." Fine chemicals traditional did not use degreasing agents or chlorinated solvents. Rather, fine chemicals typically involve small quantities of highly pure chemicals uses as catalysts, intermediaries or additives. Fine chemical manufacturers typically support the pharmaceutical, cosmetic, flavors, fragrances, food additives, and specialty chemical industries, which are not traditional sources of chlorinated solvent contamination. (Reference: A. Cybulski et al. *Fine Chemicals Manufacture: Technology and Engineering*, Elsevier, December 2001)

CLOSURE

Based on the supplemental sample results and the conclusions provided herein, we recommend no additional remedial action in relation to the off-site CVOC issue. We respectfully request that NYSDEC approve the Remedial Action Work Plan in its current form once it leaves public comment on 3 November 2014.

We appreciate the NYSDEC's attention and commitment to this project. If you have question, please contact the undersigned at 212.479.5427.

Sincerely,

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

Jason J. Hayes, PE, LEED AP
Senior Associate/Vice President

GFN:jjh
Enclosure(s): Table 1 – Soil Sample VOC and Fraction Organic Carbon Detection Summary
Figure 1 – CVOC Area of Concern Soil Sample Results Summary
Attachment A – Soil Boring Logs
Attachment B – Analytical Data Package
Attachment C – Data Usability Summary Report

cc: J. O'Connell (NYSDEC)
D. Brause (Purves Street Owners)
M. Bogin (Sive, Paget & Riesel)
C. Malkin, T. Nadal, S. Maleh (Gotham)

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TABLE 1
SOIL SAMPLE VOC AND FRACTION ORGANIC CARBON DETECTION SUMMARY

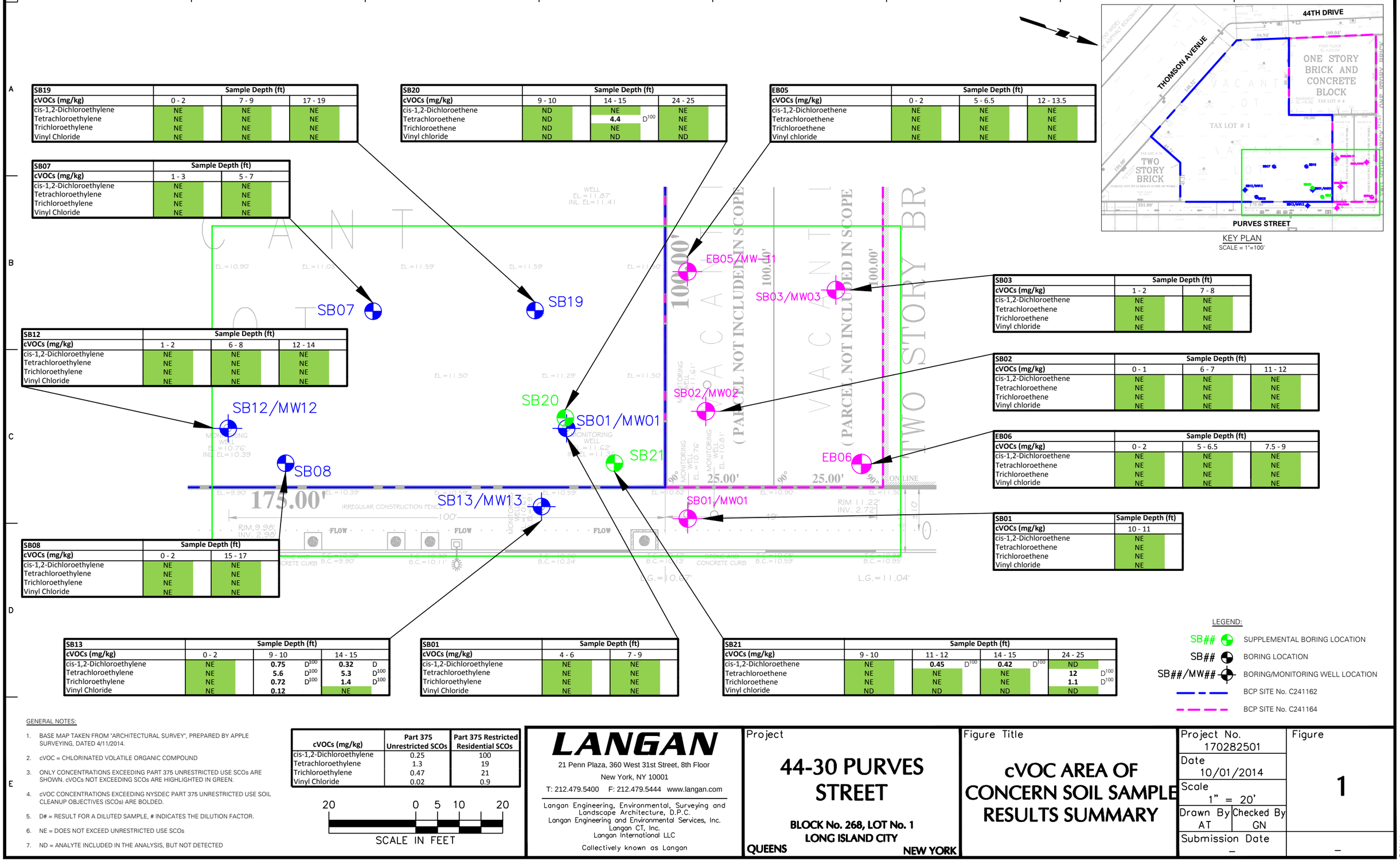
Table 1 - Soil Sample VOC and Fraction Organic Carbon Detection Summary
44-30 Purves Street
Long Island City, New York
Langan Project No. 170282501

Sample ID Sampling Date Laboratory Sample ID Sample Depth (feet) Sampled Layer	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	SB20_9-10 9/23/2014 14I0908-05 9 - 10 F Sand		SB20_14-15 9/23/2014 14I0908-06 14 - 15 Silty Clay		SB20_24-25 9/23/2014 14I0908-07 24 - 25 M-C Sand		SB21_9-10 9/23/2014 14I0908-01 9 - 10 F-M Sand		SB21_11-12 9/23/2014 14I0908-02 11 - 12 F-M Sand		SB21_14-15 9/23/2014 14I0908-03 14 - 15 Silty Clay		SB21_24-25 9/23/2014 14I0908-04 24 - 25 Sandy Clay	
VOCs, Halogenated List (mg/kg)															
1,1,1-Trichloroethane	0.68	0.0018	U	0.16	U	0.0042		0.0018	J	0.14	U	0.17	U	0.13	U
1,1,2-Trichloroethane	~	0.0018	U	0.16	U	0.0057		0.0015	U	0.14	U	0.17	U	0.35	D^{100}
cis-1,2-Dichloroethylene	0.25	0.0018	U	0.21	JD^{100}	0.021		0.15	E	**0.45**	D^{100}	**0.42**	D^{100}	0.13	U
Tetrachloroethylene	1.3	0.0018	U	**4.40**	D^{100}	0.41	D^{81}	0.16	E	0.46	D^{100}	0.44	D^{100}	**12**	D^{100}
Trichloroethylene	0.47	0.0018	U	0.44	D^{100}	0.027		0.042		0.18	JD^{100}	0.17	U	**1.10**	D^{100}
Fraction Organic Carbon (% dry weight)															
Fraction Inorganic/Recalcitrant Org. Carbon at 750 ^{o}C	~	NA		5.60		0.23		NA		0.66		1.84		NA	
Fraction Organic Carbon at 440 ^{o}C	~	NA		1.03		0.22		NA		0.40		0.98		NA	
pH															
pH	~	NA		9.24		8.35		NA		8.03		8.57		NA	
Total Solids															
% Solids	~	78.40		82.30		85.50		81.80		85.80		77.20		88.40	

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCO).
2. Only detected compounds are shown in the table.
3. NYSDEC Part 375 Unrestricted Use SCO exceedances are highlighted and in bold.
4. Boring SB20 was located 23 feet South and 16 feet West of the northeast corner of the site boundary.
5. Boring SB21 was located 11.7 feet South and 5.6 feet West of the northeast corner of the site boundary.
6. VOC = volatile organic compound
7. F = fine-grained
8. F-M = fine- to medium-grained
9. M-C = medium- to coarse-grained
10. mg/kg = milligrams per kilogram
11. NA = not analyzed
12. ~ = No corresponding comparison criteria

Qualifiers:
U = Analyte included in the analysis, but not detected
J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration
$D^{\#}$ = Results for a diluted sample, # indicates the dilution factor
E =Result is estimated and cannot be accurately reported due to levels encountered or interferences

FIGURE 1
CVOC AREA OF CONCERN SOIL SAMPLE RESULTS SUMMARY



SB19	Sample Depth (ft)		
cVOCs (mg/kg)	0 - 2	7 - 9	17 - 19
cis-1,2-Dichloroethylene	NE	NE	NE
Tetrachloroethylene	NE	NE	NE
Trichloroethylene	NE	NE	NE
Vinyl Chloride	NE	NE	NE

SB20	Sample Depth (ft)		
cVOCs (mg/kg)	9 - 10	14 - 15	24 - 25
cis-1,2-Dichloroethene	ND	NE	NE
Tetrachloroethene	ND	**4.4** D100	NE
Trichloroethene	ND	NE	NE
Vinyl chloride	ND	ND	ND

EB05	Sample Depth (ft)		
cVOCs (mg/kg)	0 - 2	5 - 6.5	12 - 13.5
cis-1,2-Dichloroethene	NE	NE	NE
Tetrachloroethene	NE	NE	NE
Trichloroethene	NE	NE	NE
Vinyl chloride	NE	NE	NE

SB07	Sample Depth (ft)	
cVOCs (mg/kg)	1 - 3	5 - 7
cis-1,2-Dichloroethylene	NE	NE
Tetrachloroethylene	NE	NE
Trichloroethylene	NE	NE
Vinyl Chloride	NE	NE

SB03	Sample Depth (ft)	
cVOCs (mg/kg)	1 - 2	7 - 8
cis-1,2-Dichloroethene	NE	NE
Tetrachloroethene	NE	NE
Trichloroethene	NE	NE
Vinyl chloride	NE	NE

SB12	Sample Depth (ft)		
cVOCs (mg/kg)	1 - 2	6 - 8	12 - 14
cis-1,2-Dichloroethylene	NE	NE	NE
Tetrachloroethylene	NE	NE	NE
Trichloroethylene	NE	NE	NE
Vinyl Chloride	NE	NE	NE

SB02	Sample Depth (ft)		
cVOCs (mg/kg)	0 - 1	6 - 7	11 - 12
cis-1,2-Dichloroethene	NE	NE	NE
Tetrachloroethene	NE	NE	NE
Trichloroethene	NE	NE	NE
Vinyl chloride	NE	NE	NE

EB06	Sample Depth (ft)		
cVOCs (mg/kg)	0 - 2	5 - 6.5	7.5 - 9
cis-1,2-Dichloroethene	NE	NE	NE
Tetrachloroethene	NE	NE	NE
Trichloroethene	NE	NE	NE
Vinyl chloride	NE	NE	NE

SB08	Sample Depth (ft)	
cVOCs (mg/kg)	0 - 2	15 - 17
cis-1,2-Dichloroethylene	NE	NE
Tetrachloroethylene	NE	NE
Trichloroethylene	NE	NE
Vinyl Chloride	NE	NE

SB01	Sample Depth (ft)
cVOCs (mg/kg)	10 - 11
cis-1,2-Dichloroethene	NE
Tetrachloroethene	NE
Trichloroethene	NE
Vinyl chloride	NE

SB13	Sample Depth (ft)		
cVOCs (mg/kg)	0 - 2	9 - 10	14 - 15
cis-1,2-Dichloroethylene	NE	**0.75** D100	**0.32** D
Tetrachloroethylene	NE	**5.6** D100	**5.3** D100
Trichloroethylene	NE	**0.72** D100	**1.4** D100
Vinyl Chloride	NE	**0.12**	NE

SB01	Sample Depth (ft)	
cVOCs (mg/kg)	4 - 6	7 - 9
cis-1,2-Dichloroethylene	NE	NE
Tetrachloroethylene	NE	NE
Trichloroethylene	NE	NE
Vinyl Chloride	NE	NE

SB21	Sample Depth (ft)			
cVOCs (mg/kg)	9 - 10	11 - 12	14 - 15	24 - 25
cis-1,2-Dichloroethene	NE	**0.45** D100	**0.42** D100	ND
Tetrachloroethene	NE	NE	NE	**12** D100
Trichloroethene	NE	NE	NE	**1.1** D100
Vinyl chloride	ND	ND	ND	ND

GENERAL NOTES:

1. BASE MAP TAKEN FROM "ARCHITECTURAL SURVEY", PREPARED BY APPLE SURVEYING, DATED 4/11/2014.
2. cVOC = CHLORINATED VOLATILE ORGANIC COMPOUND
3. ONLY CONCENTRATIONS EXCEEDING PART 375 UNRESTRICTED USE SCOs ARE SHOWN. cVOCs NOT EXCEEDING SCOs ARE HIGHLIGHTED IN GREEN.
4. cVOC CONCENTRATIONS EXCEEDING NYSDEC PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (SCOs) ARE BOLDED.
5. D# = RESULT FOR A DILUTED SAMPLE, # INDICATES THE DILUTION FACTOR.
6. NE = DOES NOT EXCEED UNRESTRICTED USE SCOs
7. ND = ANALYTE INCLUDED IN THE ANALYSIS, BUT NOT DETECTED

cVOCs (mg/kg)	Part 375 Unrestricted SCOs	Part 375 Restricted Residential SCOs
cis-1,2-Dichloroethylene	0.25	100
Tetrachloroethylene	1.3	19
Trichloroethylene	0.47	21
Vinyl Chloride	0.02	0.9

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Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
44-30 PURVES STREET
BLOCK No. 268, LOT No. 1
LONG ISLAND CITY
QUEENS **NEW YORK**

Figure Title
cVOC AREA OF CONCERN SOIL SAMPLE RESULTS SUMMARY

Project No.	Figure
170282501	1
Date 10/01/2014	
Scale 1" = 20'	
Drawn By AT / Checked By GN	
Submission Date –	–

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ATTACHMENT A
SOIL BORING LOGS

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Log of Boring **SB20** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.36 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 9/23/14 — Date Finished: 9/23/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 3 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8.5 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: John
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist. Blows/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.4	0-6" - CONCRETE 6-15" - dark brown F-C SAND, some gravel [FILL]	0					0.0	0756 - Begin Drilling
		15-27" - ROCK FRAGMENTS	1					0.0	
		27-39" - orange-brown F-M SAND, some gravel and rock fragments [FILL]	2	S1	MACROCORE	39		0.0	
		39-60" - no recovery	3					0.0	
			4						
		0-14" - no recovery	5						
			6						
		14-36" - light brown/gray F-M SAND, some gravel and rock fragments [FILL]	7					0.0	
			8	S2	MACROCORE	46		0.0	
	+3.4	36-50" - orange-brown SANDY SILT (saturated) ▽	9					0.0	
	+2.1	50-60" - orange-brown F SAND, some silt, compact	10					0.0	0810 - Collect Sample SB20_9-10 Halogenated VOCs
	+1.4	0-12" - brown F-M SAND, some gravel	11					0.0	
		12-26" - brown M-C SAND	12					2.3	
	-0.7	26-42" - dark brown/gray SILT, some F SAND	13	S3	MACROCORE	60		1.8	
	-2.1	42-60" - gray SILTY CLAY	14					10.9	
			15					15.6	0825 - Collect Sample SB20_14-15 Halogenated VOCs and FOC
		0-60" - gray SILTY CLAY	16					21.0	
			17					14.0	
			18	S4	MACROCORE	60		12.0	
			19					2.0	
			20					5.0	
	-8.6								

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Log of Boring **SB20** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 11.36 feet North American Vertical Datum of 1988 (NAVD88)

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-12" - gray M SAND with some silty clay	20						
	-9.6	12-36" - gray SILTY CLAY, hard	21					1.0	
			22					1.8	
			23	S5	MACROCORE	60		1.1	
	-11.6	36-54" - gray CLAY, soft	24					2.8	
			25					1.0	
	-13.1	54-60" - gray M-C SAND	26					2.2	
	-13.6		27					2.0	0840 - Collect Sample SB20_24-25 Halogenated VOCs and FOC
			28					1.5	
			29					4.8	End of Boring
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

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Log of Boring **SB21** Sheet 1 of 2

Project: 4430 Purves Street	Project No.: 170282501
Location: Long Island City, New York	Elevation and Datum: Approx. 11.2 feet North American Vertical Datum of 1988 (NAVD88)
Drilling Company: Aarco Environmental Services Corp.	Date Started: 9/23/14 — Date Finished: 9/23/14
Drilling Equipment: Geoprobe 6610DT	Completion Depth: 25 ft — Rock Depth: N/A
Size and Type of Bit: 5' Macrocore	Number of Samples: Disturbed 4 — Undisturbed N/A — Core N/A
Casing Diameter (in): 2" — Casing Depth (ft): 5'	Water Level (ft.): First ▽ 8 — Completion ▼ — 24 HR. ▼
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: John
Sampler: Acetate Liner	Inspecting Engineer: Paul McMahon
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.2	0-12" - pulverized CONCRETE	0					0.0	0850 - Begin Drilling
		12-15" - BRICK 15-28" - dark brown F-C SAND, some gravel, trace wood [FILL]	1					0.0	
	+8.9	28-38" - brown F SAND, some silt, trace gravel	2					0.0	
	+8.0	38-60" - no recovery	3	S1	MACROCORE	38			
			4						
		0-14" - no recovery	5						
		14-22" - concrete and brick (sloughing)	6						
	+4.4	22-60"- brown F SAND, some silt, trace M sand	7					0.0	
			8 ▽	S2	MACROCORE	46		0.0	
			9					0.0	
			10					1.0 1.6 2.4	0903- Collect Sample SB21_9-10 Halogenated VOCs
		0-36" - brown and gray F-M SAND, some silt, trace gravel	11					2.1	
			12					3.2 11.5	0915 - Collect Sample SB21_11-12 Halogenated VOCs and FOC
	-1.8	36-60" - gray SILTY CLAY, hard	13	S3	MACROCORE	60		1.5 0.6 1.9 3.2	
			14					4.5	
			15					1.6 2.1	0930 - Collect Sample SB21_14-15 Halogenated VOCs and FOC
	-3.8	0-18" - gray F-C SAND, trace gravel and silt	16					0.5 0.9	
	-5.3	18-42" - gray SILTY CLAY, soft	17					3.7	
			18	S4	MACROCORE	60		2.0	
			19					0.6 3.6	
	-7.3	42-60" - brown/orange-brown F-M SAND, trace silt	20					0.6 1.5	

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Log of Boring **SB21** Sheet 2 of 2

Project	Project No.
4430 Purves Street	170282501
Location	**Elevation and Datum**
Long Island City, New York	Approx. 11.2 feet North American Vertical Datum of 1988 (NAVD88)

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		0-52" - gray and brown F-M SAND, trace silt	20					0.9	
			21					3.1	
			22	S5	MACROCORE	60		2.1	
			23					2.3	
			24					3.0	
	-13.1		25					2.7	
		52-60" - gray SANDY CLAY, trace gravel	26					0.9	0925 - Collect Sample SB21_24-25 Halogenated VOCs
	-13.8		27					1.6	
			28					1.9	
			29					2.2	End of Boring
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

\\LANGAN.COM\DATA\NY\DATA5\170282501\ENGINEERING DATA\ENVIRONMENTAL\PHASE II ESI\GINTLOGS\PHASE II BORING LOGS.GPJ ... 9/23/2014 3:45:00 PM ... Report: Log - LANGAN ...Template TEMPLATE.GDT

ATTACHMENT B
ANALYTICAL DATA PACKAGE

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Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Report Date: 10/09/2014
Client Project ID: 170282501
York Project (SDG) No.: 14I0908

Report Date: 10/09/2014
Client Project ID: 170282501
York Project (SDG) No.: 14I0908

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Gerald Nicholls

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 23, 2014 and listed below. The project was identified as your project: **170282501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
14I0908-01	SB21_9-10	Soil	09/23/2014	09/23/2014
14I0908-02	SB21_11-12	Soil	09/23/2014	09/23/2014
14I0908-03	SB21_14-15	Soil	09/23/2014	09/23/2014
14I0908-04	SB21_24-25	Soil	09/23/2014	09/23/2014
14I0908-05	SB20_9-10	Soil	09/23/2014	09/23/2014
14I0908-06	SB20_14-15	Soil	09/23/2014	09/23/2014
14I0908-07	SB20_24-25	Soil	09/23/2014	09/23/2014

General Notes for York Project (SDG) No.: 14I0908

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:

Date: 10/09/2014

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB21_9-10 **York Sample ID:** 14I0908-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:03 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
71-55-6	**1,1,1-Trichloroethane**	**1.8**	J	ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
108-86-1	Bromobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-25-2	Bromoform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
74-83-9	Bromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-00-3	Chloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
67-66-3	Chloroform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
74-87-3	Chloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
156-59-2	**cis-1,2-Dichloroethylene**	**150**	E	ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
74-95-3	Dibromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK

Sample Information

Client Sample ID: SB21_9-10 **York Sample ID:** 14I0908-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:03 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-09-2	Methylene chloride	ND		ug/kg dry	3.0	6.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
127-18-4	**Tetrachloroethylene**	**160**	E	ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
79-01-6	**Trichloroethylene**	**42**		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:41	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*104 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*107 %*	*76-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.4 %*	*85-120*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**81.8**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

Sample Information

Client Sample ID: SB21_11-12 **York Sample ID:** 14I0908-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:15 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK

Sample Information

Client Sample ID: **SB21_11-12** **York Sample ID:** **14I0908-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:15 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
108-86-1	Bromobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-25-2	Bromoform	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
74-83-9	Bromomethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-00-3	Chloroethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
67-66-3	Chloroform	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
74-87-3	Chloromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
156-59-2	**cis-1,2-Dichloroethylene**	**450**		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
74-95-3	Dibromomethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-09-2	Methylene chloride	ND		ug/kg dry	270	550	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
127-18-4	**Tetrachloroethylene**	**460**		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
79-01-6	**Trichloroethylene**	**180**	J	ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	140	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 11:54	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*98.5 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*112 %*	*76-130*

Sample Information

Client Sample ID: SB21_11-12 **York Sample ID:** 14I0908-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:15 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
2037-26-5	*Surrogate: Toluene-d8*	*101 %*			*85-120*						

Fraction Organic Carbon (440C)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Fraction Organic Carbon (FOC@440C)**	**0.400**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA
	*** Fraction Inorganic/ Recalcitrant Org. Carbon@750C**	**0.659**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**85.8**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	pH	**8.03**	HT-pH	pH units		0.500	1	EPA 9045D	09/29/2014 10:58	09/29/2014 12:01	KK

Sample Information

Client Sample ID: SB21_14-15 **York Sample ID:** 14I0908-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:30 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK

Sample Information

Client Sample ID: **SB21_14-15** **York Sample ID:** **14I0908-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:30 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
108-86-1	Bromobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-25-2	Bromoform	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
74-83-9	Bromomethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-00-3	Chloroethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
67-66-3	Chloroform	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
74-87-3	Chloromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
156-59-2	**cis-1,2-Dichloroethylene**	**420**		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
74-95-3	Dibromomethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-09-2	Methylene chloride	ND		ug/kg dry	350	690	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
127-18-4	**Tetrachloroethylene**	**440**		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
79-01-6	Trichloroethylene	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	170	350	100	EPA 8260C	09/30/2014 08:23	09/30/2014 12:37	BK

Sample Information

Client Sample ID: SB21_14-15 **York Sample ID:** 14I0908-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:30 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**			**Acceptance Range**						
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*100 %*			*77-125*						
460-00-4	*Surrogate: p-Bromofluorobenzene*	*110 %*			*76-130*						
2037-26-5	*Surrogate: Toluene-d8*	*100 %*			*85-120*						

Fraction Organic Carbon (440C)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Fraction Organic Carbon (FOC@440C)**	**0.982**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA
	*** Fraction Inorganic/ Recalcitrant Org. Carbon@750C**	**1.84**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.2**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	pH	**8.57**	HT-pH	pH units		0.500	1	EPA 9045D	09/29/2014 10:58	09/29/2014 12:01	KK

Sample Information

Client Sample ID: SB21_24-25 **York Sample ID:** 14I0908-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:45 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK

Sample Information

Client Sample ID: SB21_24-25 **York Sample ID:** 14I0908-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:45 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
79-00-5	**1,1,2-Trichloroethane**	**350**		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
108-86-1	Bromobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-25-2	Bromoform	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
74-83-9	Bromomethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-00-3	Chloroethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
67-66-3	Chloroform	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
74-87-3	Chloromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
74-95-3	Dibromomethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-09-2	Methylene chloride	ND		ug/kg dry	270	530	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
127-18-4	**Tetrachloroethylene**	**12000**		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK

Sample Information

Client Sample ID: SB21_24-25 **York Sample ID:** 14I0908-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 9:45 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-01-6	**Trichloroethylene**	**1100**		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	130	270	100	EPA 8260C	09/30/2014 08:23	09/30/2014 13:11	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*113 %*	*76-130*
2037-26-5	*Surrogate: Toluene-d8*	*99.1 %*	*85-120*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**88.4**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

Sample Information

Client Sample ID: SB20_9-10 **York Sample ID:** 14I0908-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:10 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK

Sample Information

Client Sample ID: SB20_9-10 **York Sample ID:** 14I0908-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:10 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
108-86-1	Bromobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-25-2	Bromoform	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
74-83-9	Bromomethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-00-3	Chloroethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
67-66-3	Chloroform	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
74-87-3	Chloromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
74-95-3	Dibromomethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-09-2	Methylene chloride	ND		ug/kg dry	3.5	7.0	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
79-01-6	Trichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.8	3.5	1	EPA 8260C	09/30/2014 08:23	09/30/2014 13:44	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*100 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*115 %*	*76-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.4 %*	*85-120*

Sample Information

Client Sample ID: SB20_9-10 **York Sample ID:** 14I0908-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:10 am	09/23/2014

Total Solids **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**78.4**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

Sample Information

Client Sample ID: SB20_14-15 **York Sample ID:** 14I0908-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:25 am	09/23/2014

Volatile Organics, 8260 Halogenated List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
108-86-1	Bromobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK

Sample Information

Client Sample ID: **SB20_14-15** **York Sample ID:** **14I0908-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:25 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-25-2	Bromoform	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
74-83-9	Bromomethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-00-3	Chloroethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
67-66-3	Chloroform	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
74-87-3	Chloromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
156-59-2	**cis-1,2-Dichloroethylene**	**210**	J	ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
74-95-3	Dibromomethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-09-2	Methylene chloride	ND		ug/kg dry	330	650	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
127-18-4	**Tetrachloroethylene**	**4400**		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
79-01-6	**Trichloroethylene**	**440**		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	160	330	100	EPA 8260C	09/30/2014 08:23	09/30/2014 14:33	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*101 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*118 %*	*76-130*
2037-26-5	*Surrogate: Toluene-d8*	*99.1 %*	*85-120*

Fraction Organic Carbon (440C)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Fraction Organic Carbon (FOC@440C)**	**1.03**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA
	*** Fraction Inorganic/ Recalcitrant Org. Carbon@750C**	**5.60**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**82.3**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

Sample Information

Client Sample ID: SB20_14-15 **York Sample ID:** 14I0908-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:25 am	09/23/2014

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	pH	**9.24**	HT-pH	pH units		0.500	1	EPA 9045D	09/29/2014 10:58	09/29/2014 12:01	KK

Sample Information

Client Sample ID: SB20_24-25 **York Sample ID:** 14I0908-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:40 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
71-55-6	**1,1,1-Trichloroethane**	**4.2**		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
79-00-5	**1,1,2-Trichloroethane**	**5.7**		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
108-86-1	Bromobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
74-97-5	Bromochloromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK

Sample Information

Client Sample ID: **SB20_24-25** **York Sample ID:** **14I0908-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:40 am	09/23/2014

Volatile Organics, 8260 Halogenated List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-25-2	Bromoform	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
74-83-9	Bromomethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
108-90-7	Chlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-00-3	Chloroethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
67-66-3	Chloroform	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
74-87-3	Chloromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
156-59-2	**cis-1,2-Dichloroethylene**	**21**		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
74-95-3	Dibromomethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-09-2	Methylene chloride	ND		ug/kg dry	3.7	7.4	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
127-18-4	**Tetrachloroethylene**	**410**		ug/kg dry	150	300	81	EPA 8260C	09/30/2014 08:23	09/30/2014 16:15	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
79-01-6	**Trichloroethylene**	**27**		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.8	3.7	1	EPA 8260C	09/30/2014 08:23	09/30/2014 15:07	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*77-125*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*108 %*	*76-130*
2037-26-5	*Surrogate: Toluene-d8*	*101 %*	*85-120*

Fraction Organic Carbon (440C)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Fraction Organic Carbon (FOC@440C)**	**0.215**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA
	*** Fraction Inorganic/ Recalcitrant Org. Carbon@750C**	**0.229**		% dry		0.100	1	ASTM D 2974-87	09/29/2014 12:32	09/30/2014 10:15	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**85.5**		%	0.100	0.100	1	SM 2540G	09/29/2014 09:36	09/29/2014 14:30	KK

Sample Information

Client Sample ID: **SB20_24-25** **York Sample ID:** **14I0908-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
14I0908	170282501	Soil	September 23, 2014 8:40 am	09/23/2014

pH

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	pH	**8.35**	HT-pH	pH units		0.500	1	EPA 9045D	09/29/2014 10:58	09/29/2014 12:01	KK

Case Narrative

Client: Langan Engineering & Environmental Services (NYC)
Client Project ID: 170282501
Prepared for: Gerald Nicholls

Introduction

This Case Narrative applies only to the following samples submitted to our laboratory on **9/23/2014 6:15:00 PM** :

SB20_14-15 Soil
SB20_24-25 Soil
SB20_9-10 Soil
SB21_11-12 Soil
SB21_14-15 Soil
SB21_24-25 Soil
SB21_9-10 Soil

The 7 sample(s) were received intact in a custody-sealed cooler(s) unless otherwise noted. Upon receipt, cooler temperature(s) was determined using a NIST traceable digital infrared thermometer. The cooler temperature(s) was acceptable (2-6oC) and documented as:

Cooler 4.3 C

Chain-of-custody was maintained from receipt through analysis in the laboratory.

Methodology

All preparation and analyses were conducted according to the methods referenced in the body of the lab report.

Sample and Analysis Qualifiers

SB20_14-15 Soil Qualifiers
pH - HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

SB20_24-25 Soil Qualifiers
pH - HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

SB20_9-10 Soil No Qualifiers

SB21_11-12 Soil Qualifiers
pH - HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

SB21_14-15 Soil Qualifiers
pH - HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

SB21_24-25 Soil No Qualifiers

SB21_9-10 Soil Qualifiers

Volatile Organics, 8260 Halogenated List for cis-1,2-Dichloroethylene and tetrachloroethylene - The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate. The sample was initially run at a 1x dilution and exceeded the calibration range. The sample was rerun at the next available dilution (medium level methanolic samples at 100x) however the data for these target analytes was slightly below the reporting limits. The initial data was uploaded.

Analysis Issues (Calibration, Others)

No problems encountered other than dilutions required due to levels of target analytes.

York Project/SDG no.: 14I0908 Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*
Laboratory Director

York Analytical Laboratories, Inc.

Formulae Used for Sample Calculations

VOLATILE ORGANICS

1. Volatiles in Air-ppbv

Cx (ppbv) = Compound concentration, ppbv (parts per billion by volume)

$$Cx = \frac{(Ax)(Cis)(DF)}{(Ais)(RRF)}$$

2. Volatiles in Air-ug/m3

Cx (ug/m3)= Compound concentration in ug/m3

$$Cx\ (ug/m3) = \frac{(ppbv \times Molecular\ wt.)}{(24.040)}$$

3. Volatile Organics (water and soil), ug/L or ug/kG

Soils/Waters

$$Cx = \frac{(Ax)(IS)(DF)}{(Ais)(RRF)(V)(\%solids)}$$

Medium Level Soils

$$Cx = \frac{(Ax)(IS)(VT)(1000)(DF)}{(Ais)(RRF)(VA)(V)(\%solids)}$$

4. Semi-Volatiles (waters and soils)

$$Cx = \frac{(Ax)(IS)(VE)(DF)}{(Ais)(RRF)(Volume\ injected,\ uL)(V)(\%solids)}$$

5. Pesticides/PCB (waters and soils), DRO, CTETPH

$$Cx = \frac{(Ax)(VE)(DF)}{(CF)(Volume\ injected,\ uL)(V)(\%solids)}$$

WHERE:

Cx = concentration of analyte as ug/L or ug/kG
Ax = Area of the characteristic ion for the compound to be measured, counts.
Ais = Area of the characteristic ion for the specific internal standard, counts.
IS = Concentration of the internal standard spiking mixture, ng
RRF= Mean relative response factor from the initial calibration.
DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1
V= Volume for liquids in ml, weight for soils/solids in grams.
VA= volume of MeOH aliquot for medium level soils
VE= final volume of concentrated extract
VT= volume of MeOH for volatiles medium level soils
CF= calibration factor for external calibration used in GC pest/pcb
Cis = Concentration of the internal standard spiking mixture, ppbv

Analytical Batch Summary

Batch ID: BI41438 **Preparation Method:** % Solids Prep **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
14I0908-01	SB21_9-10	09/29/14
14I0908-02	SB21_11-12	09/29/14
14I0908-03	SB21_14-15	09/29/14
14I0908-04	SB21_24-25	09/29/14
14I0908-05	SB20_9-10	09/29/14
14I0908-06	SB20_14-15	09/29/14
14I0908-07	SB20_24-25	09/29/14

Batch ID: BI41449 **Preparation Method:** Analysis Preparation **Prepared By:** KK

YORK Sample ID	Client Sample ID	Preparation Date
14I0908-02	SB21_11-12	09/29/14
14I0908-03	SB21_14-15	09/29/14
14I0908-06	SB20_14-15	09/29/14
14I0908-07	SB20_24-25	09/29/14

Batch ID: BI41454 **Preparation Method:** Analysis Preparation **Prepared By:** AA

YORK Sample ID	Client Sample ID	Preparation Date
14I0908-02	SB21_11-12	09/29/14
14I0908-03	SB21_14-15	09/29/14
14I0908-06	SB20_14-15	09/29/14
14I0908-07	SB20_24-25	09/29/14

Batch ID: BI41538 **Preparation Method:** EPA 5035A **Prepared By:** BK

YORK Sample ID	Client Sample ID	Preparation Date
14I0908-01	SB21_9-10	09/30/14
14I0908-01RE1	SB21_9-10	09/30/14
14I0908-02	SB21_11-12	09/30/14
14I0908-03	SB21_14-15	09/30/14
14I0908-04	SB21_24-25	09/30/14
14I0908-05	SB20_9-10	09/30/14
14I0908-06	SB20_14-15	09/30/14
14I0908-07	SB20_24-25	09/30/14
14I0908-07RE1	SB20_24-25	09/30/14
BI41538-BLK1	Blank	09/30/14
BI41538-BS1	LCS	09/30/14
BI41538-BSD1	LCS Dup	09/30/14

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI41538 - EPA 5035A											
Blank (BI41538-BLK1)											Prepared & Analyzed: 09/30/2014
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg wet								
1,1,1-Trichloroethane	ND	5.0	"								
1,1,2,2-Tetrachloroethane	ND	5.0	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"								
1,1,2-Trichloroethane	ND	5.0	"								
1,1-Dichloroethane	ND	5.0	"								
1,1-Dichloroethylene	ND	5.0	"								
1,1-Dichloropropylene	ND	5.0	"								
1,2,3-Trichlorobenzene	ND	5.0	"								
1,2,3-Trichloropropane	ND	5.0	"								
1,2,4-Trichlorobenzene	ND	5.0	"								
1,2-Dibromo-3-chloropropane	ND	5.0	"								
1,2-Dibromoethane	ND	5.0	"								
1,2-Dichlorobenzene	ND	5.0	"								
1,2-Dichloroethane	ND	5.0	"								
1,2-Dichloropropane	ND	5.0	"								
1,3-Dichlorobenzene	ND	5.0	"								
1,3-Dichloropropane	ND	5.0	"								
1,4-Dichlorobenzene	ND	5.0	"								
2,2-Dichloropropane	ND	5.0	"								
2-Chlorotoluene	ND	5.0	"								
4-Chlorotoluene	ND	5.0	"								
Bromobenzene	ND	5.0	"								
Bromochloromethane	ND	5.0	"								
Bromodichloromethane	ND	5.0	"								
Bromoform	ND	5.0	"								
Bromomethane	ND	5.0	"								
Carbon tetrachloride	ND	5.0	"								
Chlorobenzene	ND	5.0	"								
Chloroethane	ND	5.0	"								
Chloroform	ND	5.0	"								
Chloromethane	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
cis-1,3-Dichloropropylene	ND	5.0	"								
Dibromochloromethane	ND	5.0	"								
Dibromomethane	ND	5.0	"								
Dichlorodifluoromethane	ND	5.0	"								
Hexachlorobutadiene	ND	5.0	"								
Methylene chloride	ND	10	"								
Tetrachloroethylene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
trans-1,3-Dichloropropylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Trichlorofluoromethane	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Surrogate: 1,2-Dichloroethane-d4	*49.2*		*ug/L*	*50.0*		*98.4*	*77-125*				
Surrogate: p-Bromofluorobenzene	*51.8*		*"*	*50.0*		*104*	*76-130*				
Surrogate: Toluene-d8	*49.7*		*"*	*50.0*		*99.4*	*85-120*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI41538 - EPA 5035A											
LCS (BI41538-BS1)								Prepared & Analyzed: 09/30/2014			
1,1,1,2-Tetrachloroethane	51		ug/L	50.0		102	75-129				
1,1,1-Trichloroethane	52		"	50.0		105	71-137				
1,1,2,2-Tetrachloroethane	53		"	50.0		106	79-129				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	52		"	50.0		105	58-146				
1,1,2-Trichloroethane	51		"	50.0		102	83-123				
1,1-Dichloroethane	51		"	50.0		103	75-130				
1,1-Dichloroethylene	50		"	50.0		100	64-137				
1,1-Dichloropropylene	52		"	50.0		104	77-127				
1,2,3-Trichlorobenzene	58		"	50.0		116	81-140				
1,2,3-Trichloropropane	53		"	50.0		106	81-126				
1,2,4-Trichlorobenzene	59		"	50.0		117	80-141				
1,2-Dibromo-3-chloropropane	58		"	50.0		117	74-142				
1,2-Dibromoethane	53		"	50.0		105	86-123				
1,2-Dichlorobenzene	53		"	50.0		105	85-122				
1,2-Dichloroethane	53		"	50.0		107	71-133				
1,2-Dichloropropane	51		"	50.0		102	81-122				
1,3-Dichlorobenzene	54		"	50.0		109	84-124				
1,3-Dichloropropane	51		"	50.0		103	83-123				
1,4-Dichlorobenzene	54		"	50.0		107	84-124				
2,2-Dichloropropane	54		"	50.0		108	67-136				
2-Chlorotoluene	52		"	50.0		104	78-127				
4-Chlorotoluene	53		"	50.0		106	79-125				
Bromobenzene	52		"	50.0		103	77-129				
Bromochloromethane	52		"	50.0		104	74-129				
Bromodichloromethane	52		"	50.0		104	81-124				
Bromoform	55		"	50.0		111	80-136				
Bromomethane	51		"	50.0		103	32-177				
Carbon tetrachloride	53		"	50.0		105	66-143				
Chlorobenzene	51		"	50.0		101	86-120				
Chloroethane	53		"	50.0		106	51-142				
Chloroform	52		"	50.0		104	76-131				
Chloromethane	54		"	50.0		109	49-132				
cis-1,2-Dichloroethylene	51		"	50.0		102	74-132				
cis-1,3-Dichloropropylene	50		"	50.0		101	81-129				
Dibromochloromethane	52		"	50.0		105	10-200				
Dibromomethane	52		"	50.0		104	83-124				
Dichlorodifluoromethane	54		"	50.0		108	28-158				
Hexachlorobutadiene	59		"	50.0		117	83-133				
Methylene chloride	51		"	50.0		103	57-141				
Tetrachloroethylene	48		"	50.0		95.5	80-129				
trans-1,2-Dichloroethylene	53		"	50.0		105	72-132				
trans-1,3-Dichloropropylene	51		"	50.0		102	78-132				
Trichloroethylene	51		"	50.0		102	84-123				
Trichlorofluoromethane	55		"	50.0		109	62-140				
Vinyl Chloride	56		"	50.0		111	52-130				
Surrogate: 1,2-Dichloroethane-d4	*51.0*		*"*	*50.0*		*102*	*77-125*				
Surrogate: p-Bromofluorobenzene	*50.4*		*"*	*50.0*		*101*	*76-130*				
Surrogate: Toluene-d8	*48.5*		*"*	*50.0*		*97.0*	*85-120*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI41538 - EPA 5035A											
LCS Dup (BI41538-BSD1)							Prepared & Analyzed: 09/30/2014				
1,1,1,2-Tetrachloroethane	52		ug/L	50.0		104	75-129		2.54	30	
1,1,1-Trichloroethane	52		"	50.0		105	71-137		0.0191	30	
1,1,2,2-Tetrachloroethane	53		"	50.0		106	79-129		0.00	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	52		"	50.0		105	58-146		0.0191	30	
1,1,2-Trichloroethane	52		"	50.0		105	83-123		2.76	30	
1,1-Dichloroethane	51		"	50.0		102	75-130		0.253	30	
1,1-Dichloroethylene	52		"	50.0		104	64-137		3.92	30	
1,1-Dichloropropylene	54		"	50.0		108	77-127		3.30	30	
1,2,3-Trichlorobenzene	56		"	50.0		112	81-140		3.22	30	
1,2,3-Trichloropropane	51		"	50.0		102	81-126		3.42	30	
1,2,4-Trichlorobenzene	55		"	50.0		111	80-141		5.74	30	
1,2-Dibromo-3-chloropropane	54		"	50.0		107	74-142		8.70	30	
1,2-Dibromoethane	54		"	50.0		108	86-123		2.18	30	
1,2-Dichlorobenzene	53		"	50.0		106	85-122		0.832	30	
1,2-Dichloroethane	53		"	50.0		106	71-133		0.431	30	
1,2-Dichloropropane	52		"	50.0		104	81-122		1.87	30	
1,3-Dichlorobenzene	54		"	50.0		107	84-124		1.44	30	
1,3-Dichloropropane	54		"	50.0		107	83-123		3.85	30	
1,4-Dichlorobenzene	54		"	50.0		109	84-124		1.26	30	
2,2-Dichloropropane	55		"	50.0		111	67-136		2.26	30	
2-Chlorotoluene	52		"	50.0		105	78-127		1.02	30	
4-Chlorotoluene	54		"	50.0		107	79-125		0.562	30	
Bromobenzene	52		"	50.0		105	77-129		1.38	30	
Bromochloromethane	54		"	50.0		108	74-129		3.93	30	
Bromodichloromethane	53		"	50.0		106	81-124		2.09	30	
Bromoform	55		"	50.0		110	80-136		0.471	30	
Bromomethane	54		"	50.0		108	32-177		4.91	30	
Carbon tetrachloride	53		"	50.0		106	66-143		0.909	30	
Chlorobenzene	52		"	50.0		104	86-120		2.58	30	
Chloroethane	56		"	50.0		112	51-142		5.04	30	
Chloroform	53		"	50.0		106	76-131		1.92	30	
Chloromethane	57		"	50.0		114	49-132		4.63	30	
cis-1,2-Dichloroethylene	52		"	50.0		105	74-132		3.24	30	
cis-1,3-Dichloropropylene	51		"	50.0		102	81-129		1.62	30	
Dibromochloromethane	54		"	50.0		108	10-200		2.97	30	
Dibromomethane	54		"	50.0		107	83-124		2.85	30	
Dichlorodifluoromethane	56		"	50.0		112	28-158		4.25	30	
Hexachlorobutadiene	56		"	50.0		113	83-133		3.60	30	
Methylene chloride	52		"	50.0		105	57-141		2.22	30	
Tetrachloroethylene	49		"	50.0		97.2	80-129		1.72	30	
trans-1,2-Dichloroethylene	53		"	50.0		107	72-132		1.45	30	
trans-1,3-Dichloropropylene	53		"	50.0		107	78-132		4.87	30	
Trichloroethylene	53		"	50.0		106	84-123		3.78	30	
Trichlorofluoromethane	56		"	50.0		113	62-140		3.30	30	
Vinyl Chloride	57		"	50.0		113	52-130		1.52	30	
Surrogate: 1,2-Dichloroethane-d4	*50.5*		*"*	*50.0*		*101*	*77-125*				
Surrogate: p-Bromofluorobenzene	*50.3*		*"*	*50.0*		*101*	*76-130*				
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.8*	*85-120*				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
14I0908-01	SB21_9-10	40mL Vial with Stir Bar-Cool 4° C
14I0908-02	SB21_11-12	40mL Vial with Stir Bar-Cool 4° C
14I0908-03	SB21_14-15	40mL Vial with Stir Bar-Cool 4° C
14I0908-04	SB21_24-25	40mL Vial with Stir Bar-Cool 4° C
14I0908-05	SB20_9-10	40mL Vial with Stir Bar-Cool 4° C
14I0908-06	SB20_14-15	40mL Vial with Stir Bar-Cool 4° C
14I0908-07	SB20_24-25	40mL Vial with Stir Bar-Cool 4° C

Notes and Definitions

J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
HT-pH	HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.

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*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

Laboratory Chain-of-Custody Record

York Project (SDG) No.: 14I0908

Samples Received: 09/23/2014 18:15 **By:** Paul Grace **Logged In:** 09/24/2014 18:26 **By:** Tom Gabrielson

Sample Conditions:

- [X] Custody Seals
- [X] Containers Intact
- [X] COC/Labels Agree
- [X] Preservation Confirmed
- [X] Cooler Temperature Confirmed
- [X] COC Complete
- [X] Chain of Custody Form Received
- [X] Appropriate Sample Volumes Received
- [X] Appropriate Sample Containers Submitted
- [X] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

Preparation Chain-of-Custody

Sample ID	Reason Prep	Prep Start Date	Prep End Date	Prep Analyst
14I0908-01	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-02	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-03	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-04	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-05	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-06	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-07	% Solids Prep	09/29/2014 9:36	09/29/2014 9:36	Philip Murphy
14I0908-02	Analysis Preparation	09/29/2014 10:58	09/29/2014 10:58	Kamrunnahar Kanny
14I0908-02	Analysis Preparation	09/29/2014 12:32	09/29/2014 12:32	Ali Akbar
14I0908-03	Analysis Preparation	09/29/2014 10:58	09/29/2014 10:58	Kamrunnahar Kanny
14I0908-03	Analysis Preparation	09/29/2014 12:32	09/29/2014 12:32	Ali Akbar
14I0908-06	Analysis Preparation	09/29/2014 10:58	09/29/2014 10:58	Kamrunnahar Kanny
14I0908-06	Analysis Preparation	09/29/2014 12:32	09/29/2014 12:32	Ali Akbar
14I0908-07	Analysis Preparation	09/29/2014 12:32	09/29/2014 12:32	Ali Akbar
14I0908-07	Analysis Preparation	09/29/2014 10:58	09/29/2014 10:58	Kamrunnahar Kanny
14I0908-01	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-02	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-03	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-04	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-05	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-06	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska
14I0908-07	EPA 5035A	09/30/2014 8:23	09/30/2014 8:23	Barbara Kostrzewska

Analysis Chain-of-Custody

Sample ID	Reason Analysis	Analysis Start Date	Analysis End Date	Analyst

14I0908-02	Fraction Organic Carbon (440C)	09/29/2014 12:32	09/30/2014 10:15	Ali Akbar
14I0908-03	Fraction Organic Carbon (440C)	09/29/2014 12:32	09/30/2014 10:15	Ali Akbar
14I0908-06	Fraction Organic Carbon (440C)	09/29/2014 12:32	09/30/2014 10:15	Ali Akbar
14I0908-07	Fraction Organic Carbon (440C)	09/29/2014 12:32	09/30/2014 10:15	Ali Akbar
14I0908-02	pH	09/29/2014 10:58	09/29/2014 12:01	Kamrunnahar Kanny
14I0908-03	pH	09/29/2014 10:58	09/29/2014 12:01	Kamrunnahar Kanny
14I0908-06	pH	09/29/2014 10:58	09/29/2014 12:01	Kamrunnahar Kanny
14I0908-07	pH	09/29/2014 10:58	09/29/2014 12:01	Kamrunnahar Kanny
14I0908-01	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-02	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-03	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-04	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-05	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-06	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-07	Total Solids	09/29/2014 9:36	09/29/2014 14:30	Kamrunnahar Kanny
14I0908-01	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 15:41	Barbara Kostrzewska
14I0908-02	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 11:54	Barbara Kostrzewska
14I0908-03	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 12:37	Barbara Kostrzewska
14I0908-04	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 13:11	Barbara Kostrzewska
14I0908-05	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 13:44	Barbara Kostrzewska
14I0908-06	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 14:33	Barbara Kostrzewska
14I0908-07	Volatile Organics, 8260 Halogenated I	09/30/2014 8:23	09/30/2014 16:15	Barbara Kostrzewska

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 1410908

YOUR Information

Company: LANGAN
Address: 360 W 31st St
NY NY 10001
Phone No. 212 479 5451
Contact Person: PMcMahon@Langan.com
E-Mail Address:

Report To:

Company: SAME
Address:
Phone No. 212 479-5559
Attention: GNicholls@
E-Mail Address: Langan.com

Invoice To:

Company: SAME
Address:
Phone No.
Attention:
E-Mail Address:

YOUR Project ID

170182501

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) X

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package
- NY ASP B Package X
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel
- NYSDEC EQuIS X
- EQuIS (std)
- HZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other
- York Regulatory Comparison
- Excel Spreadsheet

Compare to the following Regs (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Me/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxin/Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded TCL List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB2_9-10	9/23/14 9:03	S	HALOGENATED VOCs	4 VOA
SB2_11-12	9:15		+ FOC	+ 1 8oz
SB2_14-15	9:30		+ FOC	+ 1 8oz
SB2_24-25	9:45			
SB20_9-10	8:10		+ FOC	+ 1 8oz
SB20_14-15	8:25		+ FOC	+ 1 8oz
SB20_24-25	8:40			

Comments
Might need ASP-B

Preservation Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Samples Relinquished By — Date/Time: 9/23 12:30
Samples Relinquished By — Date/Time:

Samples Received By — Date/Time: 9-23-14 1815
Samples Received in LAB by — Date/Time:

Temperature on Receipt 4.3 °C

York Analytical Laboratories, Inc.
SDG: 14I0908
CLASS: VOA
METHOD: EPA 8260C

DATA PACKAGE COVER PAGE

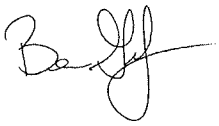
EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Client Sample Id:	Lab Sample Id:
SB21_9-10	14I0908-01
SB21_9-10	14I0908-01RE1
SB21_11-12	14I0908-02
SB21_14-15	14I0908-03
SB21_24-25	14I0908-04
SB20_9-10	14I0908-05
SB20_14-15	14I0908-06
SB20_24-25	14I0908-07
SB20_24-25	14I0908-07RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:  Name: Benjamin Gulizia

Date: 10/5/2014 Title: Laboratory Director

FORM II **SURROGATE STANDARD RECOVERY AND RT SUMMARY**

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Sequence:		Instrument:	
Matrix:	Soil	Calibration:	

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (BI41538-BS1)			Lab File ID: V466901L.D		Analyzed: 09/30/14 09:37			
1,2-Dichloroethane-d4	50.0	102	77 - 125	5.76				
p-Bromofluorobenzene	50.0	101	76 - 130	10.31				
Toluenc-d8	50.0	97.0	85 - 120	7.55				
LCS Dup (BI41538-BSD1)			Lab File ID: V466902U.D		Analyzed: 09/30/14 10:11			
1,2-Dichloroethane-d4	50.0	101	77 - 125	5.76				
p-Bromofluorobenzene	50.0	101	76 - 130	10.31				
Toluene-d8	50.0	98.8	85 - 120	7.54				
Blank (BI41538-BLK1)			Lab File ID: V466903B.D		Analyzed: 09/30/14 10:45			
1,2-Dichloroethane-d4	50.0	98.4	77 - 125	5.77				
p-Bromofluorobenzene	50.0	104	76 - 130	10.32				
Toluene-d8	50.0	99.4	85 - 120	7.56				
SB21_11-12 (14I0908-02)			Lab File ID: V466905S.D		Analyzed: 09/30/14 11:54			
1,2-Dichloroethane-d4	50.0	98.5	77 - 125	5.75				
p-Bromofluorobenzene	50.0	112	76 - 130	10.31				
Toluene-d8	50.0	101	85 - 120	7.54				
SB21_14-15 (14I0908-03)			Lab File ID: V466906S.D		Analyzed: 09/30/14 12:37			
1,2-Dichloroethane-d4	50.0	100	77 - 125	5.75				
p-Bromofluorobenzene	50.0	110	76 - 130	10.31				
Toluene-d8	50.0	100	85 - 120	7.54				
SB21_24-25 (14I0908-04)			Lab File ID: V466907S.D		Analyzed: 09/30/14 13:11			
1,2-Dichloroethane-d4	50.0	102	77 - 125	5.76				
p-Bromofluorobenzene	50.0	113	76 - 130	10.31				
Toluene-d8	50.0	99.1	85 - 120	7.54				
SB20_9-10 (14I0908-05)			Lab File ID: V466908S.D		Analyzed: 09/30/14 13:44			
1,2-Diehloroethane-d4	50.0	100	77 - 125	5.76				
p-Bromofluorobenzene	50.0	115	76 - 130	10.31				
Toluene-d8	50.0	98.4	85 - 120	7.54				
SB20_14-15 (14I0908-06)			Lab File ID: V466909S.D		Analyzed: 09/30/14 14:33			
1,2-Diehloroethane-d4	50.0	101	77 - 125	5.75				
p-Bromofluorobenzene	50.0	118	76 - 130	10.3				
Toluene-d8	50.0	99.1	85 - 120	7.53				

FORM II **SURROGATE STANDARD RECOVERY AND RT SUMMARY**

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Sequence:		Instrument:	
Matrix:	Soil	Calibration:	

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SB20_24-25 (1410908-07)			Lab File ID: V466910S.D		Analyzed: 09/30/14 15:07			
1,2-Dichloroethane-d4	50.0	102	77 - 125	5.76				
p-Bromofluorobenzene	50.0	108	76 - 130	10.32				
Toluene-d8	50.0	101	85 - 120	7.55				
SB21_9-10 (1410908-01)			Lab File ID: V466911S.D		Analyzed: 09/30/14 15:41			
1,2-Dichloroethane-d4	50.0	104	77 - 125	5.76				
p-Bromofluorobenzene	50.0	107	76 - 130	10.32				
Toluene-d8	50.0	98.4	85 - 120	7.55				

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc.
SDG: 14I0908
Client: Langan Engineering & Environmental Services (NYC)
Project: 170282501
Matrix: Soil
Batch: BI41538
Laboratory ID: BI41538-BS1
Preparation: EPA 5035A
Initial/Final: 5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	50.0	51	102	75 - 129
1,1,1-Trichloroethane	50.0	52	105	71 - 137
1,1,2,2-Tetrachloroethane	50.0	53	106	79 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	50.0	52	105	58 - 146
1,1,2-Trichloroethane	50.0	51	102	83 - 123
1,1-Dichloroethane	50.0	51	103	75 - 130
1,1-Dichloroethylene	50.0	50	100	64 - 137
1,1-Dichloropropylene	50.0	52	104	77 - 127
1,2,3-Trichlorobenzene	50.0	58	116	81 - 140
1,2,3-Trichloropropane	50.0	53	106	81 - 126
1,2,4-Trichlorobenzene	50.0	59	117	80 - 141
1,2-Dibromo-3-chloropropane	50.0	58	117	74 - 142
1,2-Dibromoethane	50.0	53	105	86 - 123
1,2-Dichlorobenzene	50.0	53	105	85 - 122
1,2-Dichloroethane	50.0	53	107	71 - 133
1,2-Dichloropropane	50.0	51	102	81 - 122
1,3-Dichlorobenzene	50.0	54	109	84 - 124
1,3-Dichloropropane	50.0	51	103	83 - 123
1,4-Dichlorobenzene	50.0	54	107	84 - 124
2,2-Dichloropropane	50.0	54	108	67 - 136
2-Chlorotoluene	50.0	52	104	78 - 127
4-Chlorotoluene	50.0	53	106	79 - 125
Bromobenzene	50.0	52	103	77 - 129
Bromochloromethane	50.0	52	104	74 - 129
Bromodichloromethane	50.0	52	104	81 - 124
Bromoform	50.0	55	111	80 - 136
Bromomethane	50.0	51	103	32 - 177
Carbon tetrachloride	50.0	53	105	66 - 143
Chlorobenzene	50.0	51	101	86 - 120
Chloroethane	50.0	53	106	51 - 142

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Matrix:	Soil		
Batch:	BI41538	Laboratory ID:	BI41538-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Chloroform	50.0	52	104	76 - 131
Chloromethane	50.0	54	109	49 - 132
cis-1,2-Dichloroethylene	50.0	51	102	74 - 132
cis-1,3-Dichloropropylene	50.0	50	101	81 - 129
Dibromochloromethane	50.0	52	105	10 - 200
Dibromomethane	50.0	52	104	83 - 124
Dichlorodifluoromethane	50.0	54	108	28 - 158
Hexachlorobutadiene	50.0	59	117	83 - 133
Methylene chloride	50.0	51	103	57 - 141
Tetrachloroethylene	50.0	48	95.5	80 - 129
trans-1,2-Dichloroethylene	50.0	53	105	72 - 132
trans-1,3-Dichloropropylene	50.0	51	102	78 - 132
Trichloroethylene	50.0	51	102	84 - 123
Trichlorofluoromethane	50.0	55	109	62 - 140
Vinyl Chloride	50.0	56	111	52 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

FORM III **LCS / LCS DUPLICATE RECOVERY**

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Matrix:	Soil		
Batch:	BI41538	Laboratory ID:	BI41538-BSD1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	50.0	52	104	2.54	30	75 - 129
1,1,1-Trichloroethane	50.0	52	105	0.0191	30	71 - 137
1,1,2,2-Tetrachloroethane	50.0	53	106	0.00	30	79 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	52	105	0.0191	30	58 - 146
1,1,2-Trichloroethane	50.0	52	105	2.76	30	83 - 123
1,1-Dichloroethane	50.0	51	102	0.253	30	75 - 130
1,1-Dichloroethylene	50.0	52	104	3.92	30	64 - 137
1,1-Dichloropropylene	50.0	54	108	3.30	30	77 - 127
1,2,3-Trichlorobenzene	50.0	56	112	3.22	30	81 - 140
1,2,3-Trichloropropane	50.0	51	102	3.42	30	81 - 126
1,2,4-Trichlorobenzene	50.0	55	111	5.74	30	80 - 141
1,2-Dibromo-3-chloropropane	50.0	54	107	8.70	30	74 - 142
1,2-Dibromoethane	50.0	54	108	2.18	30	86 - 123
1,2-Dichlorobenzene	50.0	53	106	0.832	30	85 - 122
1,2-Dichloroethane	50.0	53	106	0.431	30	71 - 133
1,2-Dichloropropane	50.0	52	104	1.87	30	81 - 122
1,3-Dichlorobenzene	50.0	54	107	1.44	30	84 - 124
1,3-Dichloropropane	50.0	54	107	3.85	30	83 - 123
1,4-Dichlorobenzene	50.0	54	109	1.26	30	84 - 124
2,2-Dichloropropane	50.0	55	111	2.26	30	67 - 136
2-Chlorotoluene	50.0	52	105	1.02	30	78 - 127
4-Chlorotoluene	50.0	54	107	0.562	30	79 - 125
Bromobenzene	50.0	52	105	1.38	30	77 - 129
Bromochloromethane	50.0	54	108	3.93	30	74 - 129
Bromodichloromethane	50.0	53	106	2.09	30	81 - 124
Bromoform	50.0	55	110	0.471	30	80 - 136
Bromomethane	50.0	54	108	4.91	30	32 - 177
Carbon tetrachloride	50.0	53	106	0.909	30	66 - 143
Chlorobenzene	50.0	52	104	2.58	30	86 - 120
Chloroethane	50.0	56	112	5.04	30	51 - 142

FORM III **LCS / LCS DUPLICATE RECOVERY**

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Matrix:	Soil		
Batch:	BI41538	Laboratory ID:	BI41538-BSD1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chloroform	50.0	53	106	1.92	30	76 - 131
Chloromethane	50.0	57	114	4.63	30	49 - 132
cis-1,2-Dichloroethylene	50.0	52	105	3.24	30	74 - 132
cis-1,3-Dichloropropylene	50.0	51	102	1.62	30	81 - 129
Dibromochloromethane	50.0	54	108	2.97	30	10 - 200
Dibromomethane	50.0	54	107	2.85	30	83 - 124
Dichlorodifluoromethane	50.0	56	112	4.25	30	28 - 158
Hexachlorobutadiene	50.0	56	113	3.60	30	83 - 133
Methylene chloride	50.0	52	105	2.22	30	57 - 141
Tetrachloroethylene	50.0	49	97.2	1.72	30	80 - 129
trans-1,2-Dichloroethylene	50.0	53	107	1.45	30	72 - 132
trans-1,3-Dichloropropylene	50.0	53	107	4.87	30	78 - 132
Trichloroethylene	50.0	53	106	3.78	30	84 - 123
Trichlorofluoromethane	50.0	56	113	3.30	30	62 - 140
Vinyl Chloride	50.0	57	113	1.52	30	52 - 130

Column to be used to flag rccovery and RPD values with an asterisk

* Values outside of QC limits

FORM I

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	BI41538-BLK1	File ID:	V466903B.D
Prepared:	09/30/14 07:27	Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml
Analyzed:	09/30/14 10:45	Instrument:	GCMS-VOA4		
Batch:	BI41538	Sequence:		Calibration:	

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethylene	5.0	U
563-58-6	1,1-Dichloropropylene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
108-86-1	Bromobenzene	5.0	U
74-97-5	Bromochloromethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
75-00-3	Chloroethane	5.0	U

FORM I

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.			SDG:	1410908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	BI41538-BLK1	File ID:	V466903B.D
Prepared:	09/30/14 07:27	Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml
Analyzed:	09/30/14 10:45	Instrument:	GCMS-VOA4		
Batch:	BI41538	Sequence:		Calibration:	

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethylene	5.0	U
10061-01-5	cis-1,3-Dichloropropylene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
74-95-3	Dibromomethane	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
75-09-2	Methylene chloride	10	U
127-18-4	Tetrachloroethylene	5.0	U
156-60-5	trans-1,2-Dichloroethylene	5.0	U
10061-02-6	trans-1,3-Dichloropropylene	5.0	U
79-01-6	Trichloroethylene	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	49.2	98.4	77 - 125	
p-Bromofluorobenzene	50.0	51.8	104	76 - 130	
Toluene-d8	50.0	49.7	99.4	85 - 120	

FORM IV

PREPARATION BATCH SUMMARY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Batch: BI41538 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB21_9-10	14I0908-01	V466911S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB21_11-12	14I0908-02	V466905S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB21_14-15	14I0908-03	V466906S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB21_24-25	14I0908-04	V466907S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB20_9-10	14I0908-05	V466908S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB20_14-15	14I0908-06	V466909S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB20_24-25	14I0908-07	V466912S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
SB20_24-25	14I0908-07	V466910S.D	09/30/14 08:23	From BI41494 by BK on 09/30/2014
Blank	BI41538-BLK1	V466903B.D	09/30/14 07:27	
LCS	BI41538-BS1	V466901L.D	09/30/14 07:27	
LCS Dup	BI41538-BSD1	V466902U.D	09/30/14 07:27	

Form 5A

Volatile Organic Instrument Performance Check

Bromofluorobenzene (BFB)

Lab Name: York Analytical Laboratories, Inc.
Client: Langan Engineering & Environmental Services (NJ)
Lab File ID: V466877B.D
Instrument ID: VOA No. 4
Calibration: V4C00234

SDG: 1410908
Project: 170282501
BFB Injection Date: 09/29/14
BFB InjectionTime:20:01
Sequence: QBV4092914B

m/e	Ion Abundance Criteria	% Relative Abundance	
50	15.0-40.0% of mass 95	21.7	
75	30.0-60.0% of mass 95	53.0	
95	Base peak, 100% relative abundance	100.0	
96	5.0-9.0% of mass 95	5.6	
173	Less than 2.0% of mass 174	0.0	78.5 **1**
174	50.0-100.0% of mass 95	78.5	
175	5.0-9.0% of mass 174	7.5	78.5 **1**
176	95.0-101.0% of mass 174	100.8	78.5 **1**
177	5.0-9.0% of mass 176	6.6	100.8 **2**

1- Value is % mass 174 **2-Value is % mass 176**

This check applies to the following samples, MS, MSD, blanks and standards

	Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
1		5 ppb VOA CALIBRATION STD	V466878C.D	09/29/14	20:35
2		10 ppb VOA CALIBRATION STD	V466879C.D	09/29/14	21:09
3		20 ppb VOA CALIBRATION STD	V466880C.D	09/29/14	21:42
4		50 ppb VOA CALIBRATION STD	V466881C.D	09/29/14	22:16
5		100 ppb VOA CALIBRATION STD	V466882C.D	09/29/14	22:50
6		200 ppb VOA CALIBRATION STD	V466883C.D	09/29/14	23:23
7		50 ppb VOA ICV STD	V466885C.D	09/30/14	00:31
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Form 5A

Volatile Organic Instrument Performance Check

Bromofluorobenzene (BFB)

Lab Name: York Analytical Laboratories, Inc.
Client: Langan Engineering & Environmental Services (NJ)
Lab File ID: V466900C.D
Instrument ID: VOA No. 4
Calibration: V4C00234

SDG: 1410908
Project: 170282501
BFB Injection Date: 09/30/14
BFB InjectionTime: 09:00
Sequence: QBV4093014A

m/e	Ion Abundance Criteria	% Relative Abundance	
50	15.0-40.0% of mass 95	22.3	
75	30.0-60.0% of mass 95	52.8	
95	Base peak, 100% relative abundance	100.0	
96	5.0-9.0% of mass 95	6.8	
173	Less than 2.0% of mass 174	0.1	79.1 **1**
174	50.0-100.0% of mass 95	79.1	
175	5.0-9.0% of mass 174	7.8	79.1 **1**
176	95.0-101.0% of mass 174	97.0	79.1 **1**
177	5.0-9.0% of mass 176	5.9	97.0 **2**

1- Value is % mass 174 **2-Value is % mass 176**

This check applies to the following samples, MS, MSD, blanks and standards

	Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
1		BI41538-BS1	V466901L.D	09/30/14	09:37
2		BI41538-BSD1	V466902U.D	09/30/14	10:11
3		BI41538-BLK1	V466903B.D	09/30/14	10:45
4	SSB21_9-10 (100X)	1410908-01 (100X)	V466904S.D	09/30/14	11:20
5	SB21_11-12	1410908-02	V466905S.D	09/30/14	11:54
6	SB21_14-15	1410908-03	V466906S.D	09/30/14	12:37
7	SB21_24-25	1410908-04	V466907S.D	09/30/14	13:11
8	SB20_9-10	1410908-05	V466908S.D	09/30/14	13:44
9	SB20_14-15	1410908-06	V466909S.D	09/30/14	14:33
10	SB20_24-25	1410908-07	V466910S.D	09/30/14	15:07
11	SSB21_9-10	1410908-01	V466911S.D	09/30/14	15:41
12	SB20_24-25 (100X)	1410908-07 (100X)	V466912S.D	09/30/14	16:15
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Form 8A

Volatile Internal Standard Area and RT Summary

Lab Name: York Analytical Laboratories, Inc
Client: Langan Engineering & Environmental Services (NJ)
Sequence: QBV4093014A
Calibration: V4C00234
Lab File ID: V466900C.D

SDG: 1410908
Project: 170282501
Instrument ID: VOA No. 4
BFB Injection Date: 09/30/14
BFB InjectionTime: 09:00

	IS 1 (FBZ) Area	RT	IS 2 (CBZ) Area	RT	IS 3 (DCB) Area	RT
12 Hour Std	138492	6.03	436457	9.05	187906	12.02
Upper Limit	276984	6.53	872914	9.55	375812	12.52
Lower Limit	69246	5.53	218229	8.55	93953	11.52
Client Sample ID						
BI41538-BS1	132575	6.03	436263	9.05	181823	12.03
BI41538-BSD1	133259	6.03	434904	9.05	185745	12.02
BI41538-BLK1	125851	6.04	414236	9.06	168135	12.04
SSB21_9-10 (100X)	130642	6.03	421255	9.04	159024	12.02
SB21_11-12	130395	6.03	425894	9.05	158504	12.02
SB21_14-15	134168	6.03	442545	9.04	163251	12.02
SB21_24-25	125241	6.03	421052	9.05	157067	12.02
SB20_9-10	136398	6.03	436452	9.05	159001	12.02
SB20_14-15	133075	6.02	443232	9.04	160238	12.02
SB20_24-25	118912	6.04	405518	9.05	156973	12.03
SSB21_9-10	129936	6.03	428662	9.05	171068	12.02
SB20_24-25 (100X)	128290	6.03	419735	9.05	159797	12.03

IS 1 (FBZ) = Fluorobenzene
IS 2 (CBZ) = Chlorobenzene-d5
IS 3 (DCB) = 1,2-Dichlorobenzene-d4

Area Upper Limit +100% of internal standard area
Area Lower Limit -50% of internal standard area
RT Upper Limit +0.50 minutes of internal standard RT
RT Upper Limit -0.50 minutes of internal standard RT

* = Values outside of QC limits

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. **SDG:** 14I0908

Client: Langan Engineering & Environmental Services (NYC) **Project:** 170282501

Matrix: Soil **Instrument:**

Analyte	LOD	LOQ	Units
1,1,1,2-Tetrachloroethane	2.5	5.0	ug/kg
1,1,1-Trichloroethane	2.5	5.0	ug/kg
1,1,2,2-Tetrachloroethane	2.5	5.0	ug/kg
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	2.5	5.0	ug/kg
1,1,2-Trichloroethane	2.5	5.0	ug/kg
1,1-Dichloroethane	2.5	5.0	ug/kg
1,1-Dichloroethylene	2.5	5.0	ug/kg
1,1-Dichloropropylene	2.5	5.0	ug/kg
1,2,3-Trichlorobenzene	2.5	5.0	ug/kg
1,2,3-Trichloropropane	2.5	5.0	ug/kg
1,2,4-Trichlorobenzene	2.5	5.0	ug/kg
1,2-Dibromo-3-chloropropane	2.5	5.0	ug/kg
1,2-Dibromoethane	2.5	5.0	ug/kg
1,2-Dichlorobenzene	2.5	5.0	ug/kg
1,2-Dichloroethane	2.5	5.0	ug/kg
1,2-Dichloropropane	2.5	5.0	ug/kg
1,3-Dichlorobenzene	2.5	5.0	ug/kg
1,3-Dichloropropane	2.5	5.0	ug/kg
1,4-Dichlorobenzene	2.5	5.0	ug/kg
2,2-Dichloropropane	2.5	5.0	ug/kg
2-Chlorotoluene	2.5	5.0	ug/kg
4-Chlorotoluene	2.5	5.0	ug/kg
Bromobenzene	2.5	5.0	ug/kg
Bromochloromethane	2.5	5.0	ug/kg
Bromodichloromethane	2.5	5.0	ug/kg
Bromoform	2.5	5.0	ug/kg
Bromomethane	2.5	5.0	ug/kg
Carbon tetrachloride	2.5	5.0	ug/kg
Chlorobenzene	2.5	5.0	ug/kg
Chloroethane	2.5	5.0	ug/kg
Chloroform	2.5	5.0	ug/kg
Chloromethane	2.5	5.0	ug/kg
cis-1,2-Dichloroethylene	2.5	5.0	ug/kg
cis-1,3-Dichloropropylene	2.5	5.0	ug/kg
Dibromochloromethane	2.5	5.0	ug/kg
Dibromomethane	2.5	5.0	ug/kg
Dichlorodifluoromethane	2.5	5.0	ug/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. **SDG:** 14I0908

Client: Langan Engineering & Environmental Services (NYC) **Project:** 170282501

Matrix: Soil **Instrument:**

Analyte	LOD	LOQ	Units
Hexachlorobutadiene	2.5	5.0	ug/kg
Methylene chloride	5.0	10	ug/kg
Tetrachloroethylene	2.5	5.0	ug/kg
trans-1,2-Dichloroethylene	2.5	5.0	ug/kg
trans-1,3-Dichloropropylene	2.5	5.0	ug/kg
Trichloroethylene	2.5	5.0	ug/kg
Trichlorofluoromethane	2.5	5.0	ug/kg
Vinyl Chloride	2.5	5.0	ug/kg

HOLDING TIME SUMMARY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SB21_9-10	09/23/14 09:03	09/23/14 18:15	09/30/14 08:23	6.97	14.00	09/30/14 15:41	7.28	14.00	
SB21_11-12	09/23/14 09:15	09/23/14 18:15	09/30/14 08:23	6.96	14.00	09/30/14 11:54	7.11	14.00	
SB21_14-15	09/23/14 09:30	09/23/14 18:15	09/30/14 08:23	6.95	14.00	09/30/14 12:37	7.13	14.00	
SB21_24-25	09/23/14 09:45	09/23/14 18:15	09/30/14 08:23	6.94	14.00	09/30/14 13:11	7.14	14.00	
SB20_9-10	09/23/14 08:10	09/23/14 18:15	09/30/14 08:23	7.01	14.00	09/30/14 13:44	7.23	14.00	
SB20_14-15	09/23/14 08:25	09/23/14 18:15	09/30/14 08:23	7.00	14.00	09/30/14 14:33	7.26	14.00	
SB20_24-25	09/23/14 08:40	09/23/14 18:15	09/30/14 08:23	6.99	14.00	09/30/14 15:07	7.27	14.00	

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_9-10

Laboratory:	York Analytical Laboratories, Inc.			SDG:	1410908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-01	File ID:	V466911S.D
Sampled:	09/23/14 09:03	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 15:41
Solids:	81.84	Preparation:	EPA 5035A	Initial/Final:	10.12 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	3.0	U
71-55-6	1,1,1-Trichloroethane	1	1.8	J
79-34-5	1,1,2,2-Tetrachloroethane	1	3.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	3.0	U
79-00-5	1,1,2-Trichloroethane	1	3.0	U
75-34-3	1,1-Dichloroethane	1	3.0	U
75-35-4	1,1-Dichloroethylene	1	3.0	U
563-58-6	1,1-Dichloropropylene	1	3.0	U
87-61-6	1,2,3-Trichlorobenzene	1	3.0	U
96-18-4	1,2,3-Trichloropropane	1	3.0	U
120-82-1	1,2,4-Trichlorobenzene	1	3.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1	3.0	U
106-93-4	1,2-Dibromoethane	1	3.0	U
95-50-1	1,2-Dichlorobenzene	1	3.0	U
107-06-2	1,2-Dichloroethane	1	3.0	U
78-87-5	1,2-Dichloropropane	1	3.0	U
541-73-1	1,3-Dichlorobenzene	1	3.0	U
142-28-9	1,3-Dichloropropane	1	3.0	U
106-46-7	1,4-Dichlorobenzene	1	3.0	U
594-20-7	2,2-Dichloropropane	1	3.0	U
95-49-8	2-Chlorotoluene	1	3.0	U
106-43-4	4-Chlorotoluene	1	3.0	U
108-86-1	Bromobenzene	1	3.0	U
74-97-5	Bromochloromethane	1	3.0	U
75-27-4	Bromodichloromethane	1	3.0	U
75-25-2	Bromoform	1	3.0	U
74-83-9	Bromomethane	1	3.0	U
56-23-5	Carbon tetrachloride	1	3.0	U
108-90-7	Chlorobenzene	1	3.0	U
75-00-3	Chloroethane	1	3.0	U
67-66-3	Chloroform	1	3.0	U
74-87-3	Chloromethane	1	3.0	U
156-59-2	cis-1,2-Dichloroethylene	1	150	E
10061-01-5	cis-1,3-Dichloropropylene	1	3.0	U
124-48-1	Dibromochloromethane	1	3.0	U
74-95-3	Dibromomethane	1	3.0	U
75-71-8	Dichlorodifluoromethane	1	3.0	U
87-68-3	Hexachlorobutadiene	1	3.0	U
75-09-2	Methylene chloride	1	6.0	U
127-18-4	Tetrachloroethylene	1	160	E

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_9-10

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-01	File ID:	V466911S.D
Sampled:	09/23/14 09:03	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 15:41
Solids:	81.84	Preparation:	EPA 5035A	Initial/Final:	10.12 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	1	3.0	U
10061-02-6	trans-1,3-Dichloropropylene	1	3.0	U
79-01-6	Trichloroethylene	1	42	
75-69-4	Trichlorofluoromethane	1	3.0	U
75-01-4	Vinyl Chloride	1	3.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	51.8	104	77 - 125	
p-Bromofluorobenzene	50.0	53.5	107	76 - 130	
Toluene-d8	50.0	49.2	98.4	85 - 120	

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466911S.D Vial: 12
Acq On : 30 Sep 2014 3:41 pm Operator: BK
Sample : 14I0908-01 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.12g RE Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 16:57 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

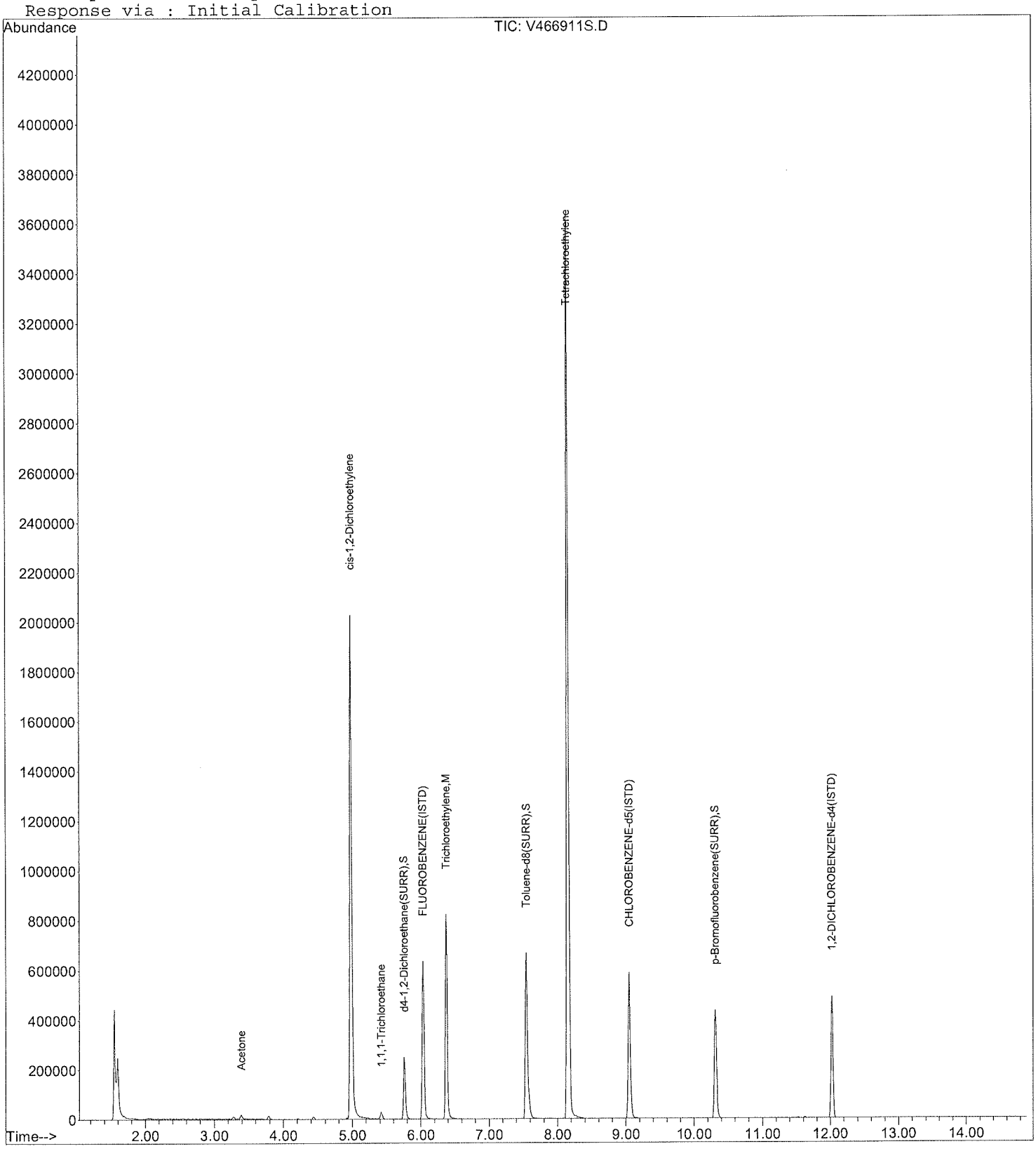
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	129936	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	428662	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	171068	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	211188	51.80	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 103.60%				
47) Toluene-d8(SURR)	7.55	98	553259	49.18	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.36%				
66) p-Bromofluorobenzene(SURR)	10.32	174	171723	53.47	ppb		0.01
Spiked Amount 50.000	Range 63 - 166		Recovery = 106.94%				
Target Compounds							Qvalue
20) Acetone	3.39	43	25320	20.13	ppb		99
23) cis-1,2-Dichloroethylene	4.99	96	955724	250.21	ppb	#	24
28) 1,1,1-Trichloroethane	5.42	97	20231	2.96	ppb	#	99
37) Trichloroethylene	6.38	95	272357	69.61	ppb		99
52) Tetrachloroethylene	8.16	166	1270501	266.06	ppb	#	100

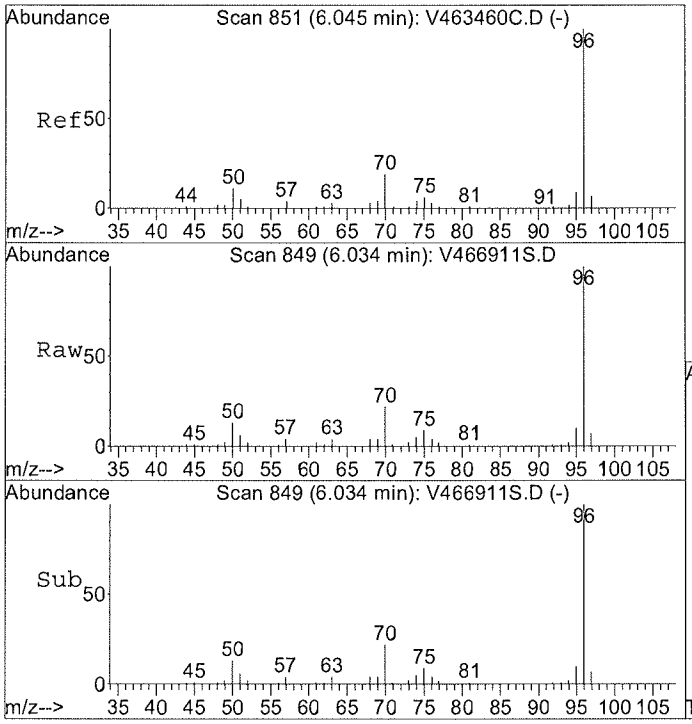
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466911S.D Vial: 12
Acq On : 30 Sep 2014 3:41 pm Operator: BK
Sample : 14I0908-01 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.12g RE Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 16:57 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

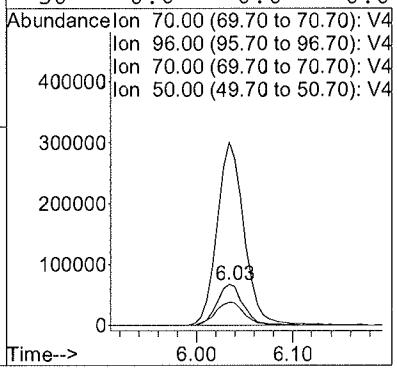


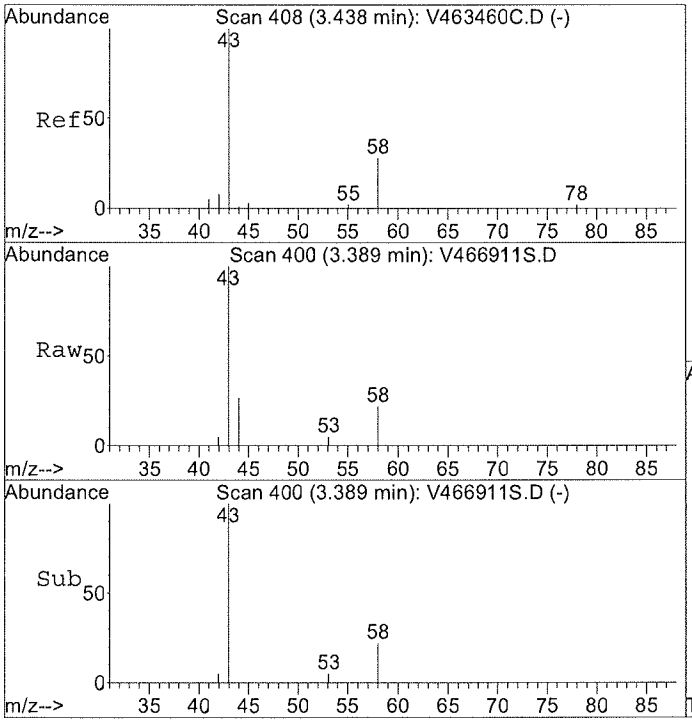


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 849
Delta R.T. 0.00 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 70 Resp: 129936

Ion	Ratio	Lower	Upper
70	100		
96	455.6	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

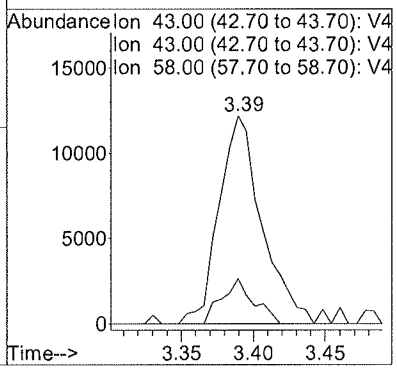


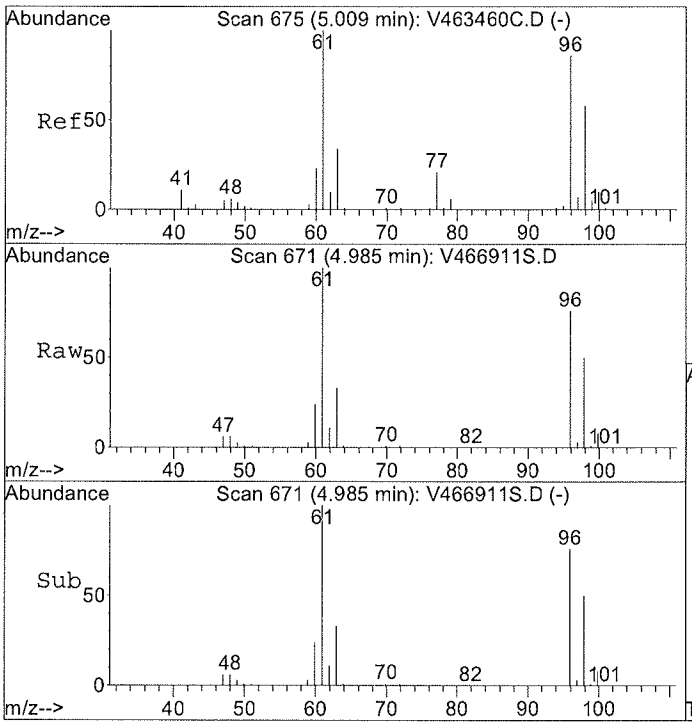


#20
Acetone
Concen: 20.13 ppb
RT: 3.39 min Scan# 400
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 43 Resp: 25320

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	21.6	0.0	38.0

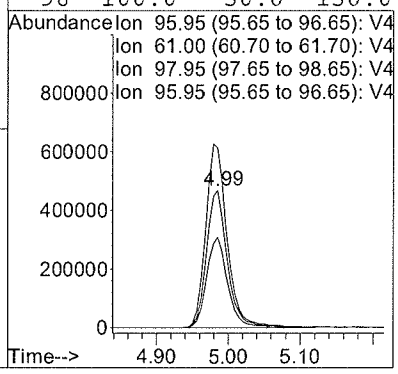


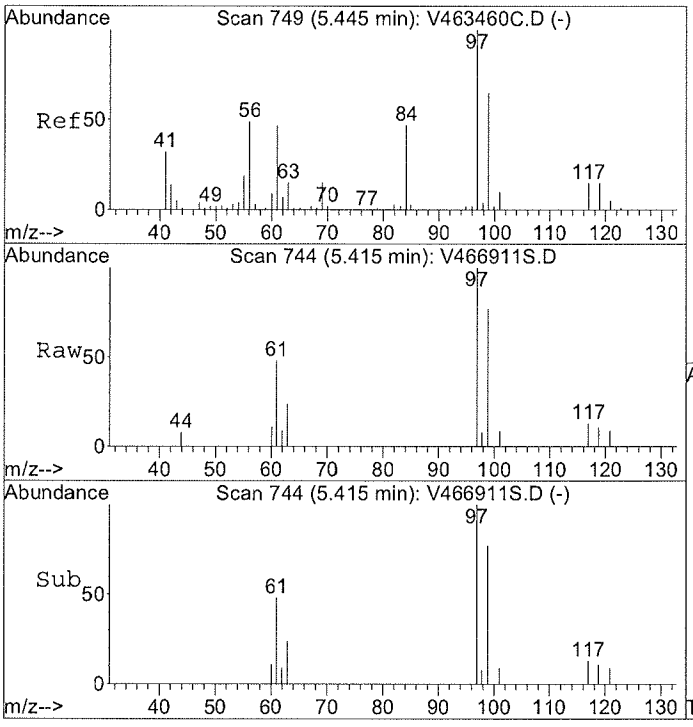


#23
cis-1,2-Dichloroethylene
Concen: 250.21 ppb
RT: 4.99 min Scan# 671
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 96 Resp: 955724

Ion	Ratio	Lower	Upper
96	100		
61	0.0	82.3	246.9#
98	66.2	0.0	0.0#
96	100.0	50.0	150.0

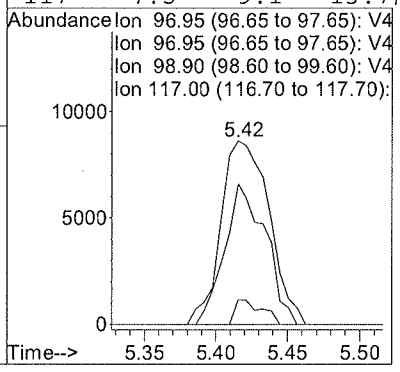


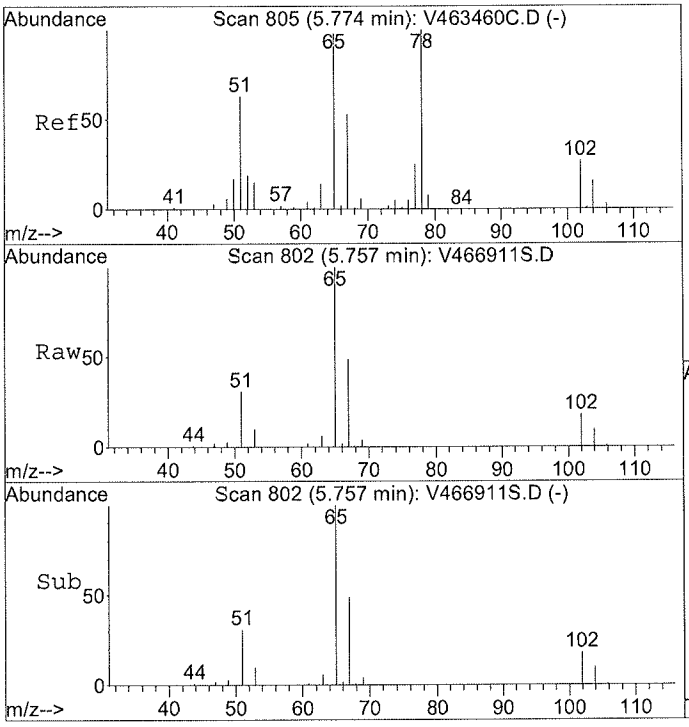


#28
1,1,1-Trichloroethane
Concen: 2.96 ppb
RT: 5.42 min Scan# 744
Delta R.T. -0.00 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 97 Resp: 20231

Ion	Ratio	Lower	Upper
97	100		
97	100.0	80.0	120.0
99	64.9	51.7	77.5
117	7.5	9.1	13.7#

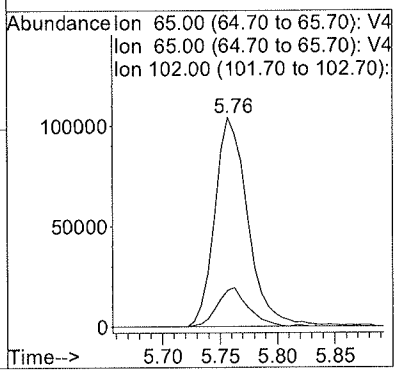


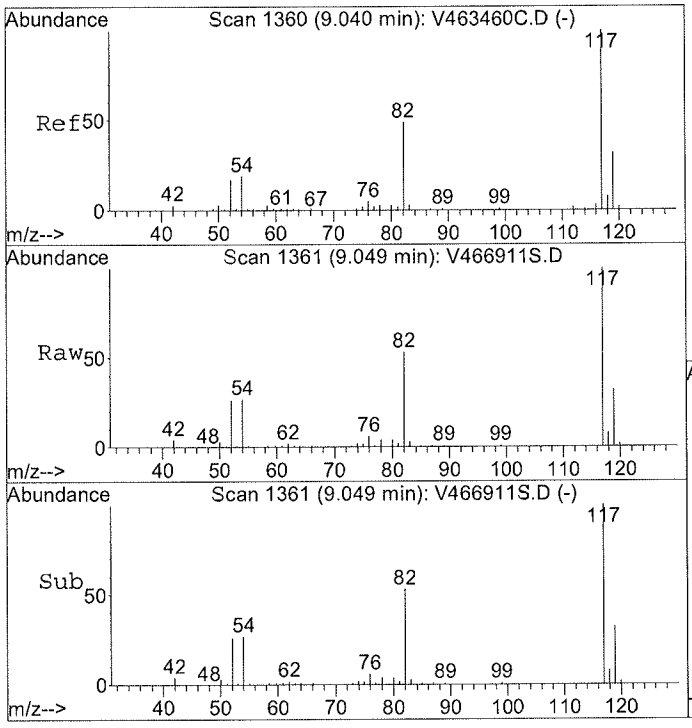


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.76 min Scan# 802
Delta R.T. 0.00 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 65 Resp: 211188

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.5	13.5	20.3

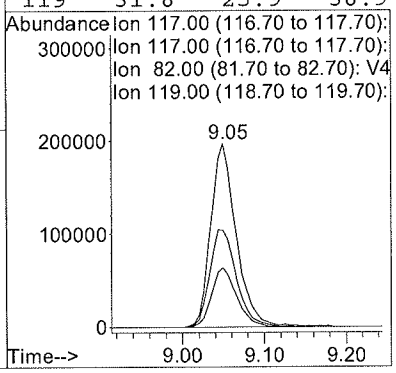


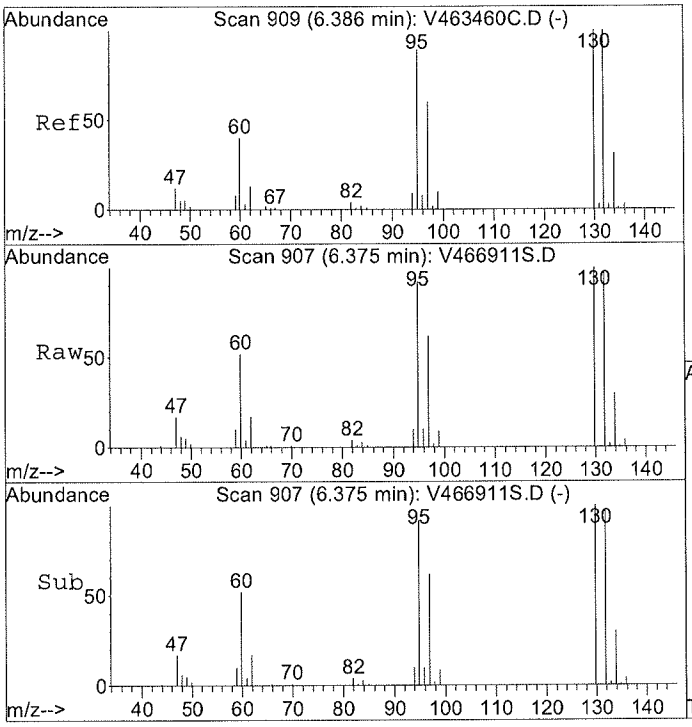


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.05 min Scan# 1361
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion:117 Resp: 428662

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	31.8	25.9	38.9

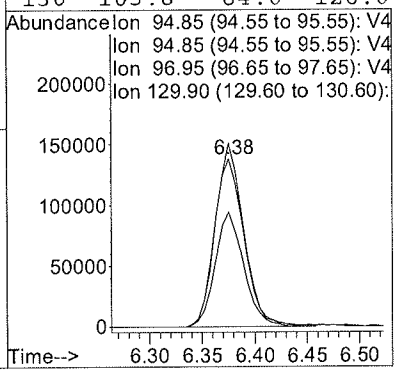


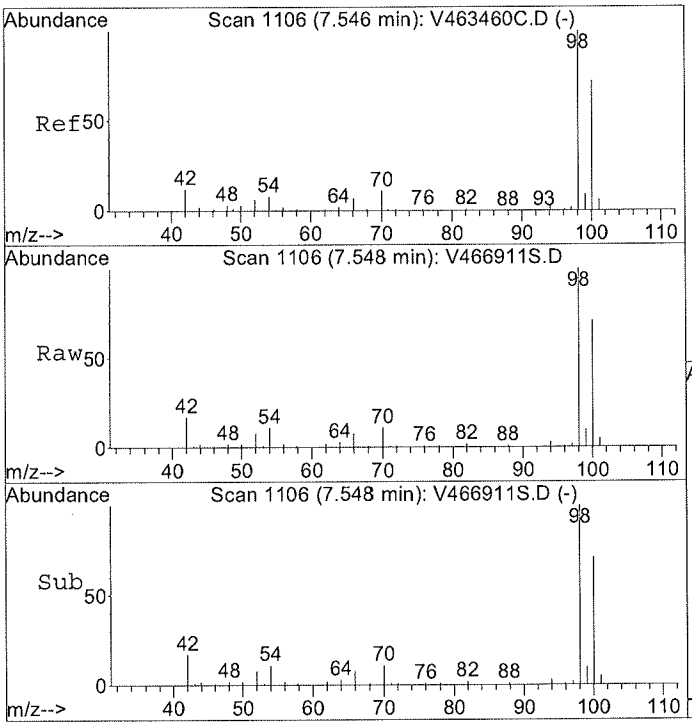


#37
Trichloroethylene
Concen: 69.61 ppb
RT: 6.38 min Scan# 907
Delta R.T. 0.00 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 95 Resp: 272357

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
97	65.7	52.4	78.6
130	103.8	84.0	126.0

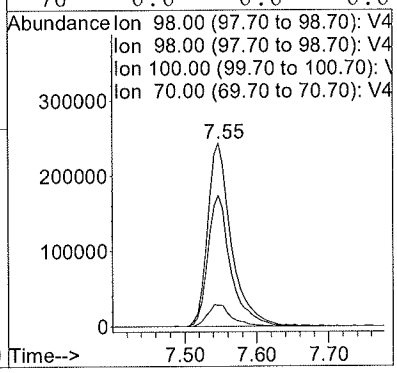


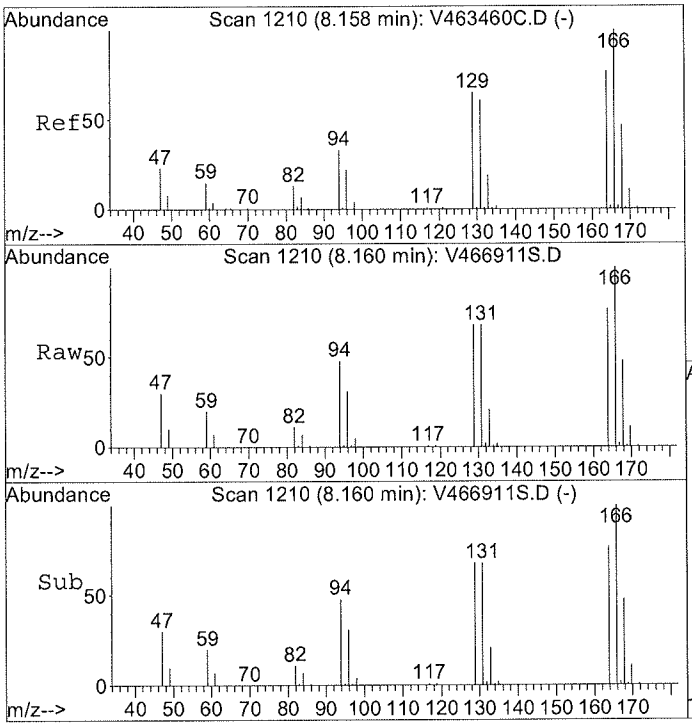


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.55 min Scan# 1106
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion: 98 Resp: 553259

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	69.4	53.8	80.6
70	0.0	0.0	0.0

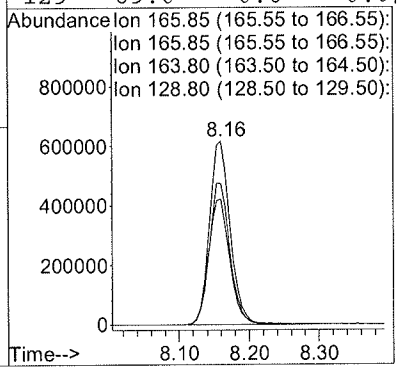


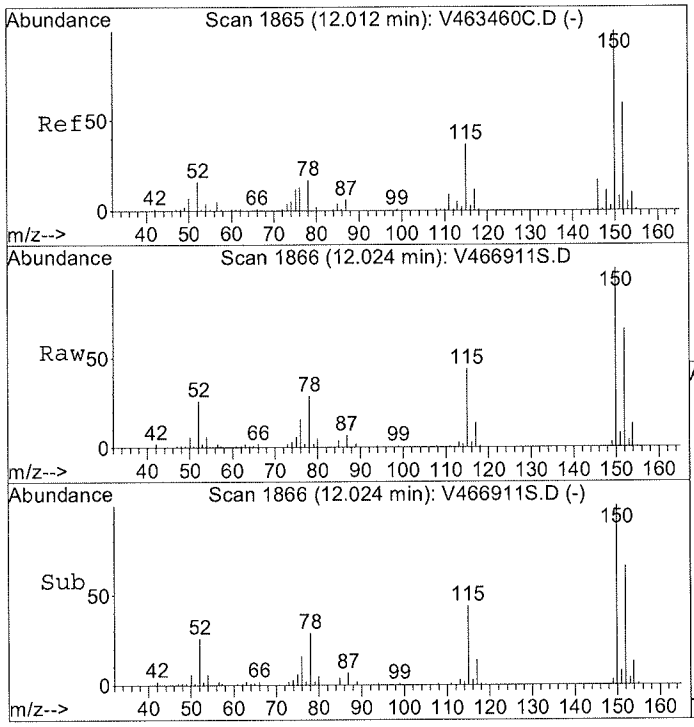


#52
Tetrachloroethylene
Concen: 266.06 ppb
RT: 8.16 min Scan# 1210
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion:166 Resp: 1270501

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	76.9	0.0	0.0#
129	69.0	0.0	0.0#

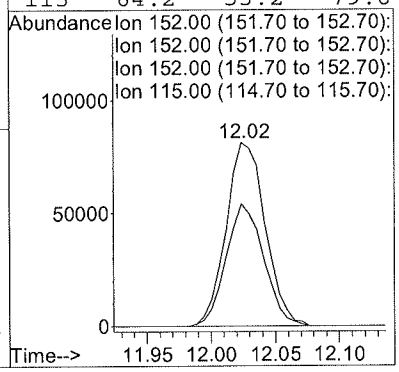


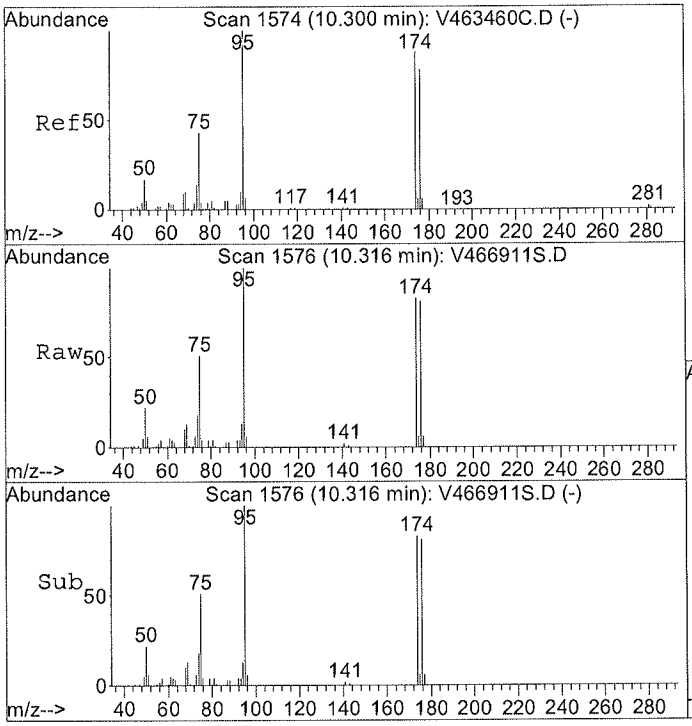


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1866
Delta R.T. 0.00 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion:152 Resp: 171068

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	64.2	53.2	79.8

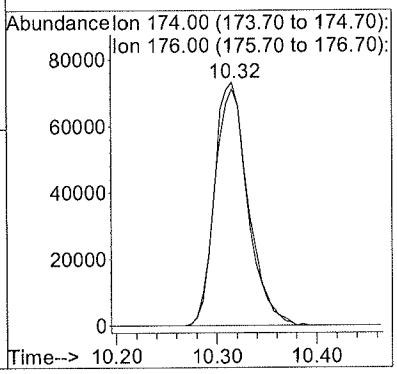




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.32 min Scan# 1576
Delta R.T. 0.01 min
Lab File: V466911S.D
Acq: 30 Sep 2014 3:41 pm

Tgt Ion:174 Resp: 171723

Ion	Ratio	Lower	Upper
174	100		
176	97.5	76.2	114.2



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466904S.D Vial: 5
Acq On : 30 Sep 2014 11:20 am Operator: BK
Sample : 14I0908-01RE1 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 6.85g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 12:39 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

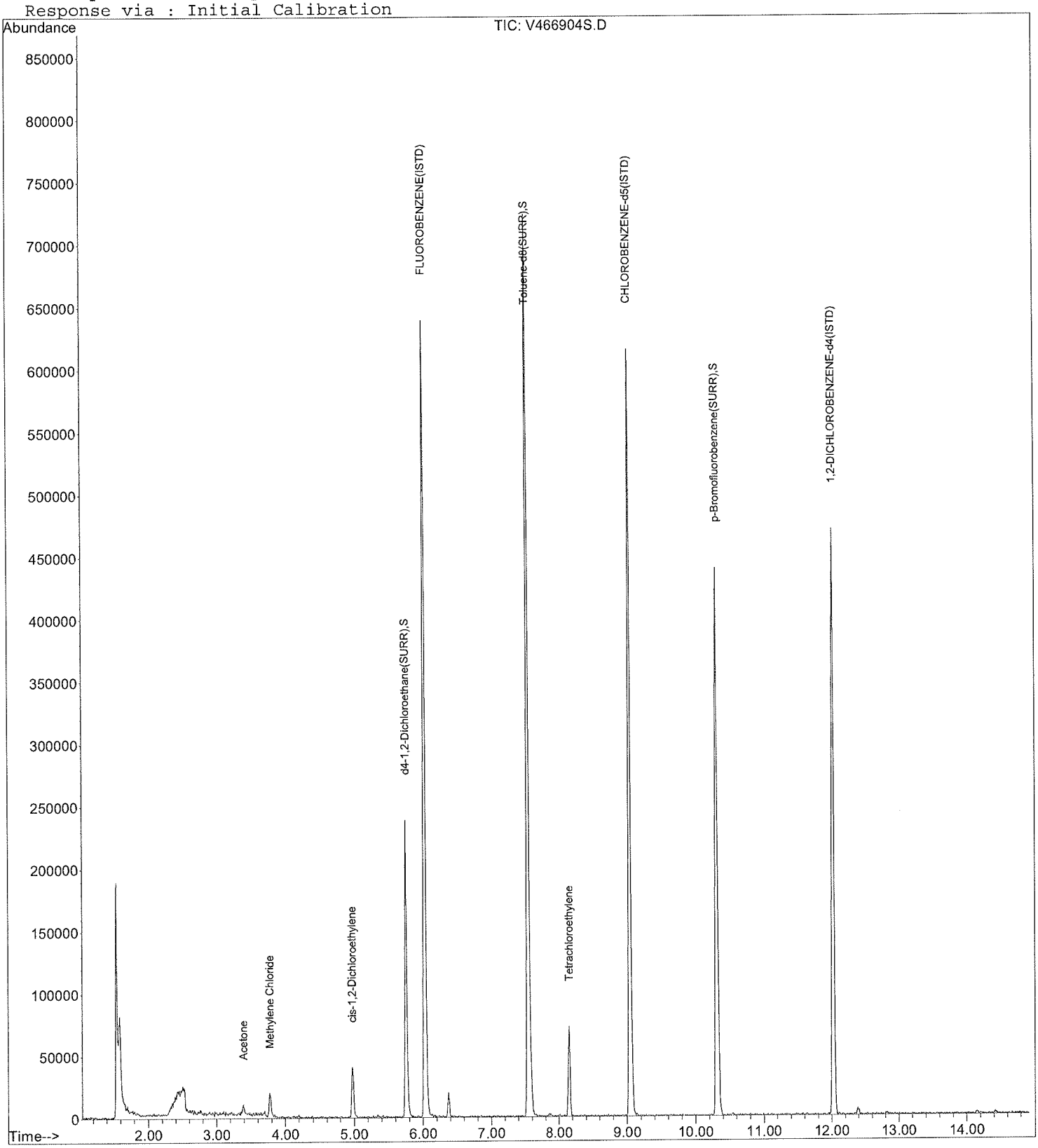
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	130642	50.00	ppb	0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	421244	50.00	ppb	0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	159024	50.00	ppb	0.00
System Monitoring Compounds						
31) d4-1,2-Dichloroethane(SURR	5.76	65	195995	47.81	ppb	0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 95.62%			
47) Toluene-d8(SURR)	7.54	98	553623	50.08	ppb	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.16%			
66) p-Bromofluorobenzene(SURR)	10.31	174	167366	56.06	ppb	0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 112.12%			
Target Compounds						Qvalue
18) Methylene Chloride	3.77	49	13556	2.94	ppb #	66
20) Acetone	3.39	43	10924	8.64	ppb	100
23) cis-1,2-Dichloroethylene	4.97	96	17951	4.67	ppb #	24
52) Tetrachloroethylene	8.16	166	23125	4.93	ppb #	100

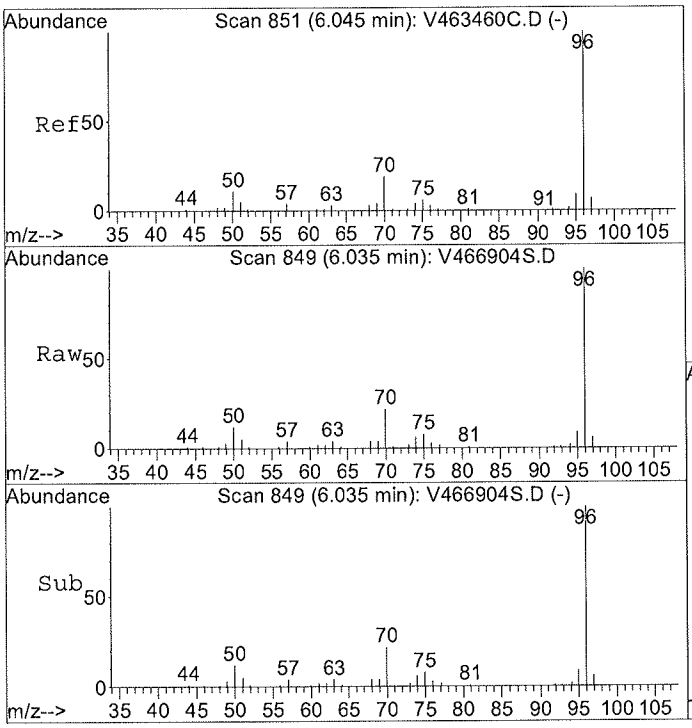
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466904S.D Vial: 5
Acq On : 30 Sep 2014 11:20 am Operator: BK
Sample : 14I0908-01RE1 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 6.85g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 12:39 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

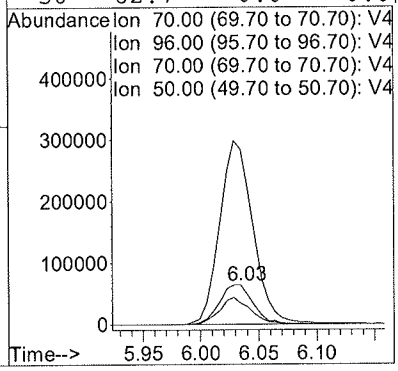


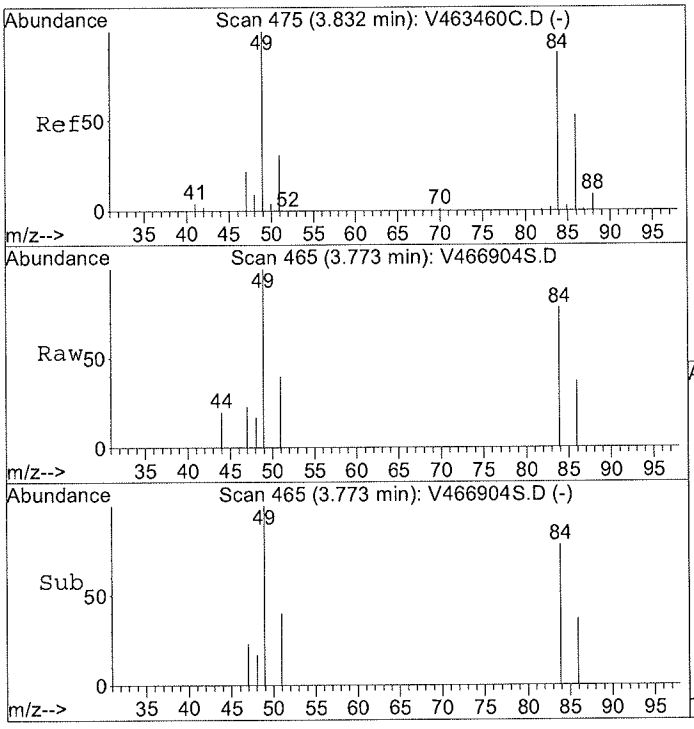


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 849
Delta R.T. 0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 70 Resp: 130642

Ion	Ratio	Lower	Upper
70	100		
96	455.9	350.6	525.8
70	100.0	80.0	120.0
50	62.7	0.0	0.0#

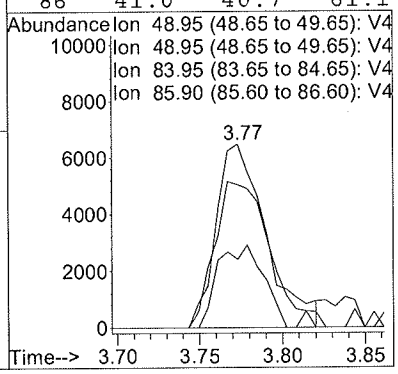


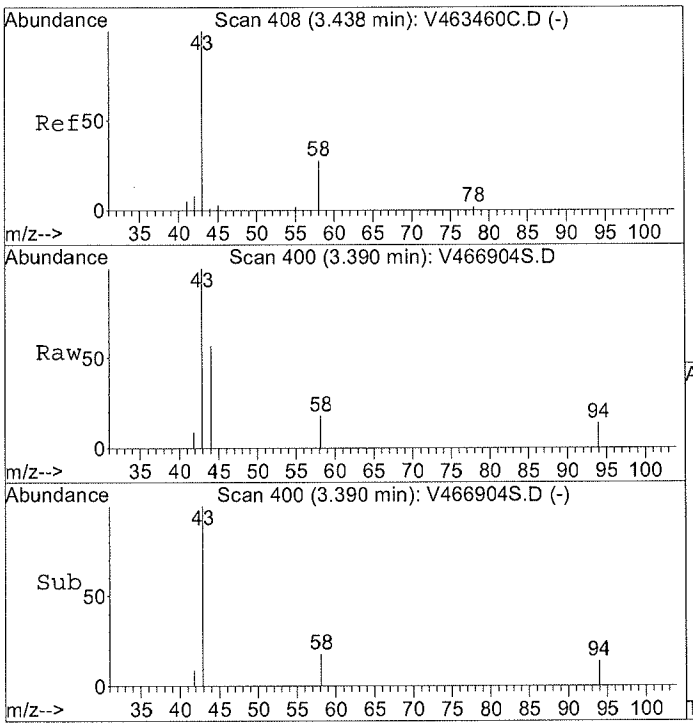


#18
Methylene Chloride
Concen: 2.94 ppb
RT: 3.77 min Scan# 465
Delta R.T. -0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 49 Resp: 13556

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	0.0	62.9	94.3#
86	41.0	40.7	61.1

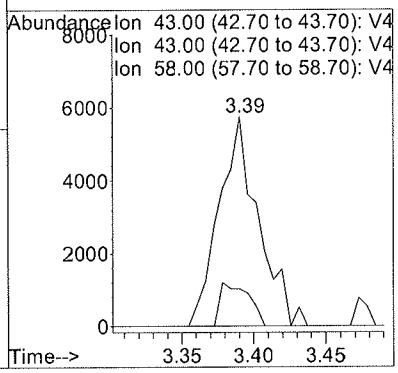


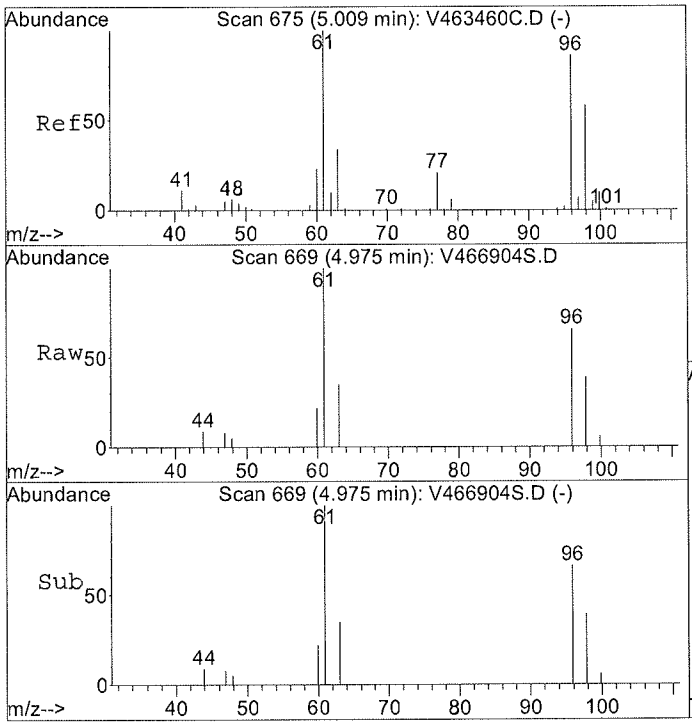


#20
Acetone
Concen: 8.64 ppb
RT: 3.39 min Scan# 400
Delta R.T. 0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 43 Resp: 10924

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	17.8	0.0	38.0

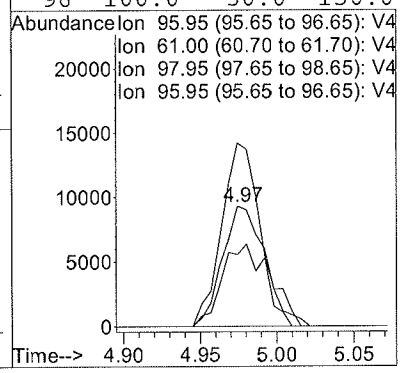


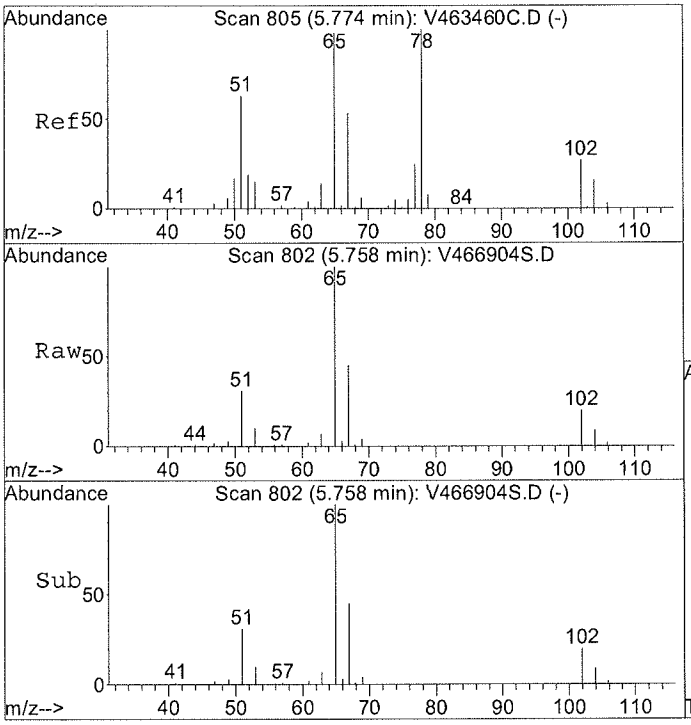


#23
cis-1,2-Dichloroethylene
Concen: 4.67 ppb
RT: 4.97 min Scan# 669
Delta R.T. -0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 96 Resp: 17951

Ion	Ratio	Lower	Upper
96	100		
61	0.0	82.3	246.9#
98	68.7	0.0	0.0#
96	100.0	50.0	150.0

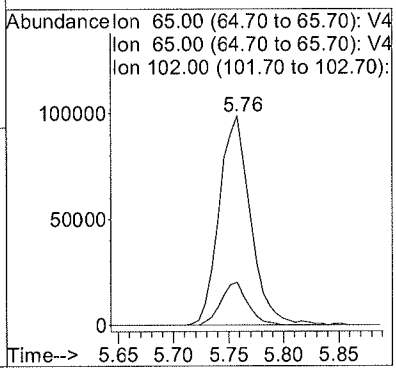


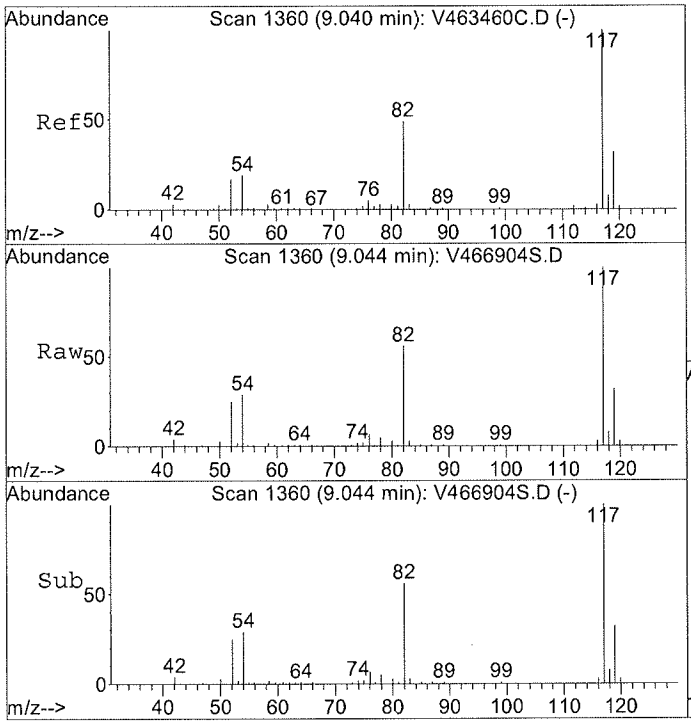


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.76 min Scan# 802
Delta R.T. 0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 65 Resp: 195995

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.6	13.5	20.3

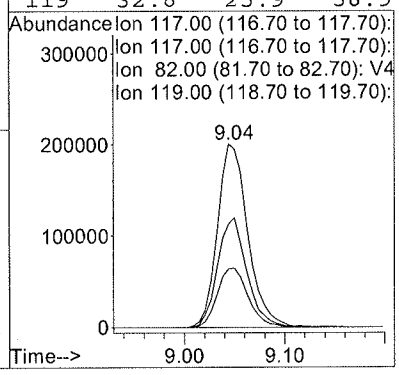


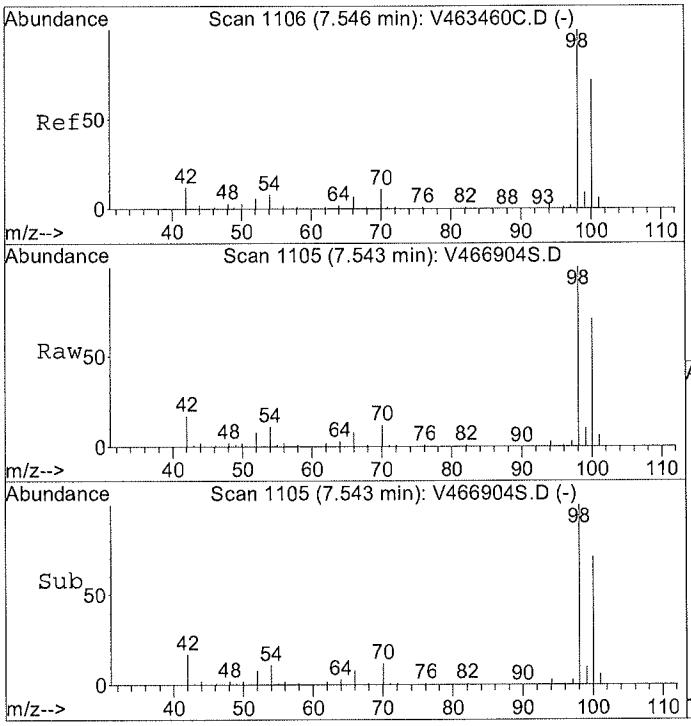


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.04 min Scan# 1360
Delta R.T. 0.00 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion:117 Resp: 421244

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	57.4	0.0	0.0#
119	32.6	25.9	38.9

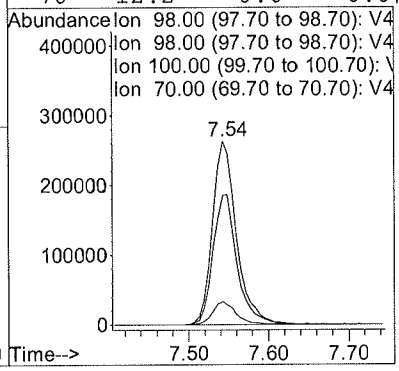


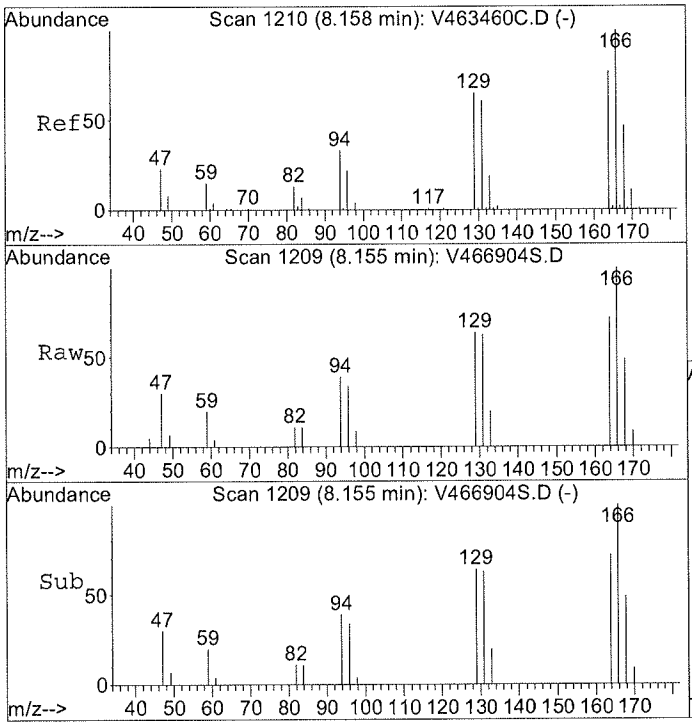


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.54 min Scan# 1105
Delta R.T. 0.00 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion: 98 Resp: 553623

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	0.0	53.8	80.6#
70	12.2	0.0	0.0#

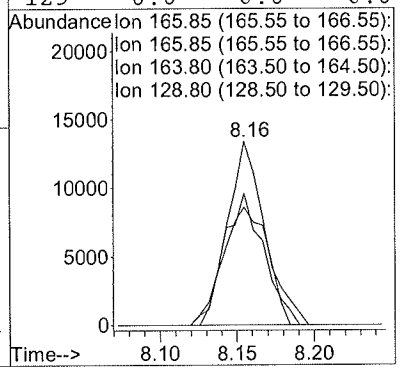


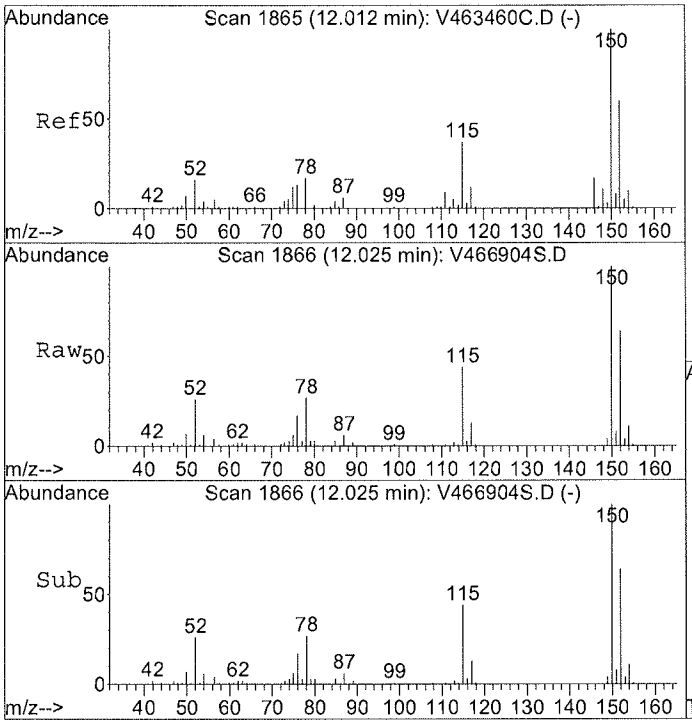


#52
Tetrachloroethylene
Concen: 4.93 ppb
RT: 8.16 min Scan# 1209
Delta R.T. 0.00 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion:166 Resp: 23125

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	0.0	0.0	0.0
129	0.0	0.0	0.0

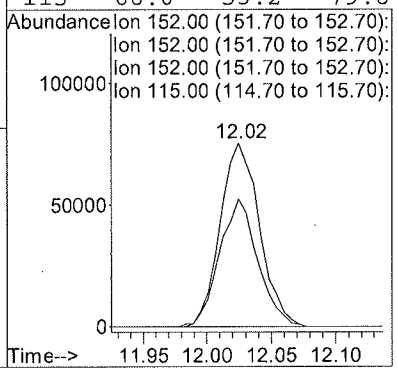


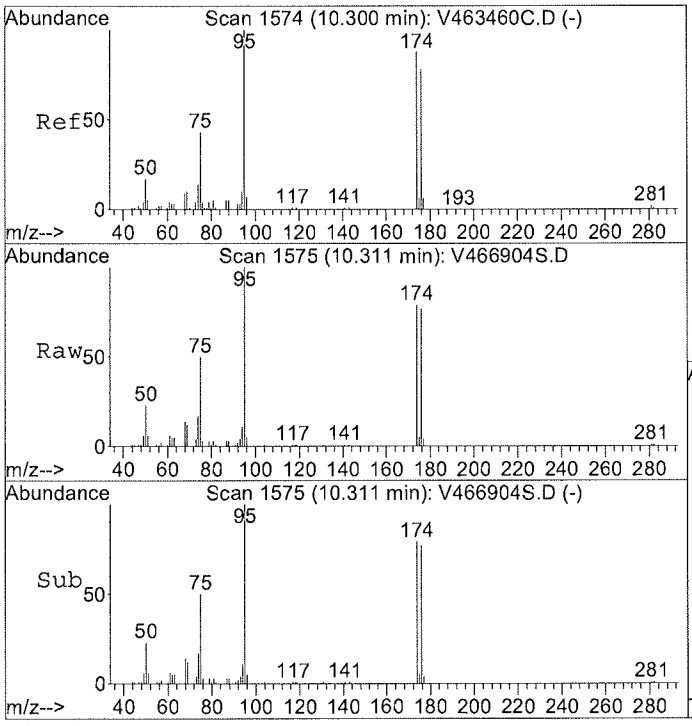


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1866
Delta R.T. 0.00 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion:152 Resp: 159024

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	68.0	53.2	79.8

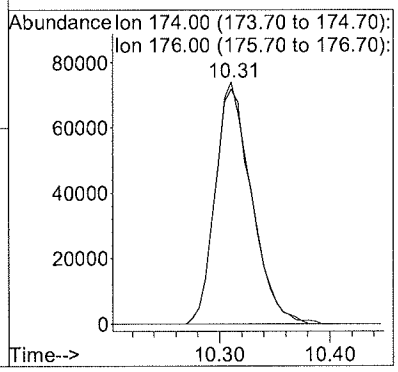




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1575
Delta R.T. 0.01 min
Lab File: V466904S.D
Acq: 30 Sep 2014 11:20 am

Tgt Ion:174 Resp: 167366

Ion	Ratio	Lower	Upper
174	100		
176	96.9	76.2	114.2



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_11-12

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-02	File ID:	V466905S.D
Sampled:	09/23/14 09:15	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 11:54
Solids:	85.76	Preparation:	EPA 5035A	Initial/Final:	10.62 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	100	270	U
71-55-6	1,1,1-Trichloroethane	100	270	U
79-34-5	1,1,2,2-Tetrachloroethane	100	270	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	100	270	U
79-00-5	1,1,2-Trichloroethane	100	270	U
75-34-3	1,1-Dichloroethane	100	270	U
75-35-4	1,1-Dichloroethylene	100	270	U
563-58-6	1,1-Dichloropropylene	100	270	U
87-61-6	1,2,3-Trichlorobenzene	100	270	U
96-18-4	1,2,3-Trichloropropane	100	270	U
120-82-1	1,2,4-Trichlorobenzene	100	270	U
96-12-8	1,2-Dibromo-3-chloropropane	100	270	U
106-93-4	1,2-Dibromoethane	100	270	U
95-50-1	1,2-Dichlorobenzene	100	270	U
107-06-2	1,2-Dichloroethane	100	270	U
78-87-5	1,2-Dichloropropane	100	270	U
541-73-1	1,3-Dichlorobenzene	100	270	U
142-28-9	1,3-Dichloropropane	100	270	U
106-46-7	1,4-Dichlorobenzene	100	270	U
594-20-7	2,2-Dichloropropane	100	270	U
95-49-8	2-Chlorotoluene	100	270	U
106-43-4	4-Chlorotoluene	100	270	U
108-86-1	Bromobenzene	100	270	U
74-97-5	Bromochloromethane	100	270	U
75-27-4	Bromodichloromethane	100	270	U
75-25-2	Bromoform	100	270	U
74-83-9	Bromomethane	100	270	U
56-23-5	Carbon tetrachloride	100	270	U
108-90-7	Chlorobenzene	100	270	U
75-00-3	Chloroethane	100	270	U
67-66-3	Chloroform	100	270	U
74-87-3	Chloromethane	100	270	U
156-59-2	cis-1,2-Dichloroethylene	100	450	D
10061-01-5	cis-1,3-Dichloropropylene	100	270	U
124-48-1	Dibromochloromethane	100	270	U
74-95-3	Dibromomethane	100	270	U
75-71-8	Dichlorodifluoromethane	100	270	U
87-68-3	Hexachlorobutadiene	100	270	U
75-09-2	Methylene chloride	100	550	U
127-18-4	Tetrachloroethylene	100	460	D

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_11-12

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-02	File ID:	V466905S.D
Sampled:	09/23/14 09:15	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 11:54
Solids:	85.76	Preparation:	EPA 5035A	Initial/Final:	10.62 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichlorocthylene	100	270	U
10061-02-6	trans-1,3-Dichloropropylene	100	270	U
79-01-6	Trichloroethylene	100	180	JD
75-69-4	Trichlorofluoromethane	100	270	U
75-01-4	Vinyl Chloride	100	270	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	49.2	98.5	77 - 125	D
p-Bromofluorobenzene	50.0	56.2	112	76 - 130	D
Toluene-d8	50.0	50.5	101	85 - 120	D

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466905S.D Vial: 6
Acq On : 30 Sep 2014 11:54 am Operator: BK
Sample : 14I0908-02 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.62g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 13:10 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

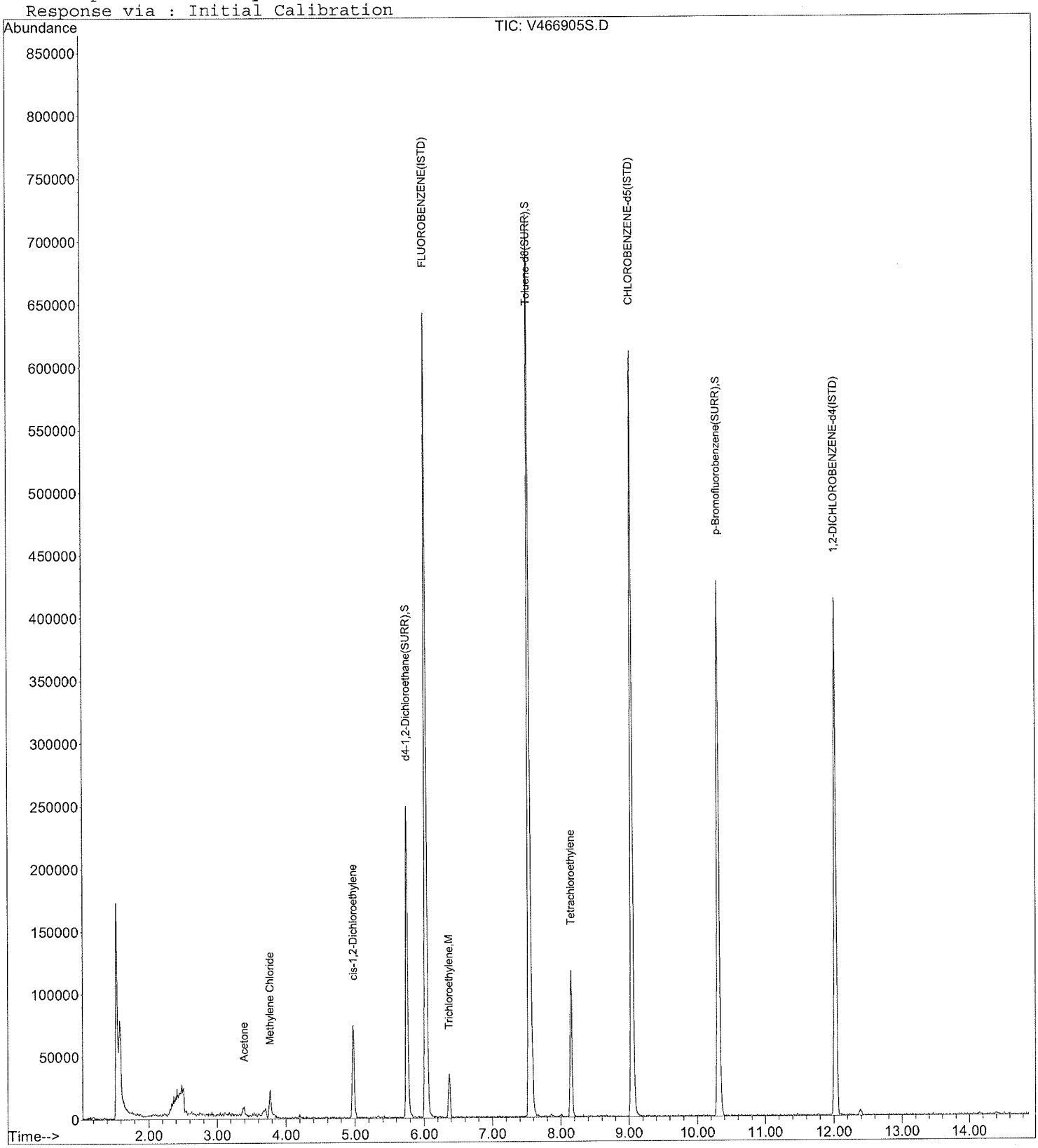
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	130395	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	425894	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	158504	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	201506	49.25	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 98.50%				
47) Toluene-d8(SURR)	7.54	98	564225	50.48	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.96%				
66) p-Bromofluorobenzene(SURR)	10.31	174	167286	56.22	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 112.44%				
Target Compounds							Qvalue
18) Methylene Chloride	3.77	49	12829	2.79	ppb	#	93
20) Acetone	3.39	43	11295	8.95	ppb		99
23) cis-1,2-Dichloroethylene	4.97	96	31616	8.25	ppb	#	92
37) Trichloroethylene	6.37	95	13021	3.35	ppb		98
52) Tetrachloroethylene	8.16	166	39725	8.37	ppb	#	100

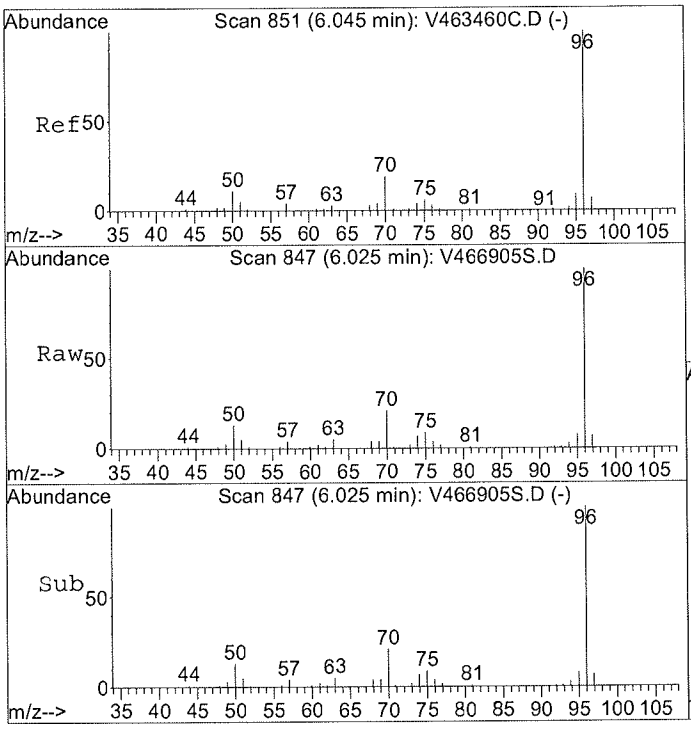
(#) = qualifier out of range (m) = manual integration
V466905S.D V4C00233.M Fri Oct 03 13:14:32 2014 123

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466905S.D Vial: 6
Acq On : 30 Sep 2014 11:54 am Operator: BK
Sample : 14I0908-02 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.62g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 13:10 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

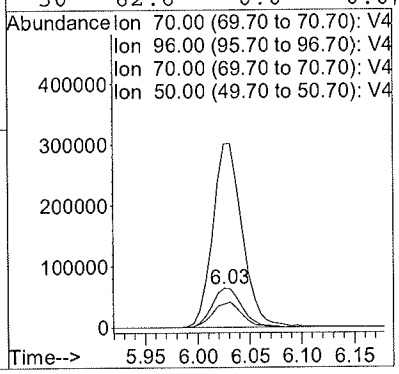


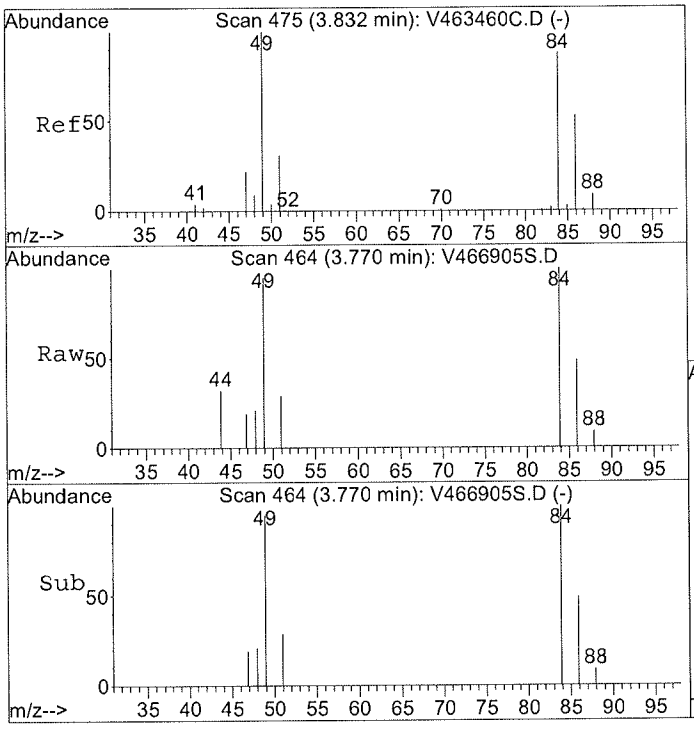


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 847
Delta R.T. -0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 70 Resp: 130395

Ion	Ratio	Lower	Upper
70	100		
96	460.6	350.6	525.8
70	100.0	80.0	120.0
50	62.6	0.0	0.0#

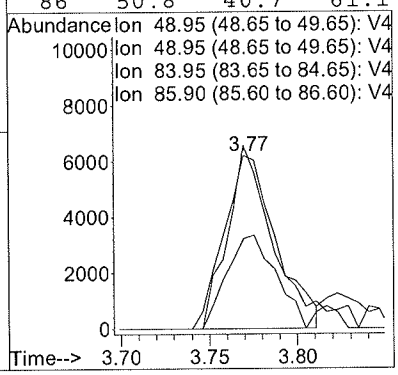


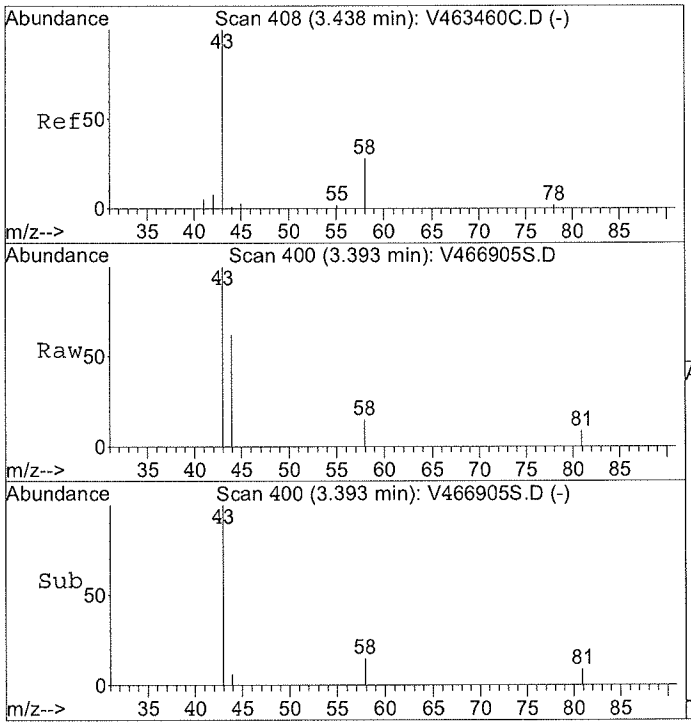


#18
Methylene Chloride
Concen: 2.79 ppb
RT: 3.77 min Scan# 464
Delta R.T. -0.01 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 49 Resp: 12829

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	96.2	62.9	94.3#
86	50.8	40.7	61.1

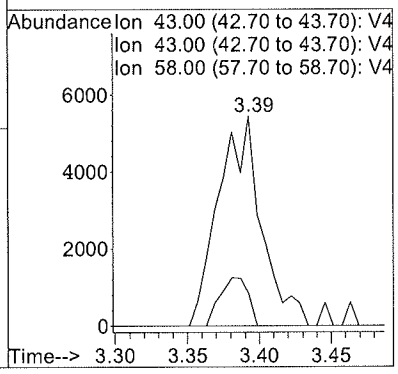


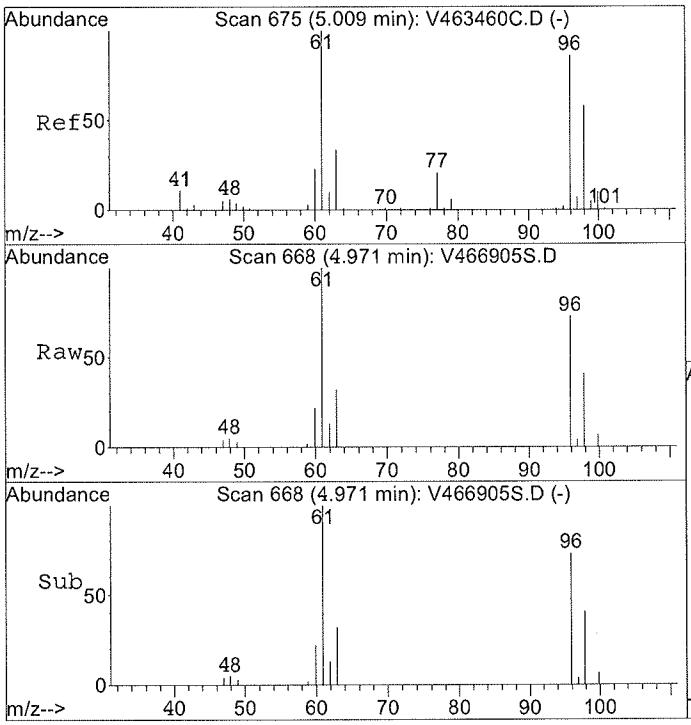


#20
Acetone
Concen: 8.95 ppb
RT: 3.39 min Scan# 400
Delta R.T. 0.01 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 43 Resp: 11295

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	15.5	0.0	38.0

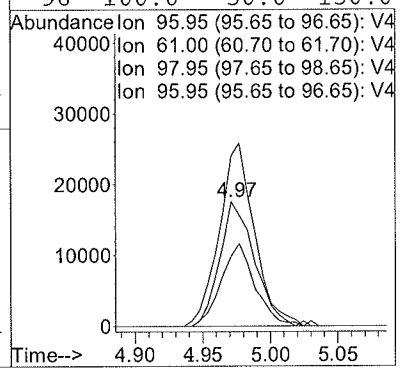


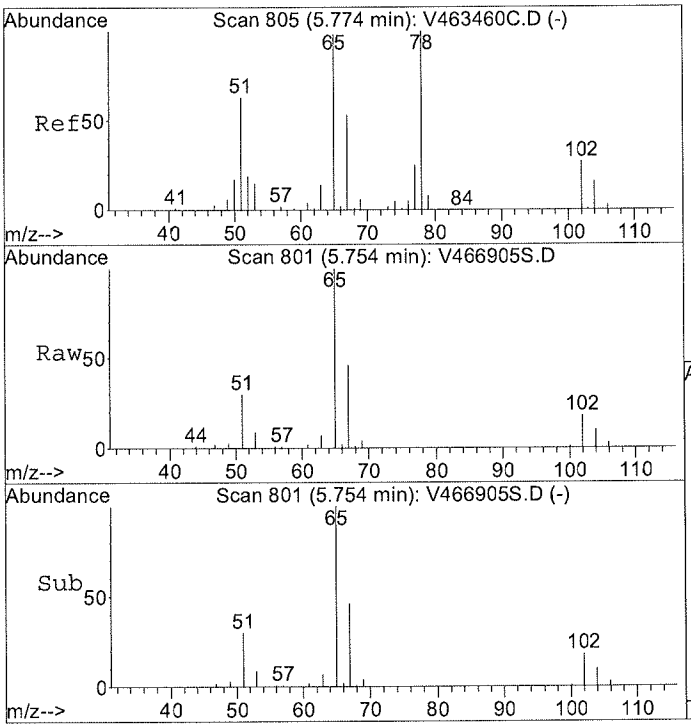


#23
cis-1,2-Dichloroethylene
Concen: 8.25 ppb
RT: 4.97 min Scan# 668
Delta R.T. -0.01 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 96 Resp: 31616

Ion	Ratio	Lower	Upper
96	100		
61	147.6	82.3	246.9
98	64.0	0.0	0.0#
96	100.0	50.0	150.0

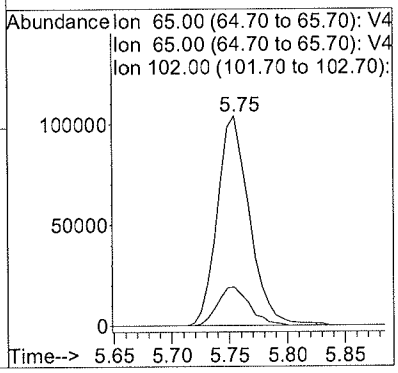


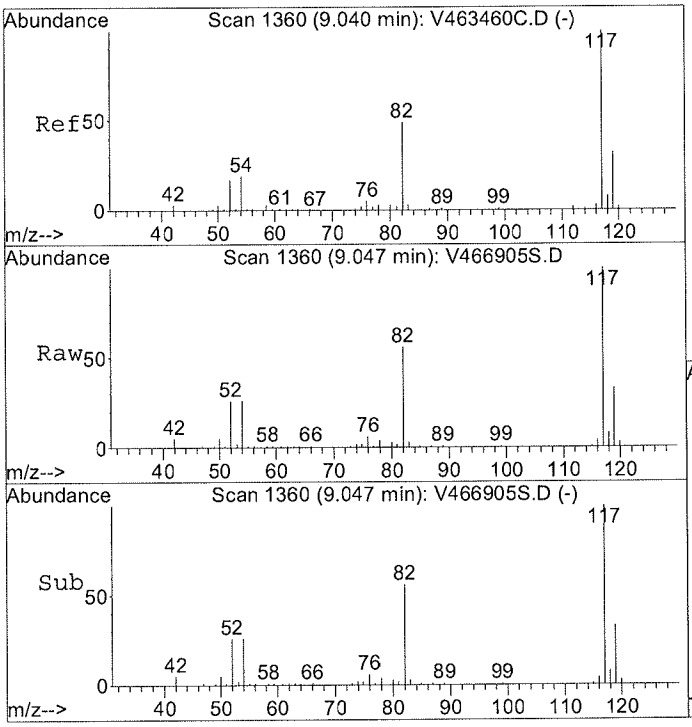


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.75 min Scan# 801
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 65 Resp: 201506

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	18.5	13.5	20.3

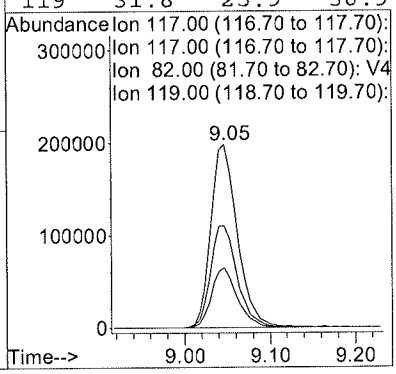


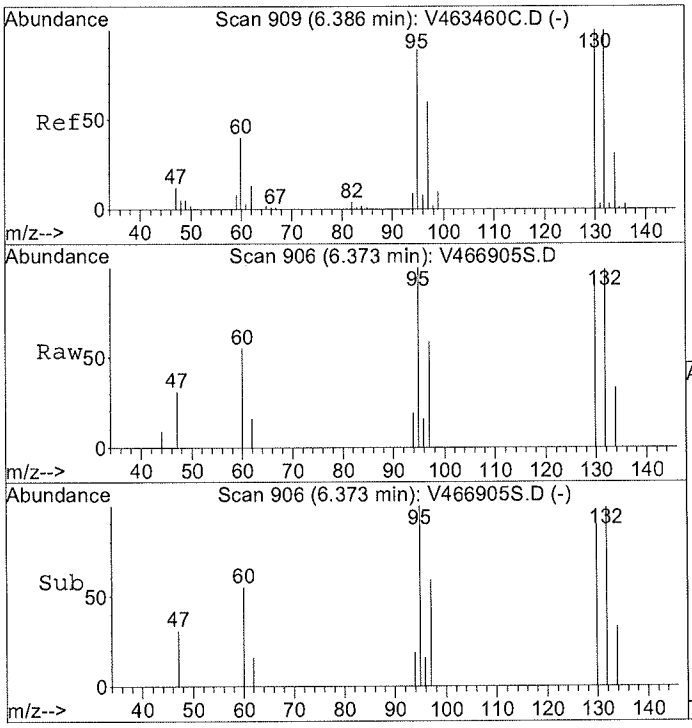


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.05 min Scan# 1360
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion:117 Resp: 425894

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	31.8	25.9	38.9

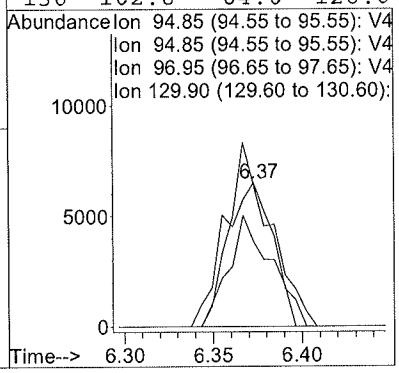


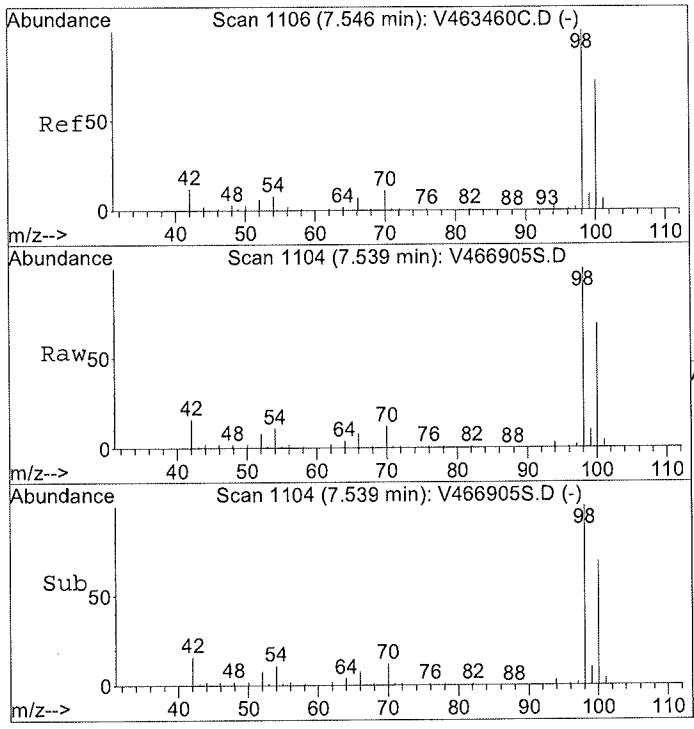


#37
Trichloroethylene
Concen: 3.35 ppb
RT: 6.37 min Scan# 906
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 95 Resp: 13021

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
97	61.7	52.4	78.6
130	102.8	84.0	126.0

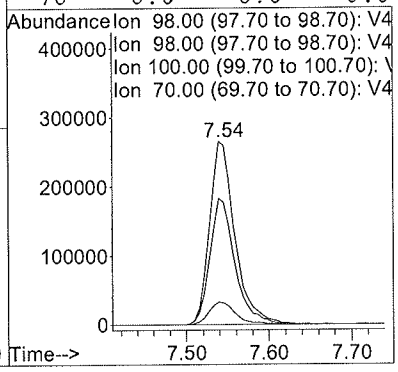


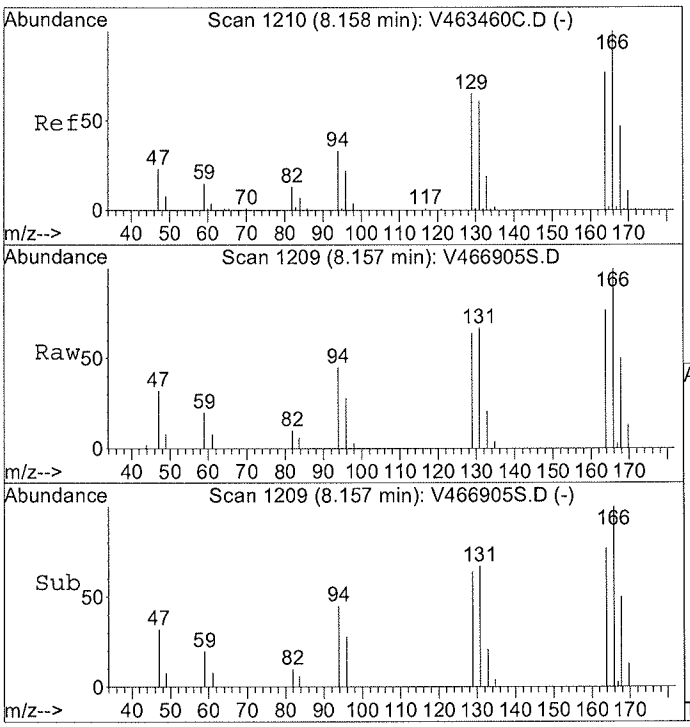


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.54 min Scan# 1104
Delta R.T. -0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion: 98 Resp: 564225

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	68.3	53.8	80.6
70	0.0	0.0	0.0

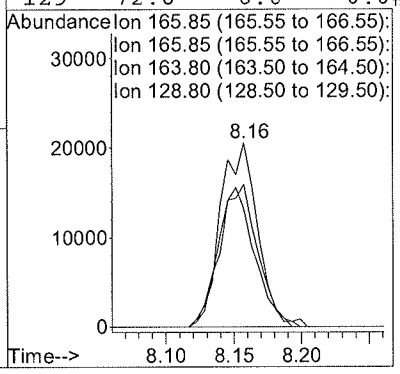


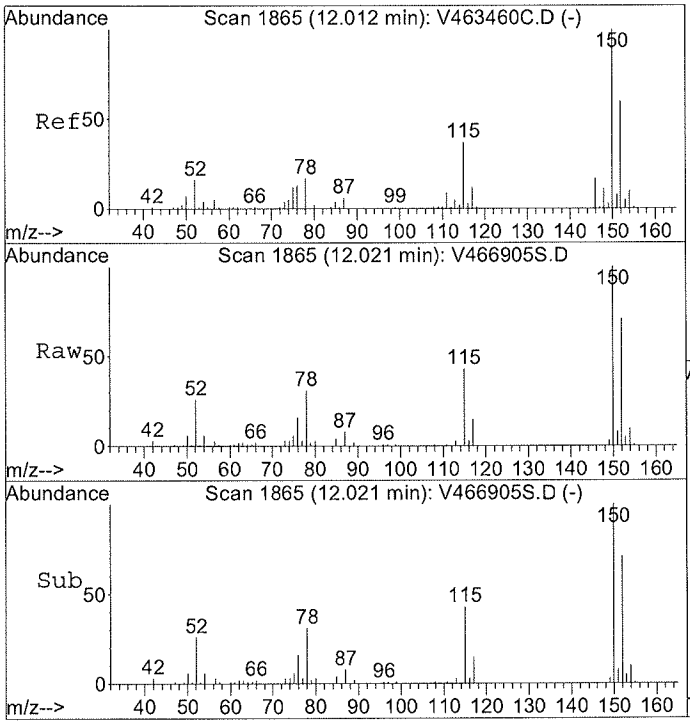


#52
Tetrachloroethylene
Concen: 8.37 ppb
RT: 8.16 min Scan# 1209
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion:166 Resp: 39725

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	79.1	0.0	0.0#
129	72.8	0.0	0.0#

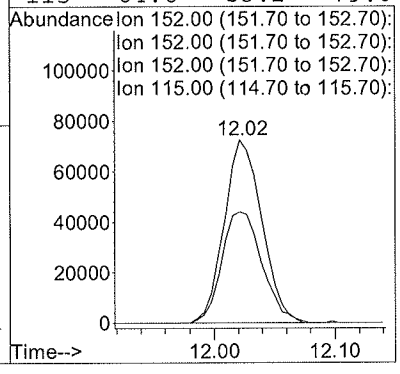


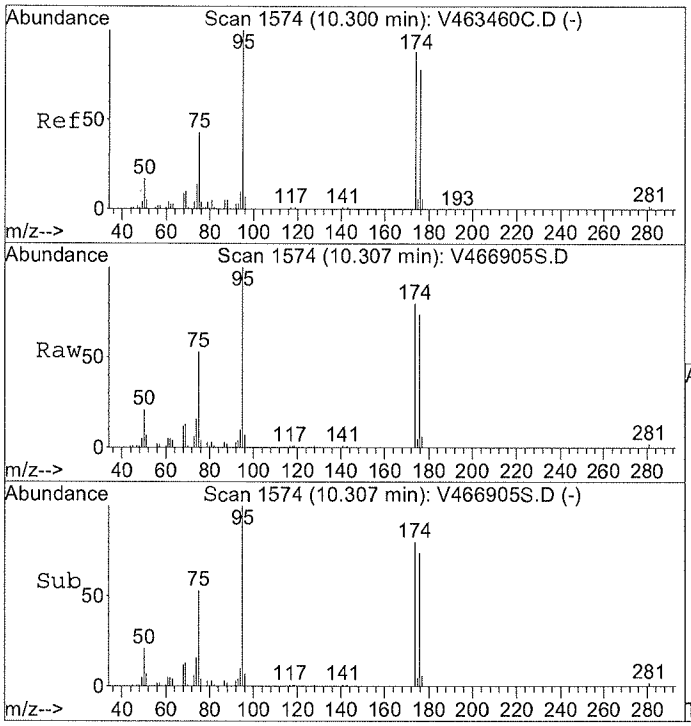


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1865
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion:152 Resp: 158504

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	64.6	53.2	79.8

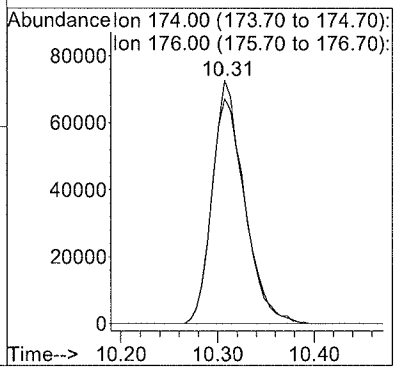




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1574
Delta R.T. 0.00 min
Lab File: V466905S.D
Acq: 30 Sep 2014 11:54 am

Tgt Ion:174 Resp: 167286

Ion	Ratio	Lower	Upper
174	100		
176	92.4	76.2	114.2



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_14-15

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-03	File ID:	V466906S.D
Sampled:	09/23/14 09:30	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 12:37
Solids:	77.17	Preparation:	EPA 5035A	Initial/Final:	9.34 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	100	350	U
71-55-6	1,1,1-Trichloroethane	100	350	U
79-34-5	1,1,2,2-Tetrachloroethane	100	350	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	100	350	U
79-00-5	1,1,2-Trichloroethane	100	350	U
75-34-3	1,1-Dichloroethane	100	350	U
75-35-4	1,1-Dichloroethylene	100	350	U
563-58-6	1,1-Dichloropropylene	100	350	U
87-61-6	1,2,3-Trichlorobenzene	100	350	U
96-18-4	1,2,3-Trichloropropane	100	350	U
120-82-1	1,2,4-Trichlorobenzene	100	350	U
96-12-8	1,2-Dibromo-3-chloropropane	100	350	U
106-93-4	1,2-Dibromoethane	100	350	U
95-50-1	1,2-Dichlorobenzene	100	350	U
107-06-2	1,2-Dichloroethane	100	350	U
78-87-5	1,2-Dichloropropane	100	350	U
541-73-1	1,3-Dichlorobenzene	100	350	U
142-28-9	1,3-Dichloropropane	100	350	U
106-46-7	1,4-Dichlorobenzene	100	350	U
594-20-7	2,2-Dichloropropane	100	350	U
95-49-8	2-Chlorotoluene	100	350	U
106-43-4	4-Chlorotoluene	100	350	U
108-86-1	Bromobenzene	100	350	U
74-97-5	Bromochloromethane	100	350	U
75-27-4	Bromodichloromethane	100	350	U
75-25-2	Bromoform	100	350	U
74-83-9	Bromomethane	100	350	U
56-23-5	Carbon tetrachloride	100	350	U
108-90-7	Chlorobenzene	100	350	U
75-00-3	Chloroethane	100	350	U
67-66-3	Chloroform	100	350	U
74-87-3	Chloromethane	100	350	U
156-59-2	cis-1,2-Dichloroethylene	100	420	D
10061-01-5	cis-1,3-Dichloropropylene	100	350	U
124-48-1	Dibromochloromethane	100	350	U
74-95-3	Dibromomethane	100	350	U
75-71-8	Dichlorodifluoromethane	100	350	U
87-68-3	Hexachlorobutadiene	100	350	U
75-09-2	Methylene chloride	100	690	U
127-18-4	Tetrachloroethylene	100	440	D

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_14-15

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-03	File ID:	V466906S.D
Sampled:	09/23/14 09:30	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 12:37
Solids:	77.17	Preparation:	EPA 5035A	Initial/Final:	9.34 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	100	350	U
10061-02-6	trans-1,3-Dichloropropylene	100	350	U
79-01-6	Trichloroethylene	100	350	U
75-69-4	Trichlorofluoromethane	100	350	U
75-01-4	Vinyl Chloride	100	350	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	50.0	100	77 - 125	D
p-Bromofluorobenzene	50.0	55.0	110	76 - 130	D
Toluene-d8	50.0	50.0	100	85 - 120	D

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466906S.D Vial: 7
Acq On : 30 Sep 2014 12:37 pm Operator: BK
Sample : 14I0908-03 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.34g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 13:53 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

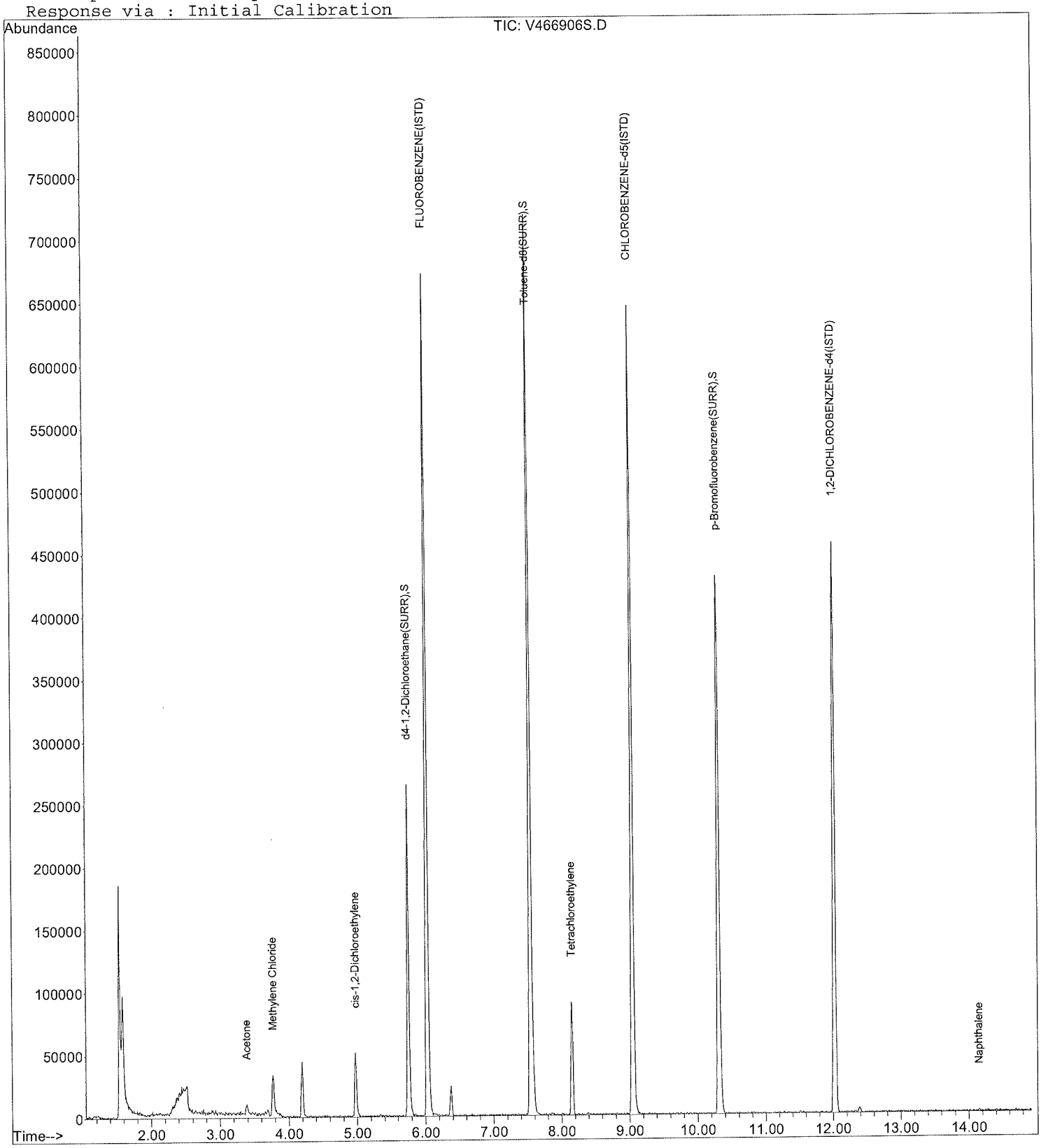
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	134168	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	442545	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	163251	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	210465	49.99	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 99.98%				
47) Toluene-d8(SURR)	7.54	98	581062	50.03	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.06%				
66) p-Bromofluorobenzene(SURR)	10.31	174	168666	55.04	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 110.08%				
Target Compounds							Qvalue
18) Methylene Chloride	3.77	49	23866	5.05	ppb		96
20) Acetone	3.38	43	12092	9.31	ppb		98
23) cis-1,2-Dichloroethylene	4.97	96	23871	6.05	ppb	#	24
52) Tetrachloroethylene	8.15	166	31342	6.36	ppb	#	100
87) Naphthalene	14.15	128	1090	3.02	ppb	#	97

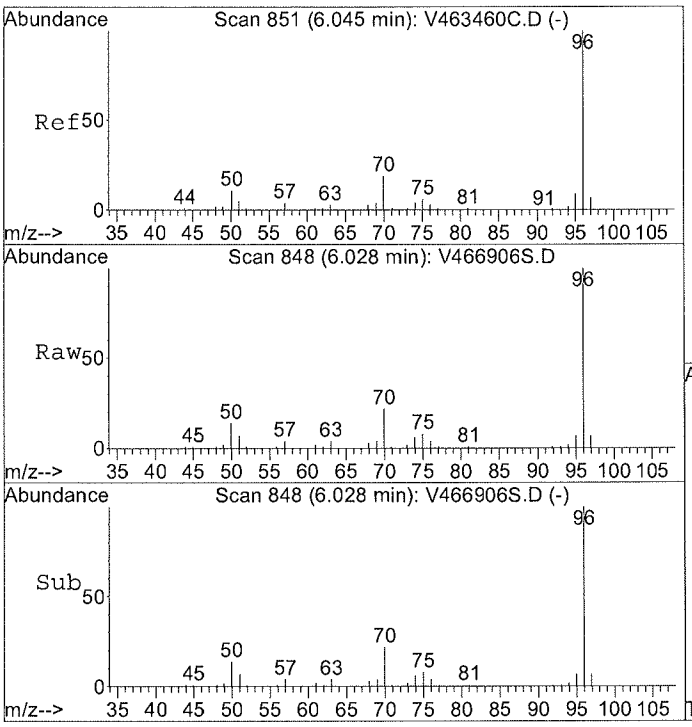
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466906S.D Vial: 7
Acq On : 30 Sep 2014 12:37 pm Operator: BK
Sample : 14I0908-03 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.34g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 13:53 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

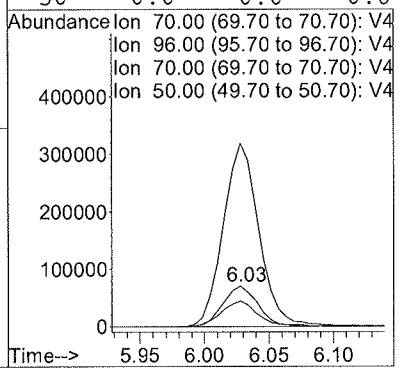


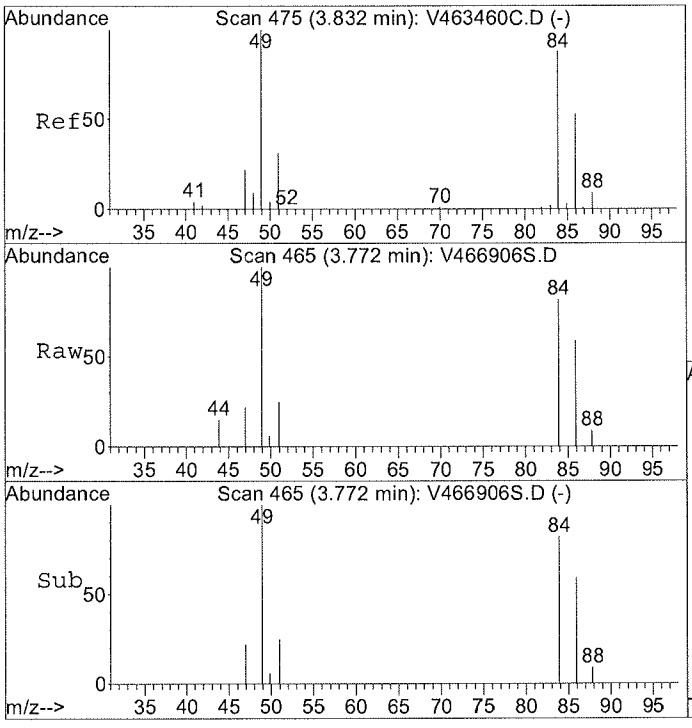


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 848
Delta R.T. -0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion: 70 Resp: 134168

Ion	Ratio	Lower	Upper
70	100		
96	456.8	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

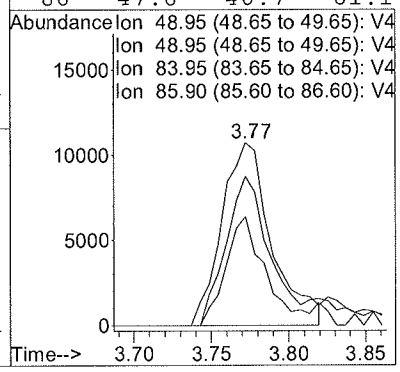


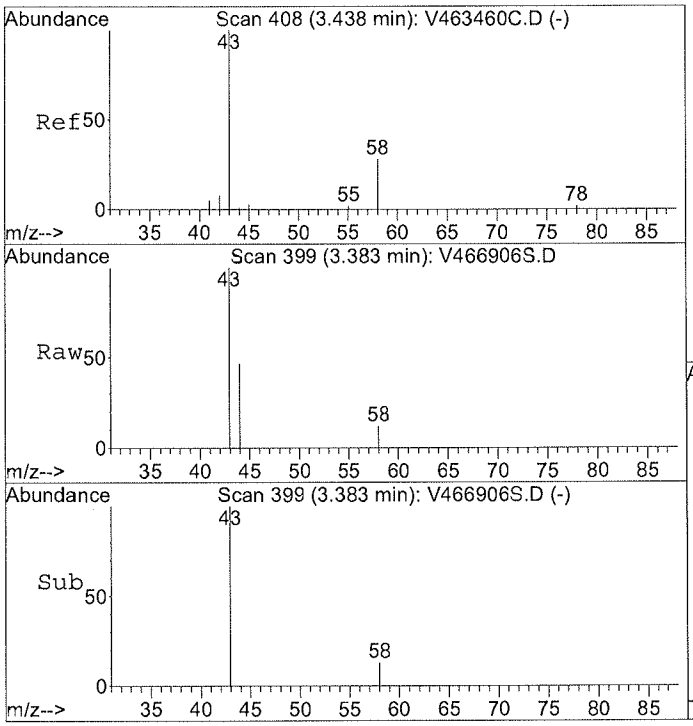


#18
Methylene Chloride
Concen: 5.05 ppb
RT: 3.77 min Scan# 465
Delta R.T. -0.01 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion: 49 Resp: 23866

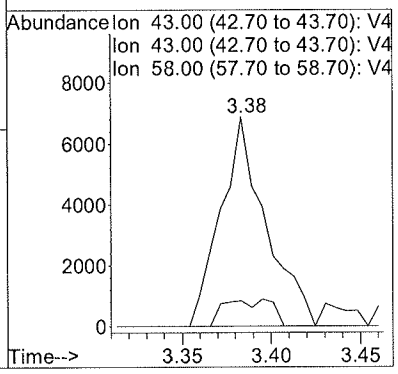
Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	70.9	62.9	94.3
86	47.6	40.7	61.1

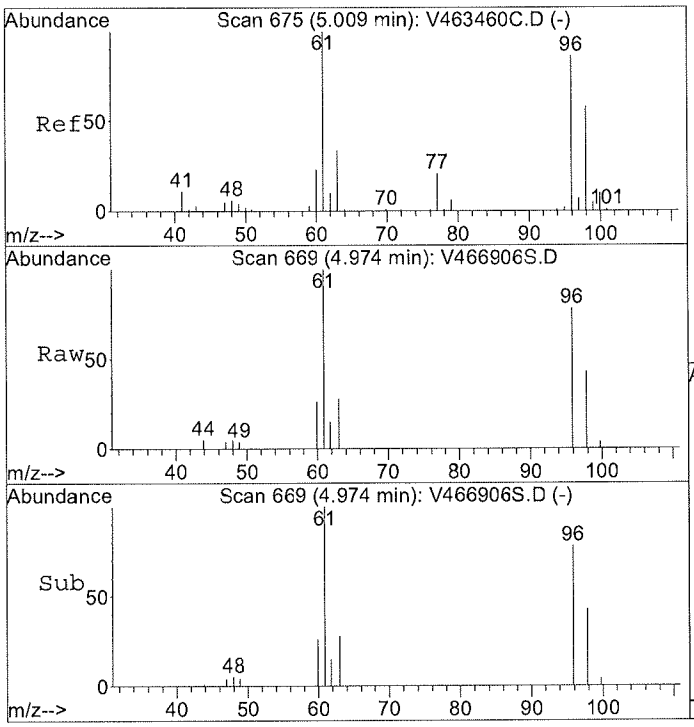




#20
Acetone
Concen: 9.31 ppb
RT: 3.38 min Scan# 399
Delta R.T. 0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

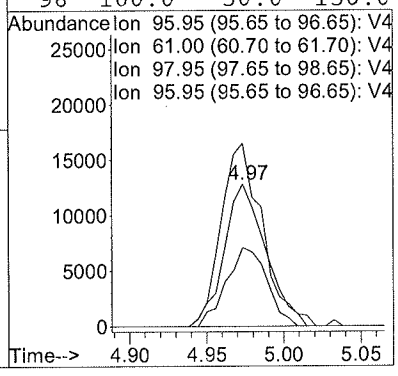
Tgt Ion: 43	Resp:	12092	
Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	12.3	0.0	38.0

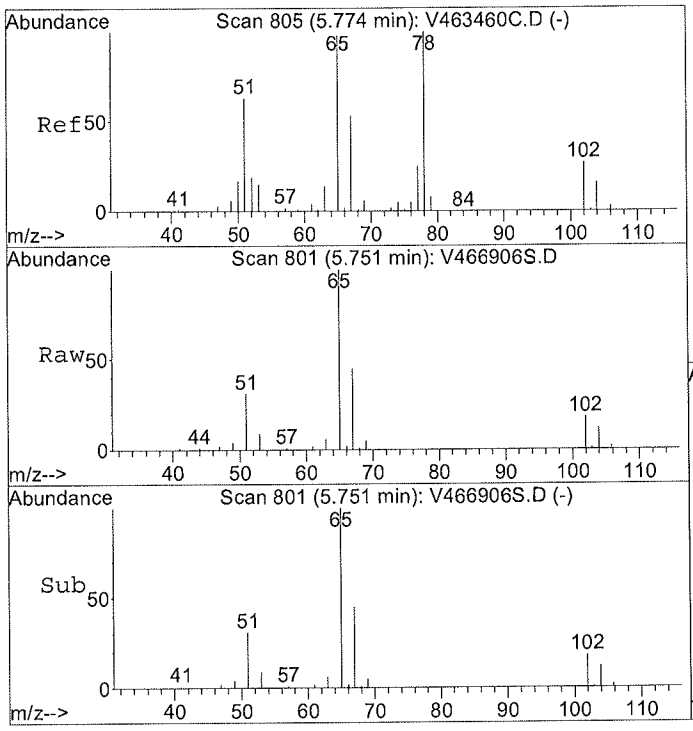




#23
cis-1,2-Dichloroethylene
Concen: 6.05 ppb
RT: 4.97 min Scan# 669
Delta R.T. -0.01 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion: 96	Resp:	23871	
Ion	Ratio	Lower	Upper
96	100		
61	0.0	82.3	246.9#
98	54.2	0.0	0.0#
96	100.0	50.0	150.0

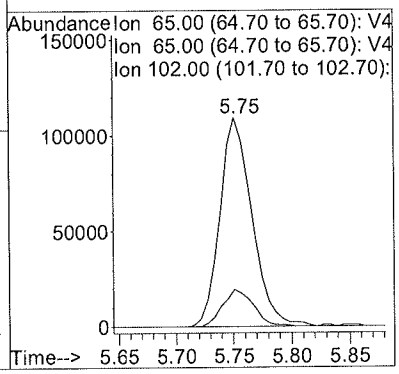


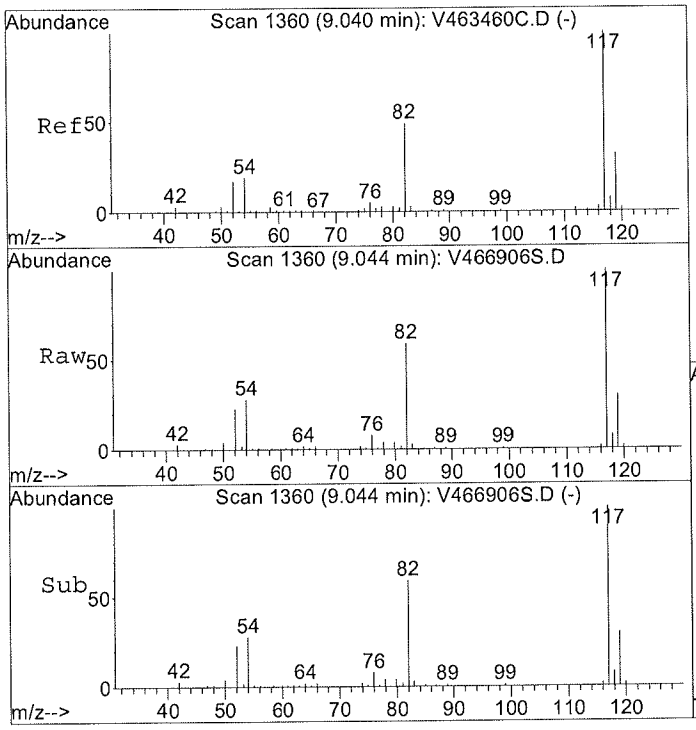


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.75 min Scan# 801
Delta R.T. -0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion: 65 Resp: 210465

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.3	13.5	20.3

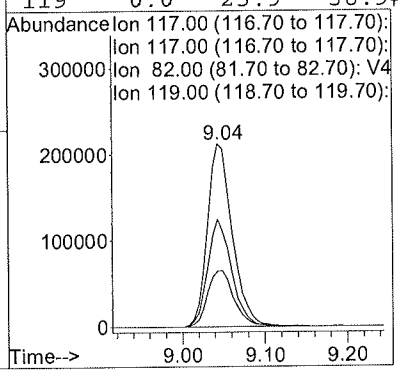


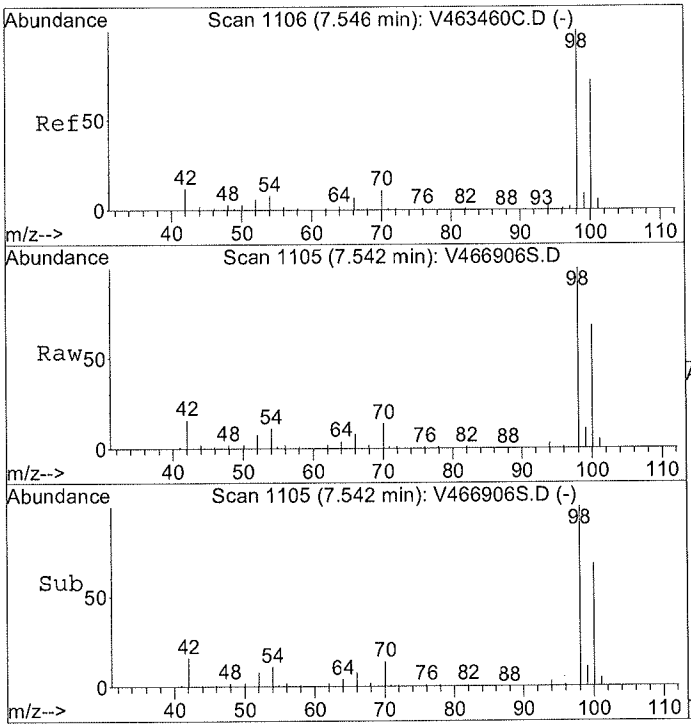


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.04 min Scan# 1360
Delta R.T. -0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion:117 Resp: 442545

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	56.7	0.0	0.0#
119	0.0	25.9	38.9#

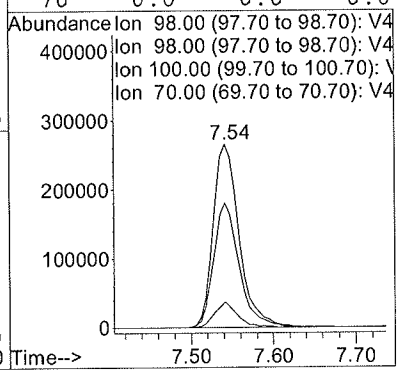


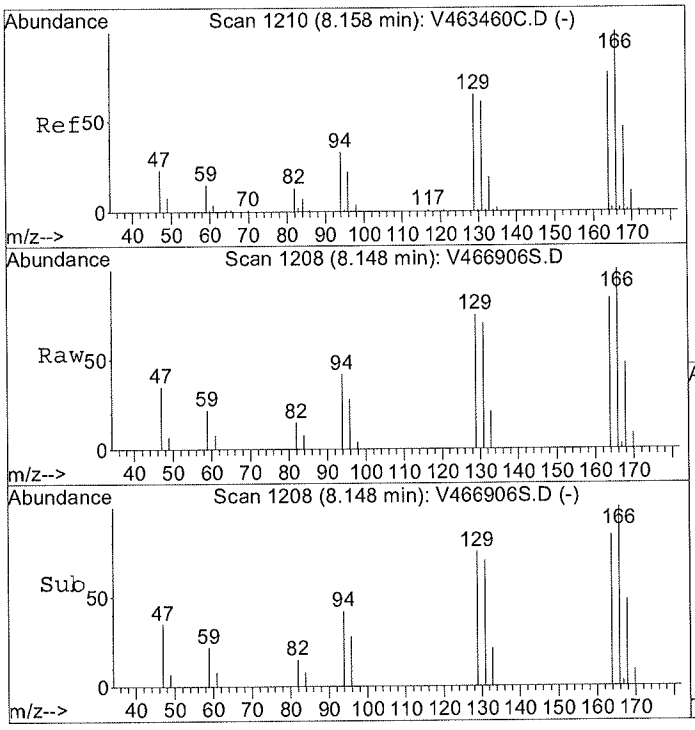


#47
Toluene-d8(SURR)
Concen: Below ppb
RT: 7.54 min Scan# 1105
Delta R.T. -0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion: 98 Resp: 581062

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	66.8	53.8	80.6
70	0.0	0.0	0.0

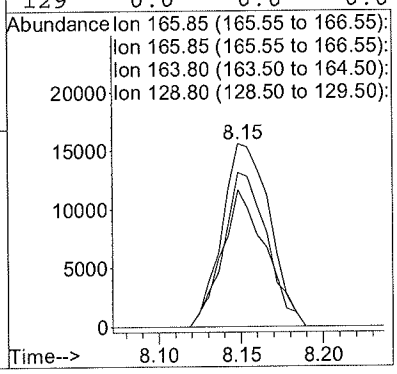


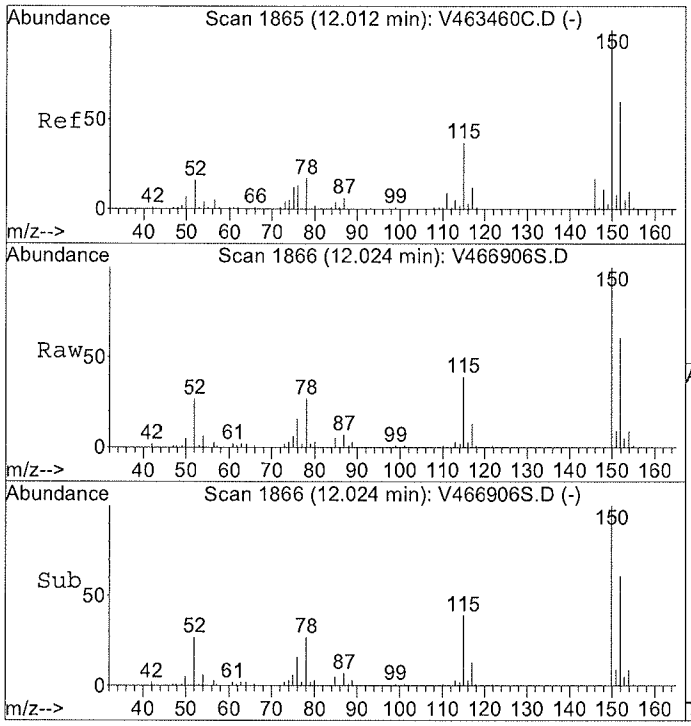


#52
Tetrachloroethylene
Concen: 6.36 ppb
RT: 8.15 min Scan# 1208
Delta R.T. -0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion:166 Resp: 31342

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	0.0	0.0	0.0
129	0.0	0.0	0.0

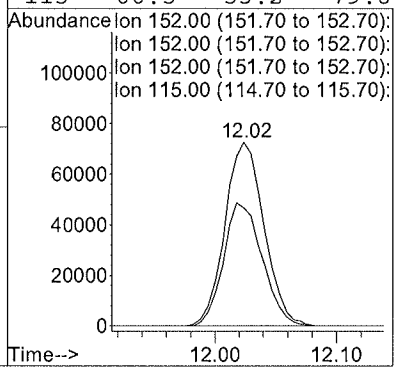


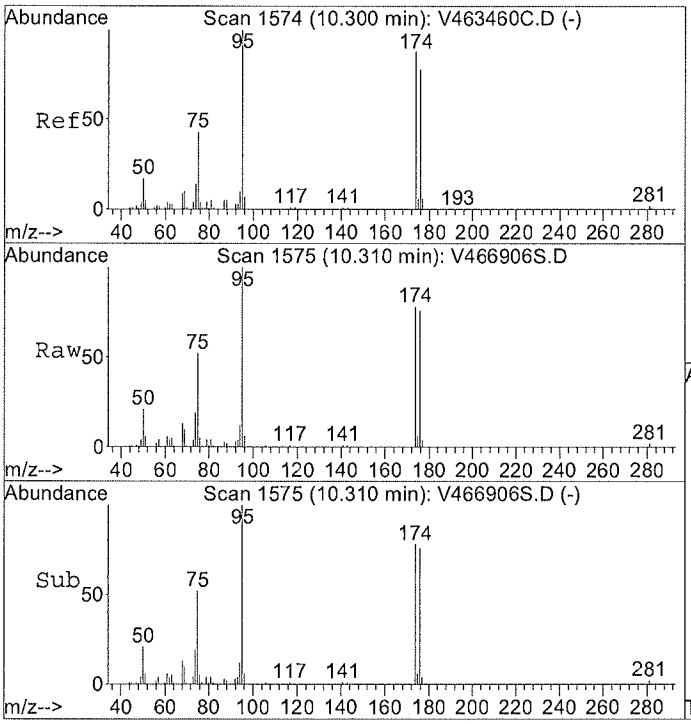


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1866
Delta R.T. 0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion:152 Resp: 163251

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	66.5	53.2	79.8

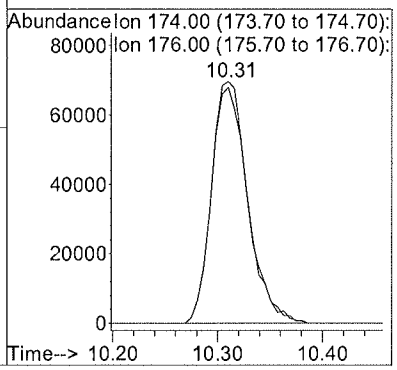


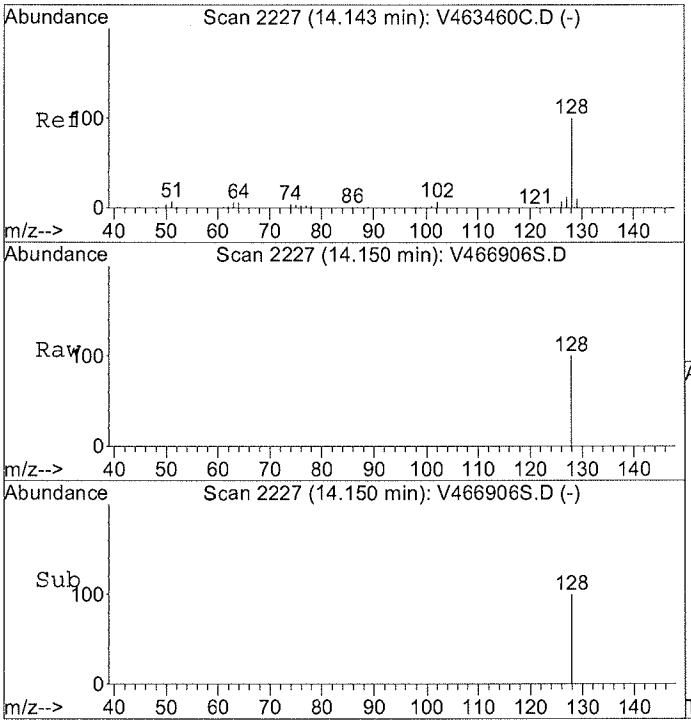


#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1575
Delta R.T. 0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion:174 Resp: 168666

Ion	Ratio	Lower	Upper
174	100		
176	97.6	76.2	114.2

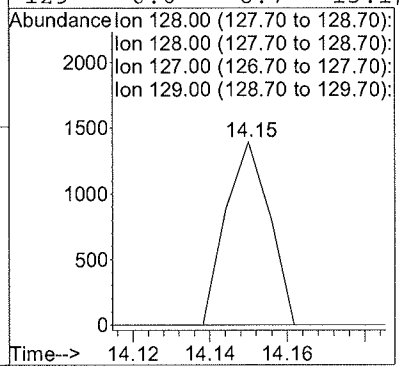




#87
Naphthalene
Concen: 3.02 ppb
RT: 14.15 min Scan# 2227
Delta R.T. 0.00 min
Lab File: V466906S.D
Acq: 30 Sep 2014 12:37 pm

Tgt Ion:128 Resp: 1090

Ion	Ratio	Lower	Upper
128	100		
128	100.0	80.0	120.0
127	0.0	0.0	0.0
129	0.0	8.7	13.1#



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_24-25

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-04	File ID:	V466907S.D
Sampled:	09/23/14 09:45	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 13:11
Solids:	88.43	Preparation:	EPA 5035A	Initial/Final:	10.6 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	100	270	U
71-55-6	1,1,1-Trichloroethane	100	270	U
79-34-5	1,1,2,2-Tetrachloroethane	100	270	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	100	270	U
79-00-5	1,1,2-Trichloroethane	100	350	D
75-34-3	1,1-Dichloroethane	100	270	U
75-35-4	1,1-Dichloroethylene	100	270	U
563-58-6	1,1-Dichloropropylene	100	270	U
87-61-6	1,2,3-Trichlorobenzene	100	270	U
96-18-4	1,2,3-Trichloropropane	100	270	U
120-82-1	1,2,4-Trichlorobenzene	100	270	U
96-12-8	1,2-Dibromo-3-chloropropane	100	270	U
106-93-4	1,2-Dibromoethane	100	270	U
95-50-1	1,2-Dichlorobenzene	100	270	U
107-06-2	1,2-Dichloroethane	100	270	U
78-87-5	1,2-Dichloropropane	100	270	U
541-73-1	1,3-Dichlorobenzene	100	270	U
142-28-9	1,3-Dichloropropane	100	270	U
106-46-7	1,4-Dichlorobenzene	100	270	U
594-20-7	2,2-Dichloropropane	100	270	U
95-49-8	2-Chlorotoluene	100	270	U
106-43-4	4-Chlorotoluene	100	270	U
108-86-1	Bromobenzene	100	270	U
74-97-5	Bromochloromethane	100	270	U
75-27-4	Bromodichloromethane	100	270	U
75-25-2	Bromoform	100	270	U
74-83-9	Bromomethane	100	270	U
56-23-5	Carbon tetrachloride	100	270	U
108-90-7	Chlorobenzene	100	270	U
75-00-3	Chloroethane	100	270	U
67-66-3	Chloroform	100	270	U
74-87-3	Chloromethane	100	270	U
156-59-2	cis-1,2-Dichloroethylene	100	270	U
10061-01-5	cis-1,3-Dichloropropylene	100	270	U
124-48-1	Dibromochloromethane	100	270	U
74-95-3	Dibromomethane	100	270	U
75-71-8	Dichlorodifluoromethane	100	270	U
87-68-3	Hexachlorobutadiene	100	270	U
75-09-2	Methylene chloride	100	530	U
127-18-4	Tetrachloroethylene	100	12000	D

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB21_24-25

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-04	File ID:	V466907S.D
Sampled:	09/23/14 09:45	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 13:11
Solids:	88.43	Preparation:	EPA 5035A	Initial/Final:	10.6 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	100	270	U
10061-02-6	trans-1,3-Dichloropropylene	100	270	U
79-01-6	Trichloroethylene	100	1100	D
75-69-4	Trichlorofluoromethane	100	270	U
75-01-4	Vinyl Chloride	100	270	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	51.1	102	77 - 125	D
p-Bromofluorobenzene	50.0	56.3	113	76 - 130	D
Toluene-d8	50.0	49.6	99.1	85 - 120	D

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466907S.D Vial: 8
Acq On : 30 Sep 2014 1:11 pm Operator: BK
Sample : 14I0908-04 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.60g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 14:47 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

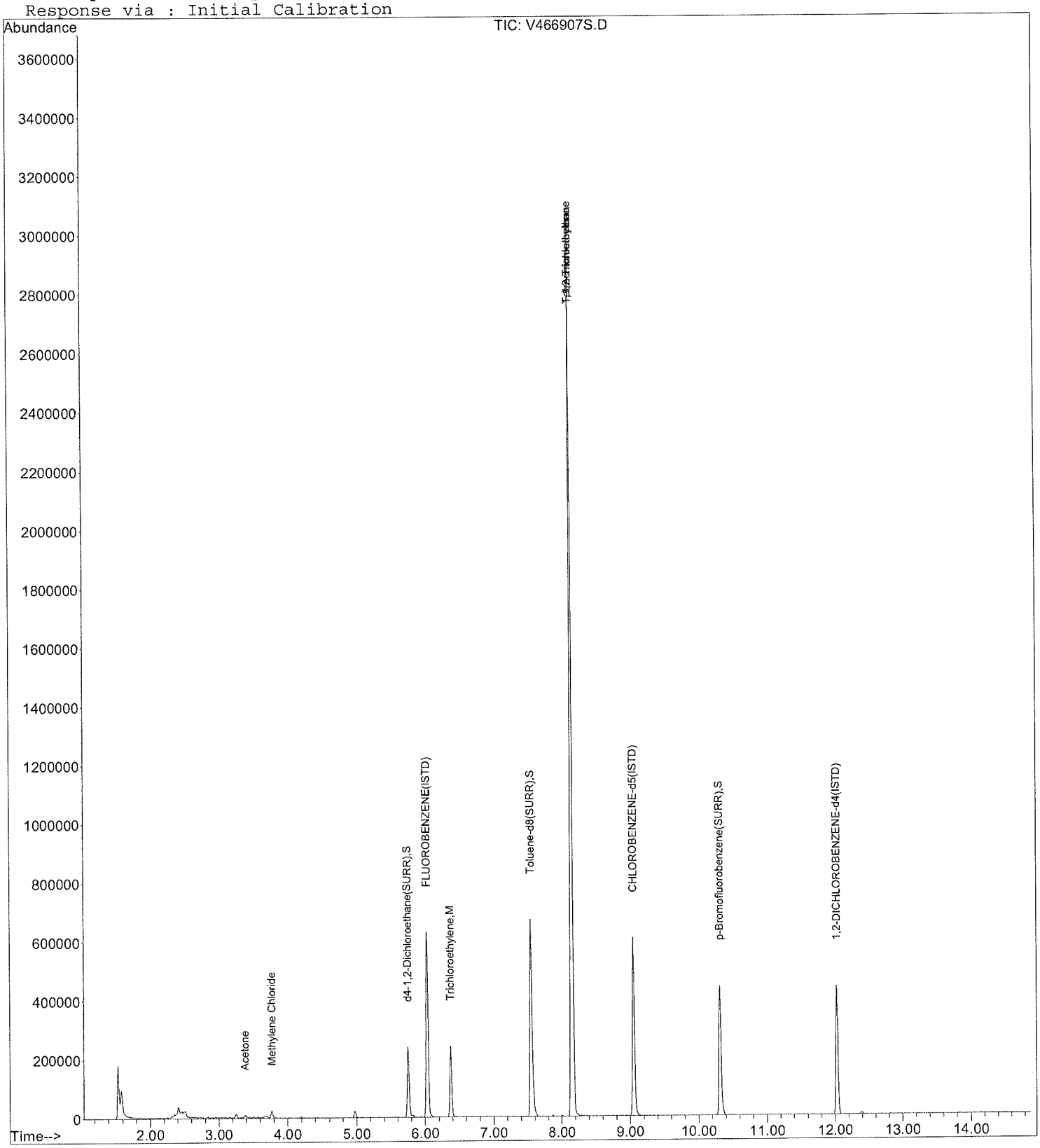
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	125241	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	421052	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	157067	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	200943	51.13	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 102.26%				
47) Toluene-d8(SURR)	7.54	98	547814	49.57	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.14%				
66) p-Bromofluorobenzene(SURR)	10.31	174	165951	56.28	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 112.56%				
Target Compounds							Qvalue
18) Methylene Chloride	3.78	49	16554	3.75	ppb		98
20) Acetone	3.38	43	10598	8.74	ppb		99
37) Trichloroethylene	6.37	95	82018	21.34	ppb		100
50) 1,1,2-Trichloroethane	8.16	83	12853	6.56	ppb	#	39
52) Tetrachloroethylene	8.15	166	1035389	220.74	ppb	#	100

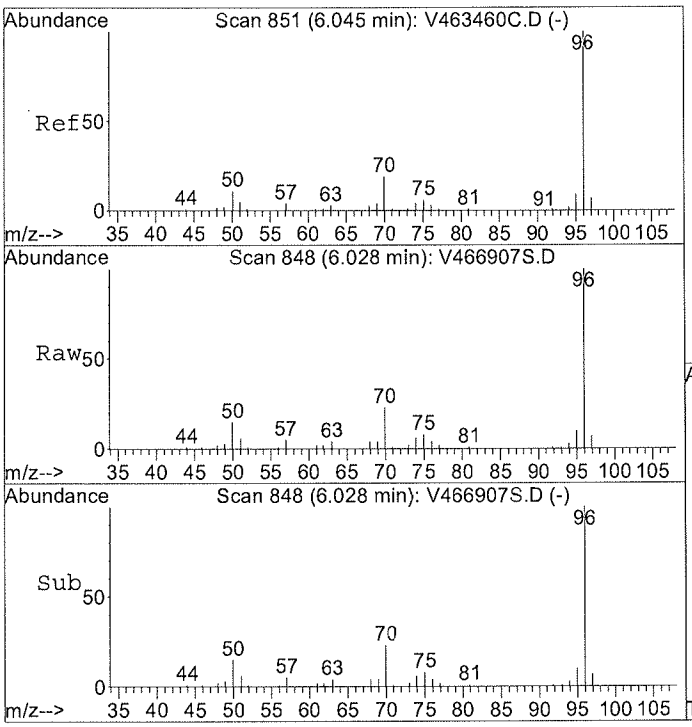
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466907S.D Vial: 8
Acq On : 30 Sep 2014 1:11 pm Operator: BK
Sample : 14I0908-04 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 10.60g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 14:47 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

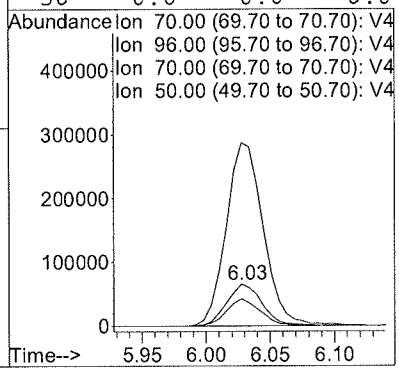


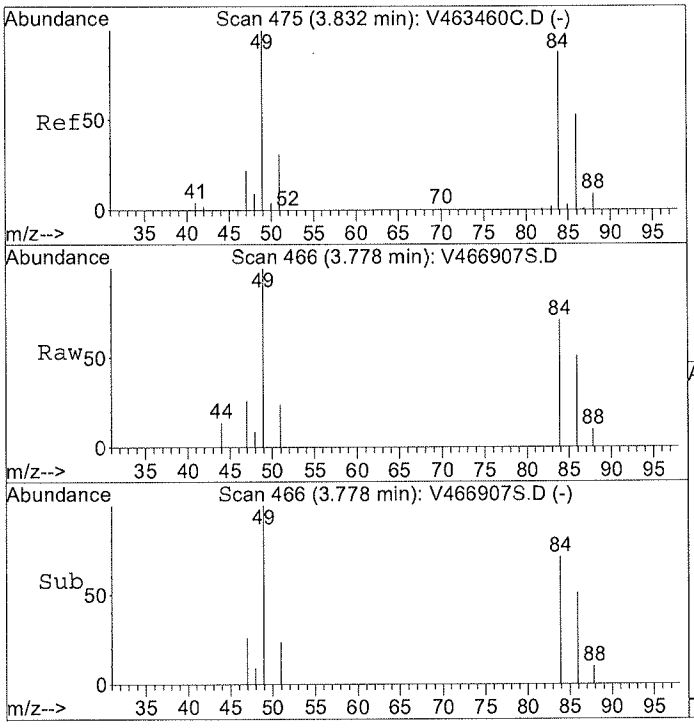


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 848
Delta R.T. -0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 70 Resp: 125241

Ion	Ratio	Lower	Upper
70	100		
96	461.7	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

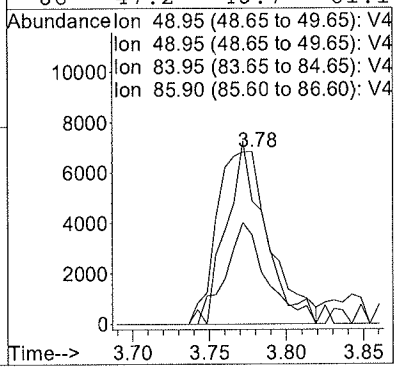


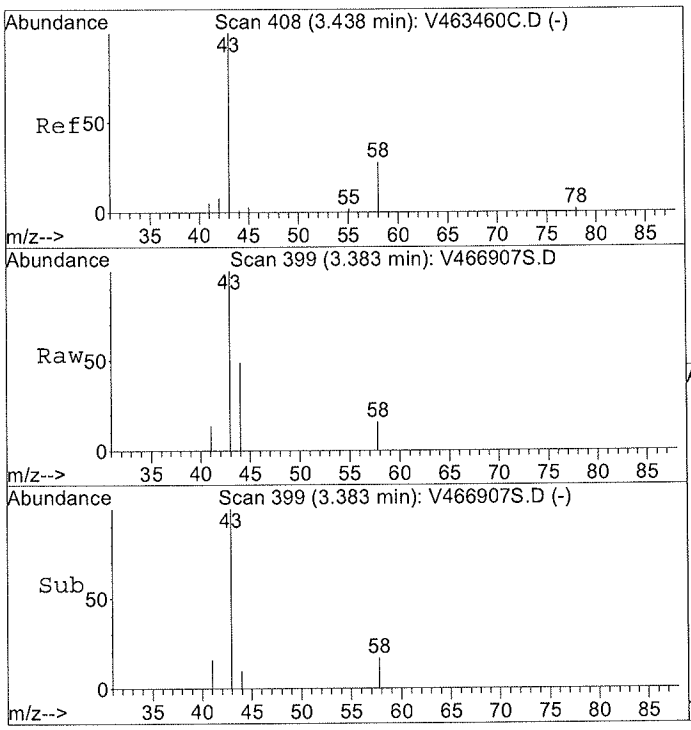


#18
Methylene Chloride
Concen: 3.75 ppb
RT: 3.78 min Scan# 466
Delta R.T. -0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 49 Resp: 16554

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	75.9	62.9	94.3
86	47.2	40.7	61.1

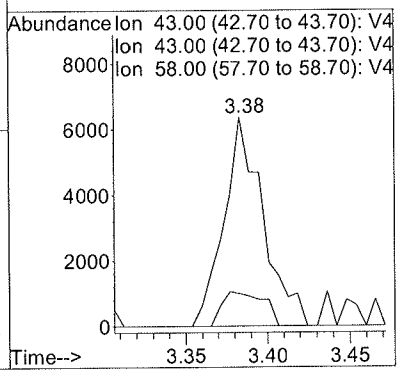


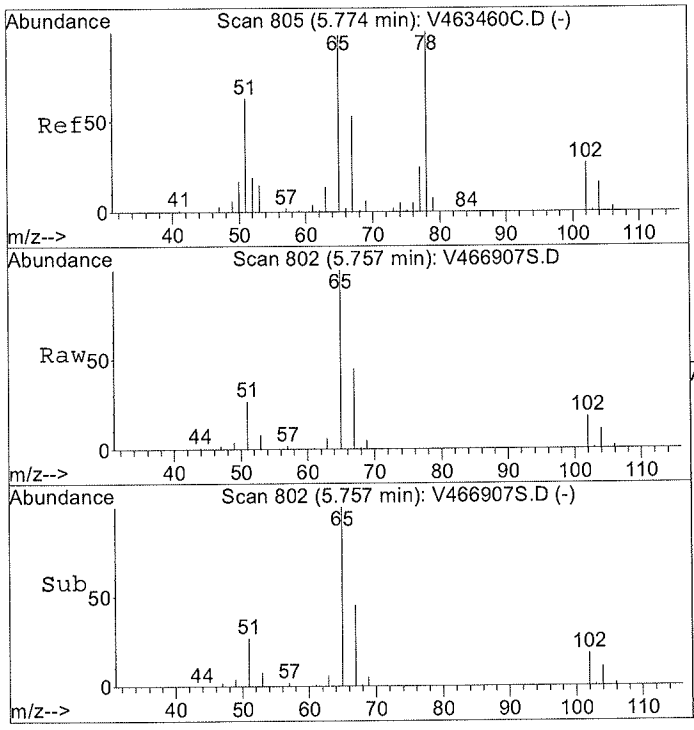


#20
Acetone
Concen: 8.74 ppb
RT: 3.38 min Scan# 399
Delta R.T. 0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 43 Resp: 10598

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	15.6	0.0	38.0

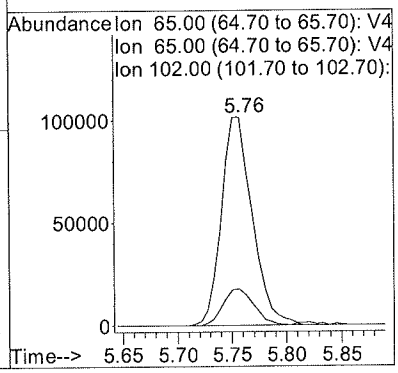


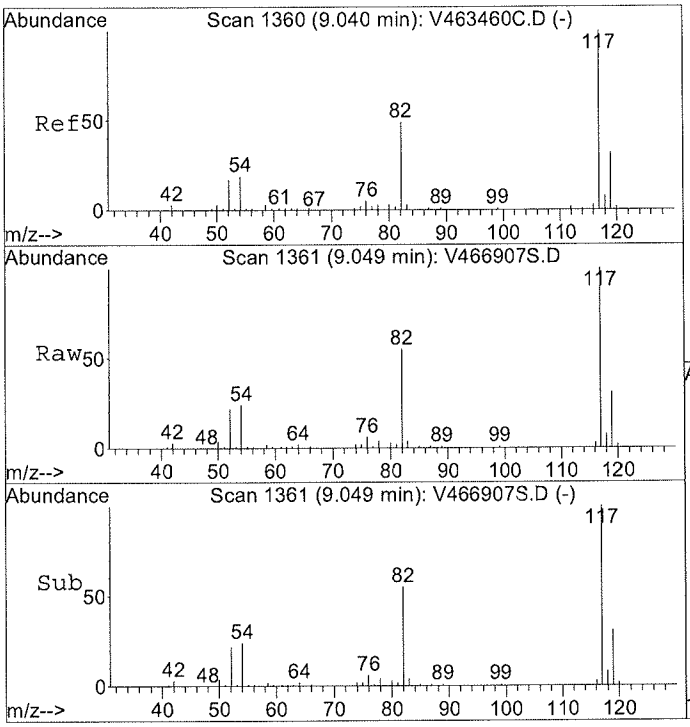


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.76 min Scan# 802
Delta R.T. 0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 65 Resp: 200943

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.5	13.5	20.3

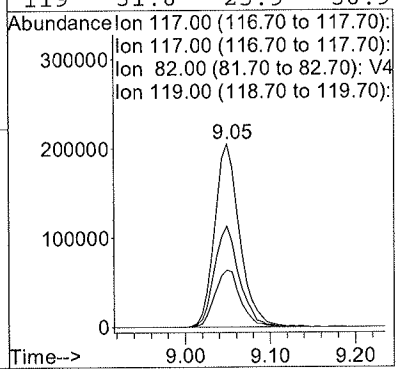


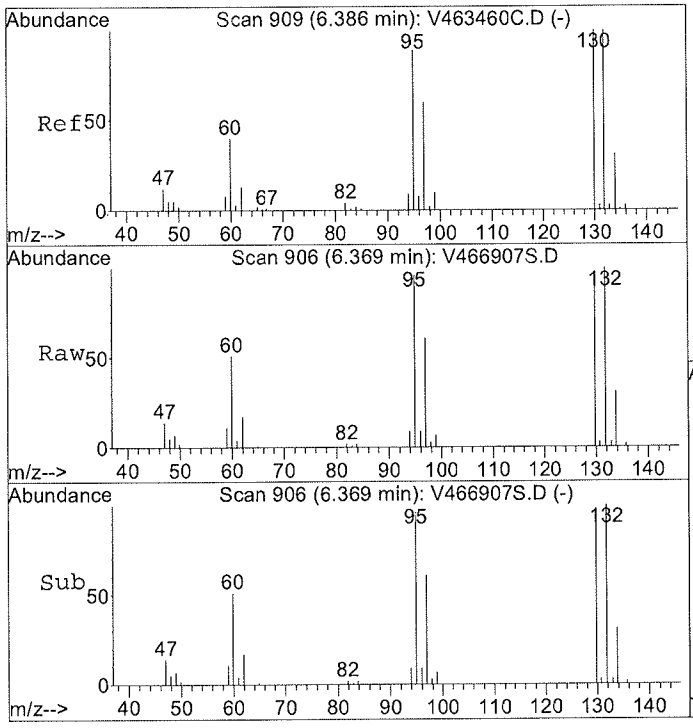


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.05 min Scan# 1361
Delta R.T. 0.01 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion:117 Resp: 421052

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	31.8	25.9	38.9

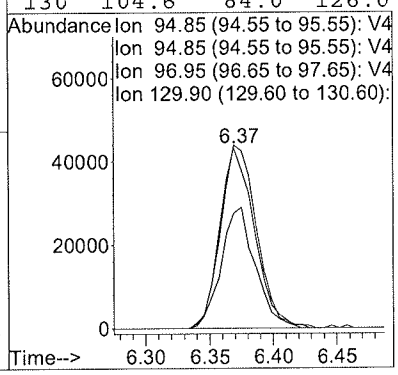


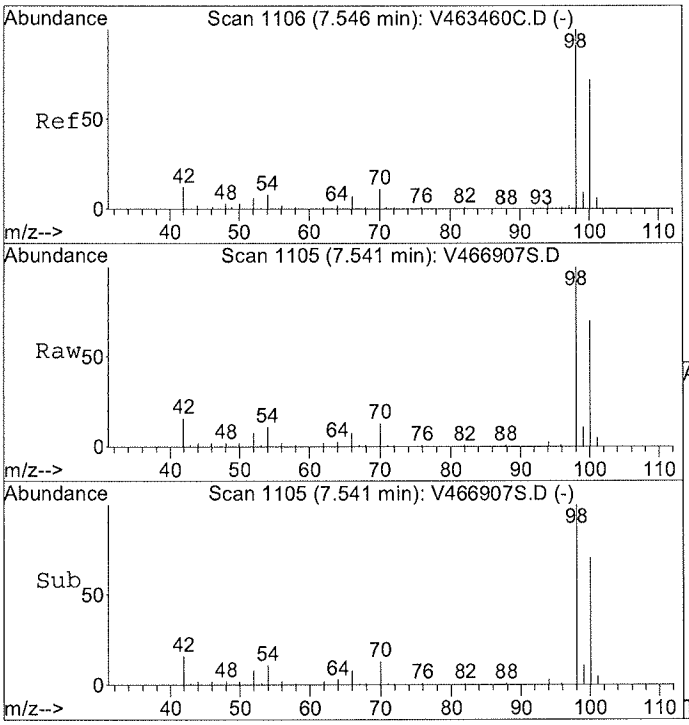


#37
Trichloroethylene
Concen: 21.34 ppb
RT: 6.37 min Scan# 906
Delta R.T. -0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 95 Resp: 82018

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
97	65.6	52.4	78.6
130	104.6	84.0	126.0

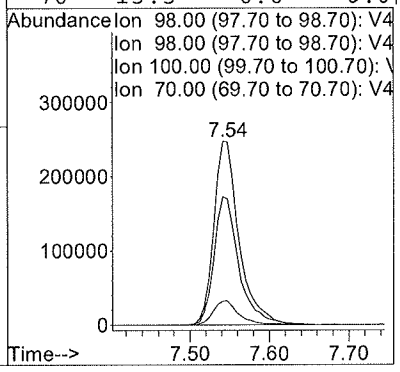


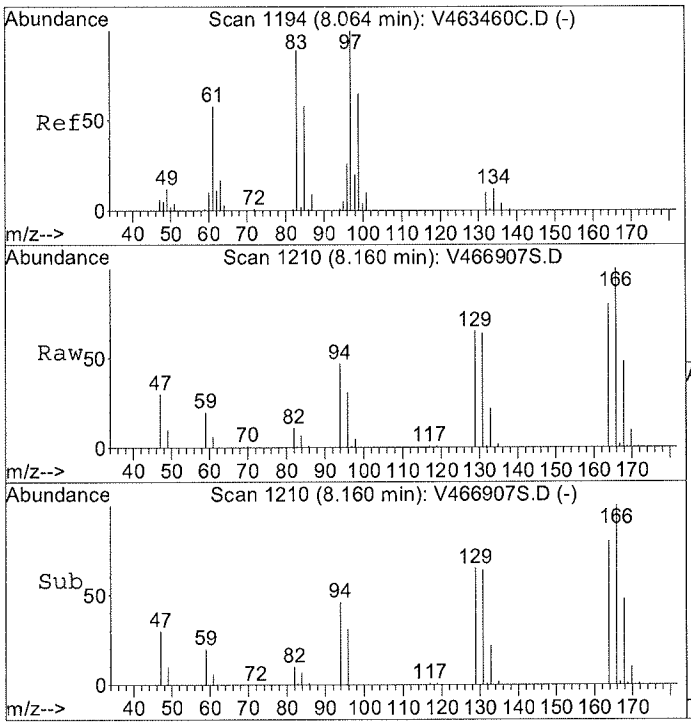


#47
Toluene-d8 (SURR)
Concen: Below ppb
RT: 7.54 min Scan# 1105
Delta R.T. -0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 98 Resp: 547814

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	68.8	53.8	80.6
70	13.3	0.0	0.0#

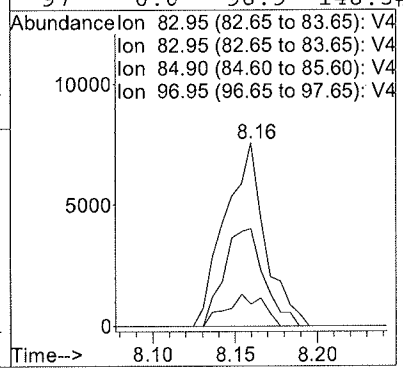


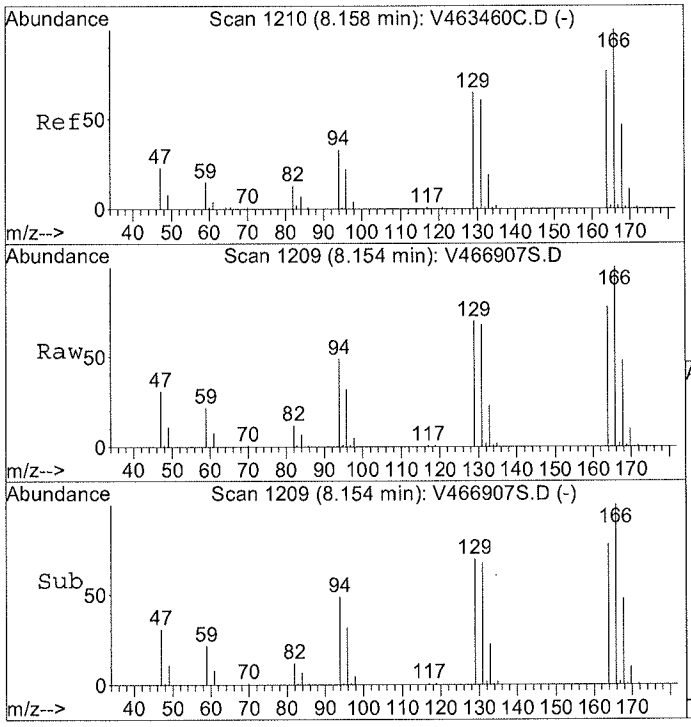


#50
1,1,2-Trichloroethane
Concen: 6.56 ppb
RT: 8.16 min Scan# 1210
Delta R.T. 0.10 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion: 83 Resp: 12853

Ion	Ratio	Lower	Upper
83	100		
83	100.0	80.0	120.0
85	16.0	53.0	79.4#
97	0.0	98.9	148.3#

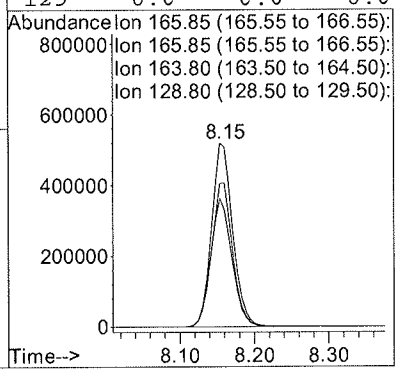


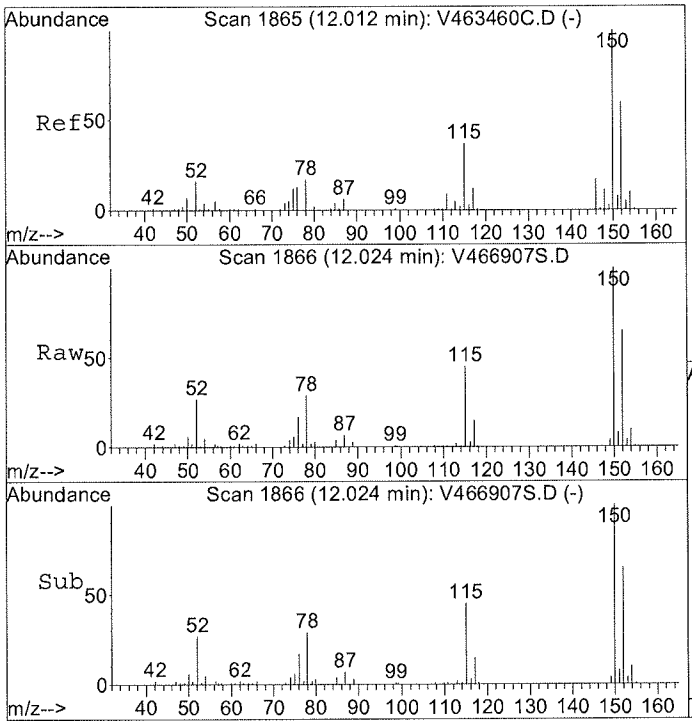


#52
Tetrachloroethylene
Concen: 220.74 ppb
RT: 8.15 min Scan# 1209
Delta R.T. 0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion:166 Resp: 1035389

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	78.0	0.0	0.0#
129	0.0	0.0	0.0

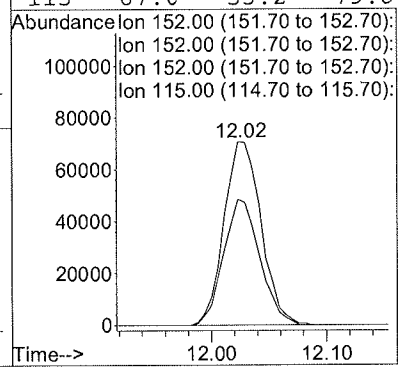


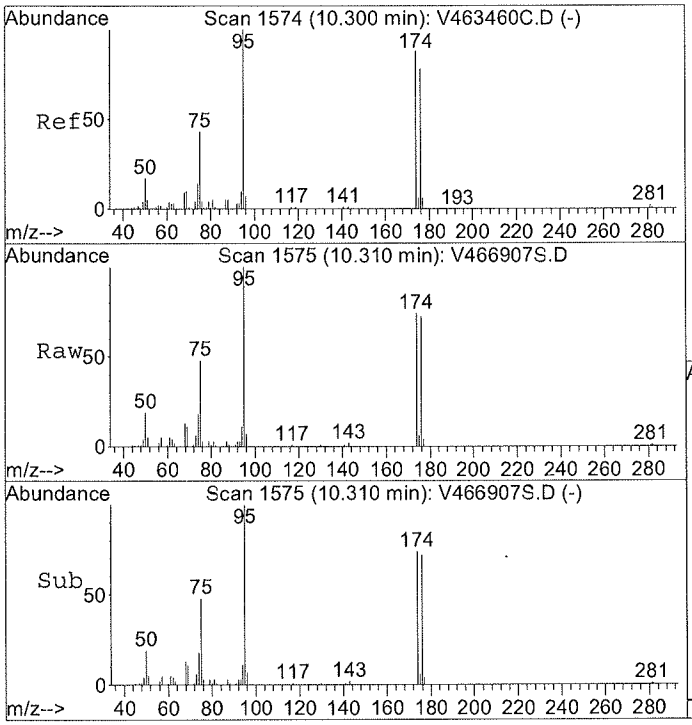


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1866
Delta R.T. 0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion:152 Resp: 157067

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	67.0	53.2	79.8

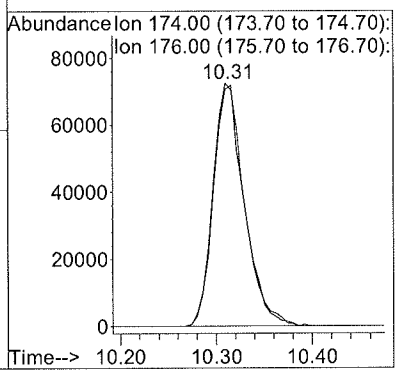




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1575
Delta R.T. 0.00 min
Lab File: V466907S.D
Acq: 30 Sep 2014 1:11 pm

Tgt Ion:174 Resp: 165951

Ion	Ratio	Lower	Upper
174	100		
176	97.6	76.2	114.2



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_9-10

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-05	File ID:	V466908S.D
Sampled:	09/23/14 08:10	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 13:44
Solids:	78.39	Preparation:	EPA 5035A	Initial/Final:	9.06 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	3.5	U
71-55-6	1,1,1-Trichloroethane	1	3.5	U
79-34-5	1,1,2,2-Tetrachloroethane	1	3.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	3.5	U
79-00-5	1,1,2-Trichloroethane	1	3.5	U
75-34-3	1,1-Dichloroethane	1	3.5	U
75-35-4	1,1-Dichloroethylene	1	3.5	U
563-58-6	1,1-Dichloropropylene	1	3.5	U
87-61-6	1,2,3-Trichlorobenzene	1	3.5	U
96-18-4	1,2,3-Trichloropropane	1	3.5	U
120-82-1	1,2,4-Trichlorobenzene	1	3.5	U
96-12-8	1,2-Dibromo-3-chloropropane	1	3.5	U
106-93-4	1,2-Dibromoethane	1	3.5	U
95-50-1	1,2-Dichlorobenzene	1	3.5	U
107-06-2	1,2-Dichloroethane	1	3.5	U
78-87-5	1,2-Dichloropropane	1	3.5	U
541-73-1	1,3-Dichlorobenzene	1	3.5	U
142-28-9	1,3-Dichloropropane	1	3.5	U
106-46-7	1,4-Dichlorobenzene	1	3.5	U
594-20-7	2,2-Dichloropropane	1	3.5	U
95-49-8	2-Chlorotoluene	1	3.5	U
106-43-4	4-Chlorotoluene	1	3.5	U
108-86-1	Bromobenzene	1	3.5	U
74-97-5	Bromochloromethane	1	3.5	U
75-27-4	Bromodichloromethane	1	3.5	U
75-25-2	Bromoform	1	3.5	U
74-83-9	Bromomethane	1	3.5	U
56-23-5	Carbon tetrachloride	1	3.5	U
108-90-7	Chlorobenzene	1	3.5	U
75-00-3	Chloroethane	1	3.5	U
67-66-3	Chloroform	1	3.5	U
74-87-3	Chloromethane	1	3.5	U
156-59-2	cis-1,2-Dichloroethylene	1	3.5	U
10061-01-5	cis-1,3-Dichloropropylene	1	3.5	U
124-48-1	Dibromochloromethane	1	3.5	U
74-95-3	Dibromomethane	1	3.5	U
75-71-8	Dichlorodifluoromethane	1	3.5	U
87-68-3	Hexachlorobutadiene	1	3.5	U
75-09-2	Methylene chloride	1	7.0	U
127-18-4	Tetrachloroethylene	1	3.5	U

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_9-10

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-05	File ID:	V466908S.D
Sampled:	09/23/14 08:10	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 13:44
Solids:	78.39	Preparation:	EPA 5035A	Initial/Final:	9.06 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	1	3.5	U
10061-02-6	trans-1,3-Dichloropropylene	1	3.5	U
79-01-6	Trichloroethylene	1	3.5	U
75-69-4	Trichlorofluoromethane	1	3.5	U
75-01-4	Vinyl Chloride	1	3.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	50.2	100	77 - 125	
p-Bromofluorobenzene	50.0	57.5	115	76 - 130	
Toluene-d8	50.0	49.2	98.4	85 - 120	

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466908S.D Vial: 9
Acq On : 30 Sep 2014 1:44 pm Operator: BK
Sample : 14I0908-05 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.06g Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 15:05 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

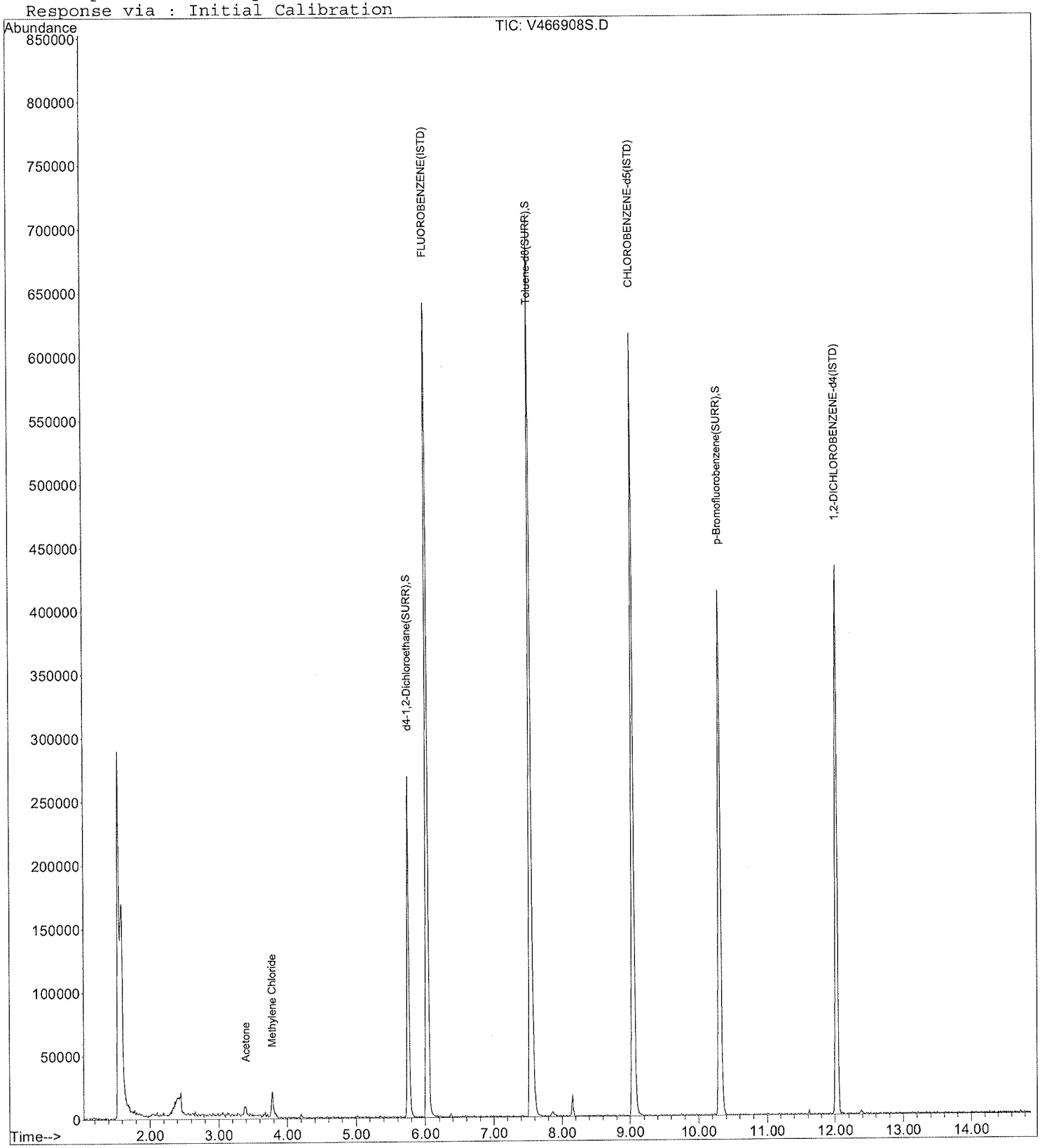
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	136398	50.00	ppb	0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	436452	50.00	ppb	0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	159001	50.00	ppb	0.00
System Monitoring Compounds						
31) d4-1,2-Dichloroethane(SURR	5.76	65	214662	50.16	ppb	0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 100.32%			
47) Toluene-d8(SURR)	7.54	98	563305	49.18	ppb	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.36%			
66) p-Bromofluorobenzene(SURR)	10.31	174	171611	57.49	ppb	0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 114.98%			
Target Compounds						Qvalue
18) Methylene Chloride	3.78	49	13540	2.82	ppb	94
20) Acetone	3.39	43	12063	9.13	ppb	98

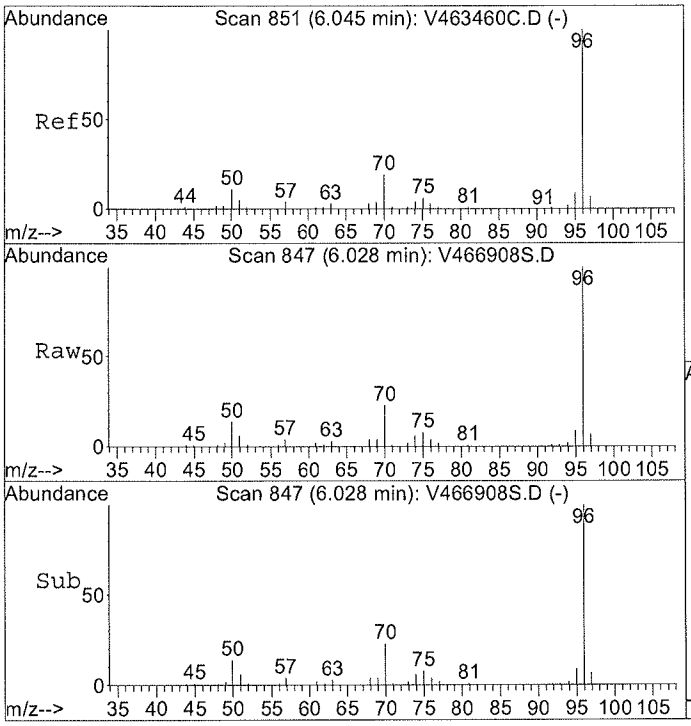
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466908S.D Vial: 9
Acq On : 30 Sep 2014 1:44 pm Operator: BK
Sample : 14I0908-05 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.06g Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 15:05 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

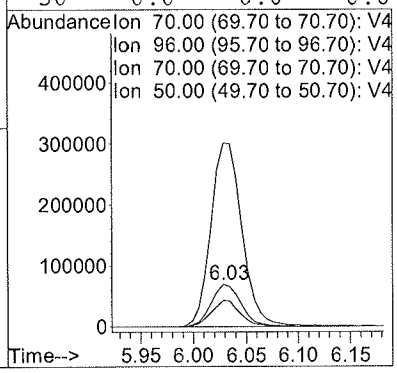


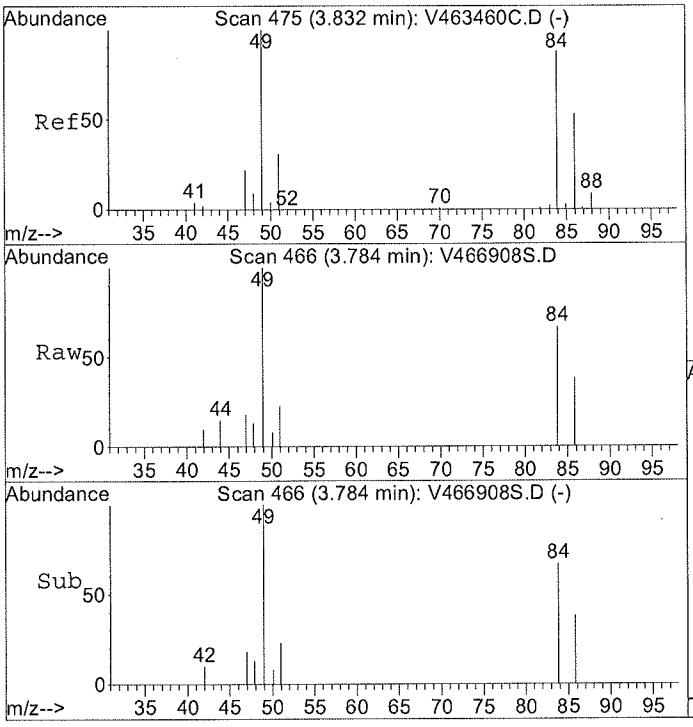


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 847
Delta R.T. -0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion: 70 Resp: 136398

Ion	Ratio	Lower	Upper
70	100		
96	452.0	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

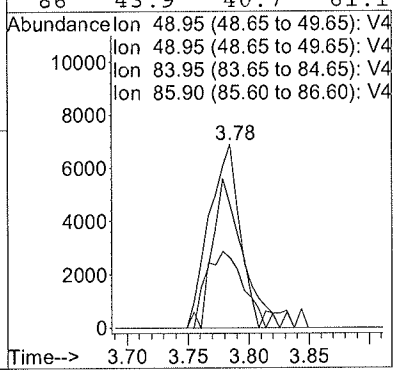


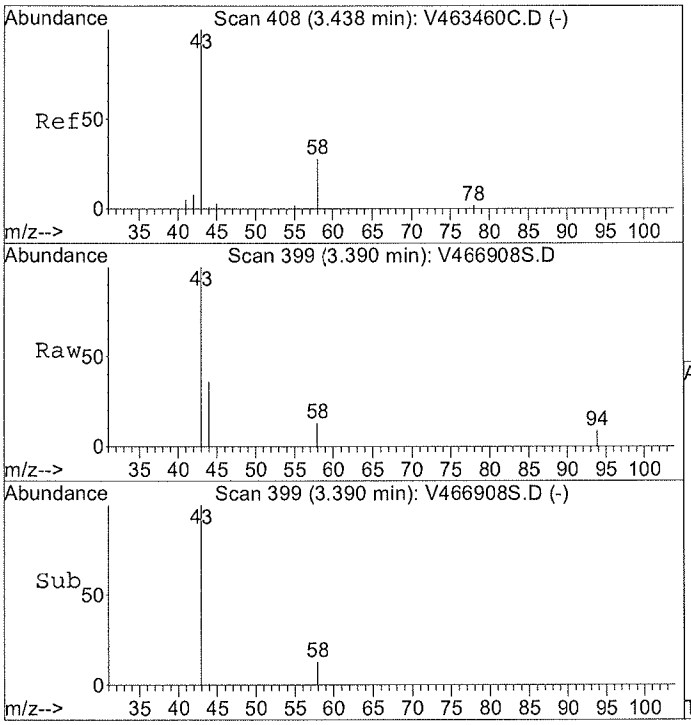


#18
Methylene Chloride
Concen: 2.82 ppb
RT: 3.78 min Scan# 466
Delta R.T. 0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion: 49 Resp: 13540

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	69.7	62.9	94.3
86	43.9	40.7	61.1

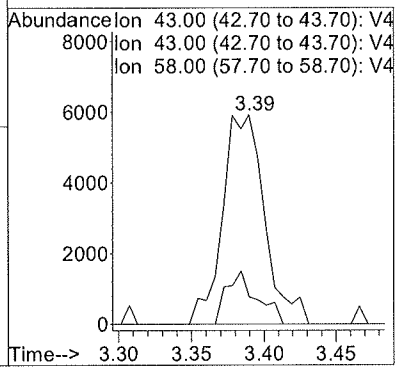


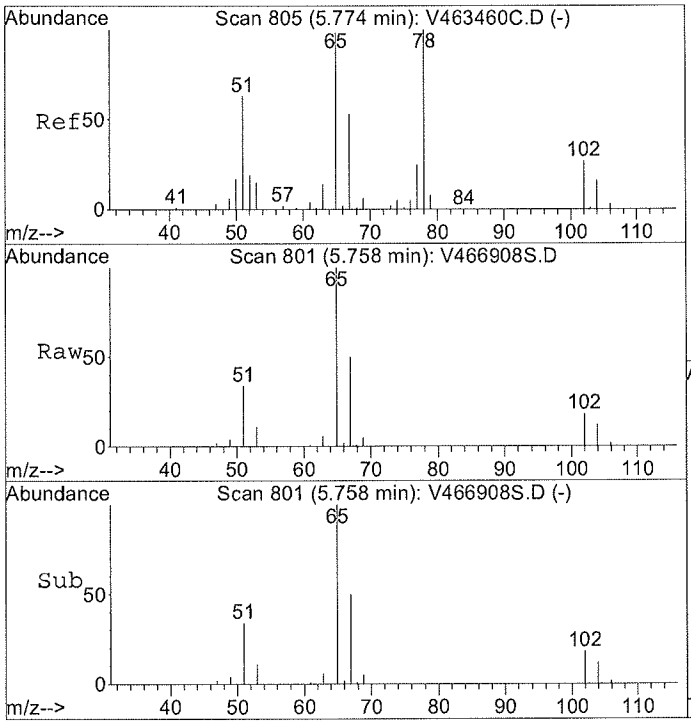


#20
Acetone
Concen: 9.13 ppb
RT: 3.39 min Scan# 399
Delta R.T. 0.01 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion: 43 Resp: 12063

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	13.1	0.0	38.0

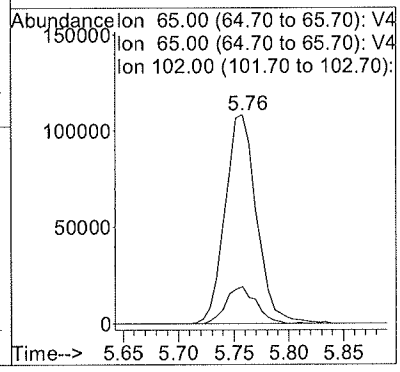


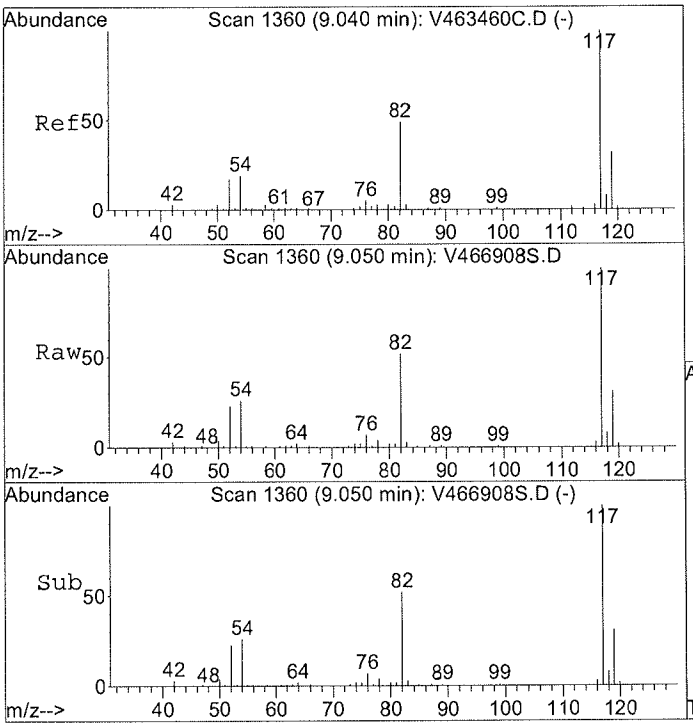


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.76 min Scan# 801
Delta R.T. 0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion: 65 Resp: 214662

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.0	13.5	20.3

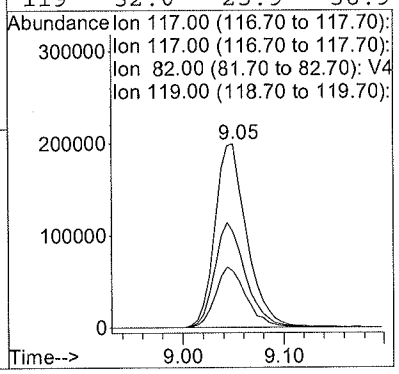


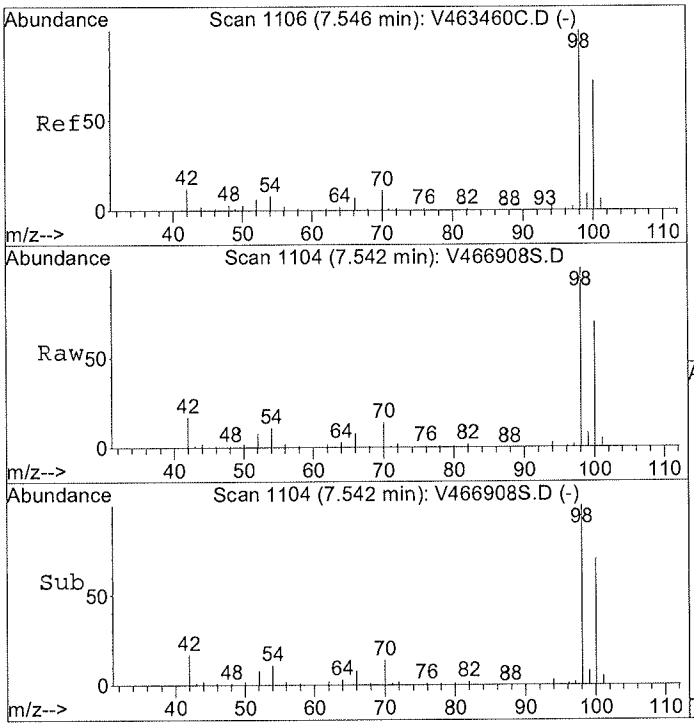


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion:117 Resp: 436452

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	55.5	0.0	0.0#
119	32.0	25.9	38.9

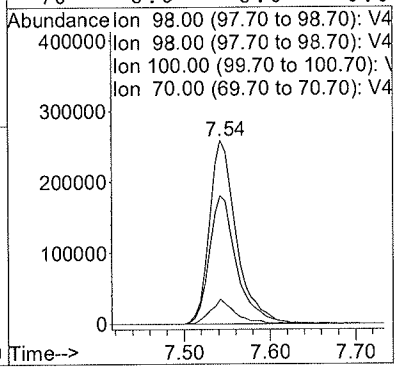


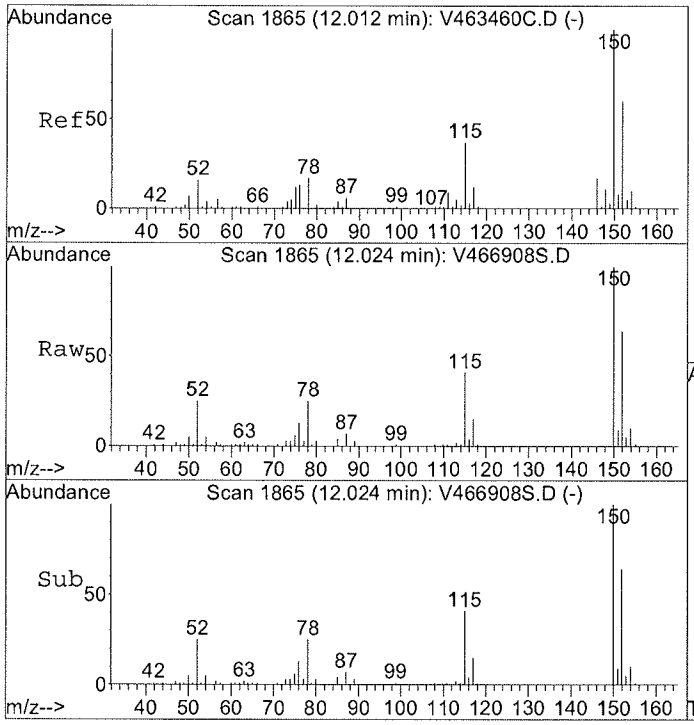


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.54 min Scan# 1104
Delta R.T. 0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion: 98 Resp: 563305

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	71.0	53.8	80.6
70	0.0	0.0	0.0

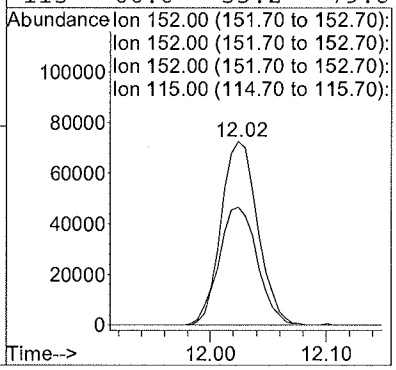


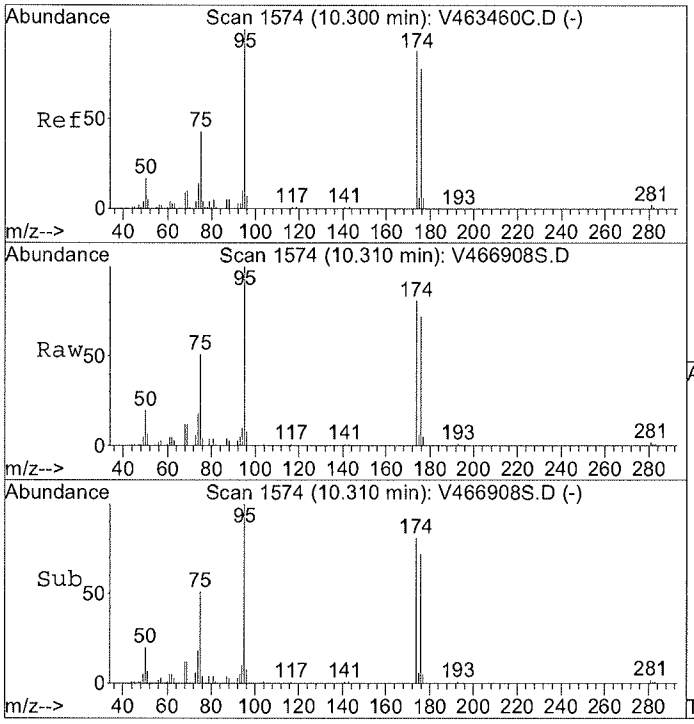


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1865
Delta R.T. 0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion:152 Resp: 159001

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	66.6	53.2	79.8

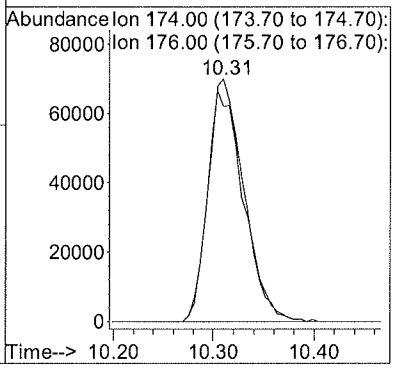




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1574
Delta R.T. 0.00 min
Lab File: V466908S.D
Acq: 30 Sep 2014 1:44 pm

Tgt Ion:174 Resp: 171611

Ion	Ratio	Lower	Upper
174	100		
176	88.5	76.2	114.2



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_14-15

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-06	File ID:	V466909S.D
Sampled:	09/23/14 08:25	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 14:33
Solids:	82.28	Preparation:	EPA 5035A	Initial/Final:	9.34 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	100	330	U
71-55-6	1,1,1-Trichloroethane	100	330	U
79-34-5	1,1,2,2-Tetrachloroethane	100	330	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	100	330	U
79-00-5	1,1,2-Trichloroethane	100	330	U
75-34-3	1,1-Dichloroethane	100	330	U
75-35-4	1,1-Dichloroethylene	100	330	U
563-58-6	1,1-Dichloropropylene	100	330	U
87-61-6	1,2,3-Trichlorobenzene	100	330	U
96-18-4	1,2,3-Trichloropropane	100	330	U
120-82-1	1,2,4-Trichlorobenzene	100	330	U
96-12-8	1,2-Dibromo-3-chloropropane	100	330	U
106-93-4	1,2-Dibromoethane	100	330	U
95-50-1	1,2-Dichlorobenzene	100	330	U
107-06-2	1,2-Dichloroethane	100	330	U
78-87-5	1,2-Dichloropropane	100	330	U
541-73-1	1,3-Dichlorobenzene	100	330	U
142-28-9	1,3-Dichloropropane	100	330	U
106-46-7	1,4-Dichlorobenzene	100	330	U
594-20-7	2,2-Dichloropropane	100	330	U
95-49-8	2-Chlorotoluene	100	330	U
106-43-4	4-Chlorotoluene	100	330	U
108-86-1	Bromobenzene	100	330	U
74-97-5	Bromochloromethane	100	330	U
75-27-4	Bromodichloromethane	100	330	U
75-25-2	Bromoform	100	330	U
74-83-9	Bromomethane	100	330	U
56-23-5	Carbon tetrachloride	100	330	U
108-90-7	Chlorobenzene	100	330	U
75-00-3	Chloroethane	100	330	U
67-66-3	Chloroform	100	330	U
74-87-3	Chloromethane	100	330	U
156-59-2	cis-1,2-Dichloroethylene	100	210	JD
10061-01-5	cis-1,3-Dichloropropylene	100	330	U
124-48-1	Dibromochloromethane	100	330	U
74-95-3	Dibromomethane	100	330	U
75-71-8	Dichlorodifluoromethane	100	330	U
87-68-3	Hexachlorobutadiene	100	330	U
75-09-2	Methylene chloride	100	650	U
127-18-4	Tetrachloroethylene	100	4400	D

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_14-15

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-06	File ID:	V466909S.D
Sampled:	09/23/14 08:25	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 14:33
Solids:	82.28	Preparation:	EPA 5035A	Initial/Final:	9.34 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	100	330	U
10061-02-6	trans-1,3-Dichloropropylene	100	330	U
79-01-6	Trichloroethylene	100	440	D
75-69-4	Trichlorofluoromethane	100	330	U
75-01-4	Vinyl Chloride	100	330	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	50.6	101	77 - 125	D
p-Bromofluorobenzene	50.0	59.0	118	76 - 130	D
Toluene-d8	50.0	49.5	99.1	85 - 120	D

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466909S.D Vial: 10
Acq On : 30 Sep 2014 2:33 pm Operator: BK
Sample : 14I0908-06 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.34g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 15:52 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

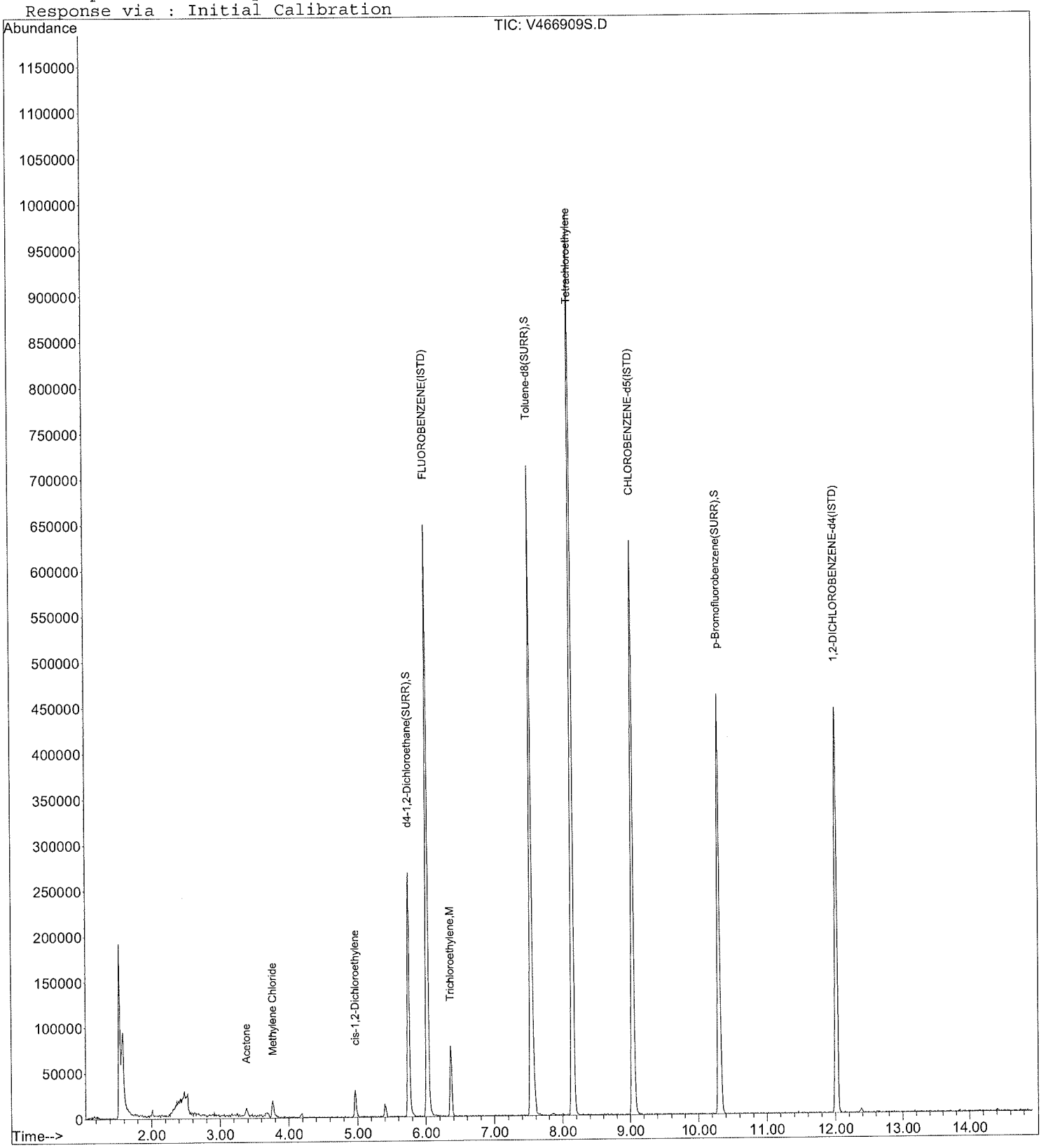
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.02	70	133075	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	443232	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	160238	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	211085	50.55	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 101.10%				
47) Toluene-d8(SURR)	7.53	98	576176	49.53	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.06%				
66) p-Bromofluorobenzene(SURR)	10.30	174	177514	59.01	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 118.02%				
Target Compounds							Qvalue
18) Methylene Chloride	3.76	49	12841	2.74	ppb		99
20) Acetone	3.37	43	12283	9.53	ppb		99
23) cis-1,2-Dichloroethylene	4.96	96	12717	3.25	ppb	#	86
37) Trichloroethylene	6.37	95	27153	6.71	ppb		97
52) Tetrachloroethylene	8.14	166	334682	67.78	ppb	#	100

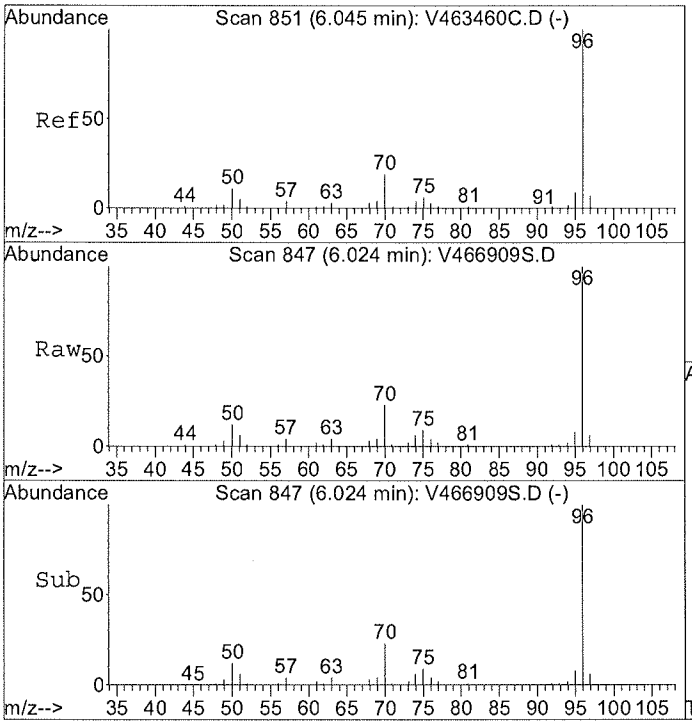
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466909S.D Vial: 10
Acq On : 30 Sep 2014 2:33 pm Operator: BK
Sample : 14I0908-06 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.34g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 15:52 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

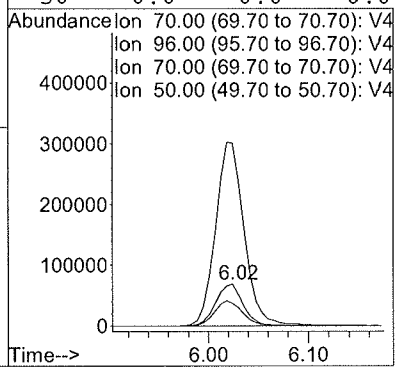


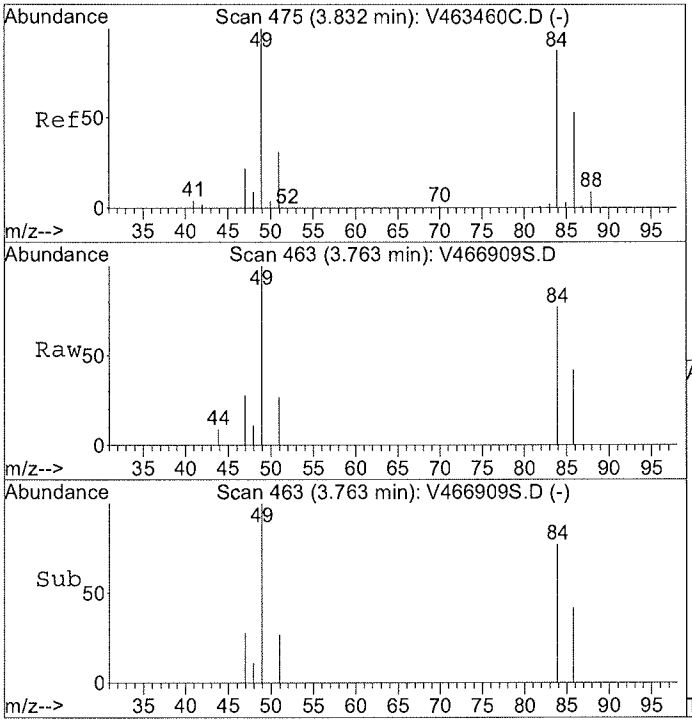


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.02 min Scan# 847
Delta R.T. -0.00 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 70 Resp: 133075

Ion	Ratio	Lower	Upper
70	100		
96	0.0	350.6	525.8#
70	100.0	80.0	120.0
50	0.0	0.0	0.0

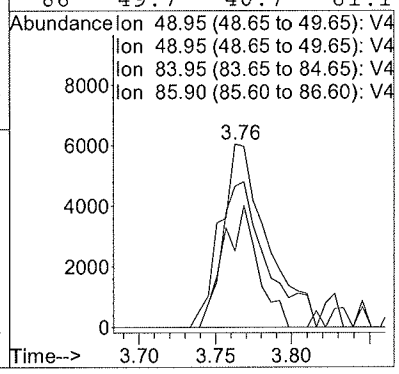


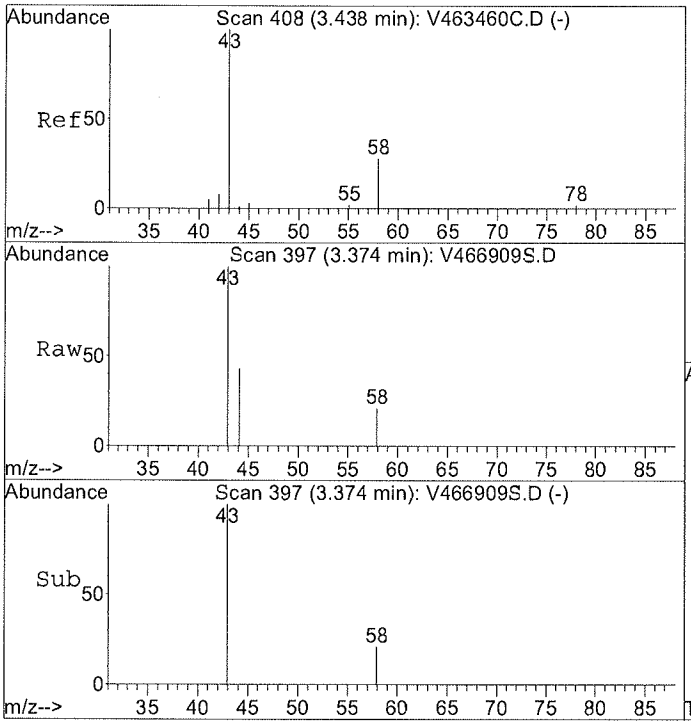


#18
Methylene Chloride
Concen: 2.74 ppb
RT: 3.76 min Scan# 463
Delta R.T. -0.02 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 49 Resp: 12841

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	76.2	62.9	94.3
86	49.7	40.7	61.1

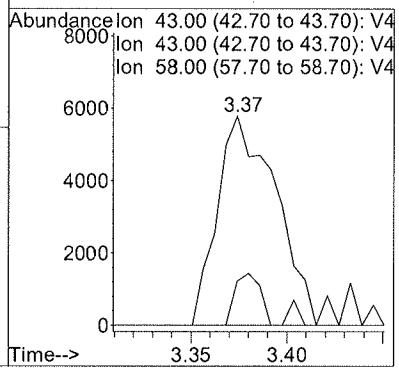


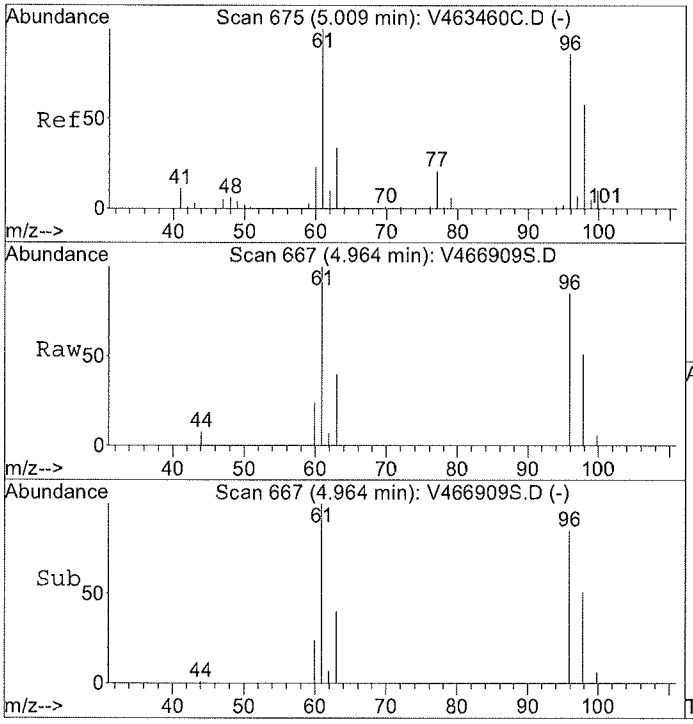


#20
Acetone
Concen: 9.53 ppb
RT: 3.37 min Scan# 397
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 43 Resp: 12283

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	21.3	0.0	38.0

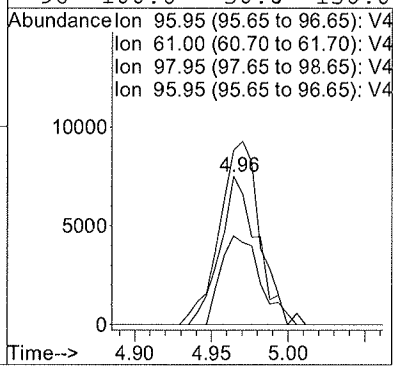


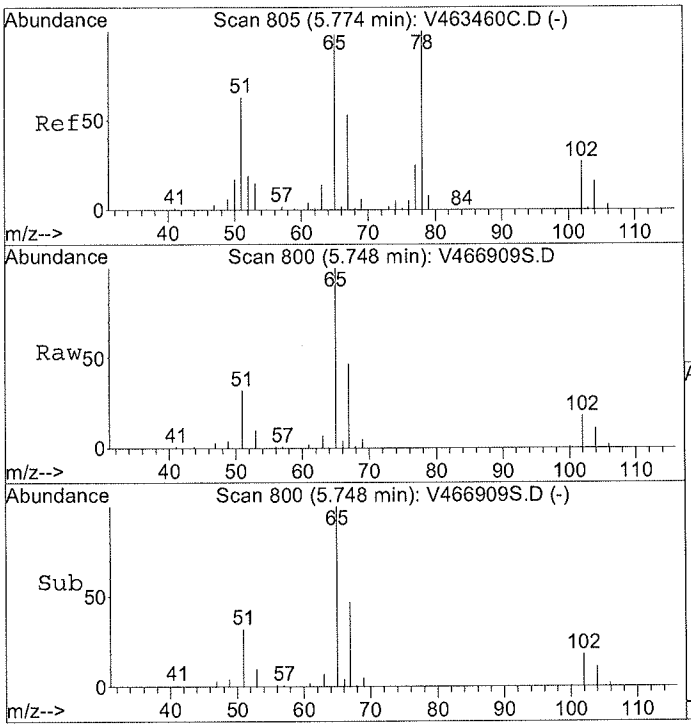


#23
cis-1,2-Dichloroethylene
Concen: 3.25 ppb
RT: 4.96 min Scan# 667
Delta R.T. -0.02 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 96 Resp: 12717

Ion	Ratio	Lower	Upper
96	100		
61	134.4	82.3	246.9
98	63.1	0.0	0.0#
96	100.0	50.0	150.0

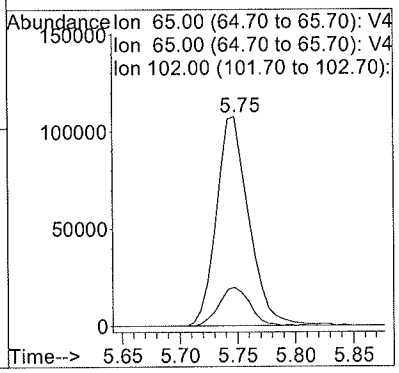


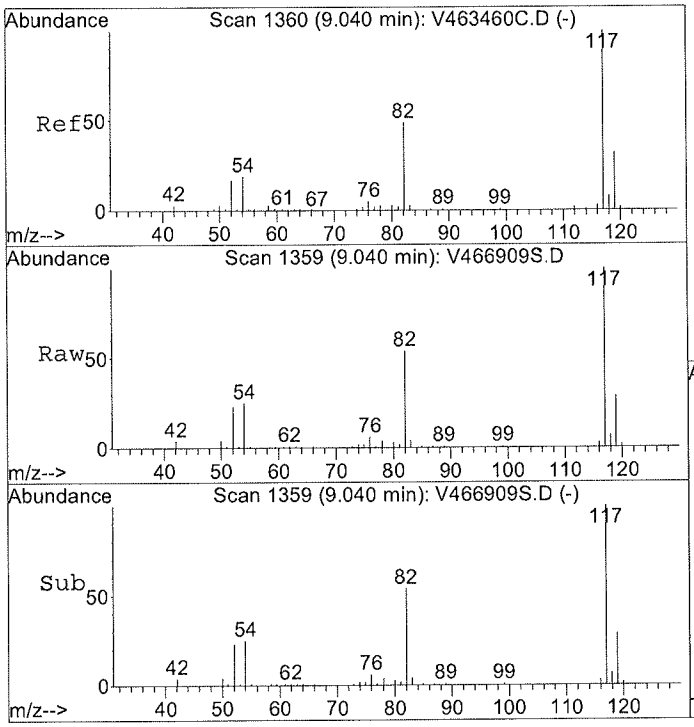


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.75 min Scan# 800
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 65 Resp: 211085

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.7	13.5	20.3

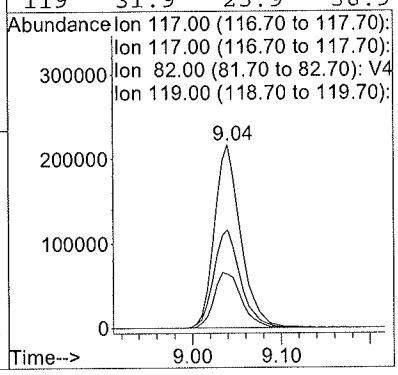


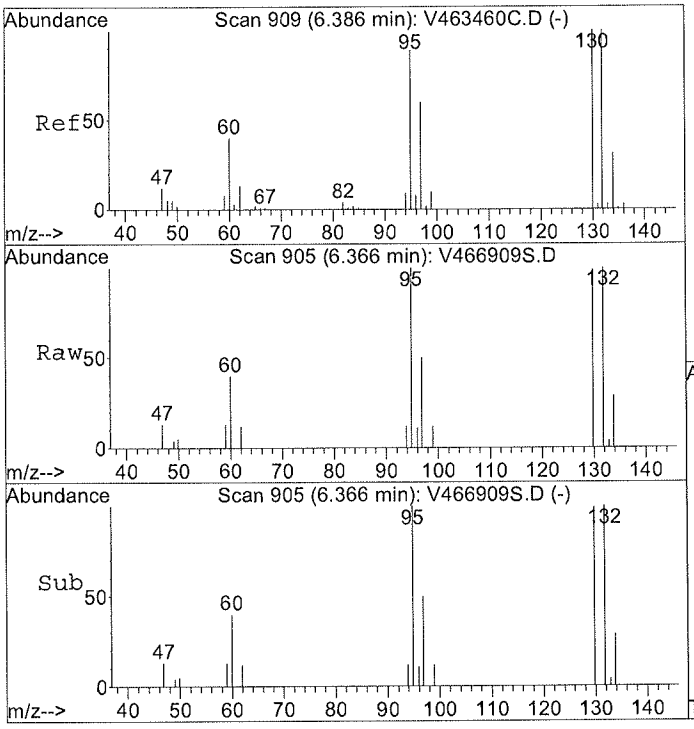


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.04 min Scan# 1359
Delta R.T. -0.00 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion:117 Resp: 443232

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	54.7	0.0	0.0#
119	31.9	25.9	38.9

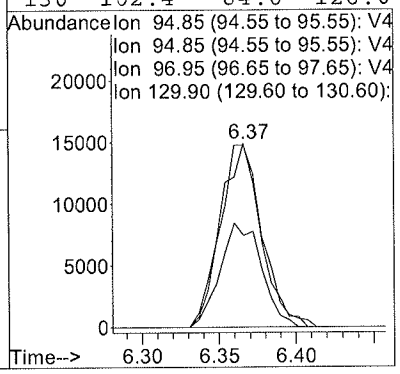


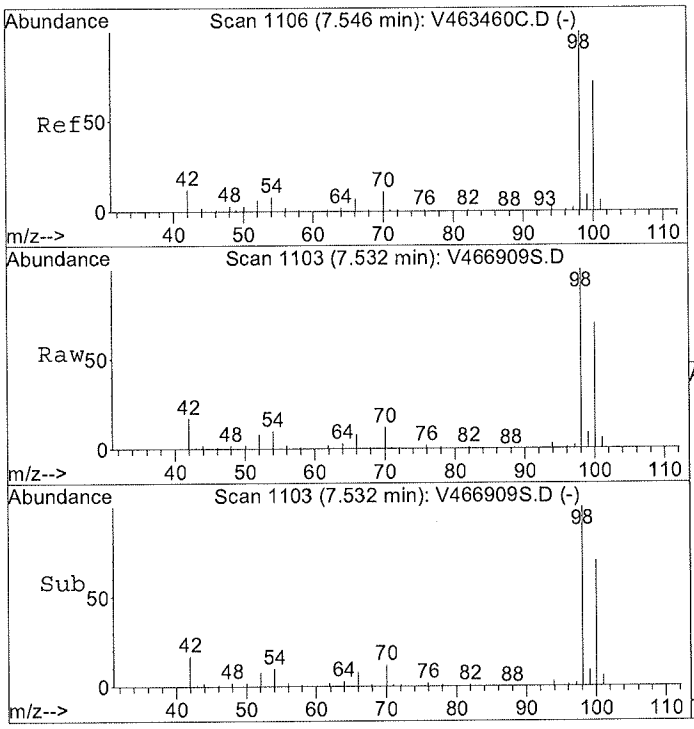


#37
Trichloroethylene
Concen: 6.71 ppb
RT: 6.37 min Scan# 905
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 95 Resp: 27153

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
97	57.9	52.4	78.6
130	102.4	84.0	126.0

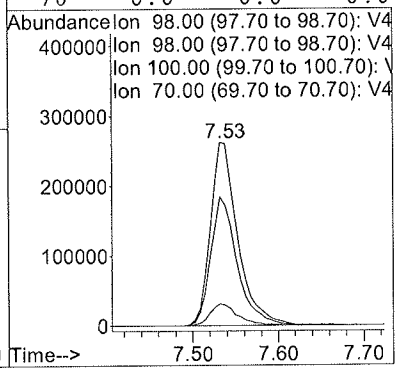


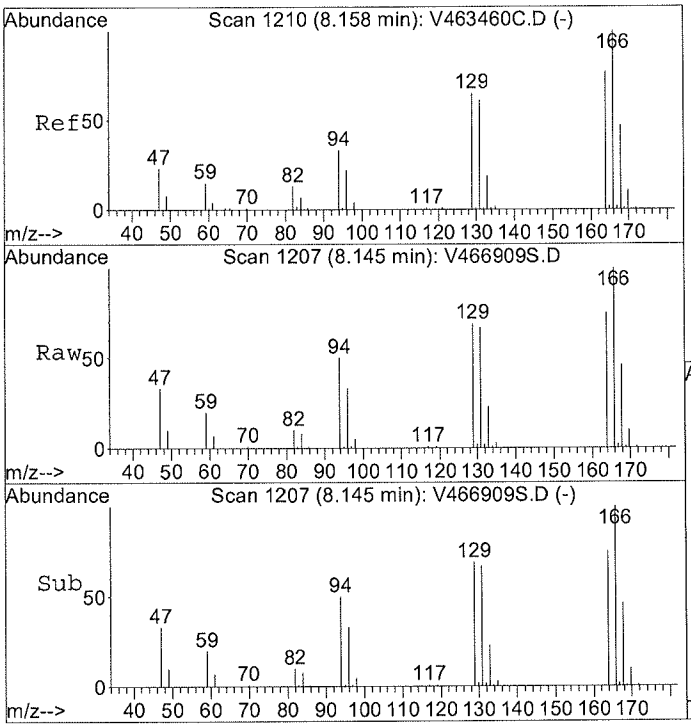


#47
Toluene-d8 (SURR)
Concen: Below ppb
RT: 7.53 min Scan# 1103
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion: 98 Resp: 576176

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	68.7	53.8	80.6
70	0.0	0.0	0.0

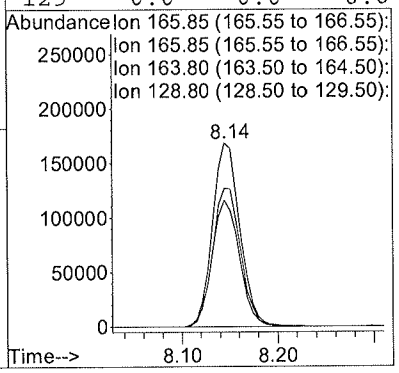


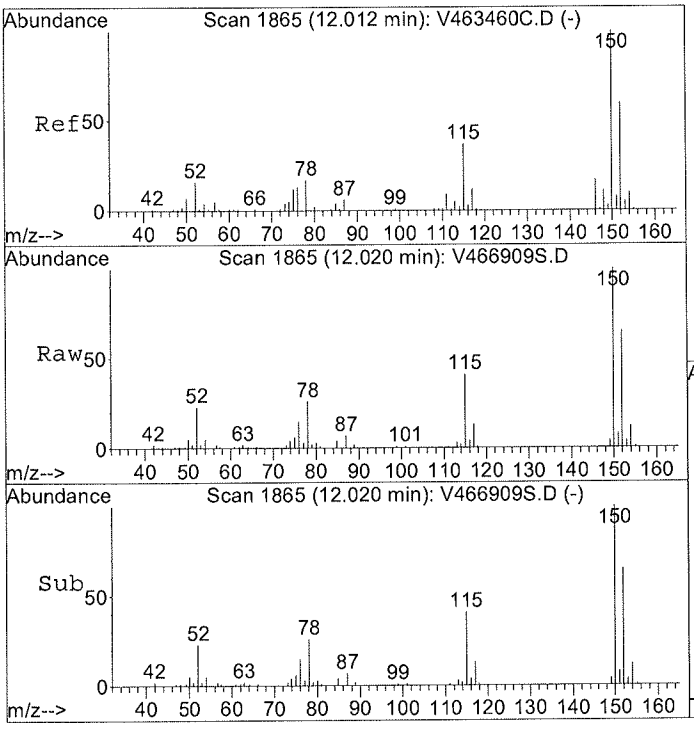


#52
Tetrachloroethylene
Concen: 67.78 ppb
RT: 8.14 min Scan# 1207
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion:166 Resp: 334682

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	0.0	0.0	0.0
129	0.0	0.0	0.0

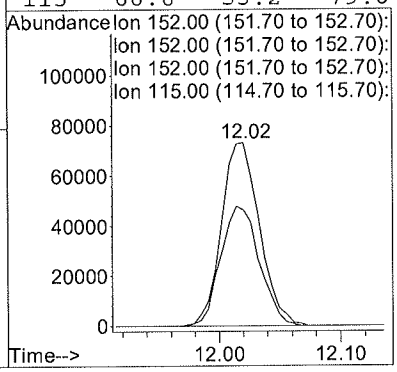


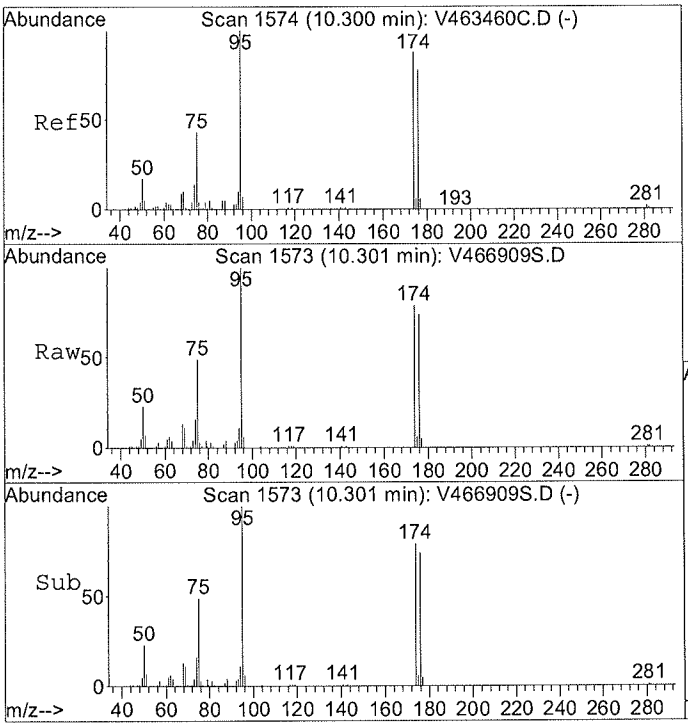


#64
1,2-DICHLOROBENZENE-d4 (ISTD)
Concen: 50.00 ppb
RT: 12.02 min Scan# 1865
Delta R.T. -0.00 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion:152 Resp: 160238

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	66.6	53.2	79.8

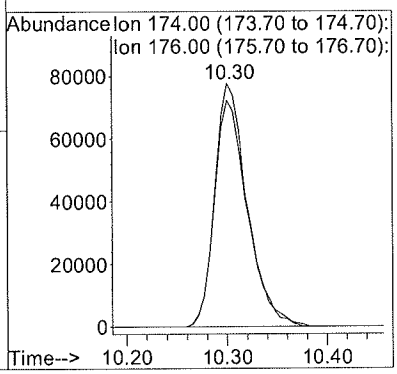




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.30 min Scan# 1573
Delta R.T. -0.01 min
Lab File: V466909S.D
Acq: 30 Sep 2014 2:33 pm

Tgt Ion:174 Resp: 177514

Ion	Ratio	Lower	Upper
174	100		
176	93.0	76.2	114.2



FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_24-25

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	14I0908-07	File ID:	V466910S.D
Sampled:	09/23/14 08:40	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 15:07
Solids:	85.47	Preparation:	EPA 5035A	Initial/Final:	7.92 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	3.7	U
71-55-6	1,1,1-Trichloroethane	1	4.2	
79-34-5	1,1,2,2-Tetrachloroethane	1	3.7	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	3.7	U
79-00-5	1,1,2-Trichloroethane	1	5.7	
75-34-3	1,1-Dichloroethane	1	3.7	U
75-35-4	1,1-Dichloroethylene	1	3.7	U
563-58-6	1,1-Dichloropropylene	1	3.7	U
87-61-6	1,2,3-Trichlorobenzene	1	3.7	U
96-18-4	1,2,3-Trichloropropane	1	3.7	U
120-82-1	1,2,4-Trichlorobenzene	1	3.7	U
96-12-8	1,2-Dibromo-3-chloropropane	1	3.7	U
106-93-4	1,2-Dibromoethane	1	3.7	U
95-50-1	1,2-Dichlorobenzene	1	3.7	U
107-06-2	1,2-Dichloroethane	1	3.7	U
78-87-5	1,2-Dichloropropane	1	3.7	U
541-73-1	1,3-Dichlorobenzene	1	3.7	U
142-28-9	1,3-Dichloropropane	1	3.7	U
106-46-7	1,4-Dichlorobenzene	1	3.7	U
594-20-7	2,2-Dichloropropane	1	3.7	U
95-49-8	2-Chlorotoluene	1	3.7	U
106-43-4	4-Chlorotoluene	1	3.7	U
108-86-1	Bromobenzene	1	3.7	U
74-97-5	Bromochloromethane	1	3.7	U
75-27-4	Bromodichloromethane	1	3.7	U
75-25-2	Bromoform	1	3.7	U
74-83-9	Bromomethane	1	3.7	U
56-23-5	Carbon tetrachloride	1	3.7	U
108-90-7	Chlorobenzene	1	3.7	U
75-00-3	Chloroethane	1	3.7	U
67-66-3	Chloroform	1	3.7	U
74-87-3	Chloromethane	1	3.7	U
156-59-2	cis-1,2-Dichloroethylene	1	21	
10061-01-5	cis-1,3-Dichloropropylene	1	3.7	U
124-48-1	Dibromochloromethane	1	3.7	U
74-95-3	Dibromomethane	1	3.7	U
75-71-8	Dichlorodifluoromethane	1	3.7	U
87-68-3	Hexachlorobutadiene	1	3.7	U
75-09-2	Methylene chloride	1	7.4	U
127-18-4	Tetrachloroethylene	81	410	D

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

SB20_24-25

Laboratory:	York Analytical Laboratories, Inc.			SDG:	1410908
Client:	Langan Engineering & Environmental Services (NYC)			Project:	170282501
Matrix:	Soil	Laboratory ID:	1410908-07	File ID:	V466910S.D
Sampled:	09/23/14 08:40	Prepared:	09/30/14 08:23	Analyzed:	09/30/14 15:07
Solids:	85.47	Preparation:	EPA 5035A	Initial/Final:	7.92 g / 5 ml
Batch:	BI41538	Sequence:		Calibration:	Instrument: GCMS-VOA4

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethylene	1	3.7	U
10061-02-6	trans-1,3-Dichloropropylene	1	3.7	U
79-01-6	Trichloroethylene	1	27	
75-69-4	Trichlorofluoromethane	1	3.7	U
75-01-4	Vinyl Chloride	1	3.7	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	50.9	102	77 - 125	
p-Bromofluorobenzene	50.0	54.1	108	76 - 130	
Toluene-d8	50.0	50.3	101	85 - 120	

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466910S.D Vial: 11
Acq On : 30 Sep 2014 3:07 pm Operator: BK
Sample : 14I0908-07 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 7.92g Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 16:27 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

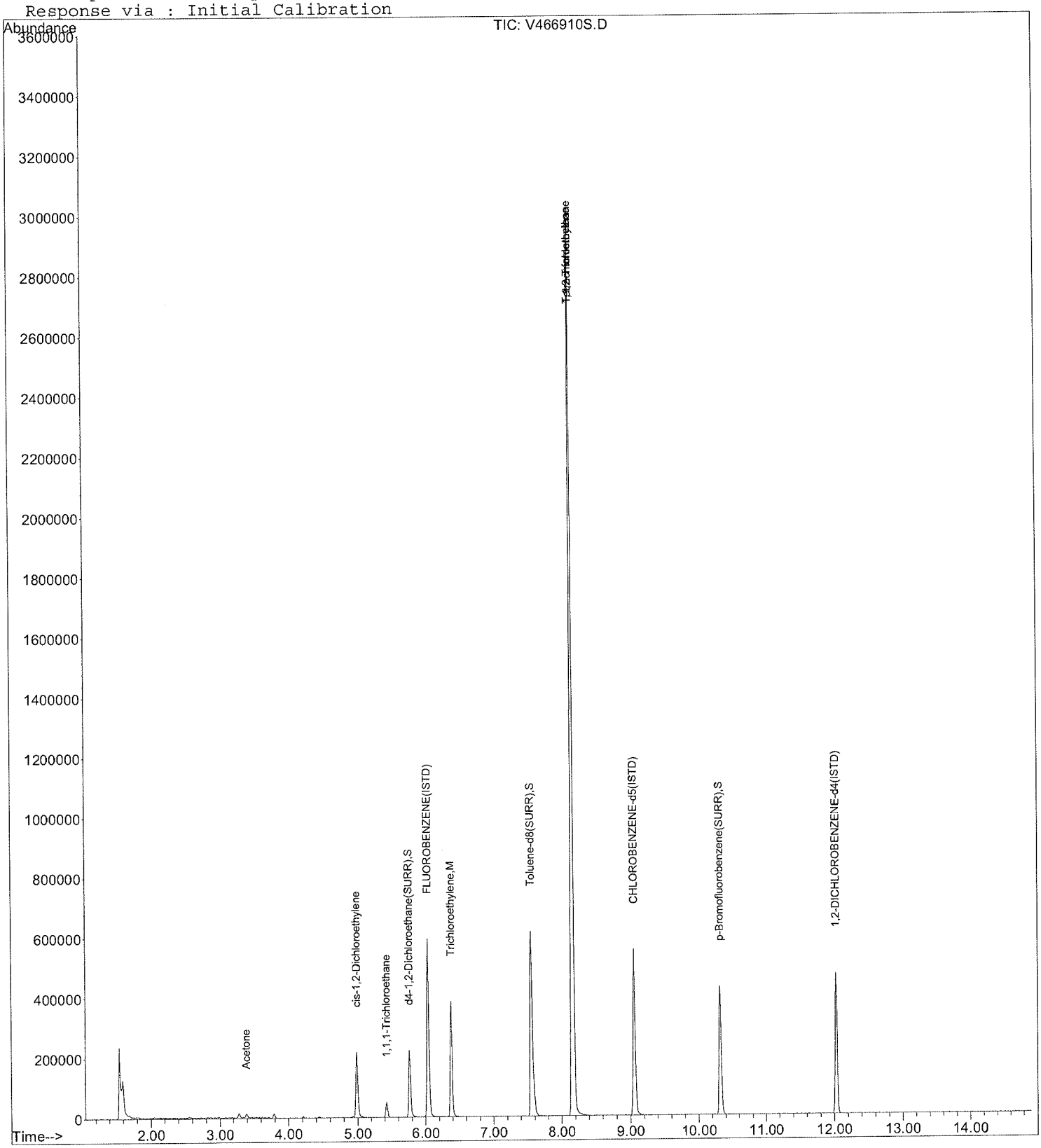
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.04	70	118912	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	405518	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.03	152	156973	50.00	ppb		0.01
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	189750	50.86	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 101.72%				
47) Toluene-d8(SURR)	7.55	98	535355	50.30	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.60%				
66) p-Bromofluorobenzene(SURR)	10.32	174	159336	54.07	ppb		0.01
Spiked Amount 50.000	Range 63 - 166		Recovery = 108.14%				
Target Compounds							Qvalue
20) Acetone	3.39	43	15527	13.49	ppb		98
23) cis-1,2-Dichloroethylene	4.99	96	101554	29.05	ppb	#	24
28) 1,1,1-Trichloroethane	5.42	97	35215	5.62	ppb		98
37) Trichloroethylene	6.38	95	133131	35.97	ppb		98
50) 1,1,2-Trichloroethane	8.16	83	14486	7.67	ppb	#	56
52) Tetrachloroethylene	8.16	166	1086264	240.46	ppb	#	100

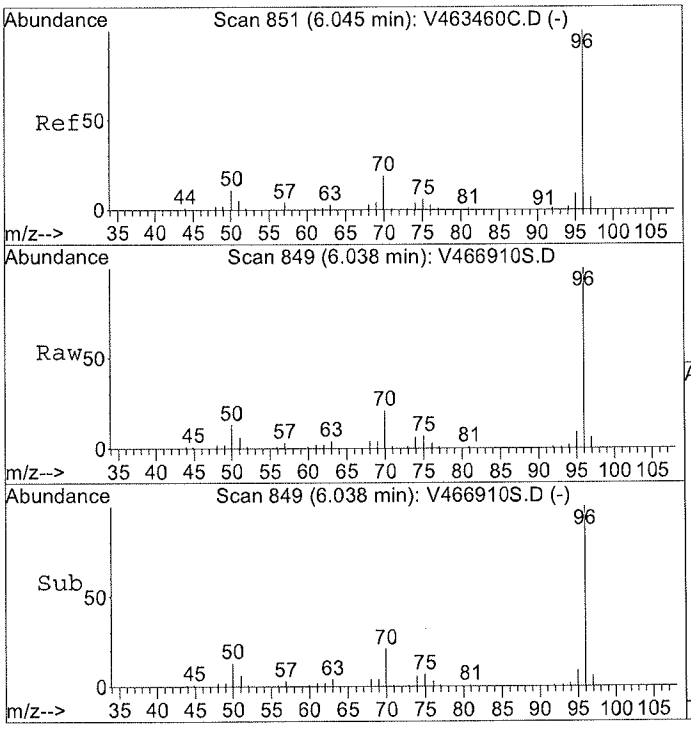
(#) = qualifier out of range (m) = manual integration
V466910S.D V4C00233.M Fri Oct 03 13:14:59 2014 123

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466910S.D Vial: 11
Acq On : 30 Sep 2014 3:07 pm Operator: BK
Sample : 14I0908-07 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 7.92g Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 16:27 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

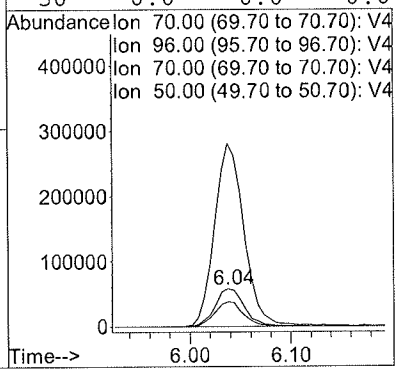


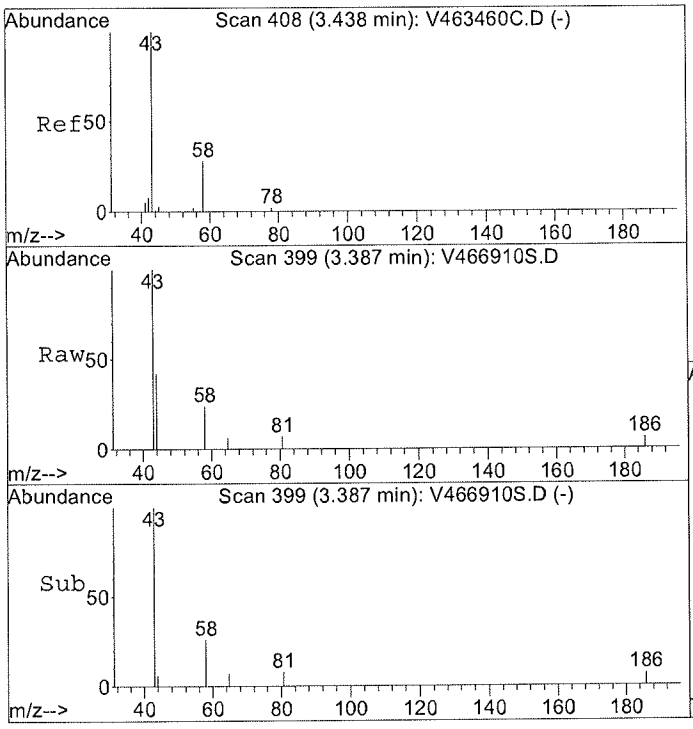


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.04 min Scan# 849
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 70 Resp: 118912

Ion	Ratio	Lower	Upper
70	100		
96	477.8	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

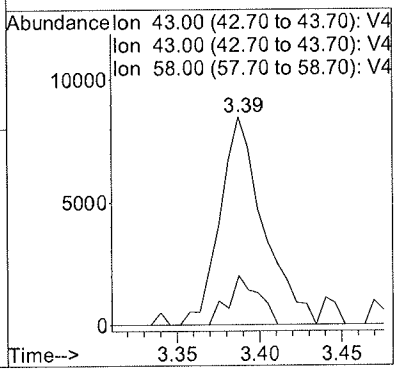


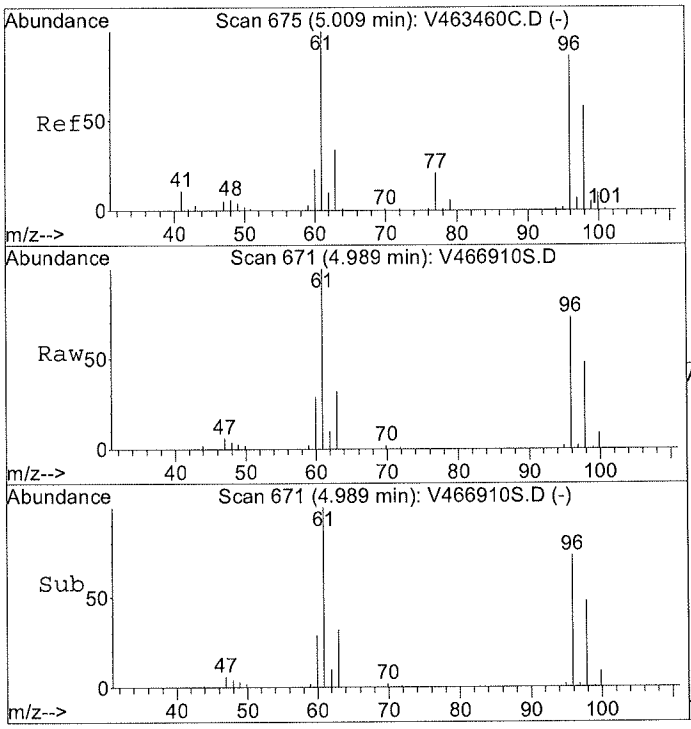


#20
Acetone
Concen: 13.49 ppb
RT: 3.39 min Scan# 399
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 43 Resp: 15527

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	23.6	0.0	38.0

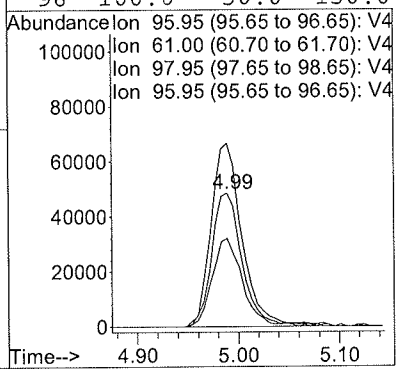


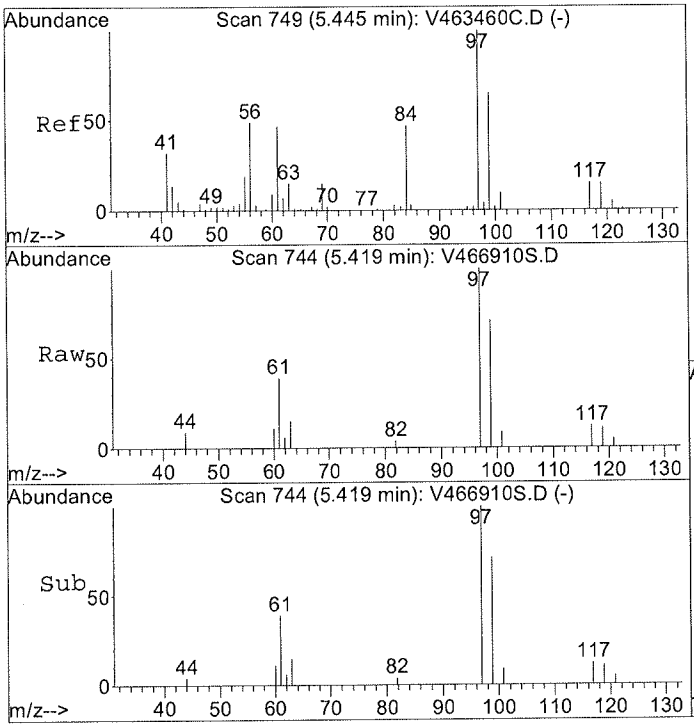


#23
cis-1,2-Dichloroethylene
Concen: 29.05 ppb
RT: 4.99 min Scan# 671
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 96 Resp: 101554

Ion	Ratio	Lower	Upper
96	100		
61	0.0	82.3	246.9#
98	65.9	0.0	0.0#
96	100.0	50.0	150.0

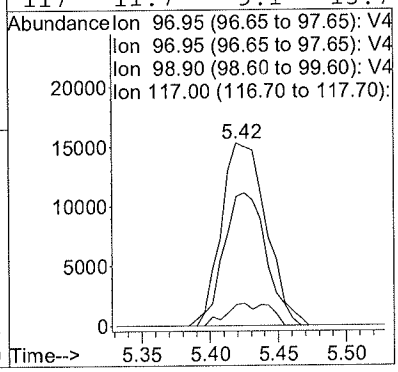


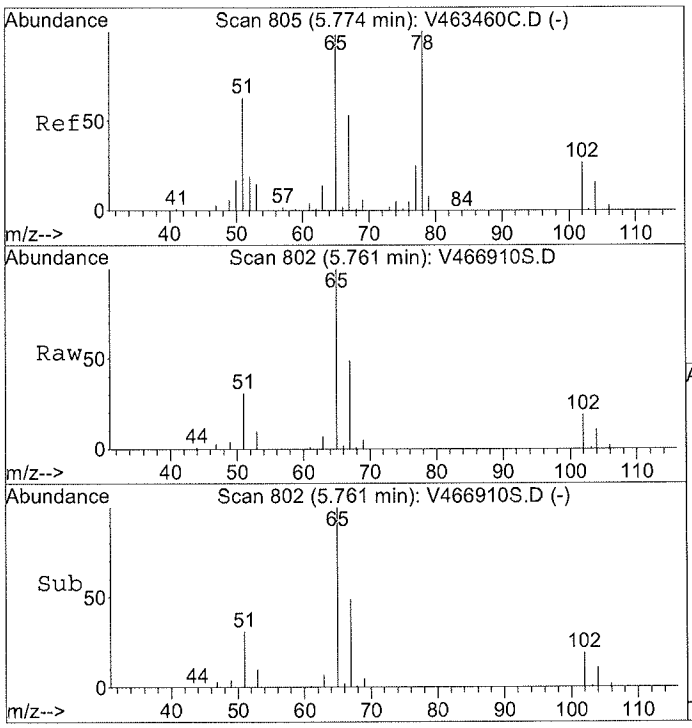


#28
1,1,1-Trichloroethane
Concen: 5.62 ppb
RT: 5.42 min Scan# 744
Delta R.T. 0.00 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 97 Resp: 35215

Ion	Ratio	Lower	Upper
97	100		
97	100.0	80.0	120.0
99	67.8	51.7	77.5
117	11.7	9.1	13.7

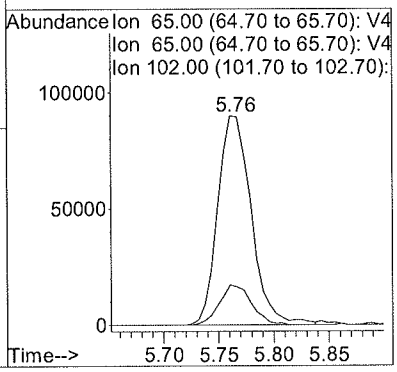


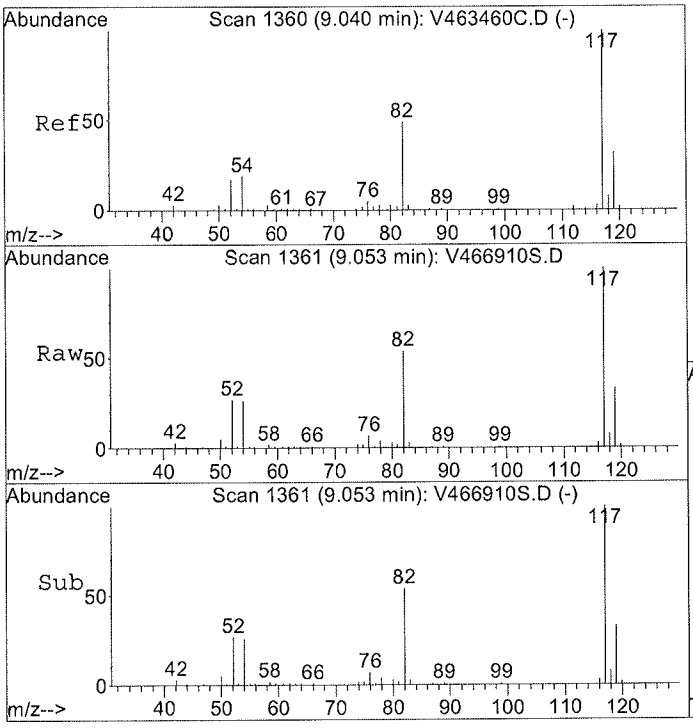


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.76 min Scan# 802
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 65 Resp: 189750

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	18.4	13.5	20.3

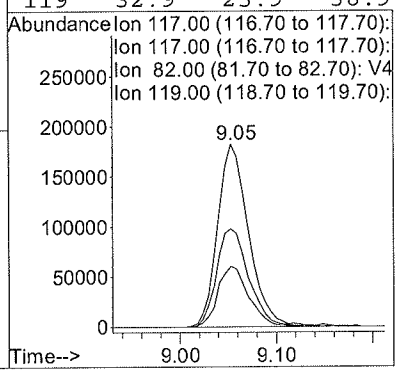


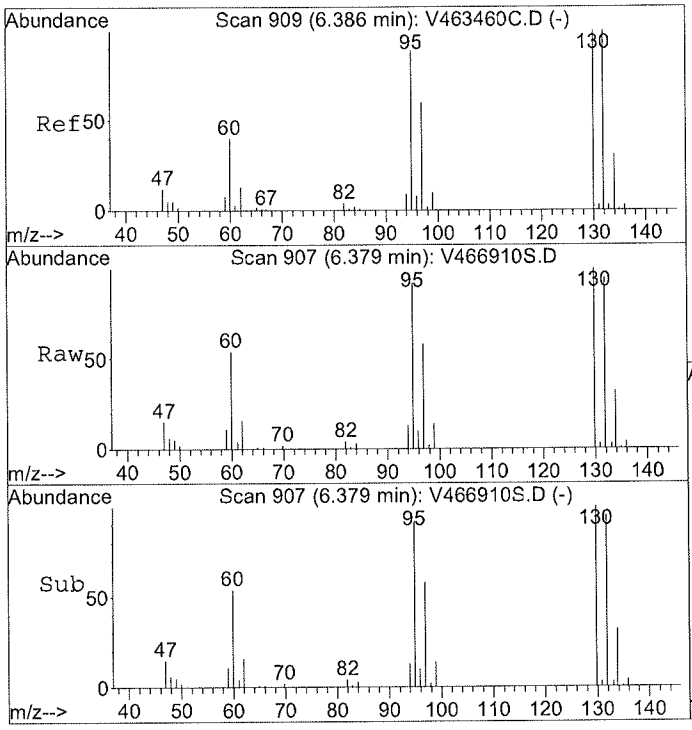


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.05 min Scan# 1361
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion:117 Resp: 405518

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	32.9	25.9	38.9

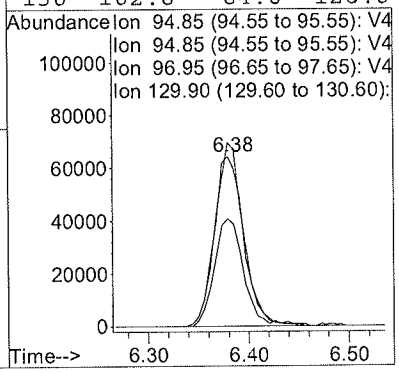


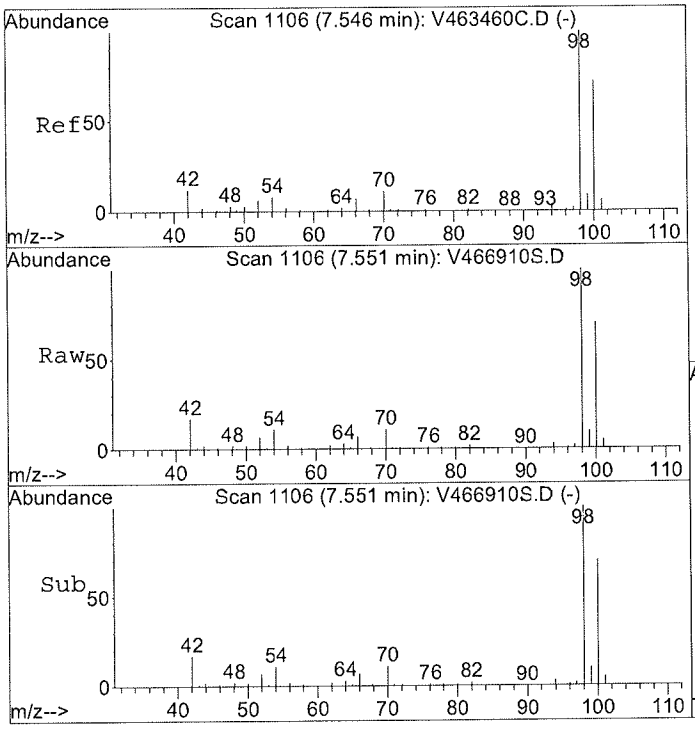


#37
Trichloroethylene
Concen: 35.97 ppb
RT: 6.38 min Scan# 907
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 95 Resp: 133131

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
97	62.0	52.4	78.6
130	102.8	84.0	126.0

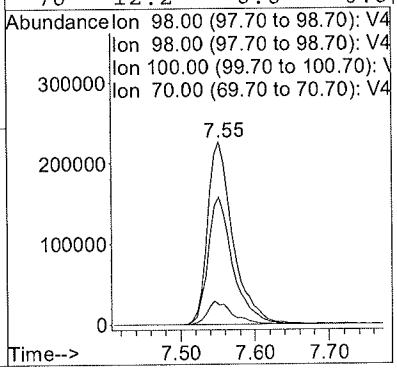


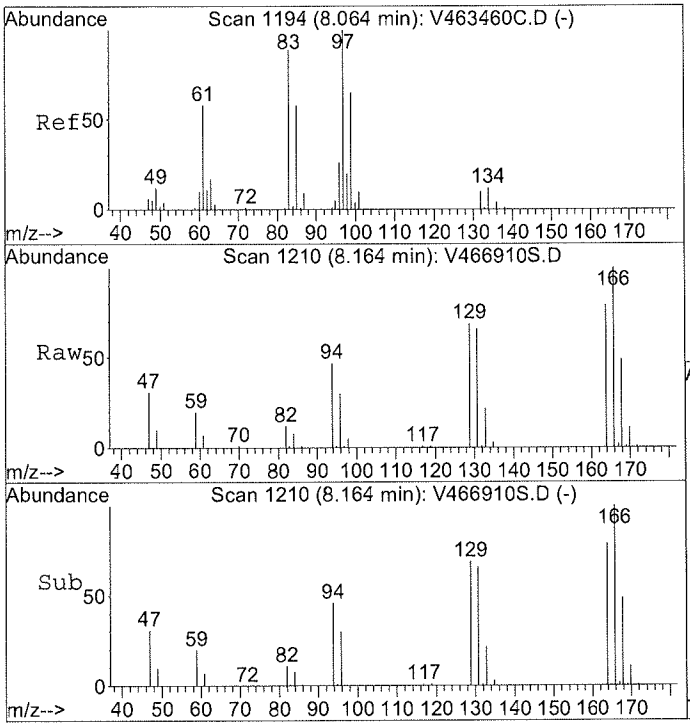


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.55 min Scan# 1106
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 98 Resp: 535355

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	0.0	53.8	80.6#
70	12.2	0.0	0.0#

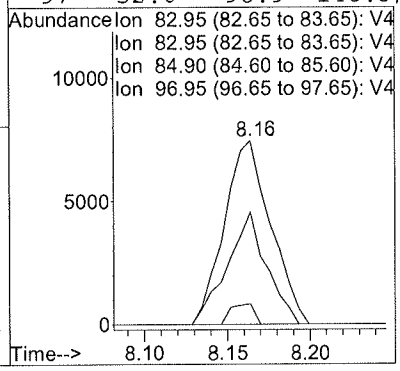


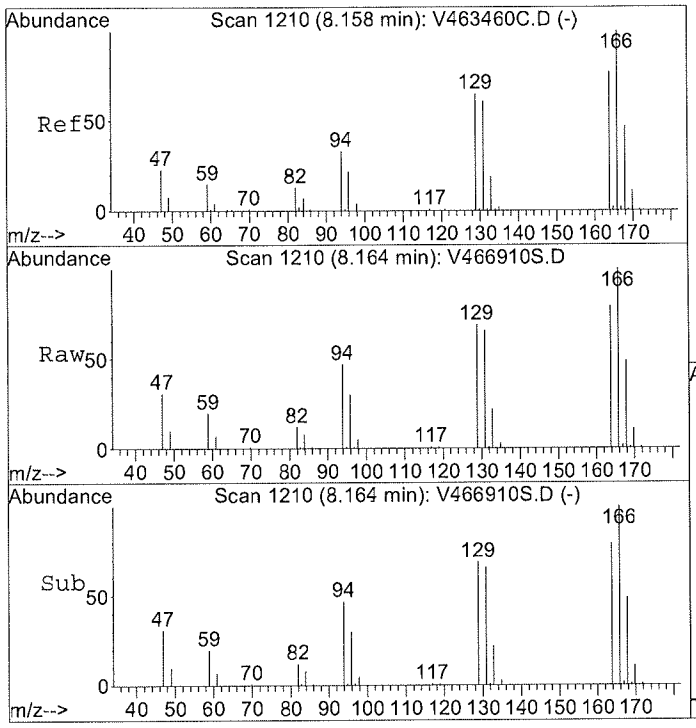


#50
1,1,2-Trichloroethane
Concen: 7.67 ppb
RT: 8.16 min Scan# 1210
Delta R.T. 0.10 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion: 83 Resp: 14486

Ion	Ratio	Lower	Upper
83	100		
83	100.0	80.0	120.0
85	5.6	53.0	79.4#
97	52.0	98.9	148.3#

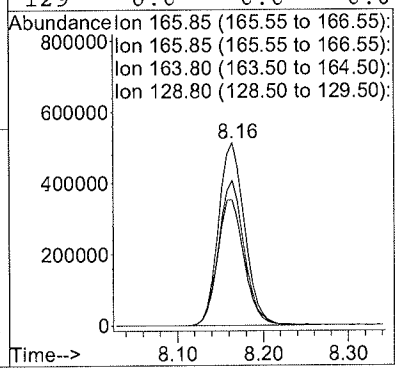


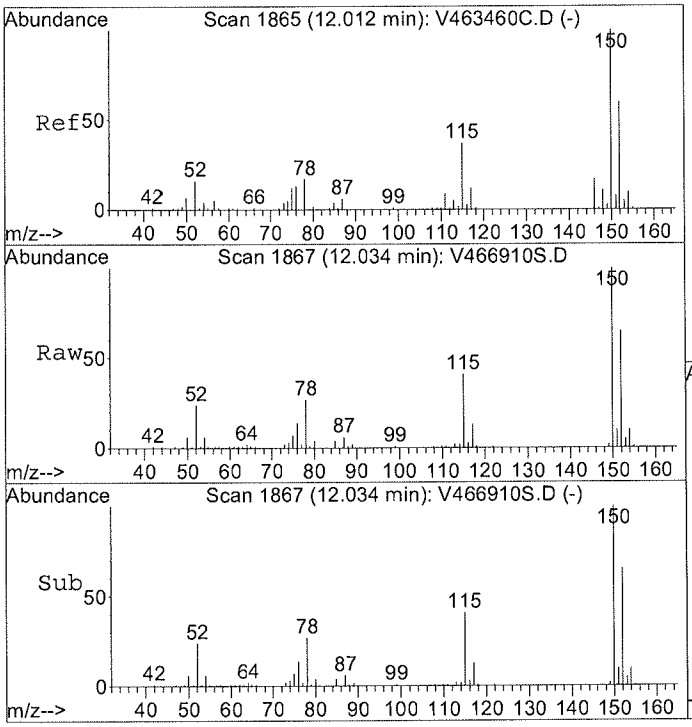


#52
Tetrachloroethylene
Concen: 240.46 ppb
RT: 8.16 min Scan# 1210
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion:166 Resp: 1086264

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	0.0	0.0	0.0
129	0.0	0.0	0.0

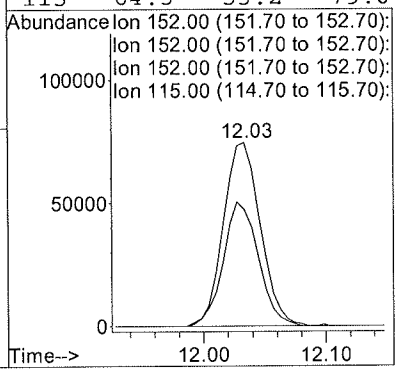


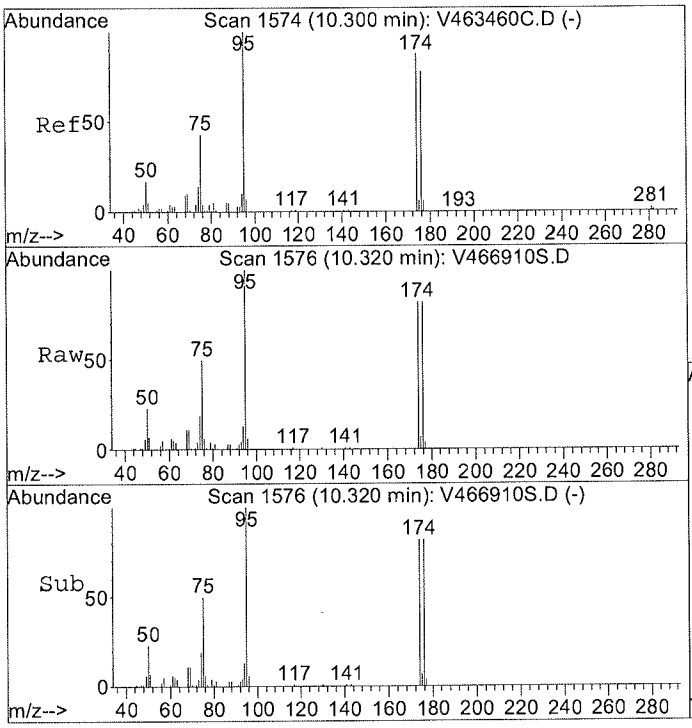


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.03 min Scan# 1867
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion:152 Resp: 156973

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	64.3	53.2	79.8

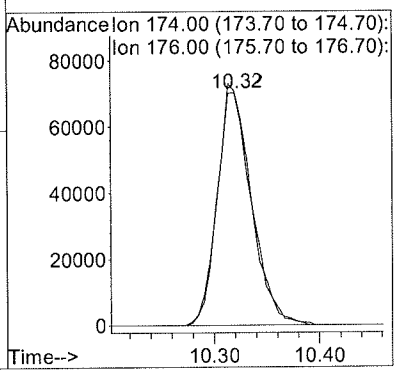




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.32 min Scan# 1576
Delta R.T. 0.01 min
Lab File: V466910S.D
Acq: 30 Sep 2014 3:07 pm

Tgt Ion:174 Resp: 159336

Ion	Ratio	Lower	Upper
174	100		
176	100.6	76.2	114.2



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466912S.D Vial: 13
Acq On : 30 Sep 2014 4:15 pm Operator: BK
Sample : 14I0908-07RE1 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.74g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 17:31 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

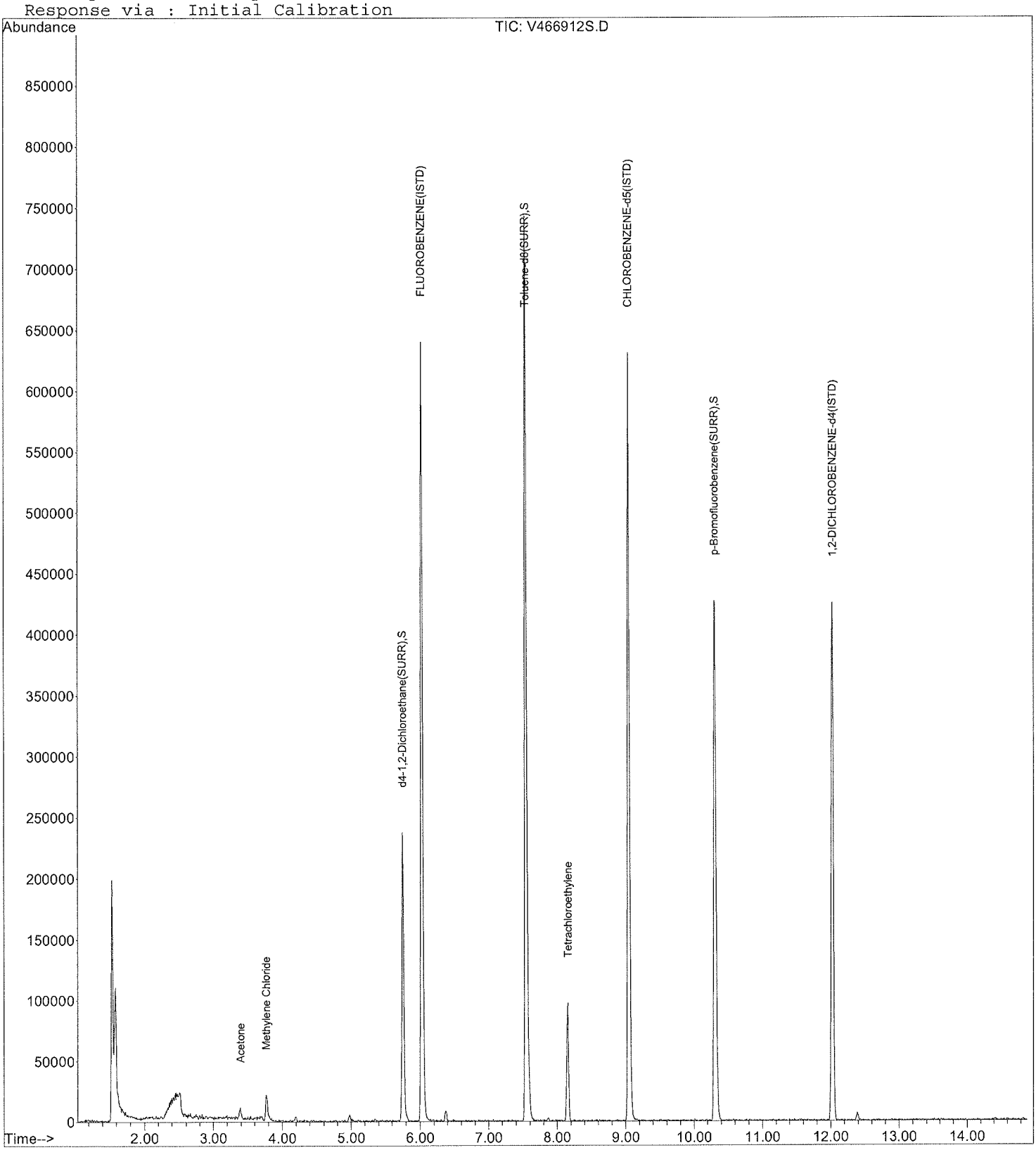
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	128290	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	419735	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.03	152	159797	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	192816	47.90	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 95.80%				
47) Toluene-d8(SURR)	7.54	98	553990	50.29	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.58%				
66) p-Bromofluorobenzene(SURR)	10.31	174	161487	53.83	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 107.66%				
Target Compounds							Qvalue
18) Methylene Chloride	3.77	49	15732	3.48	ppb		96
20) Acetone	3.39	43	11742	9.45	ppb		99
52) Tetrachloroethylene	8.16	166	32332	6.91	ppb	#	100

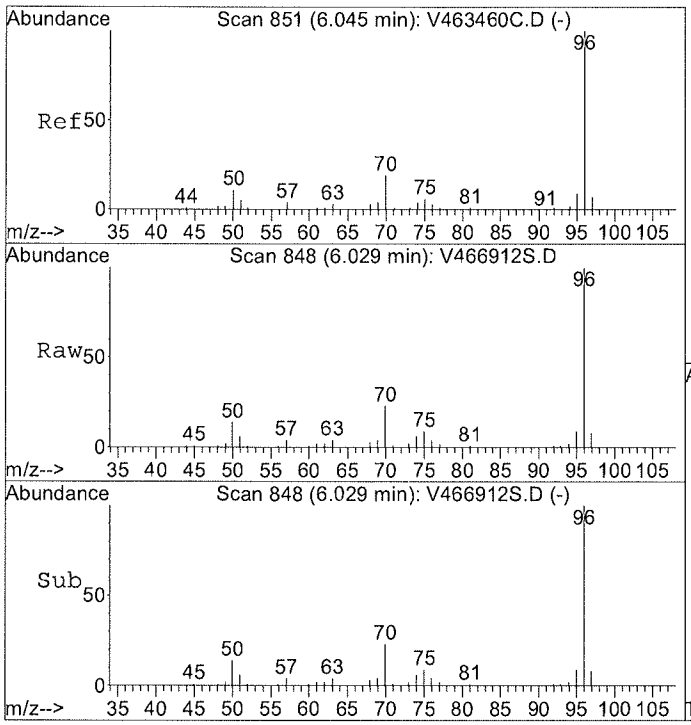
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466912S.D Vial: 13
Acq On : 30 Sep 2014 4:15 pm Operator: BK
Sample : 14I0908-07RE1 Inst : GCMS-VOA4
Misc : QBV4093014A 8260 HALO 9.74g 100UL/5ML Multiplr: 100.00
MS Integration Params: rteint.p
Quant Time: Sep 30 17:31 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

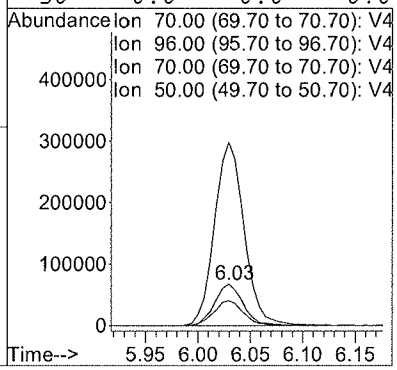


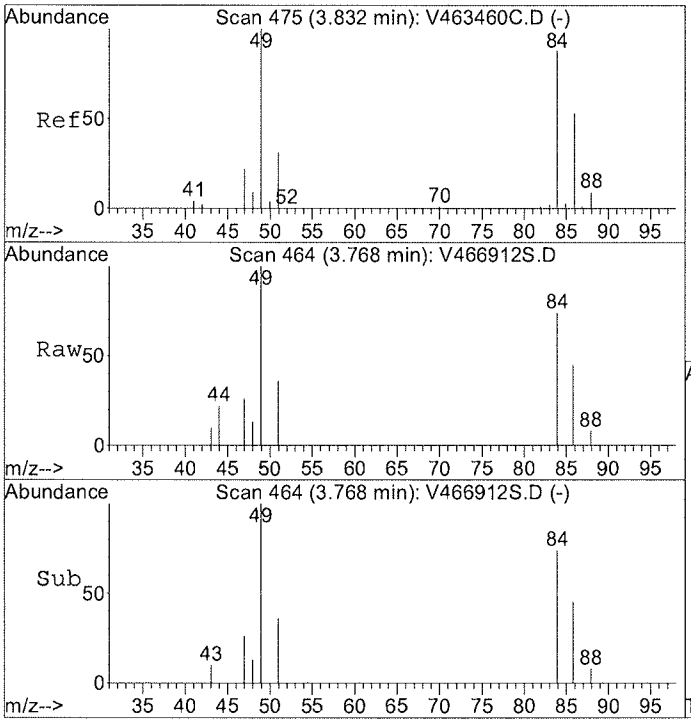


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.03 min Scan# 848
Delta R.T. 0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion: 70 Resp: 128290

Ion	Ratio	Lower	Upper
70	100		
96	458.7	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

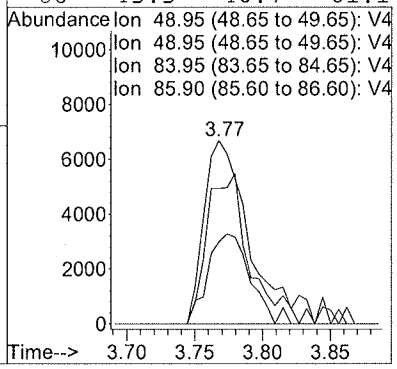


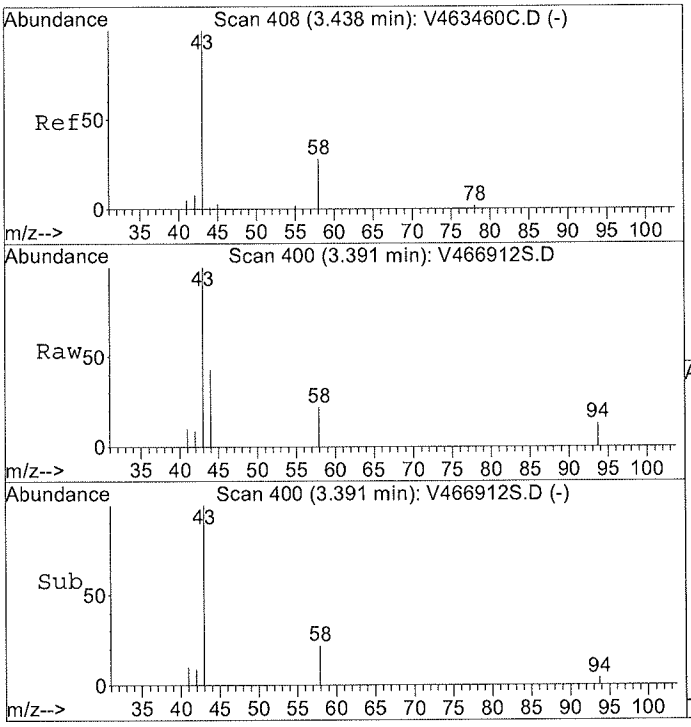


#18
Methylene Chloride
Concen: 3.48 ppb
RT: 3.77 min Scan# 464
Delta R.T. -0.01 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion: 49 Resp: 15732

Ion	Ratio	Lower	Upper
49	100		
49	100.0	80.0	120.0
84	74.0	62.9	94.3
86	45.5	40.7	61.1

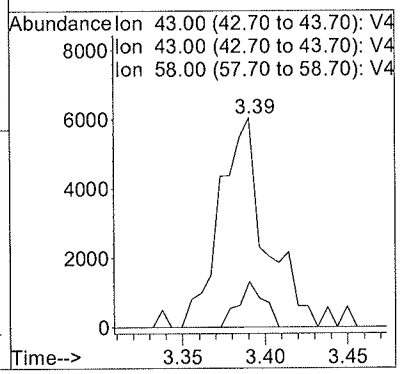


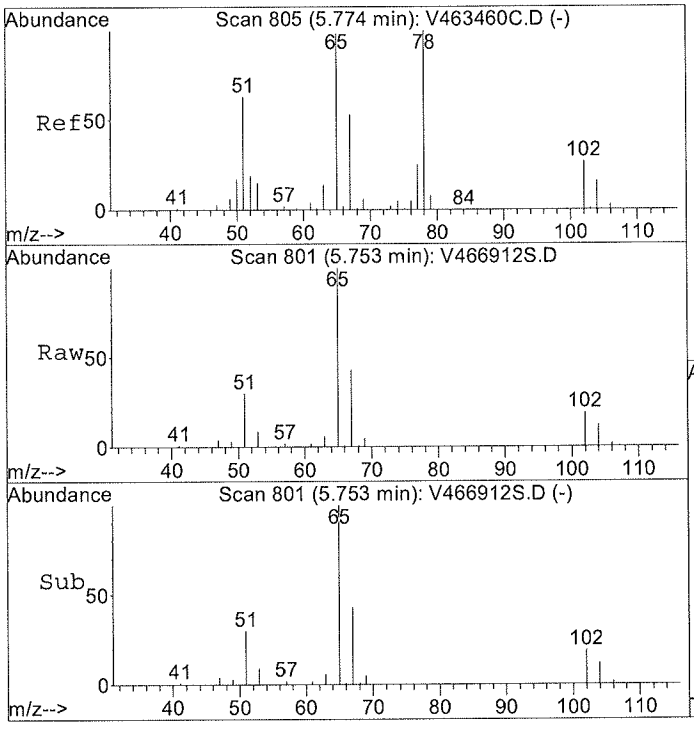


#20
Acetone
Concen: 9.45 ppb
RT: 3.39 min Scan# 400
Delta R.T. 0.01 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion: 43 Resp: 11742

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	21.8	0.0	38.0

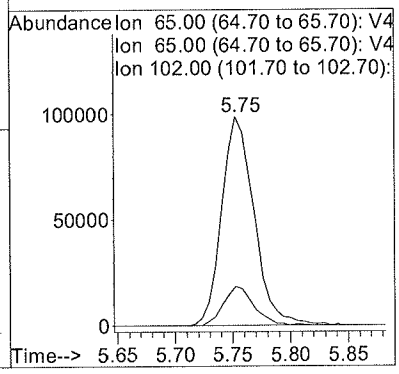


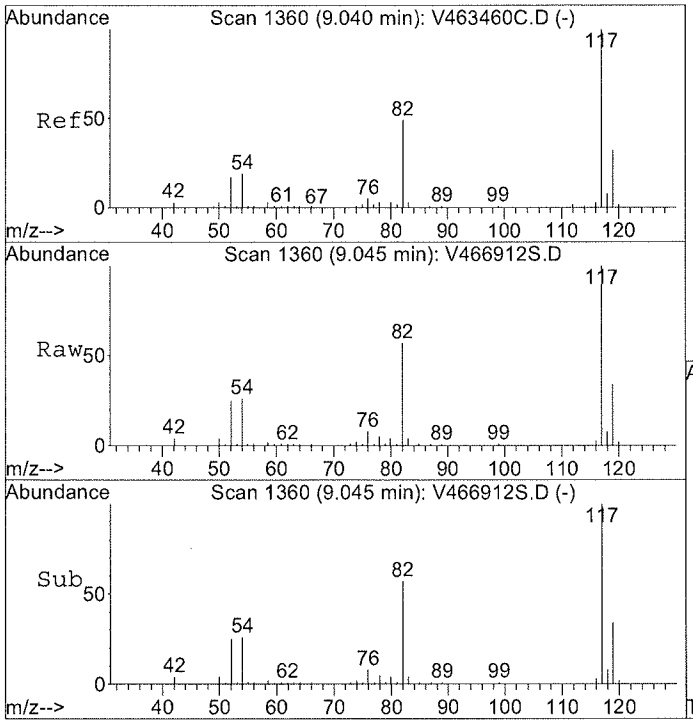


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.75 min Scan# 801
Delta R.T. -0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion: 65 Resp: 192816

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.6	13.5	20.3

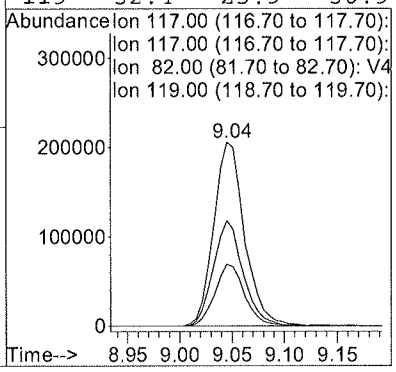


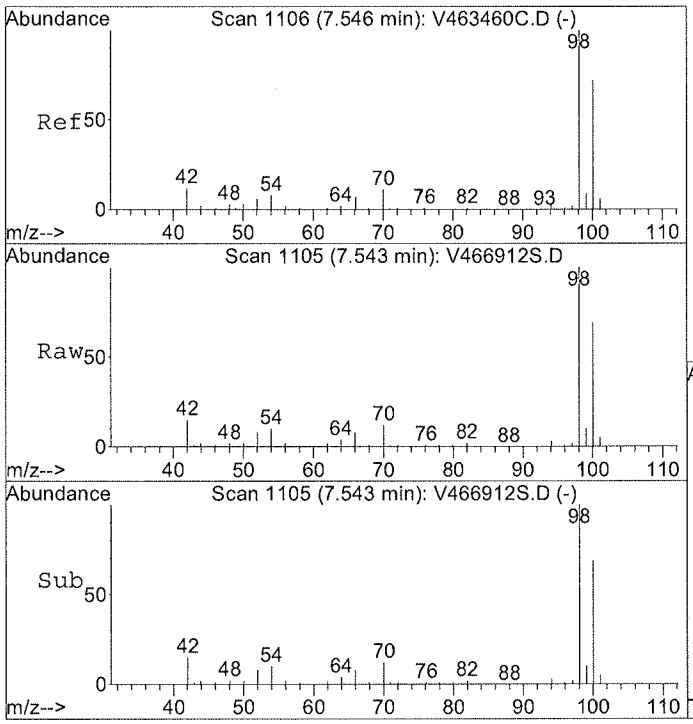


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.04 min Scan# 1360
Delta R.T. 0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion:117 Resp: 419735

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	32.4	25.9	38.9

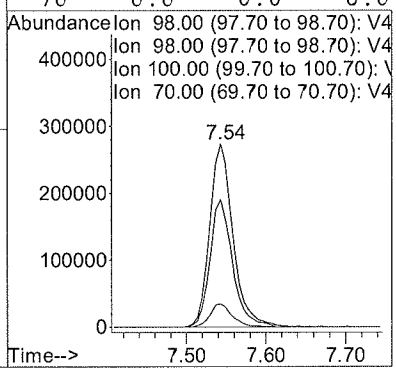


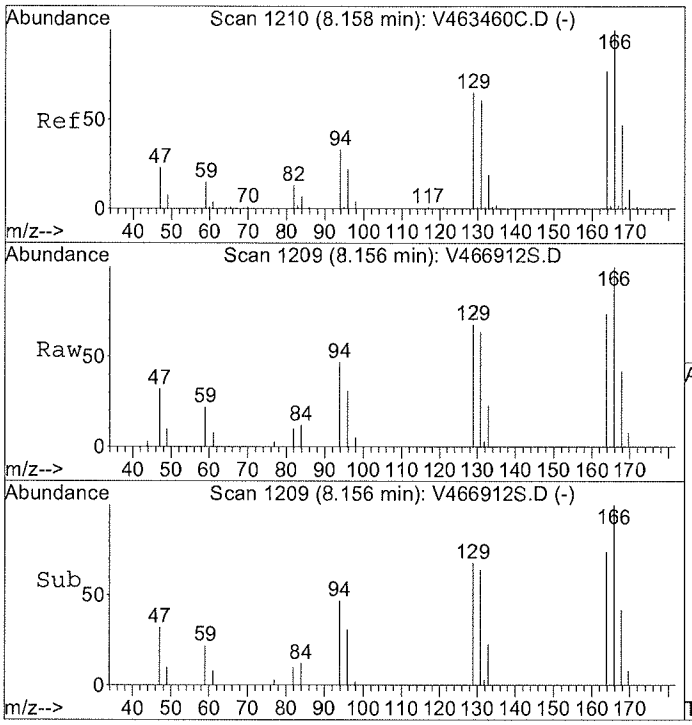


#47
Toluene-d8(SURR)
Concen: N.D. ppb
RT: 7.54 min Scan# 1105
Delta R.T. 0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion: 98 Resp: 553990

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	67.7	53.8	80.6
70	0.0	0.0	0.0

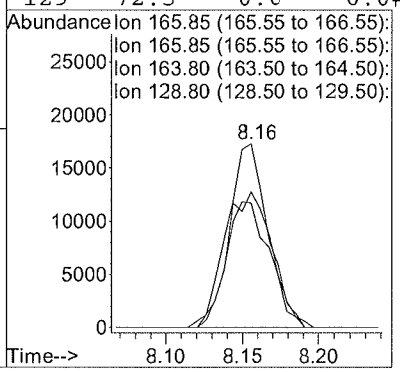


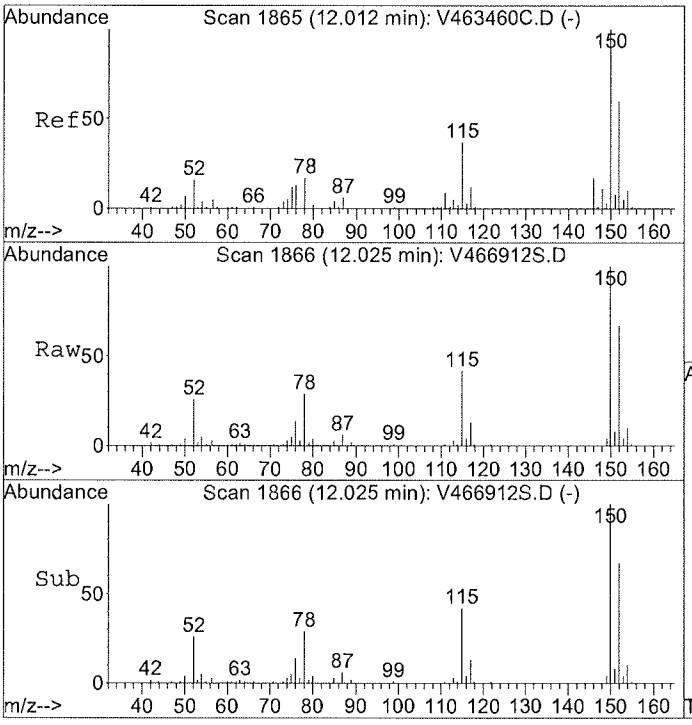


#52
Tetrachloroethylene
Concen: 6.91 ppb
RT: 8.16 min Scan# 1209
Delta R.T. 0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion:166 Resp: 32332

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
164	79.9	0.0	0.0#
129	72.5	0.0	0.0#

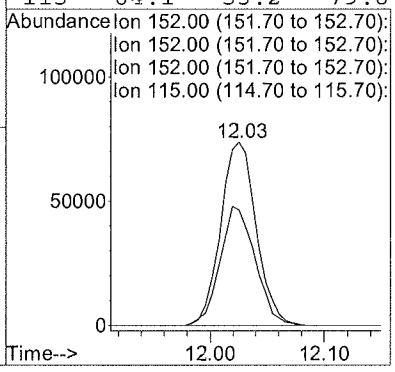


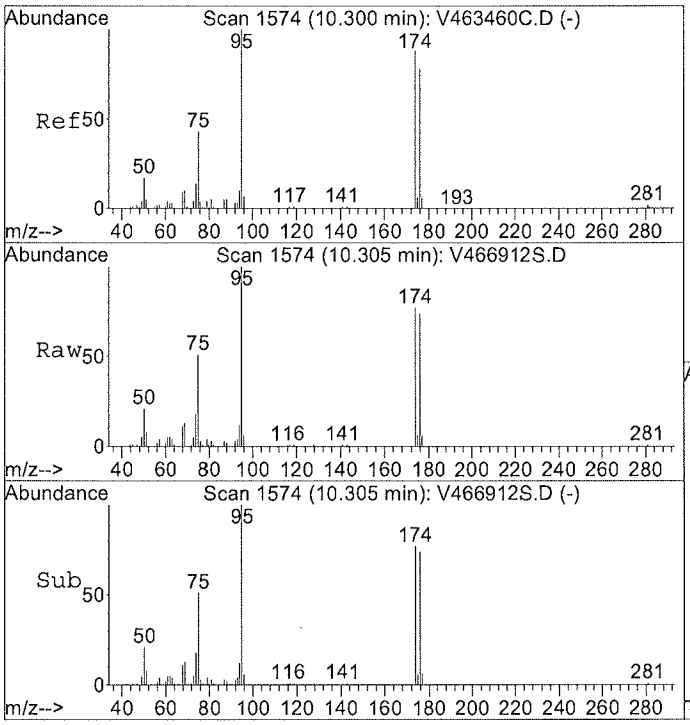


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.03 min Scan# 1866
Delta R.T. 0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion:152 Resp: 159797

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	64.1	53.2	79.8

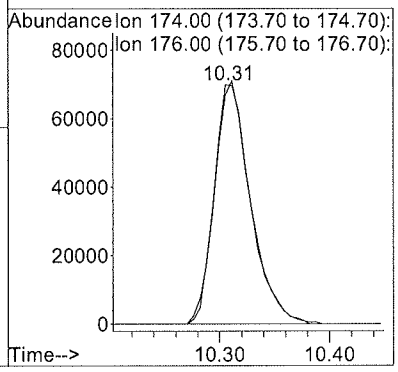




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.31 min Scan# 1574
Delta R.T. -0.00 min
Lab File: V466912S.D
Acq: 30 Sep 2014 4:15 pm

Tgt Ion:174 Resp: 161487

Ion	Ratio	Lower	Upper
174	100		
176	95.8	76.2	114.2



Response Factor Report GCMS-VOA4

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration

Calibration Files
20 =V466880C.D 50 =V466881C.D 100 =V466882C.D
200 =V466883C.D 5 =V466878C.D 10 =V466879C.D

		Compound	20	50	100	200	5	10	Avg	%RSD
1)		FLUOROBENZENE(ISTD)	----------ISTD----------							
2)		Dichlorodifluoromet	1.898	1.724	1.821	1.781	1.840	1.796	1.810	3.23
3)	P	Chloromethane	1.484	1.365	1.411	1.386	1.528	1.430	1.434	4.30
4)	C	Vinyl Chloride	1.509	1.371	1.388	1.345	1.404	1.371	1.398	4.15#
5)		Bromomethane	0.808	0.710	0.766	0.751	1.025	0.887	0.825	13.95
6)		Chloroethane	0.982	0.846	0.875	0.842	0.877	0.890	0.886	5.75
7)		Trichlorofluorometh	2.762	2.502	2.656	2.527	2.626	2.625	2.616	3.58
8)		Ethyl Ether	0.880	0.843	0.893	0.878	0.865	0.803	0.860	3.81
9)		Freon-113	1.534	1.465	1.558	1.458	1.497	1.359	1.478	4.76
10)	C,M	1,1-Dichloroethylen	2.362	2.175	2.264	2.206	2.379	2.281	2.278	3.58#
11)		Acrolein	0.074	0.064	0.078	0.083	0.046	0.075	0.070	18.88
12)		Iodomethane	0.914	1.214	1.448	1.483	0.158	0.516	0.955	55.76
13)		Methyl Acetate	0.716	0.610	0.675	0.652	0.819	0.696	0.695	10.27
14)		tert Butyl Alcohol	0.115	0.108	0.106	0.119	0.040	0.102	0.098	29.75
15)		Acrylonitrile	0.239	0.202	0.242	0.240	0.196	0.252	0.229	10.23
16)		trans-1,2-Dichloroe	2.160	1.967	2.078	2.038	1.863	2.081	2.031	5.11
17)		Carbon Disulfide	4.199	3.819	4.020	3.875	4.021	4.089	4.004	3.48
18)		Methylene Chloride	1.888	1.590	1.719	1.668		1.949	1.763	8.56
19)		tert-Butyl Methyl E	3.569	3.218	3.447	3.422	3.695	3.504	3.476	4.59
20)		Acetone	0.535	0.353	0.514	0.312		0.707	0.484	32.66
21)	P	1,1-Dichloroethane	2.678	2.315	2.494	2.457	2.653	2.501	2.516	5.31
22)		Vinyl Acetate	1.281	1.213	1.137	1.323	1.202	1.236	1.232	5.26
23)		cis-1,2-Dichloroeth	1.539	1.365	1.455	1.450	1.496	1.514	1.470	4.20
24)		2-Butanone	0.439	0.370	0.477	0.399	0.432	0.452	0.428	9.00
25)		2,2-Dichloropropane	2.671	2.411	2.590	2.527	2.601	2.493	2.549	3.60
26)		Bromochloromethane	1.070	0.985	1.022	0.982	0.988	1.016	1.010	3.32
27)	C	Chloroform	2.859	2.540	2.804	2.683	2.535	2.761	2.697	5.06#
28)		1,1,1-Trichloroetha	2.703	2.511	2.645	2.604	2.737	2.604	2.634	3.05
29)		Cyclohexane	2.171	1.991	2.162	2.076	2.228	2.034	2.110	4.31
30)		1,1-Dichloropropyle	2.183	1.959	2.102	1.974	2.049	2.107	2.062	4.17
31)	S	d4-1,2-Dichloroetha	1.589	1.535	1.615	1.559	1.561	1.554	1.569	1.83
32)		Carbon Tetrachlorid	2.429	2.205	2.400	2.304	2.322	2.310	2.328	3.41
33)		1,2-Dichloroethane	2.134	1.904	2.161	2.033	2.098	2.017	2.058	4.56
34)	M	Benzene	4.763	4.344	4.544	4.426	4.592	4.578	4.541	3.20
35)		CHLOROBENZENE-d5(ISTD	----------ISTD----------							
36)		Tetrahydrofuran	0.072	0.068	0.074	0.078	0.025	0.042	0.060	35.43
37)	M	Trichloroethylene	0.483	0.442	0.463	0.449	0.428	0.472	0.456	4.42
38)		Methyl Cyclohexane	0.698	0.666	0.692	0.690	0.670	0.690	0.684	1.89
39)		Methyl Methyacrylat	0.191	0.190	0.194	0.201	0.184	0.187	0.191	3.13
40)		Dibromomethane	0.235	0.234	0.238	0.243	0.227	0.234	0.235	2.22
41)		Bromodichloromethan	0.620	0.599	0.620	0.634	0.578	0.617	0.611	3.25
42)	C	1,2-Dichloropropane	0.342	0.317	0.333	0.334	0.340	0.344	0.335	2.91#
43)		1,4-Dioxane	0.001	0.001	0.001	0.001	0.000	0.001	0.001#	43.35
44)		2-Chloroethyl vinyl							0.000#	-1.00
45)		cis-1,3-Dichloropro	0.599	0.587	0.606	0.620	0.553	0.600	0.594	3.84
46)		2-Hexanone	0.211	0.188	0.222	0.201	0.150	0.180	0.192	13.46
47)	S	Toluene-d8(SURR)	1.292	1.327	1.316	1.320	1.311	1.307	1.312	0.92
48)	C,M	Toluene	1.671	1.540	1.551	1.540	1.652	1.654	1.601	3.97#
49)		trans-1,3-Dichlorop	0.582	0.569	0.575	0.585	0.539	0.589	0.573	3.20
50)		1,1,2-Trichloroetha	0.232	0.223	0.231	0.235	0.237	0.239	0.233	2.41
51)		1,3-Dichloropropane	0.528	0.503	0.501	0.519	0.536	0.495	0.514	3.22
52)		Tetrachloroethylene	0.535	0.532	0.684	0.510	0.546	0.535	0.557	11.40

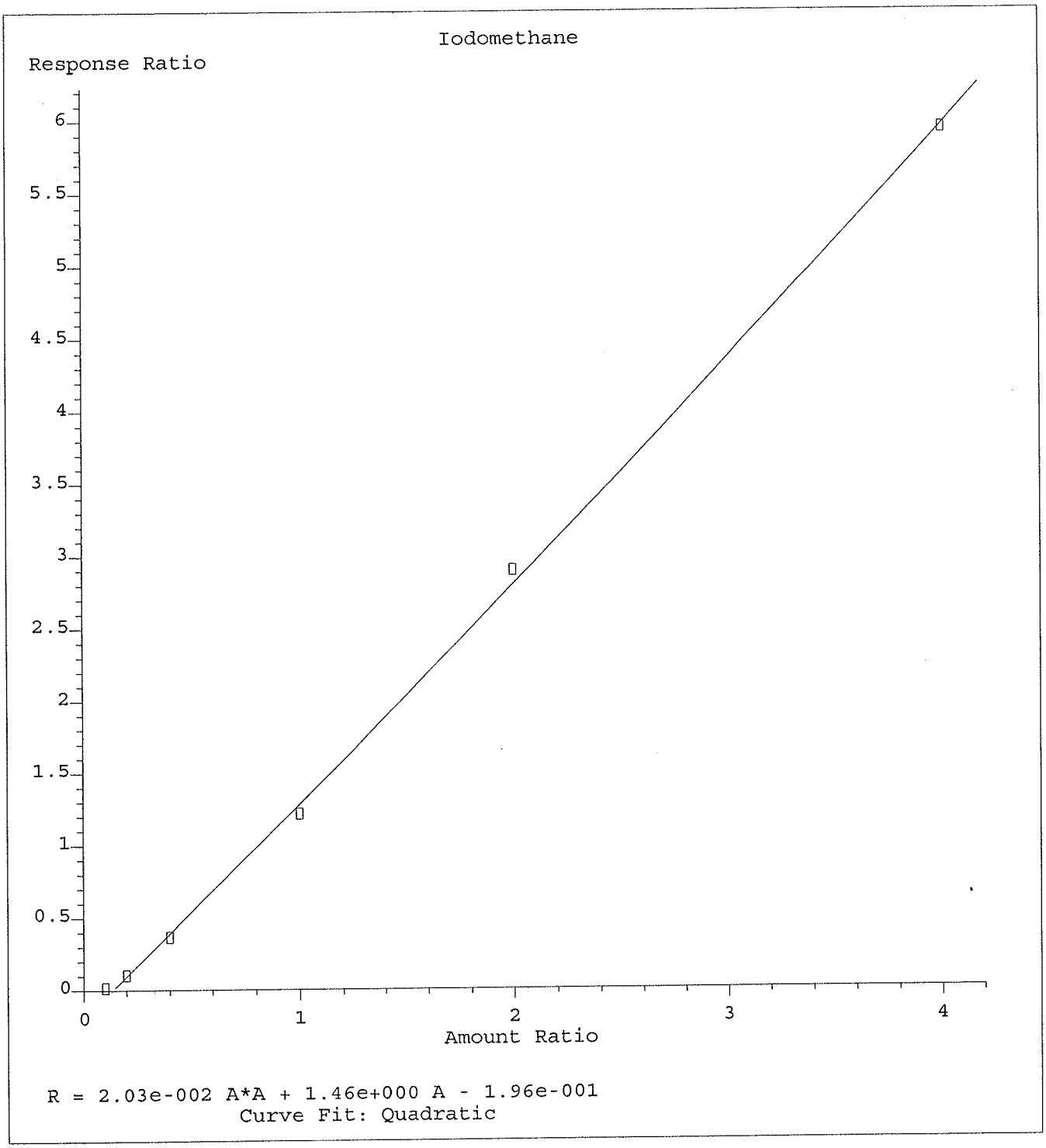
(#) = Out of Range

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration

Calibration Files
20 =V466880C.D 50 =V466881C.D 100 =V466882C.D
200 =V466883C.D 5 =V466878C.D 10 =V466879C.D

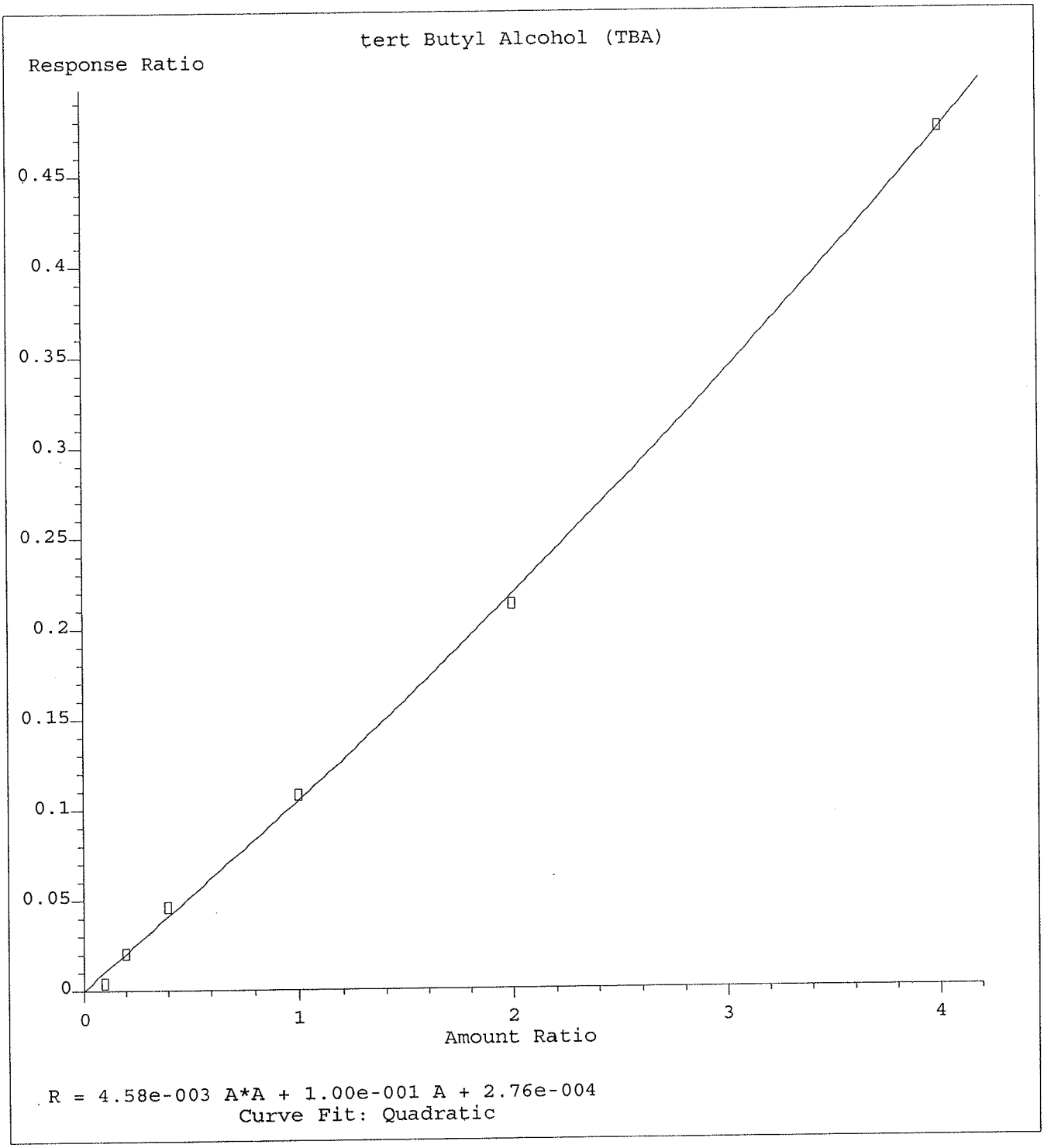
		Compound	20	50	100	200	5	10	Avg	%RSD
53)		4-Methyl-2-Pentanon	0.279	0.264	0.289	0.297	0.304	0.282	0.286	4.93
54)		Dibromochloromethan	0.405	0.395	0.415	0.426	0.388	0.404	0.405	3.32
55)		1,2-Dibromoethane	0.316	0.296	0.311	0.315	0.277	0.318	0.306	5.23
56)	P,M	Chlorobenzene	1.058	0.998	1.019	1.007	1.102	1.043	1.038	3.70
57)	C	Ethyl Benzene	1.933	1.800	1.815	1.762	1.896	1.904	1.852	3.69#
58)		p- & m-Xylenes	1.505	1.422	1.414	1.360	1.570	1.474	1.458	5.12
59)		o-Xylene	1.506	1.428	1.426	1.419	1.492	1.467	1.456	2.56
60)		Styrene	1.076	1.037	1.054	1.031	1.040	1.040	1.046	1.58
61)		1,1,1,2-Tetrachloro	0.424	0.405	0.408	0.406	0.419	0.431	0.416	2.65
62)		p-Ethyltoulene	1.687	1.626	1.677	1.646	1.636	1.640	1.652	1.48
63)		p-Diethylbenzene	0.736	0.771	0.839	0.838	0.594	0.646	0.737	13.63
64)		1,2-DICHLOROBENZENE-d	----------	----------	ISTD	----------	----------	----------	----------	
65)	p	Bromoform	0.569	0.542	0.579	0.615	0.494	0.537	0.556	7.47
66)	S	p-Bromofluorobenzen	0.939	0.939	0.908	0.943	0.946	0.957	0.939	1.75
67)	P	1,1,2,2-Tetrachloro	0.814	0.713	0.719	0.776	0.756	0.760	0.756	4.93
68)		trans-1,4-Dichloro-	0.835	0.775	0.817	0.866	0.808	0.859	0.827	4.10
69)		1,2,3-Trichloroprop	0.256	0.231	0.246	0.256	0.247	0.271	0.251	5.27
70)		Isopropylbenzene	4.521	4.187	4.226	4.289	4.633	4.605	4.410	4.52
71)		Bromobenzene	1.663	1.510	1.516	1.577	1.600	1.581	1.575	3.60
72)		n-Propylbenzene	5.213	4.769	4.848	4.905	5.106	5.041	4.980	3.37
73)		2-Chlorotoluene	3.535	3.232	3.235	3.263	3.635	3.685	3.431	6.17
74)		4-Chlorotoluene	3.242	2.928	2.986	3.032	3.155	3.171	3.086	3.95
75)		tert-Butylbenzene	3.109	2.867	2.895	2.949	3.100	3.082	3.000	3.64
76)		1,3,5-trimethylbenz	3.662	3.416	3.434	3.406	3.672	3.651	3.540	3.77
77)		1,2,4-trimethylbenz	3.433	3.169	3.270	3.328	3.187	3.291	3.280	2.96
78)		sec-Butylbenzene	4.564	4.184	4.318	4.324	4.400	4.479	4.378	3.05
79)		1,3-Dichlorobenzene	1.899	1.757	1.773	1.804	1.861	1.790	1.814	3.01
80)		1,4-Dichlorobenzene	1.894	1.761	1.759	1.802	1.769	1.843	1.805	3.00
81)		1,2-Dichlorobenzene	1.714	1.567	1.616	1.637	1.711	1.660	1.651	3.44
82)		p-Isopropyltoluene	3.626	3.385	3.517	3.575	3.225	3.449	3.463	4.18
83)		n-Butylbenzene	3.497	3.497	3.769	3.902	2.625	3.066	3.393	13.95
84)		1,2,4,5-Tetramethyl	2.342	2.223	2.381	2.491	1.929	2.240	2.268	8.50
85)		1,2-Dibromo-3-chlor	0.146	0.149	0.150	0.171	0.132	0.148	0.149	8.30
86)		1,2,4-Trichlorobenz	0.737	0.808	0.939	1.035	0.455	0.588	0.760	28.40
87)		Naphthalene	1.062	1.127	1.346	1.543	0.663	0.880	1.104	28.60
88)		Hexachloro-1,3-Buta	0.741	0.715	0.734	0.794	0.575	0.656	0.702	10.92
89)		1,2,3-Trichlorobenz	0.604	0.681	0.783	0.875	0.324	0.464	0.622	32.79

(#) = Out of Range



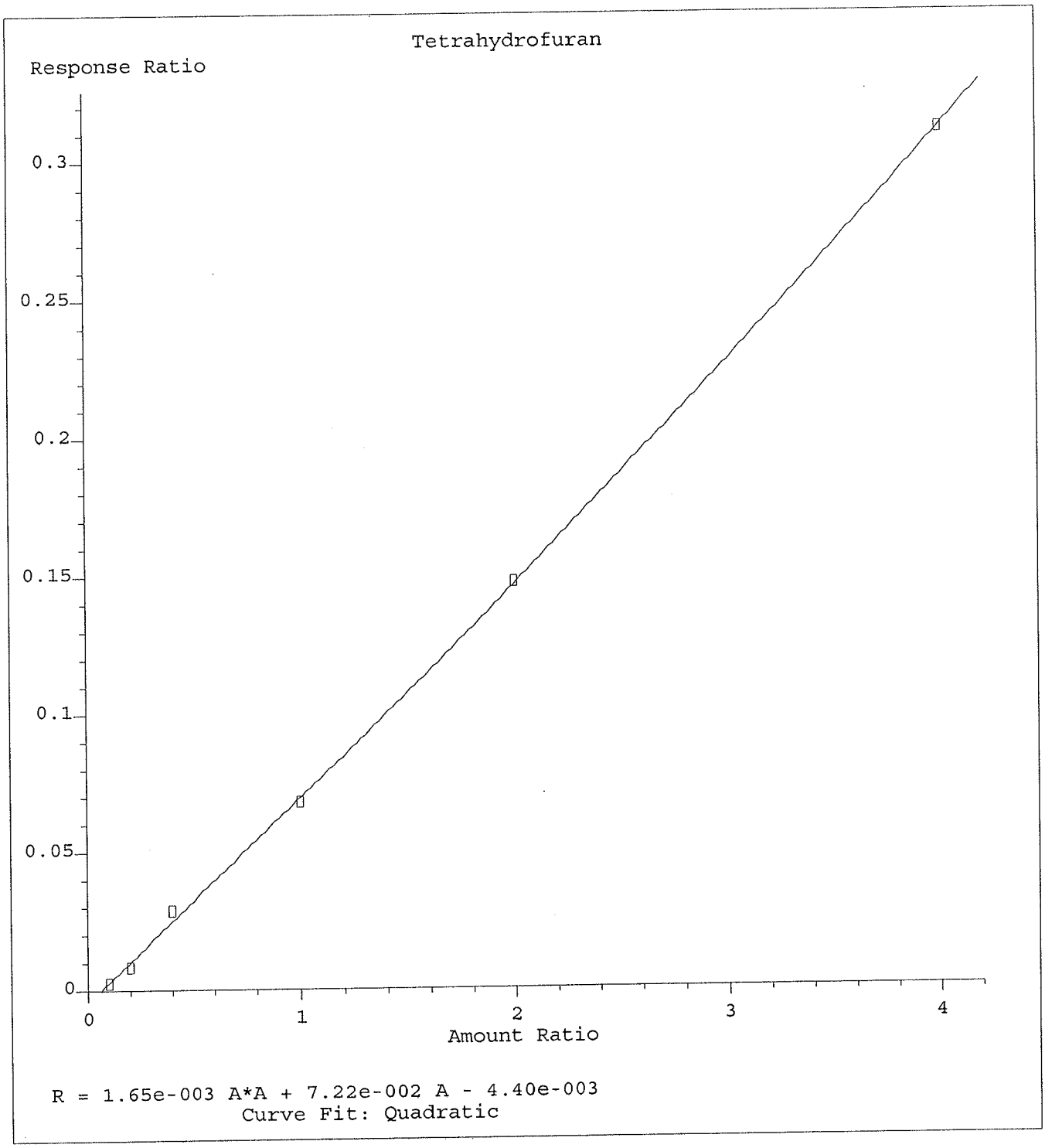
Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:03:20 2014

0.999



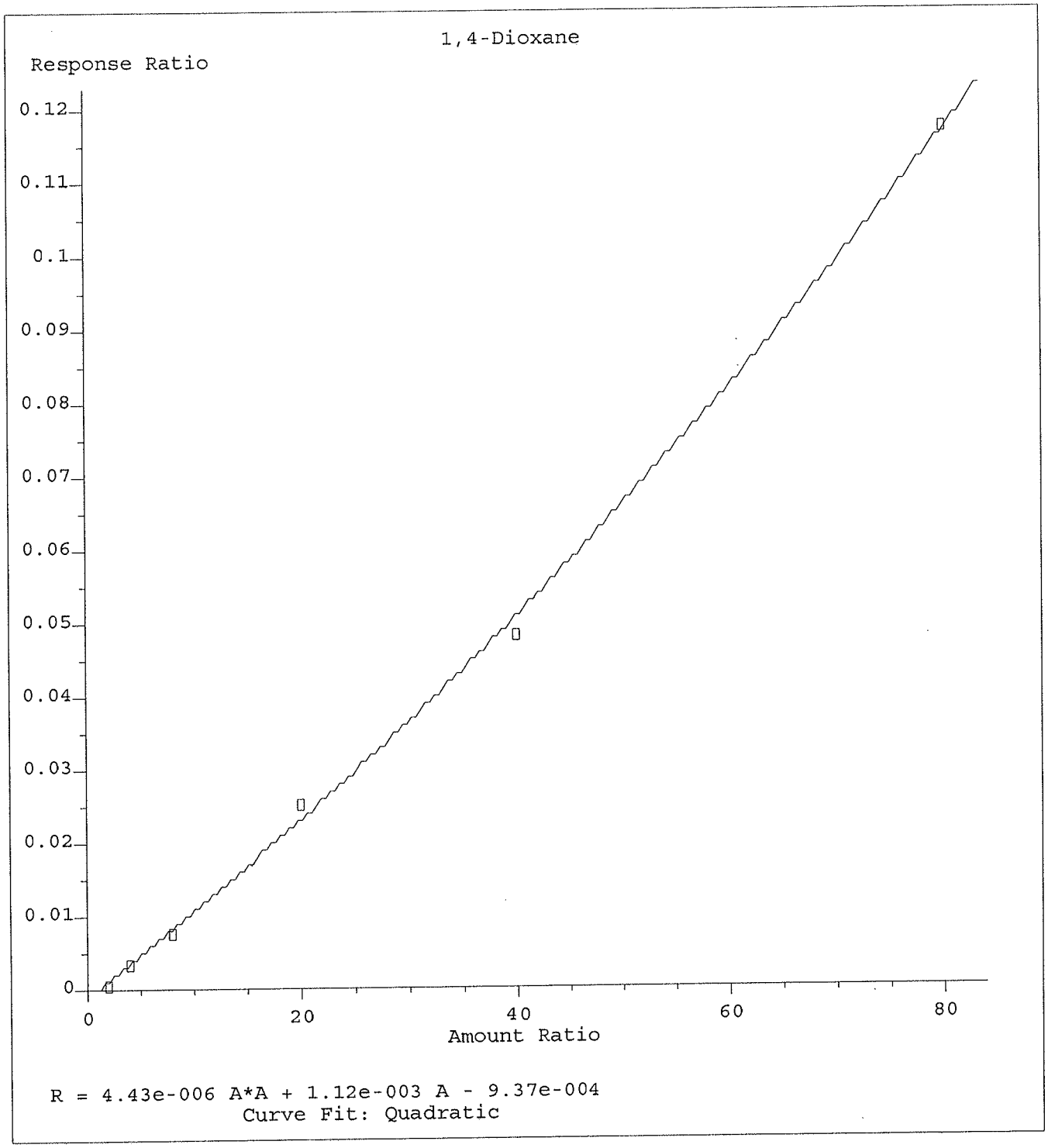
Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:03:45 2014

0.999



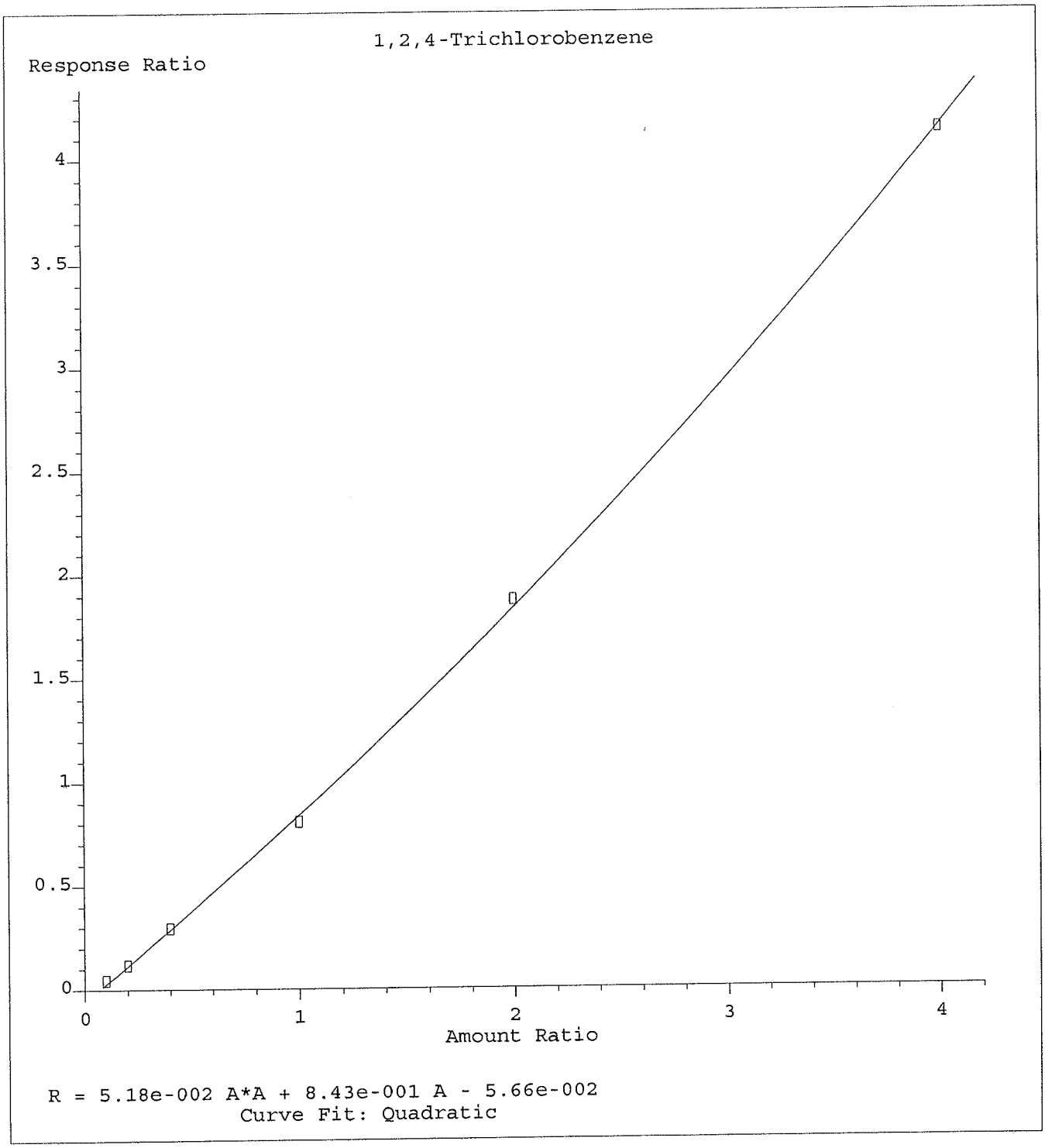
Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:04:13 2014

1.00



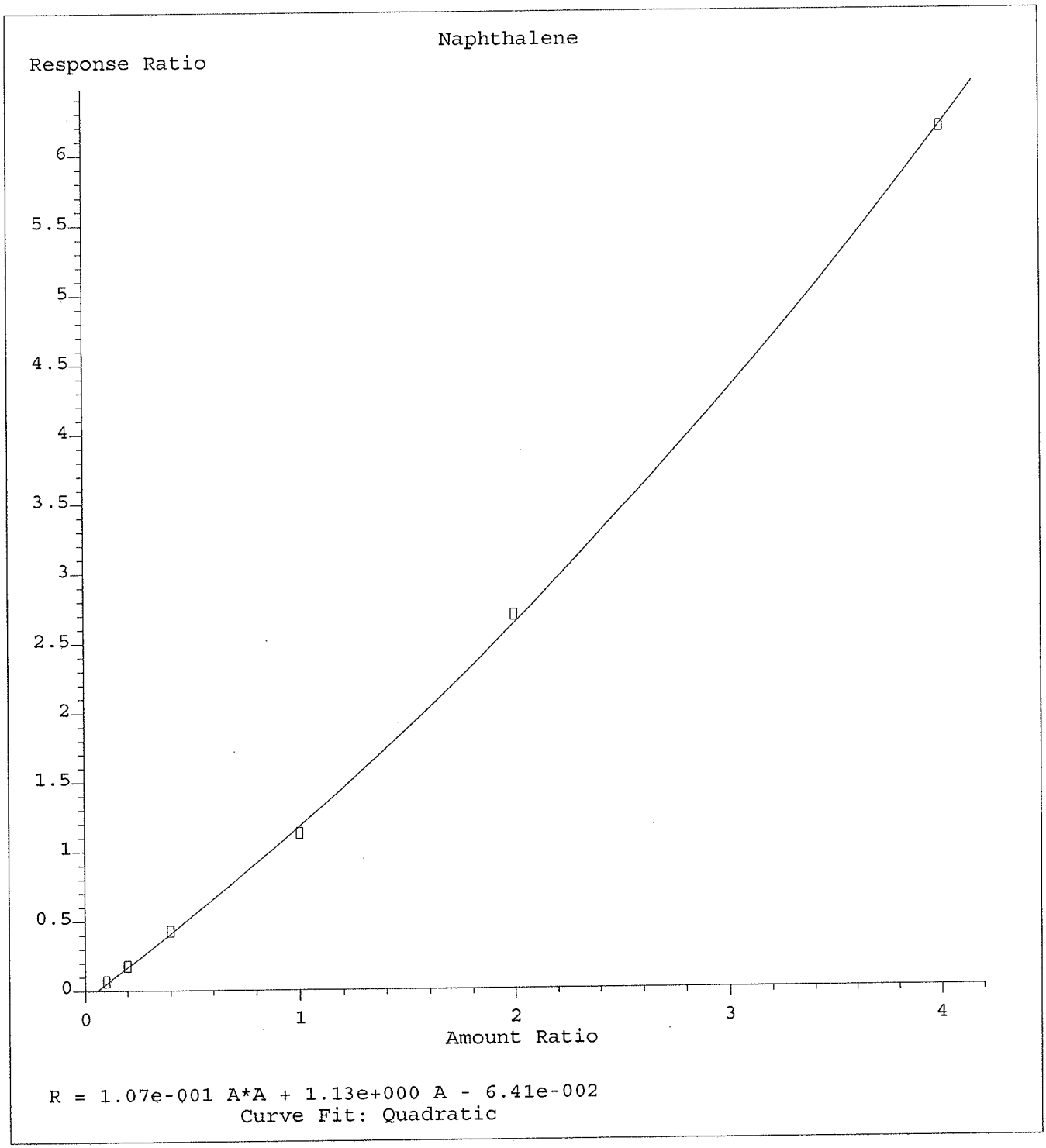
Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:04:47 2014

0.998



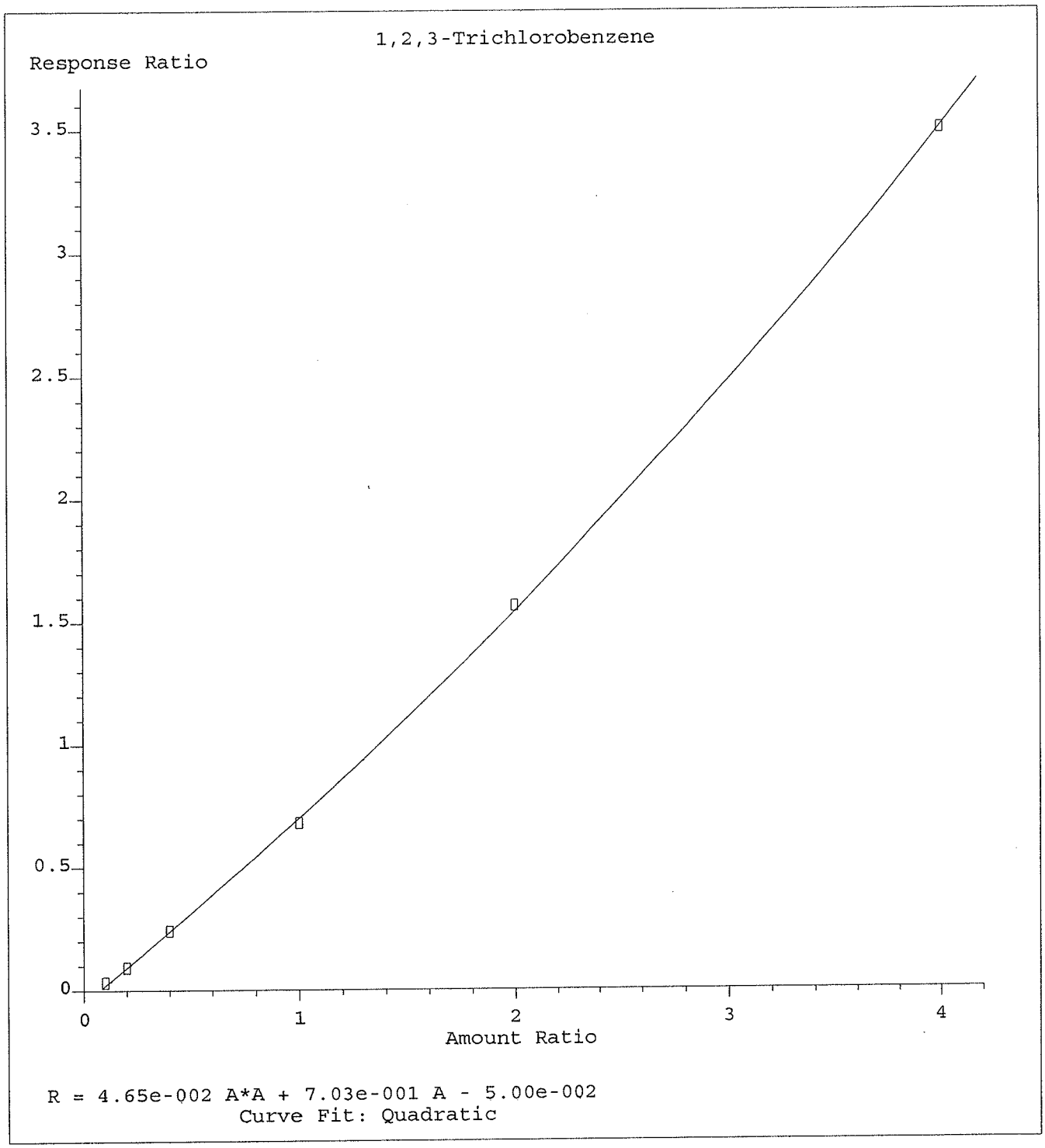
Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:05:52 2014

1.00



Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:05:52 2014

1,00



Method Name: G:\MSVOAM~1\V4C00234.M
Calibration Table Last Updated: Tue Sep 30 09:05:52 2014

1.00

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466878C.D Vial: 22
Acq On : 29 Sep 2014 8:35 pm Operator: BK
Sample : 5PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:49 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	132401	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	422667	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	176664	50.00	ppb		0.01
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	206675	55.97	ppb		0.01
Spiked Amount 50.000	Range 67 - 128		Recovery = 111.94%				
47) Toluene-d8(SURR)	7.54	98	554159	49.48	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.96%				
66) p-Bromofluorobenzene(SURR)	10.31	174	167130	51.20	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 102.40%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	24359m	4.67	ppb		
3) Chloromethane	1.99	50	20235m	4.33	ppb		
4) Vinyl Chloride	2.04	62	18593m	5.00	ppb		
5) Bromomethane	2.40	94	13573m	5.62	ppb		
6) Chloroethane	2.51	64	11617m	5.36	ppb		
7) Trichlorofluoromethane	2.75	101	34766	5.96	ppb		97
8) Ethyl Ether	3.04	59	11447	5.67	ppb		96
9) Freon-113	3.25	101	19814	5.86	ppb		95
10) 1,1-Dichloroethylene	3.28	61	31492	6.37	ppb		97
11) Acrolein	3.23	56	613m	8.13	ppb		
13) Methyl Acetate	3.68	43	10849	6.31	ppb		97
15) Acrylonitrile	4.06	53	2601	3.80	ppb	#	62
16) trans-1,2-Dichloroethylene	4.01	61	24663	4.60	ppb		94
17) Carbon Disulfide	3.51	76	53239	6.06	ppb		100
18) Methylene Chloride	3.78	49	29846	6.03	ppb	#	71
19) tert-Butyl Methyl Ether (M	4.00	73	48917	5.80	ppb	#	98
20) Acetone	3.38	43	15131	16.15	ppb		99
21) 1,1-Dichloroethane	4.43	63	35122	5.40	ppb		99
22) Vinyl Acetate	4.47	43	15919	4.52	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	19810	5.29	ppb	#	67
24) 2-Butanone	5.01	43	5720	4.75	ppb		98
25) 2,2-Dichloropropane	4.96	77	34441	5.48	ppb		99
26) Bromochloromethane	5.22	49	13083	4.86	ppb		96
27) Chloroform	5.28	83	33562	5.03	ppb		98
28) 1,1,1-Trichloroethane	5.42	97	36233	5.96	ppb		98
29) Cyclohexane	5.44	56	29495	4.84	ppb	#	90
30) 1,1-Dichloropropylene	5.56	75	27126	5.14	ppb		99
32) Carbon Tetrachloride	5.56	117	30745	5.85	ppb		100
33) 1,2-Dichloroethane	5.83	62	27780	5.80	ppb	#	98
34) Benzene	5.78	78	60798	5.00	ppb		100
37) Trichloroethylene	6.38	95	18102	4.79	ppb		98
38) Methyl Cyclohexane	6.51	83	28312	4.57	ppb	#	99
39) Methyl Methyacrylate	6.68	69	7766	4.55	ppb	#	79
40) Dibromomethane	6.76	93	9598	5.13	ppb		98
41) Bromodichloromethane	6.89	83	24413	5.12	ppb	#	96
42) 1,2-Dichloropropane	6.62	63	14379	4.70	ppb	#	74
43) 1,4-Dioxane	6.78	88	206m	13.07	ppb		
45) cis-1,3-Dichloropropene	7.31	75	23380	4.57	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466878C.D Vial: 22
Acq On : 29 Sep 2014 8:35 pm Operator: BK
Sample : 5PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:49 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

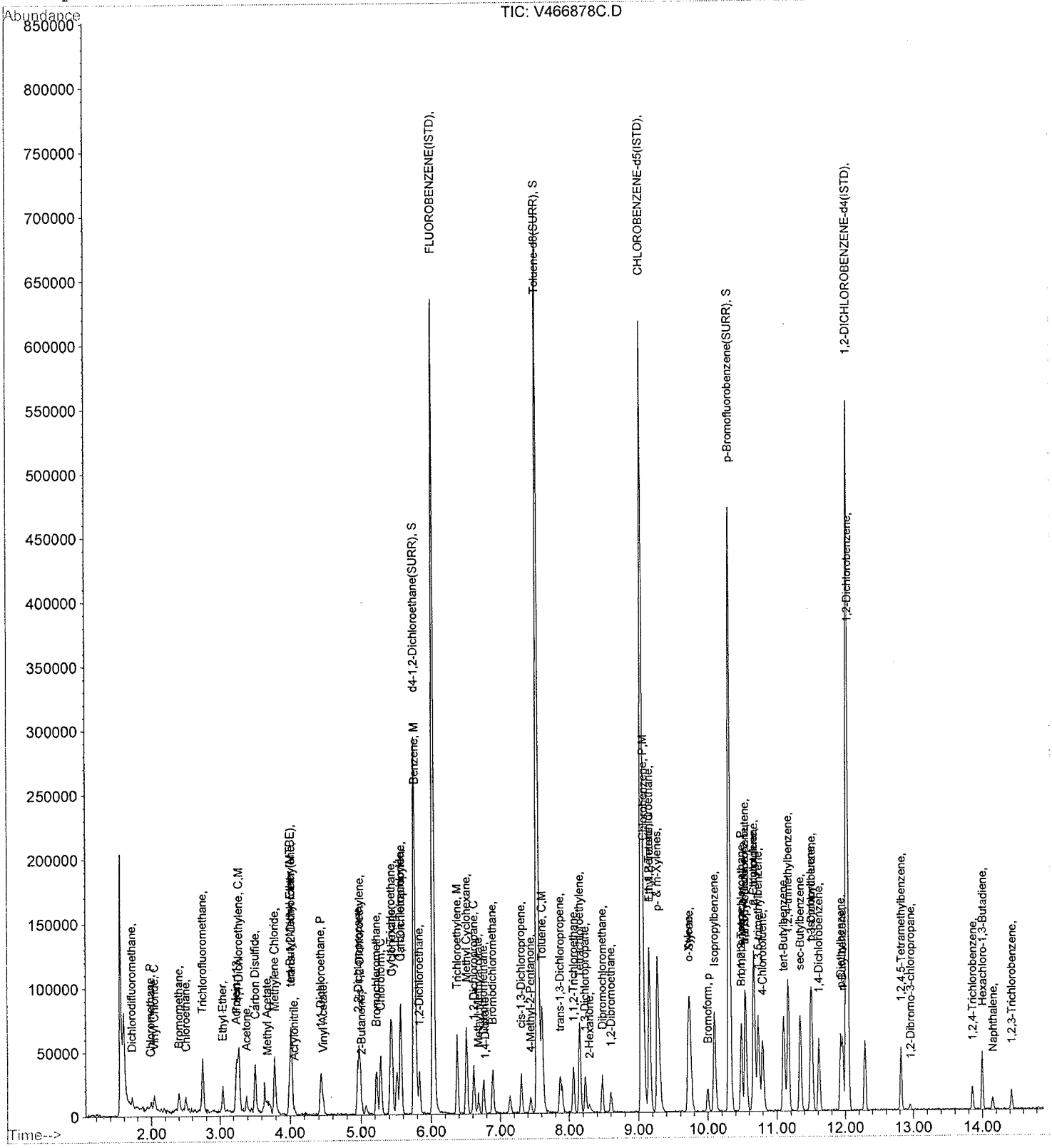
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Hexanone	8.29	43	6323	3.47	ppb		99
48)	Toluene	7.61	91	69817	5.10	ppb		100
49)	trans-1,3-Dichloropropene	7.87	75	22769	4.84	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	10010	5.02	ppb		99
51)	1,3-Dichloropropane	8.23	76	22672	5.10	ppb	#	86
52)	Tetrachloroethylene	8.16	166	23085	5.36	ppb	#	100
53)	4-Methyl-2-Pentanone	7.45	43	12864	5.06	ppb	#	95
54)	Dibromochloromethane	8.48	129	16412	5.32	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	11724	4.68	ppb		94
56)	Chlorobenzene	9.08	112	46569	5.40	ppb	#	99
57)	Ethyl Benzene	9.16	91	80120	5.15	ppb		99
58)	p- & m-Xylenes	9.27	91	132711	11.11	ppb		98
59)	o-Xylene	9.72	91	63065	5.25	ppb		99
60)	Styrene	9.73	104	43948	4.99	ppb	#	78
61)	1,1,1,2-Tetrachloroethane	9.16	131	17725	5.38	ppb		98
62)	p-Ethyltoulene	10.67	105	69160	4.96	ppb		94
63)	p-Diethylbenzene	11.93	119	25090	3.64	ppb		90
65)	Bromoform	10.00	173	8720	5.02	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	13355	5.00	ppb	#	96
68)	trans-1,4-Dichloro-2-buten	10.54	75	14279	4.78	ppb		98
69)	1,2,3-Trichloropropane	10.55	110	4357	5.05	ppb		91
70)	Isopropylbenzene	10.09	105	81852	5.27	ppb	#	90
71)	Bromobenzene	10.48	77	28275	5.01	ppb		98
72)	n-Propylbenzene	10.54	91	90199	4.99	ppb		100
73)	2-Chlorotoluene	10.68	91	64220	5.38	ppb	#	99
74)	4-Chlorotoluene	10.80	91	55741	5.11	ppb	#	100
75)	tert-Butylbenzene	11.09	119	54763	5.18	ppb	#	90
76)	1,3,5-trimethylbenzene	10.73	105	64871	5.09	ppb		100
77)	1,2,4-trimethylbenzene	11.16	105	56305	4.68	ppb		99
78)	sec-Butylbenzene	11.34	105	77731	4.95	ppb	#	93
79)	1,3-Dichlorobenzene	11.51	146	32873	5.08	ppb	#	100
80)	1,4-Dichlorobenzene	11.61	146	31250	4.91	ppb	#	100
81)	1,2-Dichlorobenzene	12.04	146	30222	5.25	ppb	#	68
82)	p-Isopropyltoluene	11.49	119	56977	4.41	ppb	#	99
83)	n-Butylbenzene	11.95	91	46367	3.40	ppb	#	100
84)	1,2,4,5-Tetramethylbenzene	12.82	119	34081	6.39	ppb		96
85)	1,2-Dibromo-3-chloropropan	12.95	75	2336	5.05	ppb		91
86)	1,2,4-Trichlorobenzene	13.85	180	8035	6.55	ppb	#	50
87)	Naphthalene	14.15	128	11719	7.39	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	10159	4.35	ppb	#	68
89)	1,2,3-Trichlorobenzene	14.43	182	5721	6.07	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466878C.D Vial: 22
Acq On : 29 Sep 2014 8:35 pm Operator: BK
Sample : 5PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:49 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466879C.D Vial: 23
Acq On : 29 Sep 2014 9:09 pm Operator: BK
Sample : 10PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:50 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	137548	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	433754	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.03	152	180405	50.00	ppb		0.01
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	213801	55.73	ppb		0.01
Spiked Amount 50.000	Range 67 - 128		Recovery = 111.46%				
47) Toluene-d8(SURR)	7.55	98	566910	49.32	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.64%				
66) p-Bromofluorobenzene(SURR)	10.31	174	172652	51.80	ppb		0.01
Spiked Amount 50.000	Range 63 - 166		Recovery = 103.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	49418m	9.12	ppb		
3) Chloromethane	1.98	50	39343m	8.11	ppb		
4) Vinyl Chloride	2.04	62	37722m	9.76	ppb		
5) Bromomethane	2.39	94	24388m	9.72	ppb		
6) Chloroethane	2.50	64	24496m	10.88	ppb		
7) Trichlorofluoromethane	2.74	101	72223	11.92	ppb		99
8) Ethyl Ether	3.04	59	22084	10.53	ppb		92
9) Freon-113	3.25	101	37372	10.64	ppb		91
10) 1,1-Dichloroethylene	3.27	61	62746	12.22	ppb		99
11) Acrolein	3.23	56	2052m	29.80	ppb		
12) Iodomethane	3.46	142	14190	4.38	ppb		100
13) Methyl Acetate	3.67	43	19141	10.72	ppb		99
14) tert Butyl Alcohol (TBA)	3.92	59	2809m	8.80	ppb		
15) Acrylonitrile	4.05	53	6940	9.76	ppb		98
16) trans-1,2-Dichloroethylene	4.02	61	57247	10.28	ppb		99
17) Carbon Disulfide	3.50	76	112487	12.33	ppb		100
18) Methylene Chloride	3.78	49	53615	10.42	ppb		99
19) tert-Butyl Methyl Ether (M	3.99	73	96400	11.00	ppb		99
20) Acetone	3.38	43	19446	19.98	ppb		100
21) 1,1-Dichloroethane	4.43	63	68788	10.18	ppb		99
22) Vinyl Acetate	4.46	43	34006	9.30	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	41636	10.70	ppb	#	98
24) 2-Butanone	5.01	43	12433m	9.94	ppb		
25) 2,2-Dichloropropane	4.96	77	68574	10.50	ppb		100
26) Bromochloromethane	5.22	49	27960	9.99	ppb		97
27) Chloroform	5.28	83	75965	10.95	ppb		99
28) 1,1,1-Trichloroethane	5.42	97	71624	11.33	ppb		100
29) Cyclohexane	5.44	56	55960	8.84	ppb		97
30) 1,1-Dichloropropylene	5.57	75	57970	10.58	ppb		99
32) Carbon Tetrachloride	5.56	117	63557	11.64	ppb		97
33) 1,2-Dichloroethane	5.83	62	55497	11.16	ppb	#	99
34) Benzene	5.78	78	125936	9.97	ppb		100
36) Tetrahydrofuran	5.27	42	3616m	4.87	ppb		
37) Trichloroethylene	6.38	95	40941	10.56	ppb		98
38) Methyl Cyclohexane	6.51	83	59822	9.42	ppb	#	74
39) Methyl Methyacrylate	6.68	69	16191	9.25	ppb	#	93
40) Dibromomethane	6.76	93	20307	10.57	ppb	#	61
41) Bromodichloromethane	6.89	83	53550	10.95	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466879C.D Vial: 23
Acq On : 29 Sep 2014 9:09 pm Operator: BK
Sample : 10PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:50 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

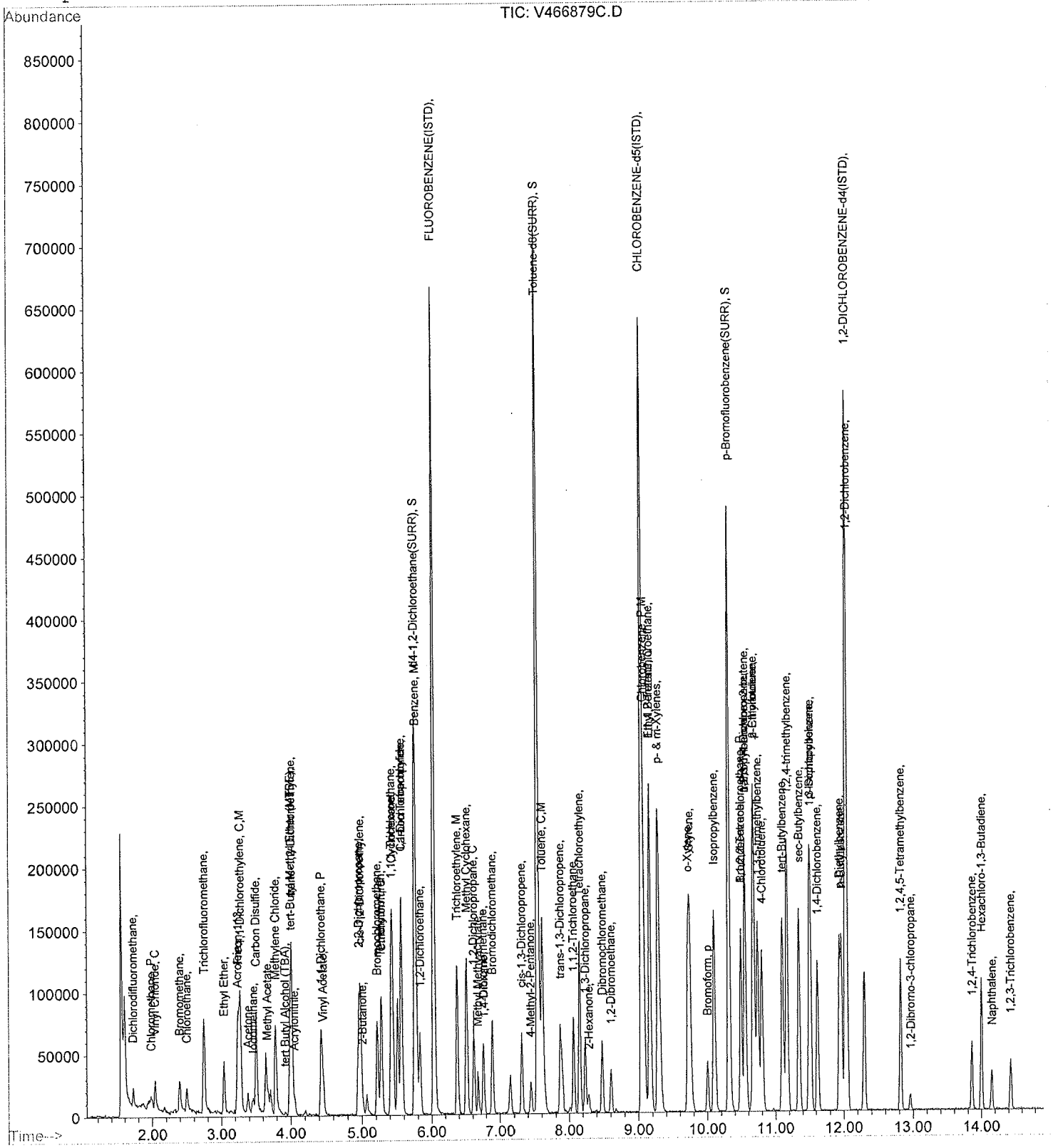
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.61	63	29823	9.49	ppb		96
43)	1,4-Dioxane	6.77	88	1454m	89.87	ppb		
45)	cis-1,3-Dichloropropene	7.31	75	52068	9.91	ppb		100
46)	2-Hexanone	8.29	43	15577	8.33	ppb		98
48)	Toluene	7.62	91	143475	10.22	ppb		99
49)	trans-1,3-Dichloropropene	7.87	75	51086	10.57	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	20750	10.15	ppb		98
51)	1,3-Dichloropropane	8.23	76	42946	9.42	ppb	#	86
52)	Tetrachloroethylene	8.16	166	46386	10.50	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	24464	9.38	ppb		98
54)	Dibromochloromethane	8.48	129	35036	11.07	ppb	#	100
55)	1,2-Dibromoethane	8.61	107	27600	10.73	ppb		98
56)	Chlorobenzene	9.08	112	90443	10.23	ppb	#	86
57)	Ethyl Benzene	9.16	91	165181	10.35	ppb		100
58)	p- & m-Xylenes	9.28	91	255785	20.87	ppb		100
59)	o-Xylene	9.71	91	127254	10.33	ppb		100
60)	Styrene	9.74	104	90250	9.98	ppb		98
61)	1,1,1,2-Tetrachloroethane	9.16	131	37432	11.08	ppb		98
62)	p-Ethyltoulene	10.67	105	142261	9.94	ppb		94
63)	p-Diethylbenzene	11.93	119	56079	7.94	ppb	#	91
65)	Bromoform	10.00	173	19390	10.93	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.50	83	27433	10.05	ppb		99
68)	trans-1,4-Dichloro-2-buten	10.55	75	30995	10.16	ppb	#	88
69)	1,2,3-Trichloropropane	10.54	110	9777	11.11	ppb		97
70)	Isopropylbenzene	10.10	105	166159	10.48	ppb	#	100
71)	Bromobenzene	10.48	77	57041	9.89	ppb		96
72)	n-Propylbenzene	10.55	91	181870	9.85	ppb		99
73)	2-Chlorotoluene	10.68	91	132971	10.91	ppb	#	100
74)	4-Chlorotoluene	10.80	91	114406	10.27	ppb	#	87
75)	tert-Butylbenzene	11.10	119	111194	10.30	ppb	#	100
76)	1,3,5-trimethylbenzene	10.74	105	131716	10.11	ppb		99
77)	1,2,4-trimethylbenzene	11.16	105	118749	9.67	ppb		100
78)	sec-Butylbenzene	11.34	105	161608	10.07	ppb	#	100
79)	1,3-Dichlorobenzene	11.51	146	64573	9.77	ppb	#	68
80)	1,4-Dichlorobenzene	11.61	146	66507	10.24	ppb	#	68
81)	1,2-Dichlorobenzene	12.04	146	59893	10.19	ppb	#	68
82)	p-Isopropyltoluene	11.50	119	124427	9.44	ppb	#	100
83)	n-Butylbenzene	11.96	91	110633	7.95	ppb	#	100
84)	1,2,4,5-Tetramethylbenzene	12.82	119	80805	11.84	ppb		97
85)	1,2-Dibromo-3-chloropropan	12.96	75	5339	11.30	ppb		92
86)	1,2,4-Trichlorobenzene	13.85	180	21219	10.44	ppb		99
87)	Naphthalene	14.15	128	31745	11.63	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	23653	9.92	ppb	#	99
89)	1,2,3-Trichlorobenzene	14.42	182	16726	10.26	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466879C.D Vial: 23
Acq On : 29 Sep 2014 9:09 pm Operator: BK
Sample : 10PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:50 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466880C.D Vial: 24
Acq On : 29 Sep 2014 9:42 pm Operator: BK
Sample : 20PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:52 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	133520	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	439128	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	185296	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	212117	56.96	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 113.92%				
47) Toluene-d8(SURR)	7.54	98	567533	48.77	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.54%				
66) p-Bromofluorobenzene(SURR)	10.31	174	173937	50.81	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 101.62%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	101361m	19.28	ppb		
3) Chloromethane	1.99	50	79272m	16.83	ppb		
4) Vinyl Chloride	2.04	62	80616m	21.49	ppb		
5) Bromomethane	2.39	94	43166m	17.72	ppb		
6) Chloroethane	2.50	64	52450m	23.99	ppb		
7) Trichlorofluoromethane	2.75	101	147525	25.09	ppb		99
8) Ethyl Ether	3.04	59	46977	23.08	ppb		98
9) Freon-113	3.24	101	81906	24.01	ppb		96
10) 1,1-Dichloroethylene	3.27	61	126164	25.31	ppb		99
11) Acrolein	3.23	56	3971	59.81	ppb		88
12) Iodomethane	3.45	142	48804	15.53	ppb		99
13) Methyl Acetate	3.67	43	38263	22.07	ppb		100
14) tert Butyl Alcohol (TBA)	3.92	59	6145	19.84	ppb	#	100
15) Acrylonitrile	4.05	53	12786	18.53	ppb		97
16) trans-1,2-Dichloroethylene	4.01	61	115355	21.34	ppb		98
17) Carbon Disulfide	3.50	76	224270	25.33	ppb		100
18) Methylene Chloride	3.78	49	100820	20.19	ppb		99
19) tert-Butyl Methyl Ether (M	4.00	73	190601	22.41	ppb		99
20) Acetone	3.38	43	28558	30.22	ppb		99
21) 1,1-Dichloroethane	4.43	63	143026	21.81	ppb		100
22) Vinyl Acetate	4.46	43	68434	19.27	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	82219	21.77	ppb	#	99
24) 2-Butanone	5.01	43	23442	19.31	ppb		99
25) 2,2-Dichloropropane	4.96	77	142666	22.50	ppb		100
26) Bromochloromethane	5.21	49	57123	21.02	ppb		97
27) Chloroform	5.27	83	152709	22.67	ppb		100
28) 1,1,1-Trichloroethane	5.41	97	144339	23.53	ppb		100
29) Cyclohexane	5.44	56	115926	18.88	ppb		98
30) 1,1-Dichloropropylene	5.57	75	116612	21.93	ppb	#	89
32) Carbon Tetrachloride	5.56	117	129745	24.49	ppb		99
33) 1,2-Dichloroethane	5.83	62	113999	23.62	ppb	#	100
34) Benzene	5.77	78	254407	20.75	ppb		100
36) Tetrahydrofuran	5.26	42	12611	16.78	ppb		95
37) Trichloroethylene	6.37	95	84869	21.62	ppb	#	61
38) Methyl Cyclohexane	6.51	83	122608	19.07	ppb	#	100
39) Methyl Methyacrylate	6.68	69	33563	18.93	ppb	#	98
40) Dibromomethane	6.76	93	41280	21.23	ppb		98
41) Bromodichloromethane	6.89	83	108819	21.97	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466880C.D Vial: 24
Acq On : 29 Sep 2014 9:42 pm Operator: BK
Sample : 20PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:52 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

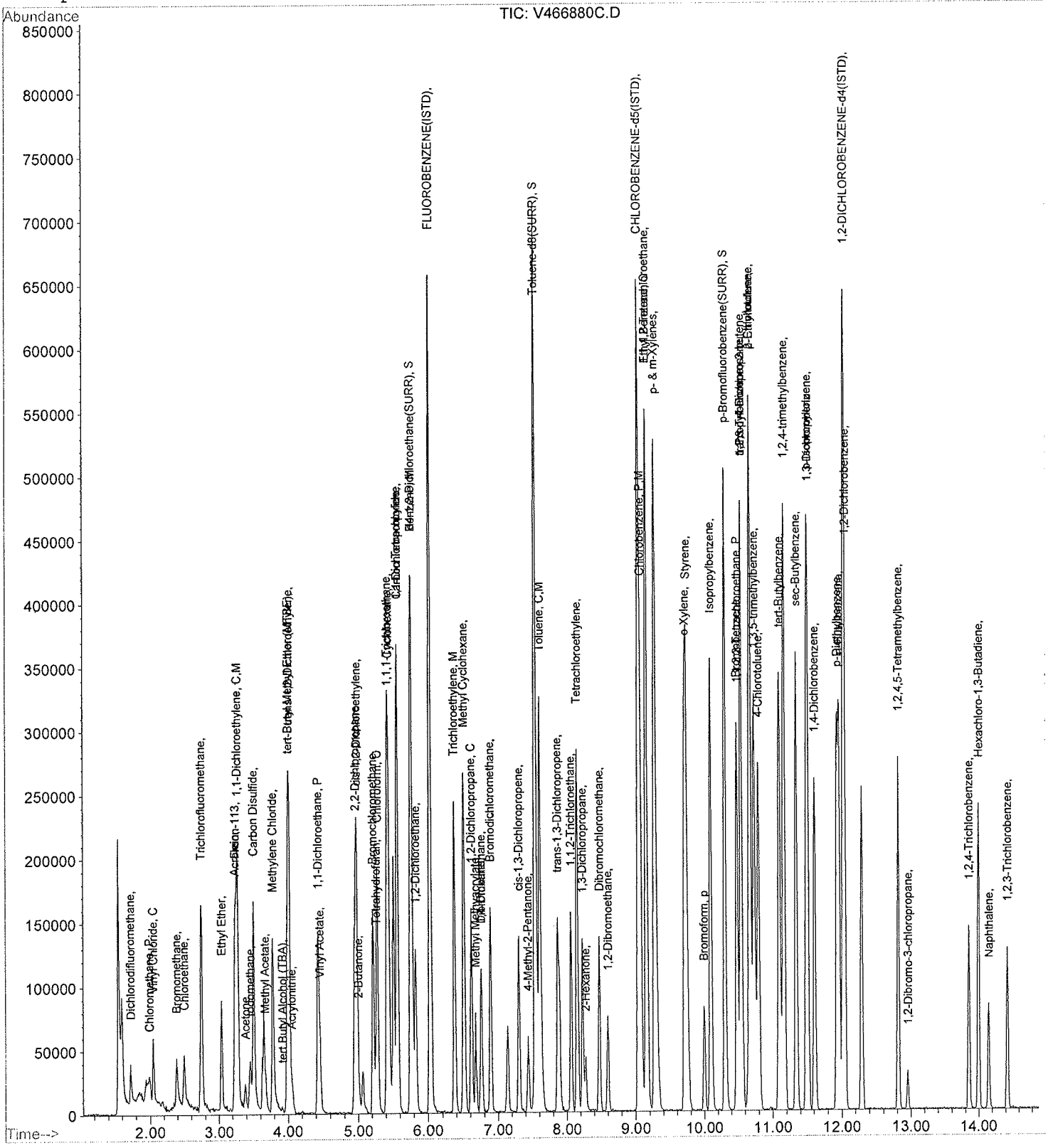
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.61	63	60056	18.88	ppb		96
43)	1,4-Dioxane	6.76	88	3317	202.52	ppb	#	100
45)	cis-1,3-Dichloropropene	7.31	75	105228	19.79	ppb	#	88
46)	2-Hexanone	8.28	43	37119	19.60	ppb		98
48)	Toluene	7.61	91	293528	20.65	ppb		99
49)	trans-1,3-Dichloropropene	7.86	75	102238	20.90	ppb	#	93
50)	1,1,2-Trichloroethane	8.06	83	40672	19.65	ppb		97
51)	1,3-Dichloropropane	8.23	76	92759	20.09	ppb	#	99
52)	Tetrachloroethylene	8.15	166	94027	21.02	ppb	#	100
53)	4-Methyl-2-Pentanone	7.43	43	49027	18.56	ppb		100
54)	Dibromochloromethane	8.48	129	71109	22.20	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	55558	21.34	ppb		99
56)	Chlorobenzene	9.08	112	185860	20.76	ppb	#	100
57)	Ethyl Benzene	9.15	91	339485	21.02	ppb		100
58)	p- & m-Xylenes	9.27	91	528800	42.62	ppb		99
59)	o-Xylene	9.71	91	264476	21.20	ppb		99
60)	Styrene	9.74	104	189075	20.66	ppb		99
61)	1,1,1,2-Tetrachloroethane	9.16	131	74517	21.79	ppb		97
62)	p-Ethyltoulene	10.67	105	296405	20.46	ppb		98
63)	p-Diethylbenzene	11.92	119	129311	18.08	ppb	#	23
65)	Bromoform	9.99	173	42205	23.16	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	60343	21.53	ppb		99
68)	trans-1,4-Dichloro-2-buten	10.54	75	61897	19.75	ppb	#	88
69)	1,2,3-Trichloropropane	10.54	110	18968	20.98	ppb		97
70)	Isopropylbenzene	10.09	105	335123	20.58	ppb	#	90
71)	Bromobenzene	10.48	77	123249	20.80	ppb		99
72)	n-Propylbenzene	10.54	91	386383	20.37	ppb		100
73)	2-Chlorotoluene	10.67	91	261988	20.92	ppb	#	100
74)	4-Chlorotoluene	10.79	91	240294	21.00	ppb	#	100
75)	tert-Butylbenzene	11.09	119	230425	20.78	ppb	#	90
76)	1,3,5-trimethylbenzene	10.73	105	271396	20.28	ppb		99
77)	1,2,4-trimethylbenzene	11.16	105	254469	20.18	ppb		99
78)	sec-Butylbenzene	11.33	105	338249	20.52	ppb	#	93
79)	1,3-Dichlorobenzene	11.51	146	140726	20.72	ppb	#	68
80)	1,4-Dichlorobenzene	11.62	146	140362	21.04	ppb	#	98
81)	1,2-Dichlorobenzene	12.05	146	127035	21.03	ppb	#	68
82)	p-Isopropyltoluene	11.49	119	268778	19.85	ppb	#	100
83)	n-Butylbenzene	11.96	91	259188	18.14	ppb	#	76
84)	1,2,4,5-Tetramethylbenzene	12.81	119	173552	22.09	ppb		97
85)	1,2-Dibromo-3-chloropropan	12.95	75	10790	22.24	ppb		97
86)	1,2,4-Trichlorobenzene	13.85	180	54605	19.84	ppb		98
87)	Naphthalene	14.15	128	78698	20.99	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	54935	22.42	ppb	#	98
89)	1,2,3-Trichlorobenzene	14.43	182	44761	20.36	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466880C.D Vial: 24
Acq On : 29 Sep 2014 9:42 pm Operator: BK
Sample : 20PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:52 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466881C.D Vial: 25
Acq On : 29 Sep 2014 10:16 pm Operator: BK
Sample : 50PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:53 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	139196	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	439683	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	191221	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	213597	55.02	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 110.04%				
47) Toluene-d8(SURR)	7.54	98	583667	50.10	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.20%				
66) p-Bromofluorobenzene(SURR)	10.30	174	179463	50.80	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 101.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	240018m	43.78	ppb		
3) Chloromethane	1.98	50	190009m	38.71	ppb		
4) Vinyl Chloride	2.04	62	190889m	48.82	ppb		
5) Bromomethane	2.39	94	98890m	38.95	ppb		
6) Chloroethane	2.50	64	117798m	51.69	ppb		
7) Trichlorofluoromethane	2.74	101	348315	56.81	ppb		100
8) Ethyl Ether	3.04	59	117314	55.28	ppb		99
9) Freon-113	3.24	101	203957	57.35	ppb		94
10) 1,1-Dichloroethylene	3.27	61	302761	58.25	ppb		99
11) Acrolein	3.23	56	8915	124.75	ppb		98
12) Iodomethane	3.45	142	169028	51.58	ppb		99
13) Methyl Acetate	3.67	43	84884	46.96	ppb		99
14) tert Butyl Alcohol (TBA)	3.91	59	15009	46.48	ppb	#	100
15) Acrylonitrile	4.06	53	28065	39.02	ppb		91
16) trans-1,2-Dichloroethylene	4.01	61	273730	48.58	ppb		99
17) Carbon Disulfide	3.50	76	531552	57.58	ppb		100
18) Methylene Chloride	3.78	49	221274	42.52	ppb		97
19) tert-Butyl Methyl Ether (M	3.99	73	447989	50.52	ppb	#	93
20) Acetone	3.38	43	49081	49.83	ppb		99
21) 1,1-Dichloroethane	4.43	63	322290	47.14	ppb		100
22) Vinyl Acetate	4.46	43	168910	45.63	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	190022	48.26	ppb	#	67
24) 2-Butanone	5.00	43	51443	40.64	ppb		100
25) 2,2-Dichloropropane	4.95	77	335557	50.76	ppb		100
26) Bromochloromethane	5.22	49	137125	48.41	ppb		98
27) Chloroform	5.27	83	353572	50.36	ppb		99
28) 1,1,1-Trichloroethane	5.42	97	349489	54.64	ppb		100
29) Cyclohexane	5.44	56	277116	43.28	ppb	#	61
30) 1,1-Dichloropropylene	5.56	75	272713	49.19	ppb		100
32) Carbon Tetrachloride	5.56	117	306937	55.57	ppb		99
33) 1,2-Dichloroethane	5.82	62	265039	52.67	ppb	#	100
34) Benzene	5.78	78	604607	47.31	ppb		100
36) Tetrahydrofuran	5.25	42	29941	39.78	ppb		88
37) Trichloroethylene	6.37	95	194556	49.50	ppb		99
38) Methyl Cyclohexane	6.51	83	292955	45.50	ppb	#	99
39) Methyl Methyacrylate	6.68	69	83427	47.00	ppb	#	78
40) Dibromomethane	6.75	93	103086	52.95	ppb		99
41) Bromodichloromethane	6.89	83	263260	53.09	ppb	#	70

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466881C.D Vial: 25
Acq On : 29 Sep 2014 10:16 pm Operator: BK
Sample : 50PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:53 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

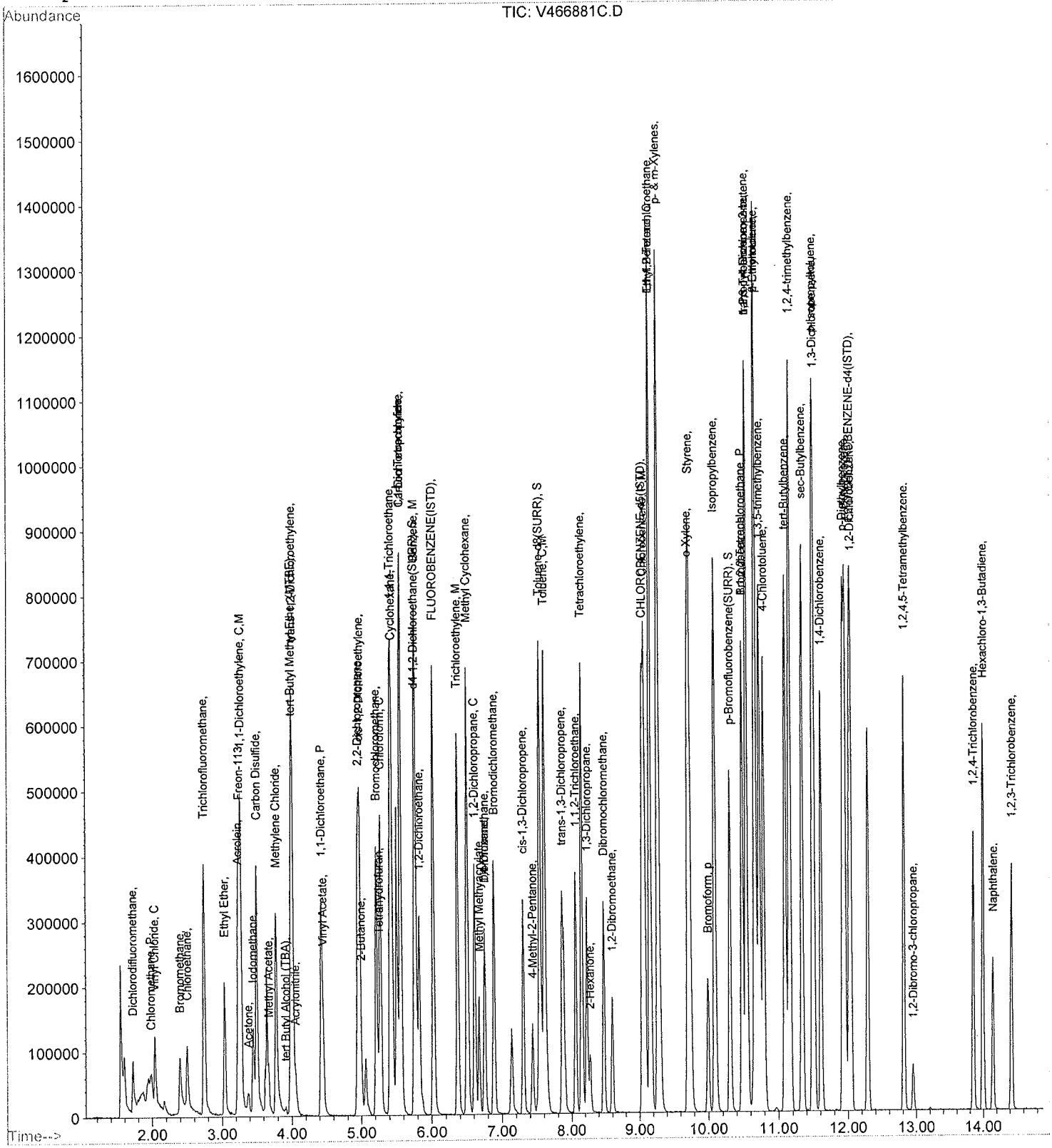
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.61	63	139432	43.79	ppb	#	94
43)	1,4-Dioxane	6.75	88	11063	674.60	ppb	#	100
45)	cis-1,3-Dichloropropene	7.30	75	258107	48.48	ppb		100
46)	2-Hexanone	8.27	43	82581	43.55	ppb		100
48)	Toluene	7.61	91	677021	47.58	ppb		100
49)	trans-1,3-Dichloropropene	7.86	75	250310	51.11	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	98245	47.41	ppb		99
51)	1,3-Dichloropropane	8.23	76	221334	47.87	ppb	#	86
52)	Tetrachloroethylene	8.15	166	233835	52.20	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	116268	43.96	ppb		99
54)	Dibromochloromethane	8.47	129	173602	54.13	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	130054	49.90	ppb		100
56)	Chlorobenzene	9.07	112	439019	48.97	ppb	#	100
57)	Ethyl Benzene	9.15	91	791368	48.93	ppb		100
58)	p- & m-Xylenes	9.27	91	1250134	100.62	ppb		99
59)	o-Xylene	9.70	91	628055	50.29	ppb		99
60)	Styrene	9.73	104	456131	49.78	ppb	#	80
61)	1,1,1,2-Tetrachloroethane	9.16	131	178162	52.03	ppb		97
62)	p-Ethyltoulene	10.66	105	714814	49.27	ppb		99
63)	p-Diethylbenzene	11.92	119	338828	47.31	ppb		98
65)	Bromoform	9.99	173	103731	55.16	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	136397	47.15	ppb		100
68)	trans-1,4-Dichloro-2-buten	10.54	75	148260	45.85	ppb	#	88
69)	1,2,3-Trichloropropane	10.54	110	44239	47.42	ppb		95
70)	Isopropylbenzene	10.09	105	800616	47.63	ppb	#	100
71)	Bromobenzene	10.48	77	288744	47.22	ppb		98
72)	n-Propylbenzene	10.54	91	912001	46.60	ppb		100
73)	2-Chlorotoluene	10.67	91	617931	47.82	ppb	#	100
74)	4-Chlorotoluene	10.79	91	559963	47.43	ppb	#	100
75)	tert-Butylbenzene	11.09	119	548254	47.91	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	653216	47.31	ppb		100
77)	1,2,4-trimethylbenzene	11.15	105	605920	46.56	ppb		100
78)	sec-Butylbenzene	11.34	105	800037	47.02	ppb	#	100
79)	1,3-Dichlorobenzene	11.51	146	335995	47.94	ppb	#	68
80)	1,4-Dichlorobenzene	11.61	146	336791	48.91	ppb	#	68
81)	1,2-Dichlorobenzene	12.04	146	299583	48.07	ppb	#	100
82)	p-Isopropyltoluene	11.49	119	647358	46.32	ppb	#	90
83)	n-Butylbenzene	11.95	91	668713	45.35	ppb	#	99
84)	1,2,4,5-Tetramethylbenzene	12.81	119	425021	48.04	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.95	75	28410	56.74	ppb		96
86)	1,2,4-Trichlorobenzene	13.85	180	154450	46.03	ppb		99
87)	Naphthalene	14.14	128	215531	45.84	ppb	#	100
88)	Hexachloro-1,3-Butadiene	13.99	225	136670	54.05	ppb	#	98
89)	1,2,3-Trichlorobenzene	14.42	182	130254	48.44	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466881C.D Vial: 25
Acq On : 29 Sep 2014 10:16 pm Operator: BK
Sample : 50PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:53 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466882C.D Vial: 26
Acq On : 29 Sep 2014 10:50 pm Operator: BK
Sample : 100PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:54 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	134732	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	444668	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	193439	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	217659	57.92	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 115.84%				
47) Toluene-d8(SURR)	7.54	98	585019	49.65	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.30%				
66) p-Bromofluorobenzene(SURR)	10.30	174	175653	49.15	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 98.30%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	490772m	92.49	ppb		
3) Chloromethane	1.98	50	380140m	80.00	ppb		
4) Vinyl Chloride	2.04	62	373963m	98.81	ppb		
5) Bromomethane	2.40	94	206327m	83.96	ppb		
6) Chloroethane	2.50	64	235889m	106.94	ppb		
7) Trichlorofluoromethane	2.74	101	715690	120.61	ppb		100
8) Ethyl Ether	3.04	59	240668	117.16	ppb		97
9) Freon-113	3.24	101	419957	122.01	ppb		96
10) 1,1-Dichloroethylene	3.28	61	610200	121.30	ppb	#	78
11) Acrolein	3.22	56	21049	276.58	ppb		95
12) Iodomethane	3.45	142	390095	122.99	ppb		97
13) Methyl Acetate	3.67	43	182016	104.04	ppb	#	94
14) tert Butyl Alcohol (TBA)	3.91	59	28670	91.72	ppb	#	100
15) Acrylonitrile	4.05	53	65167	93.60	ppb		98
16) trans-1,2-Dichloroethylene	4.01	61	559908	102.65	ppb		99
17) Carbon Disulfide	3.50	76	1083121	121.22	ppb		100
18) Methylene Chloride	3.78	49	463137	91.93	ppb	#	85
19) tert-Butyl Methyl Ether (M	3.99	73	928716	108.20	ppb		99
20) Acetone	3.38	43	138564	145.33	ppb		100
21) 1,1-Dichloroethane	4.43	63	672133	101.58	ppb		100
22) Vinyl Acetate	4.46	43	306424	85.51	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	391964	102.84	ppb	#	67
24) 2-Butanone	5.00	43	128663	105.01	ppb		99
25) 2,2-Dichloropropane	4.95	77	697868	109.06	ppb		100
26) Bromochloromethane	5.22	49	275399	100.45	ppb		95
27) Chloroform	5.27	83	755519	111.17	ppb		99
28) 1,1,1-Trichloroethane	5.42	97	712820	115.14	ppb		100
29) Cyclohexane	5.44	56	582647	94.02	ppb	#	61
30) 1,1-Dichloropropylene	5.57	75	566539	105.57	ppb		100
32) Carbon Tetrachloride	5.56	117	646801	120.98	ppb		99
33) 1,2-Dichloroethane	5.83	62	582256	119.55	ppb	#	100
34) Benzene	5.77	78	1224395	98.99	ppb		100
36) Tetrahydrofuran	5.25	42	65688	86.29	ppb		92
37) Trichloroethylene	6.37	95	411717	103.58	ppb		100
38) Methyl Cyclohexane	6.51	83	615318	94.51	ppb	#	74
39) Methyl Methyacrylate	6.68	69	172926	96.33	ppb	#	75
40) Dibromomethane	6.75	93	211689	107.52	ppb		99
41) Bromodichloromethane	6.89	83	551594	109.98	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466882C.D Vial: 26
Acq On : 29 Sep 2014 10:50 pm Operator: BK
Sample : 100PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:54 19114 Quant Results File: V4C00233.RES

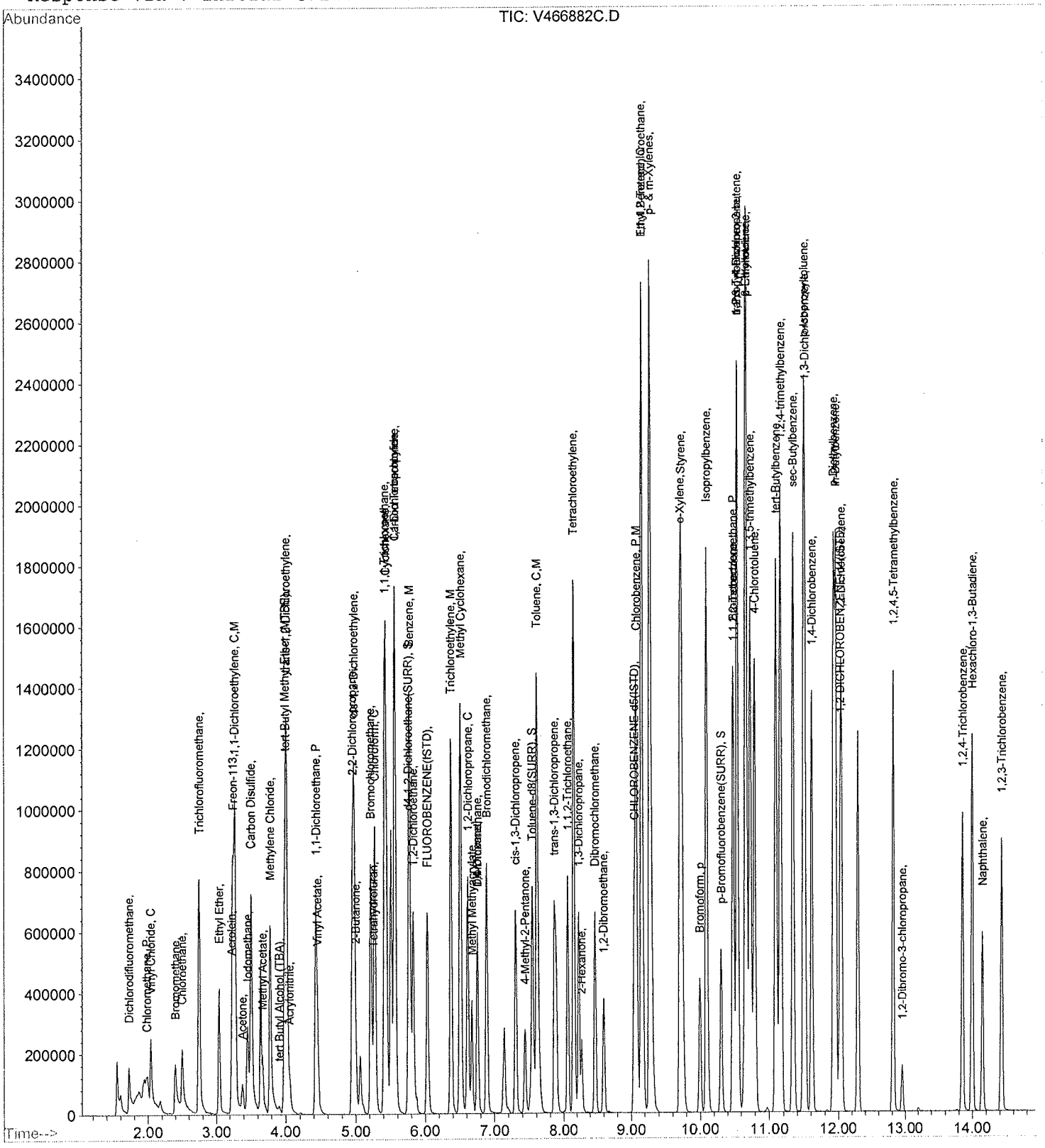
Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.61	63	296253	91.99	ppb		95
43)	1,4-Dioxane	6.75	88	21434	1292.35	ppb	#	100
45)	cis-1,3-Dichloropropene	7.30	75	539129	100.12	ppb		100
46)	2-Hexanone	8.27	43	197726	103.09	ppb		100
48)	Toluene	7.61	91	1379392	95.85	ppb		100
49)	trans-1,3-Dichloropropene	7.86	75	511087	103.18	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	205149	97.88	ppb		99
51)	1,3-Dichloropropane	8.23	76	445588	95.29	ppb	#	100
52)	Tetrachloroethylene	8.15	166	608604	134.35	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	256932	96.05	ppb		99
54)	Dibromochloromethane	8.47	129	369096	113.79	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	276655	104.95	ppb		100
56)	Chlorobenzene	9.07	112	906045	99.93	ppb	#	100
57)	Ethyl Benzene	9.16	91	1613994	98.68	ppb		100
58)	p- & m-Xylenes	9.27	91	2515033	200.17	ppb		100
59)	o-Xylene	9.71	91	1268488	100.43	ppb		100
60)	Styrene	9.73	104	937454	101.17	ppb		99
61)	1,1,1,2-Tetrachloroethane	9.16	131	362688	104.73	ppb		97
62)	p-Ethyltoulene	10.66	105	1491227	101.64	ppb		99
63)	p-Diethylbenzene	11.92	119	746314	103.04	ppb		97
65)	Bromoform	10.00	173	224054	117.78	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	278331	95.11	ppb		99
68)	trans-1,4-Dichloro-2-buten	10.54	75	316128	96.64	ppb	#	89
69)	1,2,3-Trichloropropane	10.54	110	95318	100.99	ppb		95
70)	Isopropylbenzene	10.09	105	1634843	96.15	ppb	#	90
71)	Bromobenzene	10.47	77	586663	94.84	ppb		99
72)	n-Propylbenzene	10.54	91	1875526	94.73	ppb		100
73)	2-Chlorotoluene	10.67	91	1251442	95.74	ppb	#	100
74)	4-Chlorotoluene	10.79	91	1155104	96.71	ppb	#	100
75)	tert-Butylbenzene	11.09	119	1120125	96.76	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	1328349	95.10	ppb		99
77)	1,2,4-trimethylbenzene	11.15	105	1265146	96.10	ppb		100
78)	sec-Butylbenzene	11.33	105	1670666	97.07	ppb	#	100
79)	1,3-Dichlorobenzene	11.51	146	685961	96.75	ppb	#	100
80)	1,4-Dichlorobenzene	11.61	146	680709	97.72	ppb	#	100
81)	1,2-Dichlorobenzene	12.04	146	625222	99.16	ppb	#	100
82)	p-Isopropyltoluene	11.49	119	1360764	96.25	ppb	#	100
83)	n-Butylbenzene	11.95	91	1458020	97.75	ppb	#	100
84)	1,2,4,5-Tetramethylbenzene	12.81	119	921198	95.57	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.95	75	57893	114.31	ppb		98
86)	1,2,4-Trichlorobenzene	13.85	180	363417	96.50	ppb		100
87)	Naphthalene	14.14	128	520794	94.86	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	283819	110.96	ppb	#	100
89)	1,2,3-Trichlorobenzene	14.42	182	302857	98.94	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466882C.D Vial: 26
Acq On : 29 Sep 2014 10:50 pm Operator: BK
Sample : 100PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:54 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466883C.D Vial: 27
Acq On : 29 Sep 2014 11:23 pm Operator: BK
Sample : 200PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:56 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	139816	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	446810	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	185687	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	217991	55.90	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 111.80%				
47) Toluene-d8(SURR)	7.54	98	589822	49.82	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.64%				
66) p-Bromofluorobenzene(SURR)	10.30	174	175180	51.06	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 102.12%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	996114m	180.90	ppb		
3) Chloromethane	1.98	50	775356	157.24	ppb	#	91
4) Vinyl Chloride	2.04	62	752112	191.50	ppb	#	97
5) Bromomethane	2.39	94	420235m	164.78	ppb		
6) Chloroethane	2.50	64	470882	205.72	ppb		99
7) Trichlorofluoromethane	2.74	101	1413303	229.51	ppb		99
8) Ethyl Ether	3.04	59	490799	230.25	ppb		98
9) Freon-113	3.24	101	815387	228.27	ppb		96
10) 1,1-Dichloroethylene	3.27	61	1233806	236.34	ppb		100
11) Acrolein	3.22	56	46492	512.24	ppb		99
12) Iodomethane	3.45	142	829579	252.05	ppb		98
13) Methyl Acetate	3.67	43	364408	200.72	ppb		99
14) tert Butyl Alcohol (TBA)	3.91	59	66327	204.48	ppb	#	100
15) Acrylonitrile	4.06	53	134013	185.49	ppb		97
16) trans-1,2-Dichloroethylene	4.01	61	1139798	201.37	ppb		99
17) Carbon Disulfide	3.50	76	2166993	233.71	ppb		100
18) Methylene Chloride	3.78	49	932994	178.47	ppb		99
19) tert-Butyl Methyl Ether (M	3.99	73	1913707	214.86	ppb		99
20) Acetone	3.38	43	174560	176.43	ppb		100
21) 1,1-Dichloroethane	4.43	63	1374056	200.10	ppb		100
22) Vinyl Acetate	4.46	43	740088	199.02	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	811034	205.05	ppb	#	67
24) 2-Butanone	5.00	43	223029	175.41	ppb		99
25) 2,2-Dichloropropane	4.95	77	1413300	212.82	ppb		100
26) Bromochloromethane	5.22	49	548993	192.95	ppb		95
27) Chloroform	5.27	83	1500580	212.77	ppb		100
28) 1,1,1-Trichloroethane	5.42	97	1456428	226.70	ppb		100
29) Cyclohexane	5.44	56	1160978	180.53	ppb		97
30) 1,1-Dichloropropylene	5.57	75	1103867	198.22	ppb		100
32) Carbon Tetrachloride	5.56	117	1288401	232.23	ppb		99
33) 1,2-Dichloroethane	5.83	62	1136912	224.95	ppb	#	100
34) Benzene	5.78	78	2475338	192.85	ppb		100
36) Tetrahydrofuran	5.25	42	138877	181.57	ppb		91
37) Trichloroethylene	6.38	95	802938	201.03	ppb		99
38) Methyl Cyclohexane	6.51	83	1232375	188.37	ppb	#	99
39) Methyl Methyacrylate	6.68	69	358621	198.81	ppb	#	75
40) Dibromomethane	6.75	93	434276	219.53	ppb		98
41) Bromodichloromethane	6.89	83	1132280	224.68	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466883C.D Vial: 27
Acq On : 29 Sep 2014 11:23 pm Operator: BK
Sample : 200PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:56 19114 Quant Results File: V4C00233.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

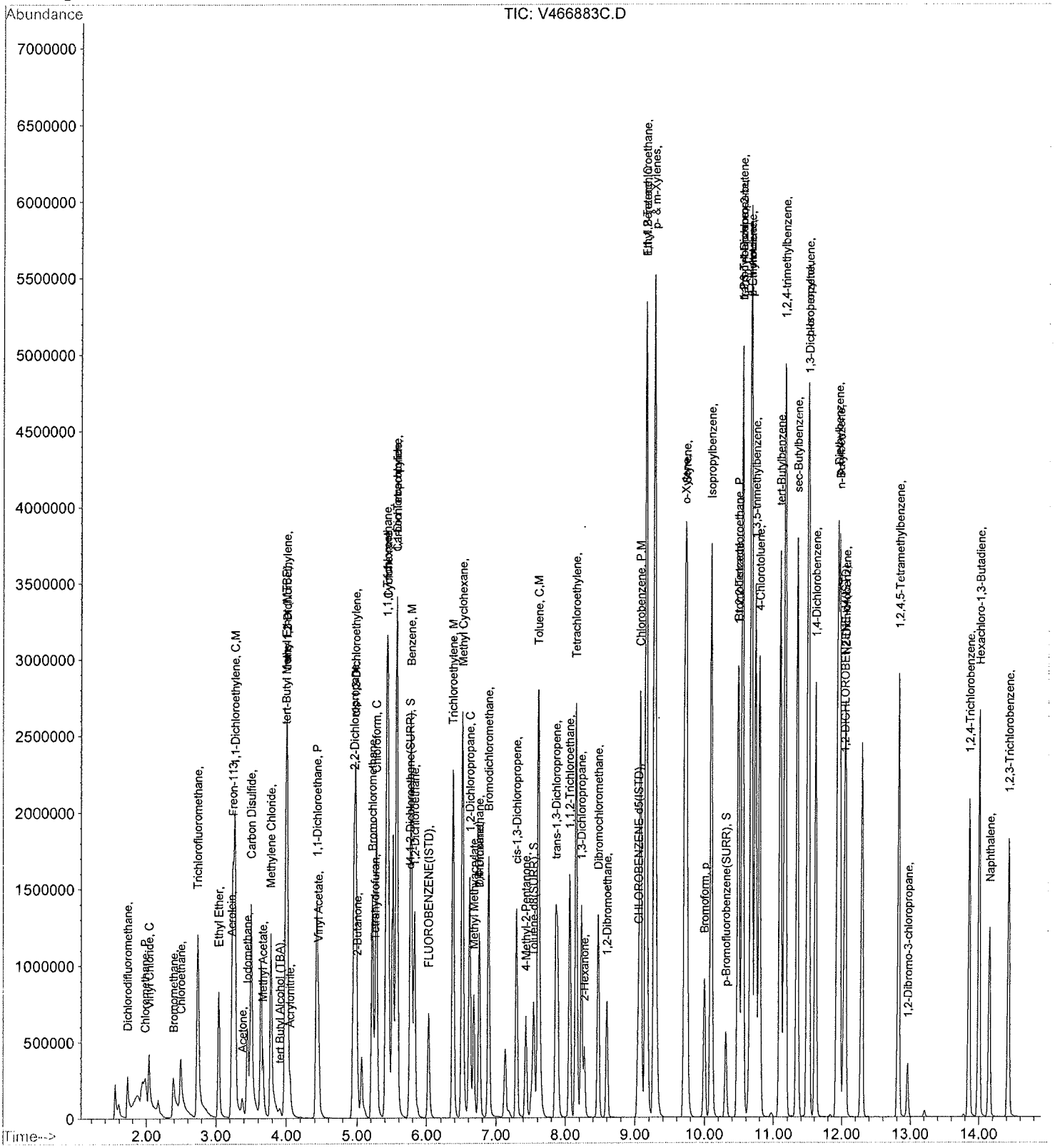
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.62	63	597089	184.52	ppb	#	75
43)	1,4-Dioxane	6.75	88	52344	3140.93	ppb	#	100
45)	cis-1,3-Dichloropropene	7.31	75	1107883	204.76	ppb		100
46)	2-Hexanone	8.28	43	358347	185.94	ppb		99
48)	Toluene	7.61	91	2752773	190.37	ppb		100
49)	trans-1,3-Dichloropropene	7.86	75	1045976	210.16	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	420635	199.74	ppb		99
51)	1,3-Dichloropropane	8.23	76	928363	197.58	ppb	#	100
52)	Tetrachloroethylene	8.15	166	910849	200.10	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	530840	197.49	ppb		100
54)	Dibromochloromethane	8.47	129	760538	233.34	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	562184	212.25	ppb		100
56)	Chlorobenzene	9.08	112	1800084	197.59	ppb	#	86
57)	Ethyl Benzene	9.16	91	3149425	191.64	ppb		100
58)	p- & m-Xylenes	9.28	91	4861890	385.09	ppb		100
59)	o-Xylene	9.72	91	2535297	199.76	ppb		99
60)	Styrene	9.74	104	1842424	197.88	ppb		98
61)	1,1,1,2-Tetrachloroethane	9.16	131	725085	208.37	ppb		99
62)	p-Ethyltoulene	10.67	105	2942603	199.60	ppb		98
63)	p-Diethylbenzene	11.93	119	1497238	205.72	ppb		97
65)	Bromoform	10.00	173	456864	250.20	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	576037	205.06	ppb		100
68)	trans-1,4-Dichloro-2-buten	10.54	75	643227	204.85	ppb	#	89
69)	1,2,3-Trichloropropane	10.54	110	190218	209.95	ppb		97
70)	Isopropylbenzene	10.09	105	3185330	195.15	ppb	#	100
71)	Bromobenzene	10.48	77	1171370	197.27	ppb		99
72)	n-Propylbenzene	10.55	91	3643313	191.71	ppb		100
73)	2-Chlorotoluene	10.68	91	2423485	193.14	ppb	#	100
74)	4-Chlorotoluene	10.79	91	2251773	196.40	ppb	#	100
75)	tert-Butylbenzene	11.09	119	2190217	197.09	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	2529452	188.65	ppb		100
77)	1,2,4-trimethylbenzene	11.16	105	2471514	195.57	ppb		100
78)	sec-Butylbenzene	11.34	105	3211328	194.38	ppb	#	100
79)	1,3-Dichlorobenzene	11.51	146	1340231	196.92	ppb	#	100
80)	1,4-Dichlorobenzene	11.61	146	1338677	200.20	ppb	#	100
81)	1,2-Dichlorobenzene	12.04	146	1215916	200.90	ppb	#	100
82)	p-Isopropyltoluene	11.49	119	2654965	195.63	ppb	#	100
83)	n-Butylbenzene	11.96	91	2898349	202.43	ppb	#	76
84)	1,2,4,5-Tetramethylbenzene	12.81	119	1850298	181.61	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.95	75	126798	260.80	ppb		95
86)	1,2,4-Trichlorobenzene	13.86	180	768420	189.55	ppb		99
87)	Naphthalene	14.15	128	1145927	184.50	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	589756	240.20	ppb	#	99
89)	1,2,3-Trichlorobenzene	14.43	182	650056	191.50	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466883C.D Vial: 27
Acq On : 29 Sep 2014 11:23 pm Operator: BK
Sample : 200PPB VOA CALIBRATION CURVE Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 8:56 19114 Quant Results File: V4C00233.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466885C.D Vial: 29
Acq On : 30 Sep 2014 12:31 am Operator: BK
Sample : 50ppb VOA ICV STD Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 9:09 19114 Quant Results File: V4C00234.RES

Quant Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	136492	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.04	117	445260	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	190553	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	217104	50.69	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 101.38%				
47) Toluene-d8(SURR)	7.54	98	584638	50.03	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.06%				
66) p-Bromofluorobenzene(SURR)	10.30	174	180200	50.38	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 100.76%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	285974m	57.87	ppb		
3) Chloromethane	1.99	50	211287m	53.97	ppb		
4) Vinyl Chloride	2.04	62	207546m	54.38	ppb		
5) Bromomethane	2.40	94	116947m	51.95	ppb		
6) Chloroethane	2.50	64	132086	54.64	ppb		100
7) Trichlorofluoromethane	2.74	101	383513	53.69	ppb		99
8) Ethyl Ether	3.04	59	131369	55.95	ppb		97
9) Freon-113	3.24	101	209987	52.03	ppb		96
10) 1,1-Dichloroethylene	3.27	61	332890	53.53	ppb		99
11) Acrolein	3.22	56	10054	52.55	ppb		94
12) Iodomethane	3.45	142	162336	46.28	ppb		100
13) Methyl Acetate	3.67	43	98038	51.69	ppb		100
14) tert Butyl Alcohol (TBA)	3.92	59	15205	53.48	ppb	#	100
15) Acrylonitrile	4.05	53	34898	55.94	ppb		93
16) trans-1,2-Dichloroethylene	4.01	61	303975	54.83	ppb		100
17) Carbon Disulfide	3.50	76	578992	52.98	ppb		100
18) Methylene Chloride	3.78	49	252590	52.49	ppb		98
19) tert-Butyl Methyl Ether (M	3.99	73	514011	54.17	ppb	#	87
20) Acetone	3.38	43	57995	43.88	ppb		99
21) 1,1-Dichloroethane	4.43	63	365827	53.26	ppb		100
22) Vinyl Acetate	4.46	43	195118	58.00	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	218836	54.54	ppb	#	24
24) 2-Butanone	5.00	43	59494	50.91	ppb		99
25) 2,2-Dichloropropane	4.95	77	375172	53.92	ppb		100
26) Bromochloromethane	5.21	49	151916	55.07	ppb		99
27) Chloroform	5.27	83	401378	54.52	ppb		100
28) 1,1,1-Trichloroethane	5.42	97	390008	54.24	ppb		100
29) Cyclohexane	5.43	56	300600	52.18	ppb	#	100
30) 1,1-Dichloropropylene	5.56	75	311107	55.26	ppb		100
32) Carbon Tetrachloride	5.56	117	353840	55.67	ppb		98
33) 1,2-Dichloroethane	5.83	62	306388	54.54	ppb		99
34) Benzene	5.77	78	676671	54.59	ppb		100
36) Tetrahydrofuran	5.25	42	34918	55.57	ppb		96
37) Trichloroethylene	6.37	95	222918	54.85	ppb		98
38) Methyl Cyclohexane	6.50	83	327206	53.70	ppb	#	99
39) Methyl Methyacrylate	6.68	69	103349	60.75	ppb	#	60
40) Dibromomethane	6.75	93	116317	55.52	ppb		99
41) Bromodichloromethane	6.89	83	298977	54.93	ppb	#	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466885C.D Vial: 29
Acq On : 30 Sep 2014 12:31 am Operator: BK
Sample : 50ppb VOA ICV STD Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 9:09 19114 Quant Results File: V4C00234.RES

Quant Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

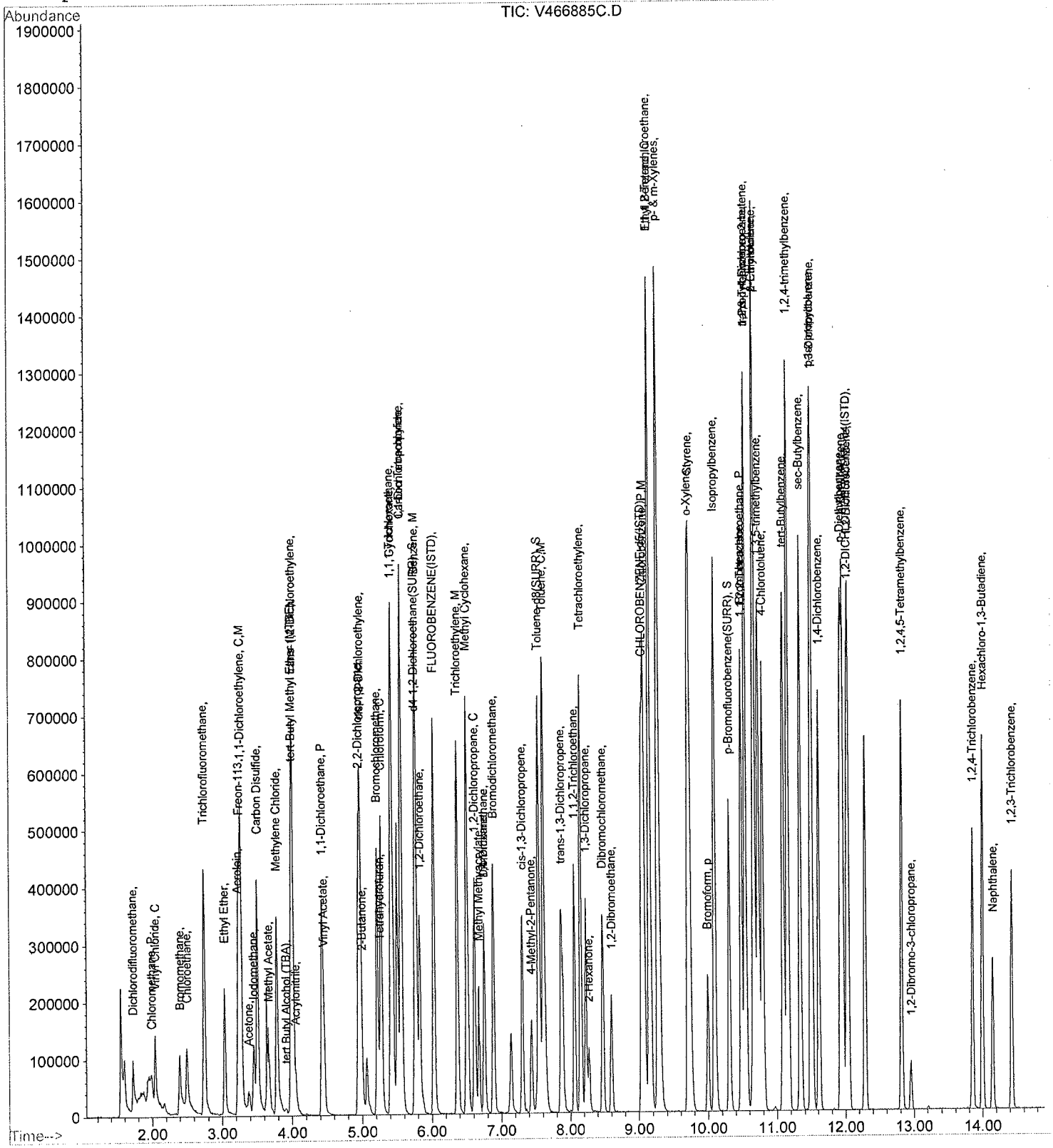
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	1,2-Dichloropropane	6.61	63	163523	54.81	ppb		98
43)	1,4-Dioxane	6.75	88	19281	1770.07	ppb	#	100
45)	cis-1,3-Dichloropropene	7.31	75	273274	51.64	ppb		100
46)	2-Hexanone	8.27	43	93806	54.91	ppb		99
48)	Toluene	7.61	91	756730	53.07	ppb		100
49)	trans-1,3-Dichloropropene	7.86	75	258580	50.66	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	112157	54.09	ppb		100
51)	1,3-Dichloropropane	8.23	76	246452	53.85	ppb	#	100
52)	Tetrachloroethylene	8.15	166	260072	52.43	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	133832	52.55	ppb		99
54)	Dibromochloromethane	8.47	129	200076	55.42	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	148501	54.58	ppb		99
56)	Chlorobenzene	9.07	112	489566	52.97	ppb	#	100
57)	Ethyl Benzene	9.16	91	885351	53.70	ppb		100
58)	p- & m-Xylenes	9.27	91	1387123	106.87	ppb		100
59)	o-Xylene	9.71	91	712336	54.93	ppb		100
60)	Styrene	9.74	104	504598	54.15	ppb	#	99
61)	1,1,1,2-Tetrachloroethane	9.16	131	199872	54.00	ppb		98
62)	p-Ethyltoulene	10.66	105	782022	53.15	ppb		98
63)	p-Diethylbenzene	11.92	119	371157	56.53	ppb	#	96
65)	Bromoform	10.00	173	115720	54.59	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	147241	51.07	ppb	#	96
68)	trans-1,4-Dichloro-2-buten	10.54	75	171484	54.42	ppb	#	99
69)	1,2,3-Trichloropropane	10.54	110	51183	53.46	ppb		95
70)	Isopropylbenzene	10.09	105	889904	52.95	ppb	#	95
71)	Bromobenzene	10.48	77	319871	53.30	ppb		100
72)	n-Propylbenzene	10.55	91	1019952	53.74	ppb		100
73)	2-Chlorotoluene	10.67	91	691236	52.87	ppb	#	100
74)	4-Chlorotoluene	10.79	91	621710	52.87	ppb	#	97
75)	tert-Butylbenzene	11.09	119	611870	53.51	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	741281	54.95	ppb		100
77)	1,2,4-trimethylbenzene	11.15	105	685730	54.86	ppb		100
78)	sec-Butylbenzene	11.33	105	908149	54.43	ppb	#	95
79)	1,3-Dichlorobenzene	11.51	146	376476	54.46	ppb	#	81
80)	1,4-Dichlorobenzene	11.61	146	366216	53.24	ppb	#	83
81)	1,2-Dichlorobenzene	12.04	146	333095	52.95	ppb	#	100
82)	p-Isopropyltoluene	11.49	119	722538	54.75	ppb	#	100
83)	n-Butylbenzene	11.95	91	741153	57.32	ppb	#	99
84)	1,2,4,5-Tetramethylbenzene	12.81	119	459818	53.21	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.95	75	32525	57.23	ppb	#	74
86)	1,2,4-Trichlorobenzene	13.86	180	173232	53.17	ppb	#	91
87)	Naphthalene	14.15	128	247766	53.98	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	149353	55.80	ppb	#	98
89)	1,2,3-Trichlorobenzene	14.42	182	145506	53.66	ppb	#	52

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466885C.D Vial: 29
Acq On : 30 Sep 2014 12:31 am Operator: BK
Sample : 50ppb VOA ICV STD Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 9:09 19114 Quant Results File: V4C00234.RES

Method : G:\MSVOAM~1\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D
Acq On : 30 Sep 2014 9:00 am
Sample : 50PPB VOA CAL CHECK STD
Misc : QBV4093014A
MS Integration Params: rteint.p

Vial: 1
Operator: BK
Inst : GCMS-VOA4
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1		FLUOROBENZENE(ISTD)	1.000	1.000	0.0	99	0.00
2		Dichlorodifluoromethane	1.810	2.009	-11.0	116	0.00
3	P	Chloromethane	1.434	1.606	-12.0	117	0.00
4	C	Vinyl Chloride	1.398	1.529	-9.4	111	0.00
5		Bromomethane	0.825	0.848	-2.8	119	0.00
6		Chloroethane	0.886	0.938	-5.9	110	0.00
7		Trichlorofluoromethane	2.616	2.913	-11.4	116	0.00
8		Ethyl Ether	0.860	0.927	-7.8	109	0.00
9		Freon-113	1.478	1.529	-3.5	104	0.00
10	C,M	1,1-Dichloroethylene	2.278	2.327	-2.2	106	0.00
11		Acrolein	0.070	0.070	0.0	108	0.00
12		Iodomethane	0.955	1.054	-10.4	86	0.00
13		Methyl Acetate	0.695	0.682	1.9	111	0.00
14		tert Butyl Alcohol (TBA)	0.098	0.113	-15.3	104	0.00
15		Acrylonitrile	0.229	0.230	-0.4	114	0.00
16		trans-1,2-Dichloroethylene	2.031	2.129	-4.8	108	0.00
17		Carbon Disulfide	4.004	4.023	-0.5	105	0.00
18		Methylene Chloride	1.763	1.737	1.5	109	0.00
19		tert-Butyl Methyl Ether (MT	3.476	3.554	-2.2	110	0.00
20		Acetone	0.484	0.535	-10.5	151	0.00
21	P	1,1-Dichloroethane	2.516	2.558	-1.7	110	0.00
22		Vinyl Acetate	1.232	1.444	-17.2	118	0.00
23		cis-1,2-Dichloroethylene	1.470	1.438	2.2	105	0.00
24		2-Butanone	0.428	0.507	-18.5	137	0.00
25		2,2-Dichloropropane	2.549	2.752	-8.0	114	0.00
26		Bromochloromethane	1.010	1.062	-5.1	107	0.00
27	C	Chloroform	2.697	2.769	-2.7	108	0.00
28		1,1,1-Trichloroethane	2.634	2.701	-2.5	107	0.00
29		Cyclohexane	2.110	2.195	-4.0	110	0.00
30		1,1-Dichloropropylene	2.062	2.141	-3.8	109	0.00
31	S	d4-1,2-Dichloroethane(SURR)	1.569	1.529	2.5	99	0.00
32		Carbon Tetrachloride	2.328	2.418	-3.9	109	0.00
33		1,2-Dichloroethane	2.058	2.101	-2.1	110	0.00
34	M	Benzene	4.541	4.669	-2.8	107	0.00
35		CHLOROBENZENE-d5(ISTD)	1.000	1.000	0.0	99	0.00
36		Tetrahydrofuran	0.060	0.083	-38.3#	122	0.00
37	M	Trichloroethylene	0.456	0.475	-4.2	107	0.00
38		Methyl Cyclohexane	0.684	0.738	-7.9	110	0.00
39		Methyl Methyacrylate	0.191	0.229	-19.9	120	0.00
40		Dibromomethane	0.235	0.249	-6.0	105	0.00
41		Bromodichloromethane	0.611	0.645	-5.6	107	0.00
42	C	1,2-Dichloropropane	0.335	0.345	-3.0	108	0.00
43		1,4-Dioxane	0.001	0.002#	-100.0#	164	0.00
44		2-Chloroethyl vinyl ether	0.000	0.000#	0.0	102	0.00
45		cis-1,3-Dichloropropene	0.594	0.602	-1.3	102	0.00
46		2-Hexanone	0.192	0.226	-17.7	119	0.00
47	S	Toluene-d8(SURR)	1.312	1.314	-0.2	98	0.00
48	C,M	Toluene	1.601	1.675	-4.6	108	0.00
49		trans-1,3-Dichloropropene	0.573	0.599	-4.5	104	0.00
50		1,1,2-Trichloroethane	0.233	0.246	-5.6	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D Vial: 1
Acq On : 30 Sep 2014 9:00 am Operator: BK
Sample : 50PPB VOA CAL CHECK STD Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51		1,3-Dichloropropane	0.514	0.530	-3.1	105	0.00
52		Tetrachloroethylene	0.557	0.553	0.7	103	0.00
53		4-Methyl-2-Pentanone	0.286	0.300	-4.9	112	0.00
54		Dibromochloromethane	0.405	0.436	-7.7	110	0.00
55		1,2-Dibromoethane	0.306	0.335	-9.5	112	0.00
56	P,M	Chlorobenzene	1.038	1.075	-3.6	107	0.00
57	C	Ethyl Benzene	1.852	1.980	-6.9	109	0.00
58		p- & m-Xylenes	1.458	1.531	-5.0	107	0.00
59		o-Xylene	1.456	1.555	-6.8	108	0.00
60		Styrene	1.046	1.108	-5.9	106	0.00
61		1,1,1,2-Tetrachloroethane	0.416	0.438	-5.3	107	0.00
62		p-Ethyltoulene	1.652	1.870	-13.2	114	0.00
63		p-Diethylbenzene	0.737	0.914	-24.0	118	0.00
64		1,2-DICHLOROBENZENE-d4(ISTD	1.000	1.000	0.0	98	0.00
65	p	Bromoform	0.556	0.609	-9.5	110	0.00
66	S	p-Bromofluorobenzene(SURR)	0.939	0.932	0.7	98	0.00
67	P	1,1,2,2-Tetrachloroethane	0.756	0.771	-2.0	106	0.00
68		trans-1,4-Dichloro-2-butene	0.827	0.868	-5.0	110	0.00
69		1,2,3-Trichloropropane	0.251	0.257	-2.4	109	0.00
70		Isopropylbenzene	4.410	4.566	-3.5	107	0.00
71		Bromobenzene	1.575	1.663	-5.6	108	0.00
72		n-Propylbenzene	4.980	5.343	-7.3	110	0.00
73		2-Chlorotoluene	3.431	3.541	-3.2	108	0.00
74		4-Chlorotoluene	3.086	3.308	-7.2	111	0.00
75		tert-Butylbenzene	3.000	3.146	-4.9	108	0.00
76		1,3,5-trimethylbenzene	3.540	3.744	-5.8	108	0.00
77		1,2,4-trimethylbenzene	3.280	3.569	-8.8	111	0.00
78		sec-Butylbenzene	4.378	4.670	-6.7	110	0.00
79		1,3-Dichlorobenzene	1.814	1.933	-6.6	108	0.00
80		1,4-Dichlorobenzene	1.805	1.948	-7.9	109	0.00
81		1,2-Dichlorobenzene	1.651	1.761	-6.7	110	0.00
82		p-Isopropyltoluene	3.463	3.859	-11.4	112	0.00
83		n-Butylbenzene	3.393	4.114	-21.2	116	0.00
84		1,2,4,5-Tetramethylbenzene	2.268	2.597	-14.5	115	0.00
85		1,2-Dibromo-3-chloropropane	0.149	0.166	-11.4	110	0.00
86		1,2,4-Trichlorobenzene	0.760	0.964	-26.8#	117	0.00
87		Naphthalene	1.104	1.248	-13.0	109	0.00
88		Hexachloro-1,3-Butadiene	0.702	0.805	-14.7	111	0.00
89		1,2,3-Trichlorobenzene	0.622	0.779	-25.2#	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
V466900C.D V4C00234.M Tue Sep 30 10:02:37 2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D Vial: 1
Acq On : 30 Sep 2014 9:00 am Operator: BK
Sample : 50PPB VOA CAL CHECK STD Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 9:18 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	138492	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	436457	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	187906	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.75	65	211802	48.74	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 97.48%				
47) Toluene-d8(SURR)	7.54	98	573360	50.05	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.10%				
66) p-Bromofluorobenzene(SURR)	10.31	174	175186	49.66	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 99.32%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	278189m	55.49	ppb		
3) Chloromethane	1.98	50	222429m	55.99	ppb		
4) Vinyl Chloride	2.04	62	211790m	54.69	ppb		
5) Bromomethane	2.40	94	117388	51.40	ppb		87
6) Chloroethane	2.50	64	129953m	52.98	ppb		
7) Trichlorofluoromethane	2.74	101	403433	55.67	ppb		99
8) Ethyl Ether	3.04	59	128402	53.90	ppb		98
9) Freon-113	3.24	101	211748	51.71	ppb		99
10) 1,1-Dichloroethylene	3.27	61	322278	51.08	ppb		100
11) Acrolein	3.23	56	9645	49.68	ppb		99
12) Iodomethane	3.45	142	145963	41.79	ppb		100
13) Methyl Acetate	3.67	43	94489	49.10	ppb		100
14) tert Butyl Alcohol (TBA)	3.92	59	15645	54.20	ppb	#	100
15) Acrylonitrile	4.06	53	31921	50.43	ppb		95
16) trans-1,2-Dichloroethylene	4.02	61	294802	52.40	ppb	#	91
17) Carbon Disulfide	3.50	76	557138	50.24	ppb		100
18) Methylene Chloride	3.78	49	240606	49.28	ppb		98
19) tert-Butyl Methyl Ether (M	3.99	73	492240	51.13	ppb	#	87
20) Acetone	3.38	43	74069	55.24	ppb		99
21) 1,1-Dichloroethane	4.43	63	354238	50.83	ppb		100
22) Vinyl Acetate	4.46	43	199929	58.57	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	199136	48.91	ppb	#	24
24) 2-Butanone	5.01	43	70248	59.24	ppb		100
25) 2,2-Dichloropropane	4.95	77	381142	53.99	ppb		100
26) Bromochloromethane	5.22	49	147034	52.53	ppb		98
27) Chloroform	5.28	83	383541	51.34	ppb		98
28) 1,1,1-Trichloroethane	5.42	97	374097	51.28	ppb		100
29) Cyclohexane	5.44	56	304005	52.01	ppb	#	100
30) 1,1-Dichloropropylene	5.57	75	296559	51.91	ppb		100
32) Carbon Tetrachloride	5.57	117	334885	51.92	ppb		99
33) 1,2-Dichloroethane	5.82	62	290910	51.03	ppb		99
34) Benzene	5.78	78	646651	51.41	ppb		100
36) Tetrahydrofuran	5.25	42	36442	58.90	ppb		91
37) Trichloroethylene	6.37	95	207226	52.02	ppb		100
38) Methyl Cyclohexane	6.51	83	322237	53.95	ppb	#	100
39) Methyl Methyacrylate	6.68	69	100055	60.00	ppb	#	81
40) Dibromomethane	6.76	93	108630	52.89	ppb		98
41) Bromodichloromethane	6.89	83	281728	52.81	ppb	#	100
42) 1,2-Dichloropropane	6.61	63	150637	51.51	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D
Acq On : 30 Sep 2014 9:00 am
Sample : 50PPB VOA CAL CHECK STD
Misc : QBV4093014A
MS Integration Params: rteint.p
Quant Time: Sep 30 9:18 2014

Vial: 1
Operator: BK
Inst : GCMS-VOA4
Multiplr: 1.00
Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

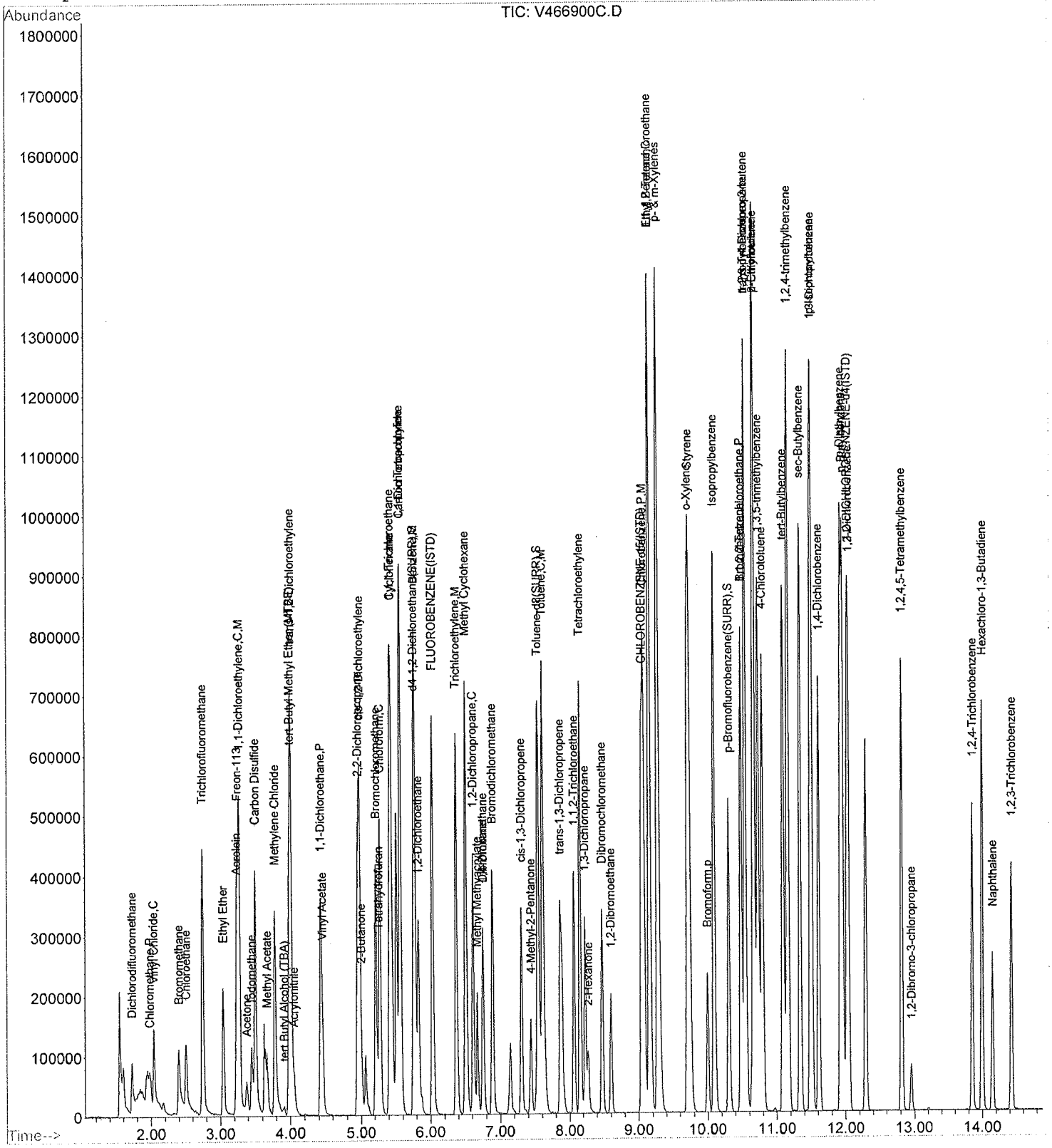
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,4-Dioxane	6.75	88	18169	1711.16	ppb	#	100
45)	cis-1,3-Dichloropropene	7.30	75	262574	50.62	ppb		100
46)	2-Hexanone	8.27	43	98664	58.91	ppb		100
48)	Toluene	7.61	91	730895	52.29	ppb		100
49)	trans-1,3-Dichloropropene	7.86	75	261453	52.26	ppb		99
50)	1,1,2-Trichloroethane	8.06	83	107459	52.87	ppb		99
51)	1,3-Dichloropropane	8.23	76	231348	51.57	ppb	#	100
52)	Tetrachloroethylene	8.15	166	241573	49.68	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	130768	52.39	ppb		100
54)	Dibromochloromethane	8.48	129	190191	53.74	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	146242	54.83	ppb		99
56)	Chlorobenzene	9.08	112	469356	51.81	ppb	#	100
57)	Ethyl Benzene	9.15	91	863971	53.46	ppb		100
58)	p- & m-Xylenes	9.28	91	1336837	105.07	ppb		99
59)	o-Xylene	9.71	91	678509	53.37	ppb		100
60)	Styrene	9.74	104	483700	52.95	ppb	#	100
61)	1,1,1,2-Tetrachloroethane	9.16	131	191092	52.67	ppb		98
62)	p-Ethyltoulene	10.67	105	816056	56.59	ppb		96
63)	p-Diethylbenzene	11.93	119	398992	61.99	ppb	#	96
65)	Bromoform	9.99	173	114354	54.71	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	144841	50.95	ppb		97
68)	trans-1,4-Dichloro-2-buten	10.54	75	163010	52.46	ppb	#	86
69)	1,2,3-Trichloropropane	10.54	110	48299	51.16	ppb		97
70)	Isopropylbenzene	10.09	105	858014	51.77	ppb	#	95
71)	Bromobenzene	10.48	77	312524	52.81	ppb		98
72)	n-Propylbenzene	10.54	91	1003979	53.64	ppb		100
73)	2-Chlorotoluene	10.67	91	665468	51.61	ppb	#	100
74)	4-Chlorotoluene	10.80	91	621511	53.60	ppb	#	87
75)	tert-Butylbenzene	11.10	119	591152	52.43	ppb	#	90
76)	1,3,5-trimethylbenzene	10.73	105	703580	52.89	ppb		100
77)	1,2,4-trimethylbenzene	11.15	105	670562	54.41	ppb		100
78)	sec-Butylbenzene	11.33	105	877512	53.33	ppb	#	95
79)	1,3-Dichlorobenzene	11.51	146	363271	53.29	ppb	#	99
80)	1,4-Dichlorobenzene	11.61	146	366108	53.98	ppb	#	83
81)	1,2-Dichlorobenzene	12.04	146	330834	53.33	ppb	#	68
82)	p-Isopropyltoluene	11.49	119	725118	55.72	ppb	#	100
83)	n-Butylbenzene	11.96	91	773059	60.63	ppb	#	100
84)	1,2,4,5-Tetramethylbenzene	12.81	119	487899	57.25	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.96	75	31229	55.73	ppb		97
86)	1,2,4-Trichlorobenzene	13.85	180	181109	56.01	ppb		100
87)	Naphthalene	14.15	128	234579	52.09	ppb	#	100
88)	Hexachloro-1,3-Butadiene	13.99	225	151234	57.30	ppb	#	98
89)	1,2,3-Trichlorobenzene	14.42	182	146313	54.59	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D Vial: 1
Acq On : 30 Sep 2014 9:00 am Operator: BK
Sample : 50PPB VOA CAL CHECK STD Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 9:18 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration



FORM V

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

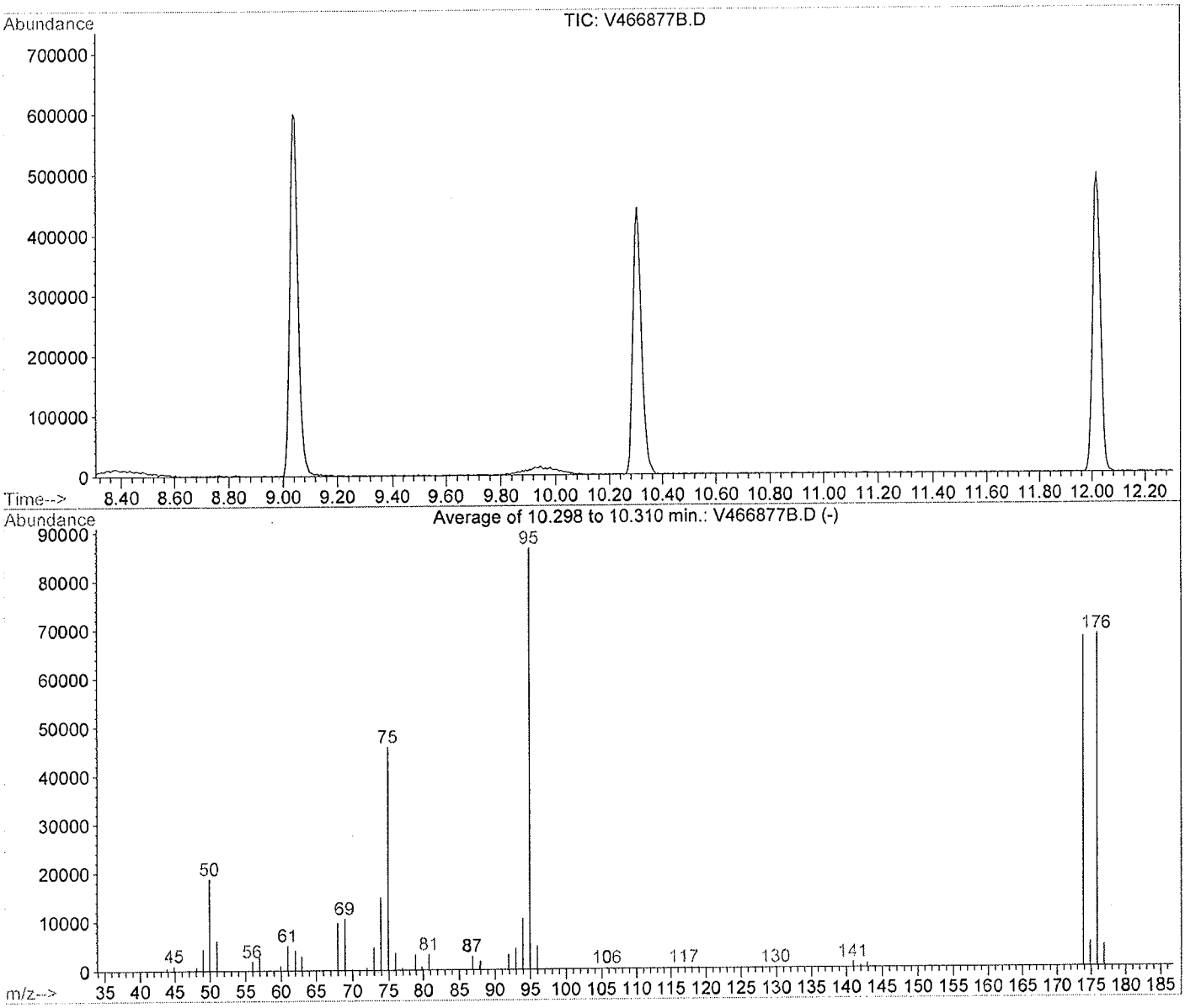
Sequence: Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	BI41538-BS1	V466901L.D	09/30/14 09:37
LCS Dup	BI41538-BSD1	V466902U.D	09/30/14 10:11
Blank	BI41538-BLK1	V466903B.D	09/30/14 10:45
SB21_11-12	14I0908-02	V466905S.D	09/30/14 11:54
SB21_14-15	14I0908-03	V466906S.D	09/30/14 12:37
SB21_24-25	14I0908-04	V466907S.D	09/30/14 13:11
SB20_9-10	14I0908-05	V466908S.D	09/30/14 13:44
SB20_14-15	14I0908-06	V466909S.D	09/30/14 14:33
SB20_24-25	14I0908-07	V466912S.D	09/30/14 15:07
SB21_9-10	14I0908-01	V466911S.D	09/30/14 15:41

BFB

Data File : G:\MSVOA4~1\DAILYDAT\V4092914\V466877B.D Vial: 21
Acq On : 29 Sep 2014 8:01 pm Operator: BK
Sample : MBLK Inst : GCMS-VOA4
Misc : QBV4092914B Multiplr: 1.00
MS Integration Params: rteint.p
Method : G:\MSVOAM~1\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260

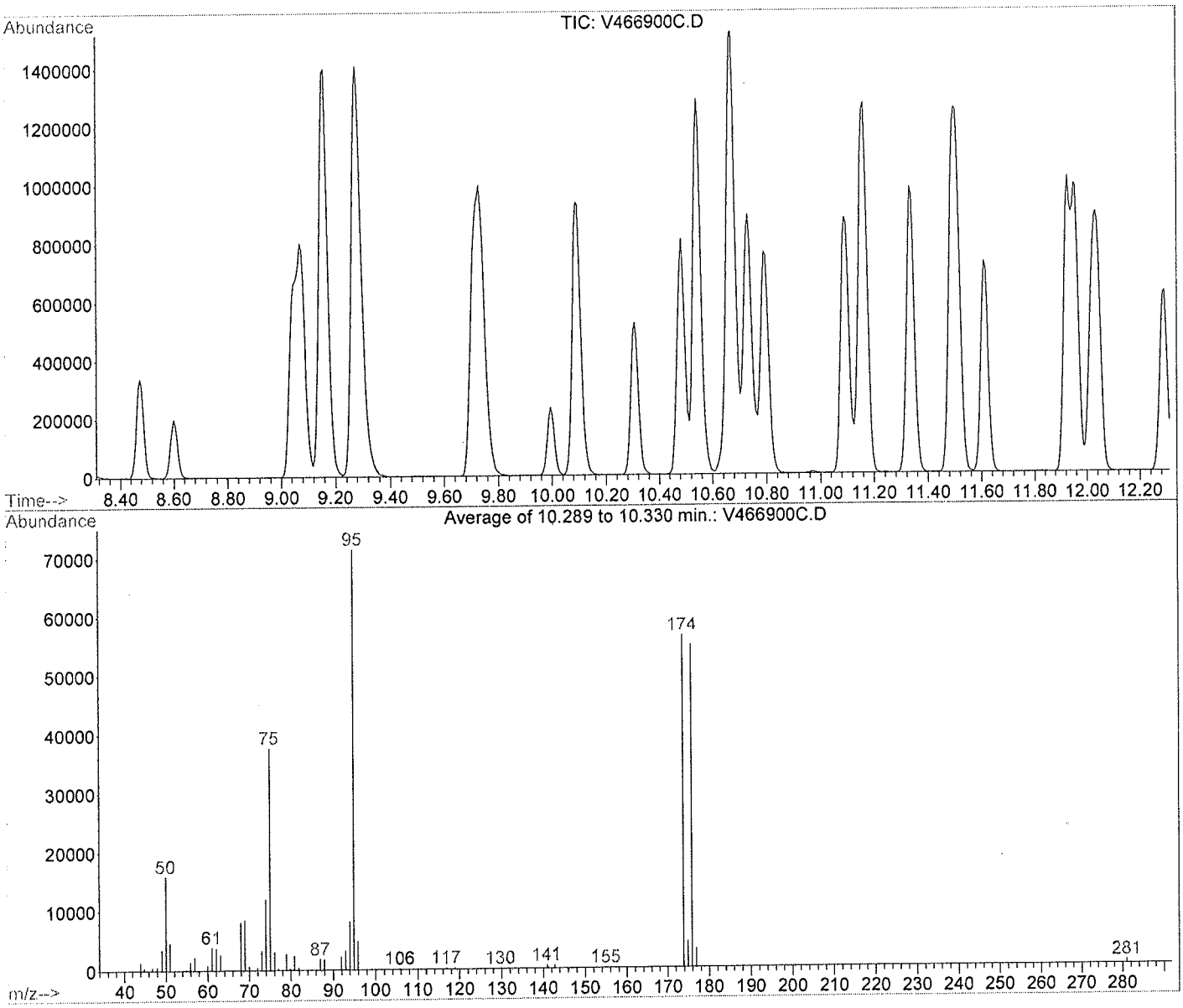


Spectrum Information: Average of 10.298 to 10.310 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	18808	PASS
75	95	30	66	53.0	45899	PASS
95	95	100	100	100.0	86600	PASS
96	95	5	9	5.6	4857	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.5	67973	PASS
175	174	5	9	7.5	5105	PASS
176	174	95	101	100.8	68531	PASS
177	176	5	9	6.6	4498	PASS

Data File : C:\HPCHEM\1\DATA\V4093014\V466900C.D
Acq On : 30 Sep 2014 9:00 am
Sample : 50PPB VOA CAL CHECK STD
Misc : QBV4093014A
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260

Vial: 1
Operator: BK
Inst : GCMS-VOA4
Multiplr: 1.00



Spectrum Information: Average of 10.289 to 10.330 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.3	15933	PASS
75	95	30	66	52.8	37759	PASS
95	95	100	100	100.0	71480	PASS
96	95	5	9	6.8	4880	PASS
173	174	0.00	2	0.1	73	PASS
174	95	50	100	79.1	56552	PASS
175	174	5	9	7.8	4439	PASS
176	174	95	101	97.0	54860	PASS
177	176	5	9	5.9	3210	PASS

FORM I

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.		SDG:	14I0908	
Client:	Langan Engineering & Environmental Services (NYC)		Project:	170282501	
Matrix:	Soil	Laboratory ID:	BI41538-BLK1	File ID:	V466903B.D
Prepared:	09/30/14 07:27	Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml
Analyzed:	09/30/14 10:45	Instrument:	GCMS-VOA4		
Batch:	BI41538	Sequence:		Calibration:	

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethylene	5.0	U
563-58-6	1,1-Dichloropropylene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
108-86-1	Bromobenzene	5.0	U
74-97-5	Bromochloromethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
75-00-3	Chloroethane	5.0	U

FORM I

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.		SDG:	14I0908	
Client:	Langan Engineering & Environmental Services (NYC)		Project:	170282501	
Matrix:	Soil	Laboratory ID:	BI41538-BLK1	File ID:	V466903B.D
Prepared:	09/30/14 07:27	Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml
Analyzed:	09/30/14 10:45	Instrument:	GCMS-VOA4		
Batch:	BI41538	Sequence:		Calibration:	

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethylene	5.0	U
10061-01-5	cis-1,3-Dichloropropylene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
74-95-3	Dibromomethane	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
75-09-2	Methylene chloride	10	U
127-18-4	Tetrachloroethylene	5.0	U
156-60-5	trans-1,2-Dichloroethylene	5.0	U
10061-02-6	trans-1,3-Dichloropropylene	5.0	U
79-01-6	Trichloroethylene	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.0	49.2	98.4	77 - 125	
p-Bromofluorobenzene	50.0	51.8	104	76 - 130	
Toluene-d8	50.0	49.7	99.4	85 - 120	

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466903B.D Vial: 4
Acq On : 30 Sep 2014 10:45 am Operator: BK
Sample : BI41538-BLK1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 12:35 2014 Quant Results File: V4C00234.RES

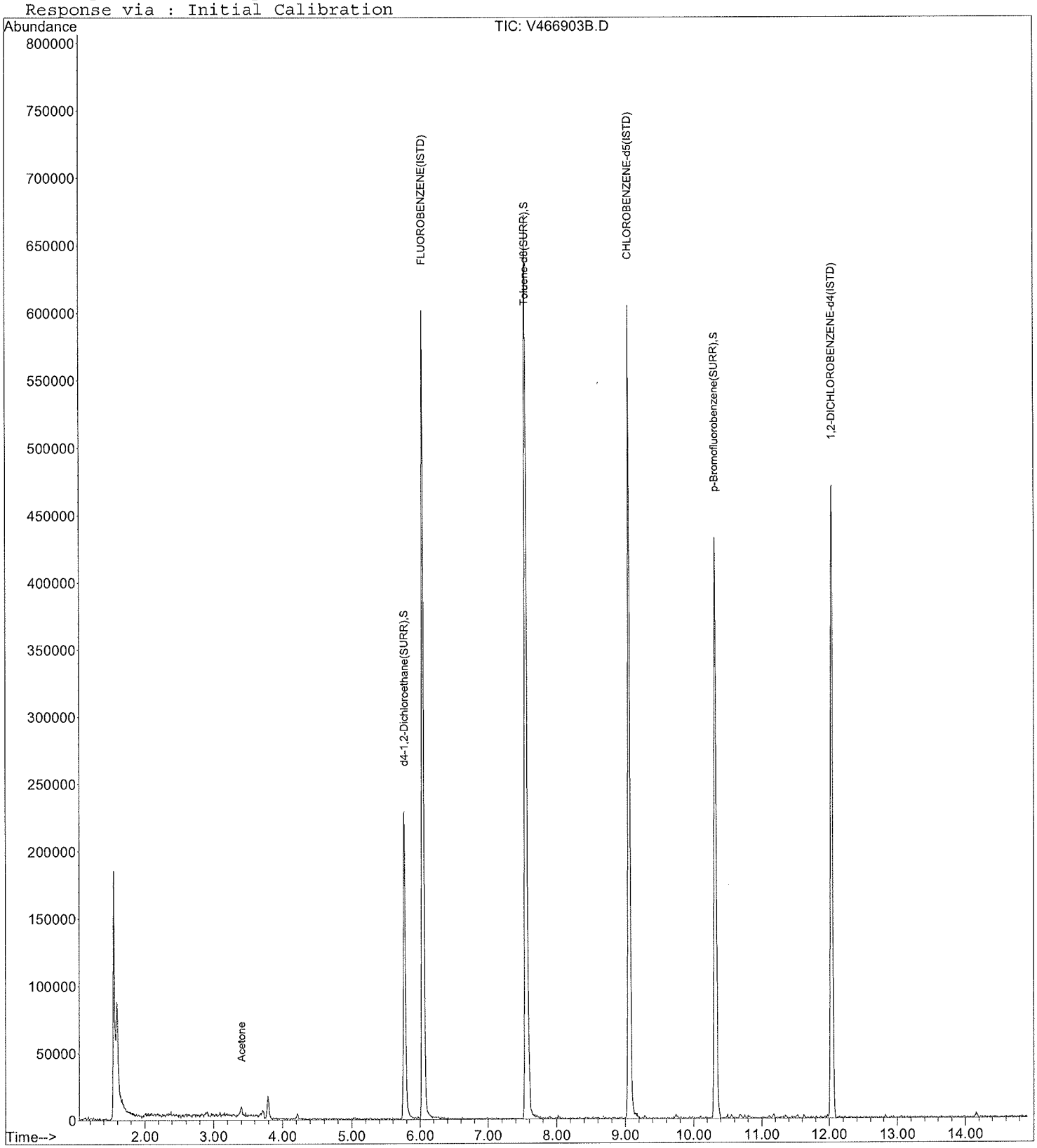
Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

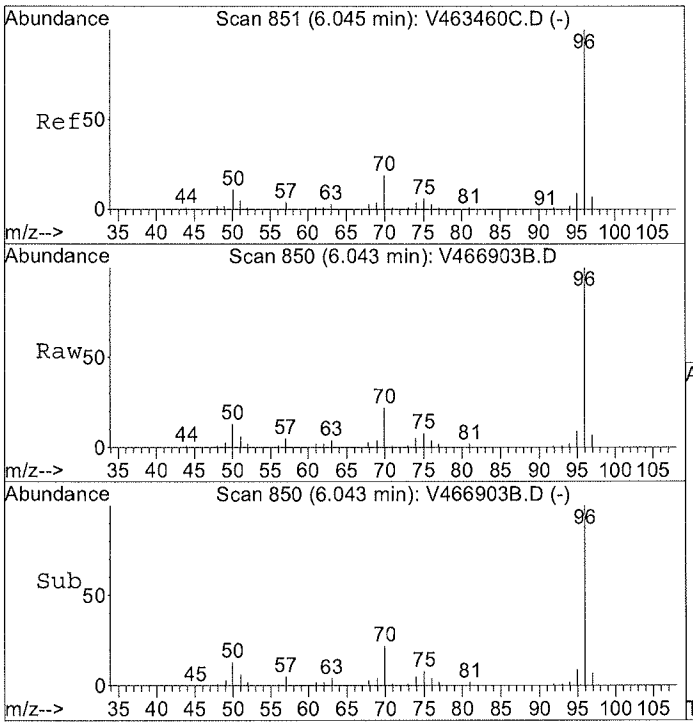
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) FLUOROBENZENE(ISTD)	6.04	70	125851	50.00	ppb	0.01
35) CHLOROBENZENE-d5(ISTD)	9.06	117	414236	50.00	ppb	0.01
64) 1,2-DICHLOROBENZENE-d4(IST	12.04	152	168135	50.00	ppb	0.02
System Monitoring Compounds						
31) d4-1,2-Dichloroethane(SURR	5.77	65	194218	49.18	ppb	0.02
Spiked Amount 50.000	Range 67 - 128		Recovery = 98.36%			
47) Toluene-d8(SURR)	7.56	98	540465	49.71	ppb	0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.42%			
66) p-Bromofluorobenzene(SURR)	10.32	174	163621	51.84	ppb	0.01
Spiked Amount 50.000	Range 63 - 166		Recovery = 103.68%			
Target Compounds						Qvalue
20) Acetone	3.40	43	9458	7.76	ppb	100

(#) = qualifier out of range (m) = manual integration
V466903B.D V4C00233.M Fri Oct 03 13:14:23 2014 123

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466903B.D Vial: 4
Acq On : 30 Sep 2014 10:45 am Operator: BK
Sample : BI41538-BLK1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 12:35 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration

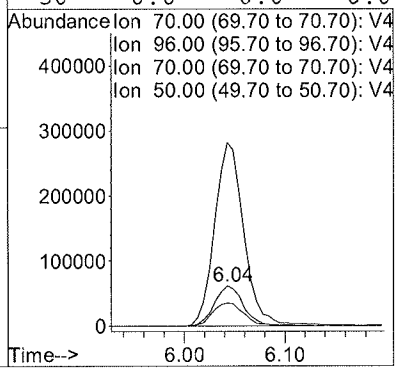


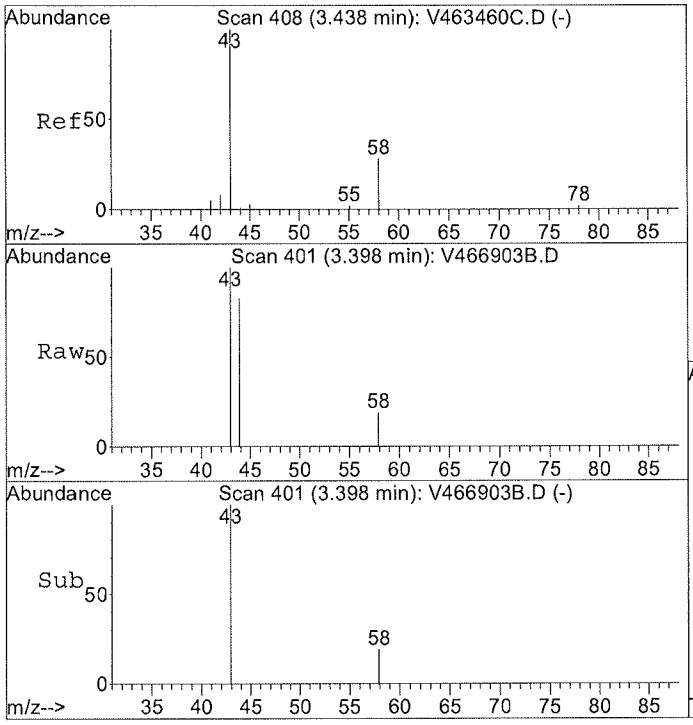


#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 6.04 min Scan# 850
Delta R.T. 0.01 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion: 70 Resp: 125851

Ion	Ratio	Lower	Upper
70	100		
96	457.7	350.6	525.8
70	100.0	80.0	120.0
50	0.0	0.0	0.0

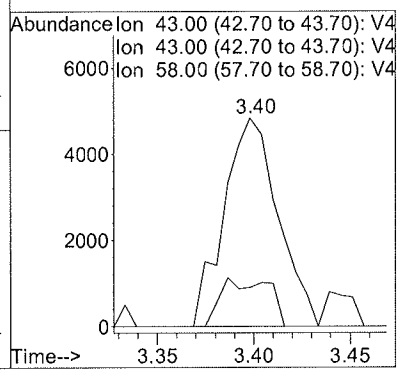


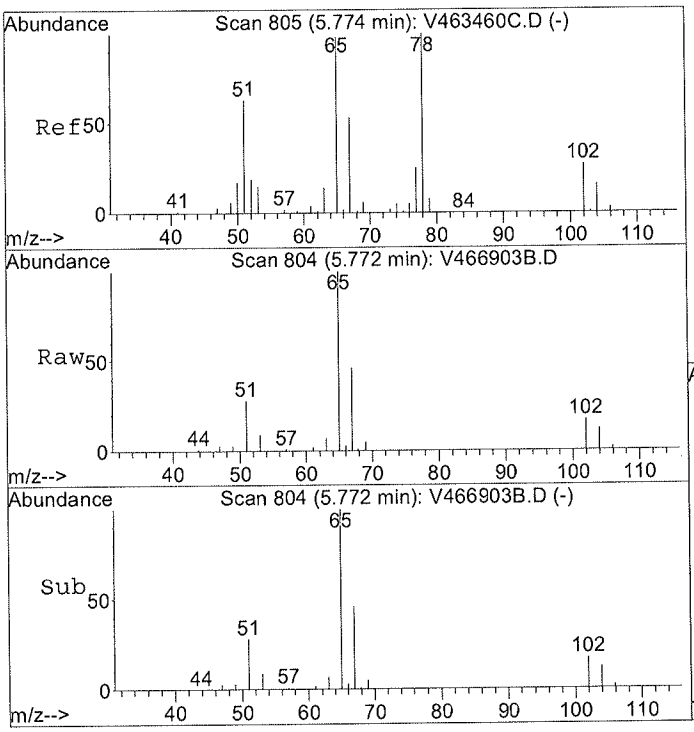


#20
Acetone
Concen: 7.76 ppb
RT: 3.40 min Scan# 401
Delta R.T. 0.02 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion: 43 Resp: 9458

Ion	Ratio	Lower	Upper
43	100		
43	100.0	0.0	200.0
58	18.8	0.0	38.0

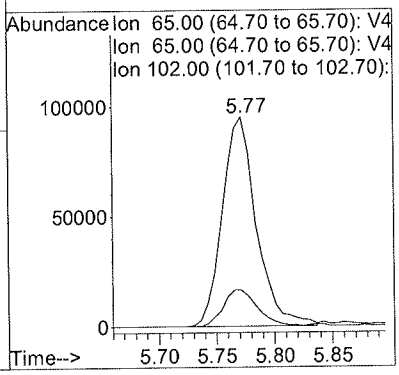


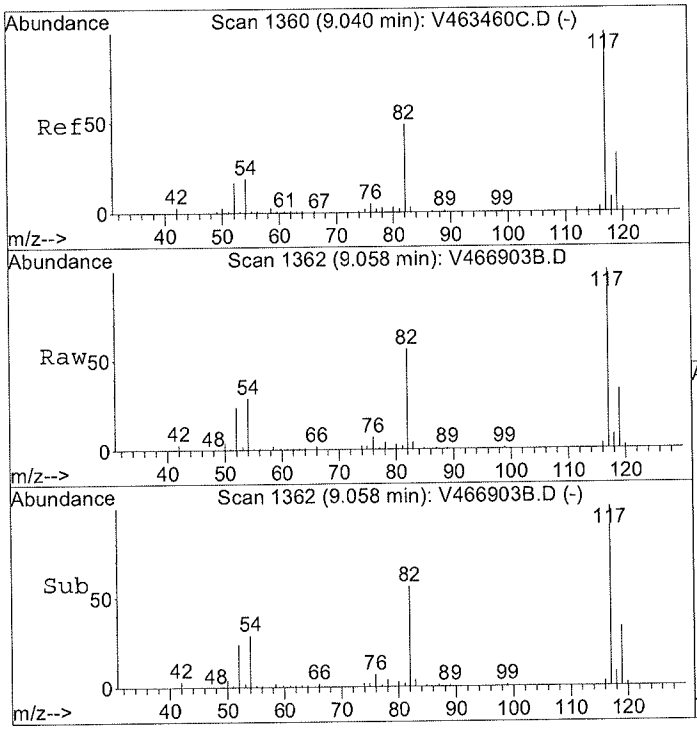


#31
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.77 min Scan# 804
Delta R.T. 0.02 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion: 65 Resp: 194218

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
102	17.6	13.5	20.3

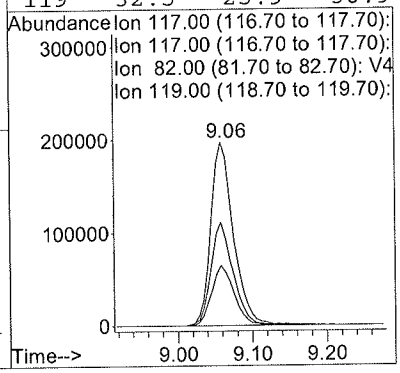


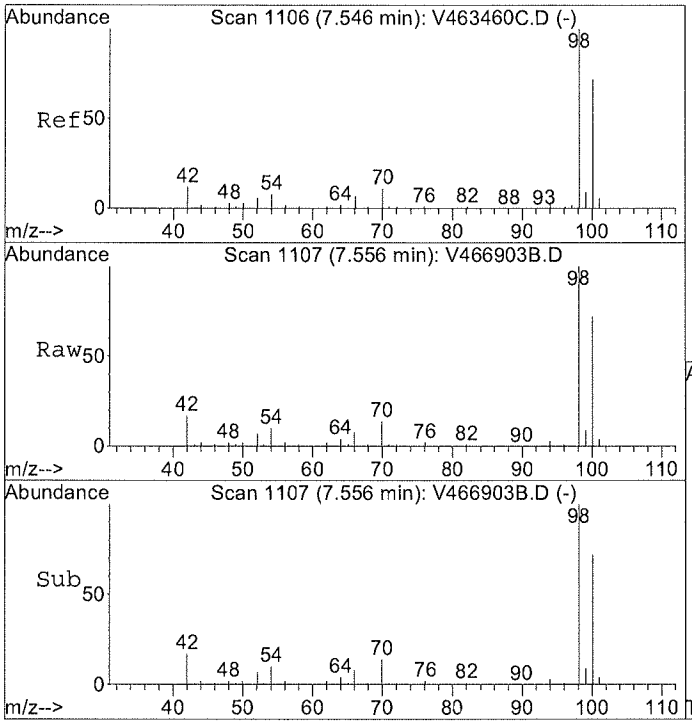


#35
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 9.06 min Scan# 1362
Delta R.T. 0.01 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion:117 Resp: 414236

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0
82	0.0	0.0	0.0
119	32.5	25.9	38.9

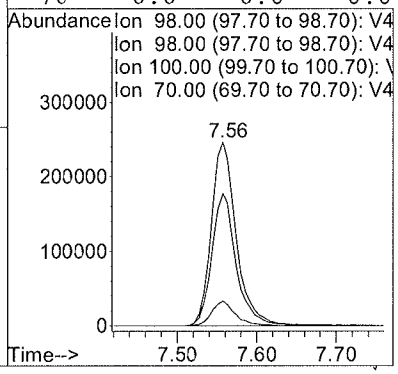


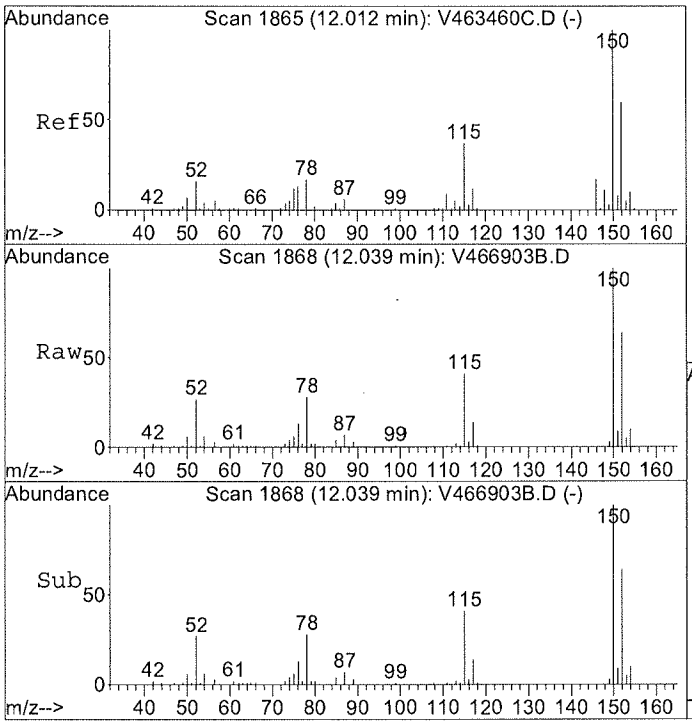


#47
Toluene-d8(SURR)
Concen: Below ppb
RT: 7.56 min Scan# 1107
Delta R.T. 0.01 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion: 98 Resp: 540465

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	70.3	53.8	80.6
70	0.0	0.0	0.0

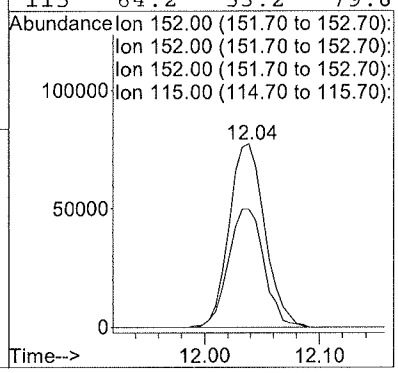


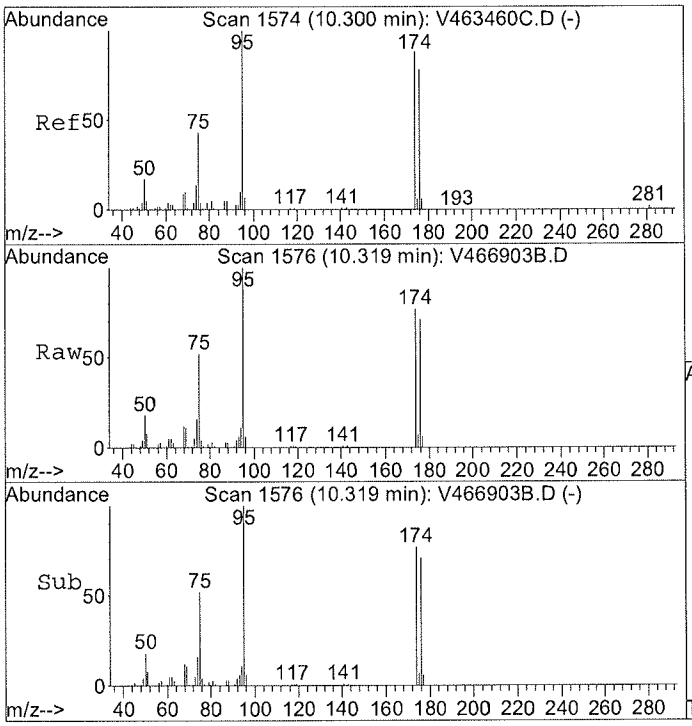


#64
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 12.04 min Scan# 1868
Delta R.T. 0.02 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion:152 Resp: 168135

Ion	Ratio	Lower	Upper
152	100		
152	100.0	80.0	120.0
152	100.0	80.0	120.0
115	64.2	53.2	79.8

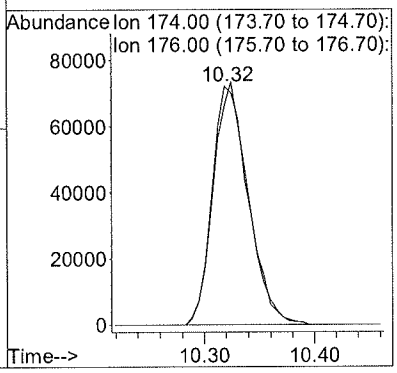




#66
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.32 min Scan# 1576
Delta R.T. 0.01 min
Lab File: V466903B.D
Acq: 30 Sep 2014 10:45 am

Tgt Ion:174 Resp: 163621

Ion	Ratio	Lower	Upper
174	100		
176	92.0	76.2	114.2



FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	1410908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Matrix:	Soil		
Batch:	BI41538	Laboratory ID:	BI41538-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	50.0	51	102	75 - 129
1,1,1-Trichloroethane	50.0	52	105	71 - 137
1,1,2,2-Tetrachloroethane	50.0	53	106	79 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	50.0	52	105	58 - 146
1,1,2-Trichloroethane	50.0	51	102	83 - 123
1,1-Dichloroethane	50.0	51	103	75 - 130
1,1-Dichloroethylene	50.0	50	100	64 - 137
1,1-Dichloropropylene	50.0	52	104	77 - 127
1,2,3-Trichlorobenzene	50.0	58	116	81 - 140
1,2,3-Trichloropropane	50.0	53	106	81 - 126
1,2,4-Trichlorobenzene	50.0	59	117	80 - 141
1,2-Dibromo-3-chloropropane	50.0	58	117	74 - 142
1,2-Dibromoethane	50.0	53	105	86 - 123
1,2-Dichlorobenzene	50.0	53	105	85 - 122
1,2-Dichloroethane	50.0	53	107	71 - 133
1,2-Dichloropropane	50.0	51	102	81 - 122
1,3-Dichlorobenzene	50.0	54	109	84 - 124
1,3-Dichloropropane	50.0	51	103	83 - 123
1,4-Dichlorobenzene	50.0	54	107	84 - 124
2,2-Dichloropropane	50.0	54	108	67 - 136
2-Chlorotoluene	50.0	52	104	78 - 127
4-Chlorotoluene	50.0	53	106	79 - 125
Bromobenzene	50.0	52	103	77 - 129
Bromochloromethane	50.0	52	104	74 - 129
Bromodichloromethane	50.0	52	104	81 - 124
Bromoform	50.0	55	111	80 - 136
Bromomethane	50.0	51	103	32 - 177
Carbon tetrachloride	50.0	53	105	66 - 143
Chlorobenzene	50.0	51	101	86 - 120
Chloroethane	50.0	53	106	51 - 142

FORM III **LCS / LCS DUPLICATE RECOVERY**

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	14I0908
Client:	Langan Engineering & Environmental Services (NYC)	Project:	170282501
Matrix:	Soil		
Batch:	BI41538	Laboratory ID:	BI41538-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Chloroform	50.0	52	104	76 - 131
Chloromethane	50.0	54	109	49 - 132
cis-1,2-Dichloroethylene	50.0	51	102	74 - 132
cis-1,3-Dichloropropylene	50.0	50	101	81 - 129
Dibromochloromethane	50.0	52	105	10 - 200
Dibromomethane	50.0	52	104	83 - 124
Dichlorodifluoromethane	50.0	54	108	28 - 158
Hexachlorobutadiene	50.0	59	117	83 - 133
Methylene chloride	50.0	51	103	57 - 141
Tetrachloroethylene	50.0	48	95.5	80 - 129
trans-1,2-Dichloroethylene	50.0	53	105	72 - 132
trans-1,3-Dichloropropylene	50.0	51	102	78 - 132
Trichloroethylene	50.0	51	102	84 - 123
Trichlorofluoromethane	50.0	55	109	62 - 140
Vinyl Chloride	50.0	56	111	52 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil

Batch: BI41538 Laboratory ID: BI41538-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	50.0	52	104	2.54	30	75 - 129
1,1,1-Trichloroethane	50.0	52	105	0.0191	30	71 - 137
1,1,2,2-Tetrachloroethane	50.0	53	106	0.00	30	79 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	52	105	0.0191	30	58 - 146
1,1,2-Trichloroethane	50.0	52	105	2.76	30	83 - 123
1,1-Dichloroethane	50.0	51	102	0.253	30	75 - 130
1,1-Dichloroethylene	50.0	52	104	3.92	30	64 - 137
1,1-Dichloropropylene	50.0	54	108	3.30	30	77 - 127
1,2,3-Trichlorobenzene	50.0	56	112	3.22	30	81 - 140
1,2,3-Trichloropropane	50.0	51	102	3.42	30	81 - 126
1,2,4-Trichlorobenzene	50.0	55	111	5.74	30	80 - 141
1,2-Dibromo-3-chloropropane	50.0	54	107	8.70	30	74 - 142
1,2-Dibromoethane	50.0	54	108	2.18	30	86 - 123
1,2-Dichlorobenzene	50.0	53	106	0.832	30	85 - 122
1,2-Dichloroethane	50.0	53	106	0.431	30	71 - 133
1,2-Dichloropropane	50.0	52	104	1.87	30	81 - 122
1,3-Dichlorobenzene	50.0	54	107	1.44	30	84 - 124
1,3-Dichloropropane	50.0	54	107	3.85	30	83 - 123
1,4-Dichlorobenzene	50.0	54	109	1.26	30	84 - 124
2,2-Dichloropropane	50.0	55	111	2.26	30	67 - 136
2-Chlorotoluene	50.0	52	105	1.02	30	78 - 127
4-Chlorotoluene	50.0	54	107	0.562	30	79 - 125
Bromobenzene	50.0	52	105	1.38	30	77 - 129
Bromochloromethane	50.0	54	108	3.93	30	74 - 129
Bromodichloromethane	50.0	53	106	2.09	30	81 - 124
Bromoform	50.0	55	110	0.471	30	80 - 136
Bromomethane	50.0	54	108	4.91	30	32 - 177
Carbon tetrachloride	50.0	53	106	0.909	30	66 - 143
Chlorobenzene	50.0	52	104	2.58	30	86 - 120
Chloroethane	50.0	56	112	5.04	30	51 - 142

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil

Batch: BI41538 Laboratory ID: BI41538-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chloroform	50.0	53	106	1.92	30	76 - 131
Chloromethane	50.0	57	114	4.63	30	49 - 132
cis-1,2-Dichloroethylene	50.0	52	105	3.24	30	74 - 132
cis-1,3-Dichloropropylene	50.0	51	102	1.62	30	81 - 129
Dibromochloromethane	50.0	54	108	2.97	30	10 - 200
Dibromomethane	50.0	54	107	2.85	30	83 - 124
Dichlorodifluoromethane	50.0	56	112	4.25	30	28 - 158
Hexachlorobutadiene	50.0	56	113	3.60	30	83 - 133
Methylene chloride	50.0	52	105	2.22	30	57 - 141
Tetrachloroethylene	50.0	49	97.2	1.72	30	80 - 129
trans-1,2-Dichloroethylene	50.0	53	107	1.45	30	72 - 132
trans-1,3-Dichloropropylene	50.0	53	107	4.87	30	78 - 132
Trichloroethylene	50.0	53	106	3.78	30	84 - 123
Trichlorofluoromethane	50.0	56	113	3.30	30	62 - 140
Vinyl Chloride	50.0	57	113	1.52	30	52 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466901L.D Vial: 2
Acq On : 30 Sep 2014 9:37 am Operator: BK
Sample : BI41538-BS1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:40 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	132575	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	436263	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.03	152	181823	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	212002	50.96	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 101.92%				
47) Toluene-d8(SURR)	7.55	98	555354	48.50	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.00%				
66) p-Bromofluorobenzene(SURR)	10.31	174	172040	50.40	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 100.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	258599m	53.88	ppb		
3) Chloromethane	1.98	50	206916	54.41	ppb	#	10
4) Vinyl Chloride	2.04	62	206427m	55.68	ppb		
5) Bromomethane	2.39	94	112128m	51.29	ppb		
6) Chloroethane	2.50	64	124961m	53.22	ppb		
7) Trichlorofluoromethane	2.74	101	378260	54.52	ppb		99
8) Ethyl Ether	3.04	59	122772	53.84	ppb		99
9) Freon-113	3.24	101	205061	52.31	ppb		99
10) 1,1-Dichloroethylene	3.28	61	303445	50.24	ppb		99
11) Acrolein	3.22	56	10163m	54.69	ppb		
12) Iodomethane	3.45	142	145178	43.15	ppb		98
13) Methyl Acetate	3.67	43	99803	54.18	ppb		99
14) tert Butyl Alcohol (TBA)	3.92	59	19290	68.89	ppb	#	100
15) Acrylonitrile	4.07	53	33653	55.54	ppb		96
16) trans-1,2-Dichloroethylene	4.01	61	283216	52.59	ppb		99
17) Carbon Disulfide	3.51	76	537539	50.64	ppb		100
18) Methylene Chloride	3.78	49	239744	51.30	ppb		98
19) tert-Butyl Methyl Ether (M	4.00	73	488583	53.02	ppb	#	100
20) Acetone	3.38	43	60618	47.22	ppb		99
21) 1,1-Dichloroethane	4.43	63	342827	51.38	ppb		99
22) Vinyl Acetate	4.46	43	195600	59.86	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	197900	50.78	ppb	#	24
24) 2-Butanone	5.01	43	63400	55.85	ppb		100
25) 2,2-Dichloropropane	4.96	77	365811	54.13	ppb		100
26) Bromochloromethane	5.22	49	139160	51.94	ppb		98
27) Chloroform	5.28	83	372801	52.13	ppb		99
28) 1,1,1-Trichloroethane	5.42	97	366063	52.42	ppb		100
29) Cyclohexane	5.44	56	283839	50.73	ppb	#	100
30) 1,1-Dichloropropylene	5.57	75	284871	52.09	ppb		99
32) Carbon Tetrachloride	5.56	117	324556	52.57	ppb		98
33) 1,2-Dichloroethane	5.83	62	291490	53.42	ppb		99
34) Benzene	5.78	78	621410	51.61	ppb		100
36) Tetrahydrofuran	5.26	42	35653	57.74	ppb		89
37) Trichloroethylene	6.37	95	202479	50.85	ppb		99
38) Methyl Cyclohexane	6.51	83	312916	52.42	ppb	#	99
39) Methyl Methyacrylate	6.68	69	98155	58.88	ppb	#	85
40) Dibromomethane	6.76	93	107077	52.16	ppb		98
41) Bromodichloromethane	6.89	83	277636	52.07	ppb	#	100
42) 1,2-Dichloropropane	6.62	63	149029	50.98	ppb		99
43) 1,4-Dioxane	6.76	88	24493	2206.63	ppb	#	100
45) cis-1,3-Dichloropropene	7.31	75	260744	50.29	ppb		100
46) 2-Hexanone	8.28	43	98872	59.06	ppb		99
48) Toluene	7.61	91	710160	50.83	ppb		100
49) trans-1,3-Dichloropropene	7.87	75	254689	50.93	ppb		99
50) 1,1,2-Trichloroethane	8.07	83	103683	51.04	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466901L.D Vial: 2
Acq On : 30 Sep 2014 9:37 am Operator: BK
Sample : BI41538-BS1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:40 2014 Quant Results File: V4C00234.RES

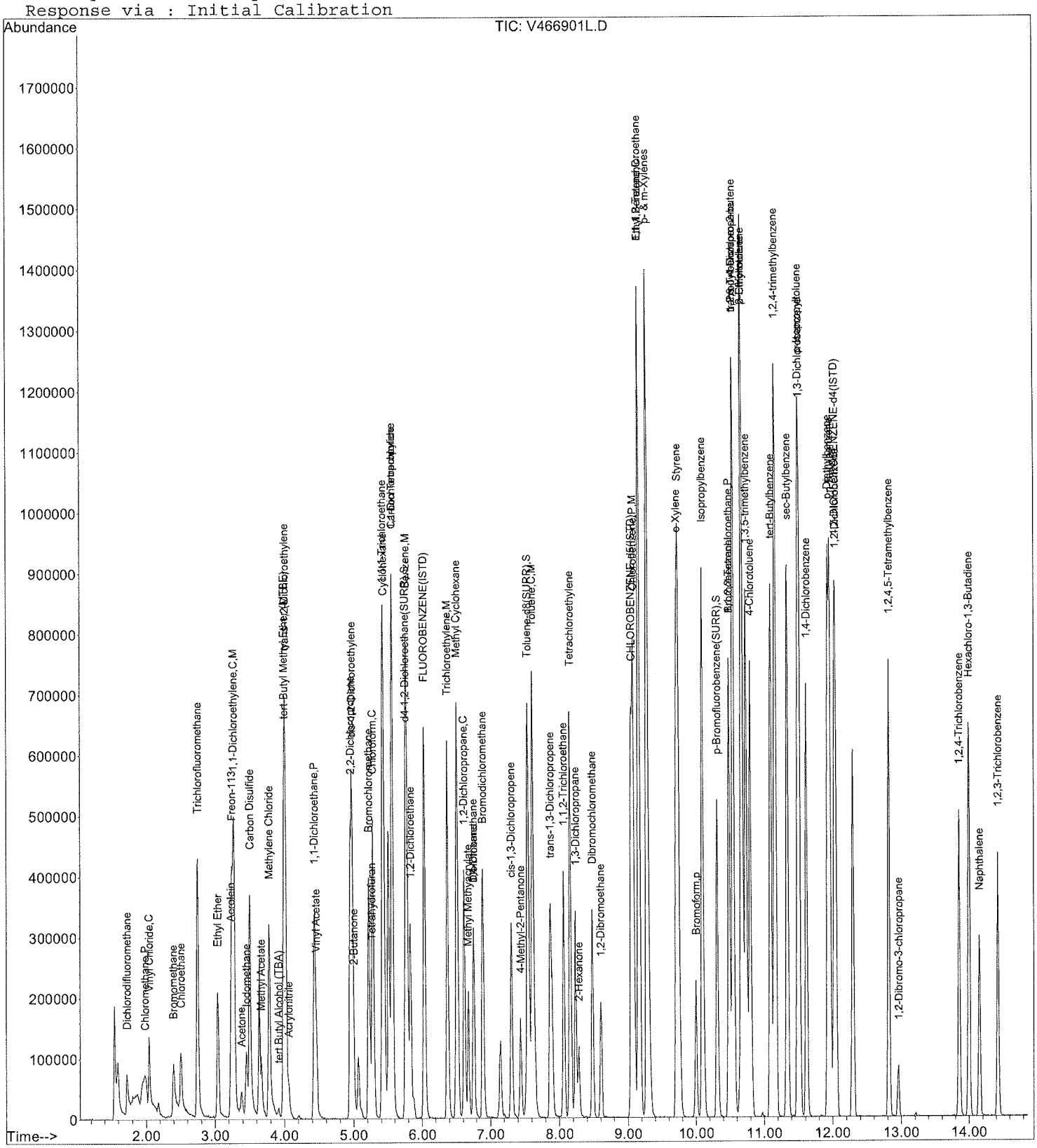
Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,3-Dichloropropane	8.24	76	230813	51.48	ppb	#	100
52)	Tetrachloroethylene	8.15	166	232131	47.76	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	132352	53.04	ppb		99
54)	Dibromochloromethane	8.48	129	185183	52.35	ppb	#	100
55)	1,2-Dibromoethane	8.61	107	140545	52.72	ppb		98
56)	Chlorobenzene	9.08	112	458179	50.60	ppb	#	100
57)	Ethyl Benzene	9.16	91	819155	50.71	ppb		100
58)	p- & m-Xylenes	9.28	91	1294833	101.82	ppb		100
59)	o-Xylene	9.71	91	646523	50.88	ppb		99
60)	Styrene	9.74	104	466468	51.09	ppb	#	99
61)	1,1,1,2-Tetrachloroethane	9.16	131	184337	50.83	ppb		99
62)	p-Ethyltoulene	10.67	105	760158	52.73	ppb		99
63)	p-Diethylbenzene	11.93	119	385612	59.94	ppb		96
65)	Bromoform	10.00	173	111951	55.35	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	145961	53.06	ppb		98
68)	trans-1,4-Dichloro-2-buten	10.54	75	168187	55.94	ppb	#	86
69)	1,2,3-Trichloropropane	10.54	110	48305	52.88	ppb		95
70)	Isopropylbenzene	10.10	105	825381	51.47	ppb	#	92
71)	Bromobenzene	10.48	77	296108	51.71	ppb		99
72)	n-Propylbenzene	10.54	91	961097	53.07	ppb		100
73)	2-Chlorotoluene	10.67	91	646110	51.79	ppb	#	89
74)	4-Chlorotoluene	10.80	91	597082	53.21	ppb	#	97
75)	tert-Butylbenzene	11.10	119	569383	52.19	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	684247	53.16	ppb		100
77)	1,2,4-trimethylbenzene	11.16	105	644197	54.01	ppb		100
78)	sec-Butylbenzene	11.33	105	848022	53.27	ppb		100
79)	1,3-Dichlorobenzene	11.52	146	358805	54.39	ppb	#	81
80)	1,4-Dichlorobenzene	11.62	146	352540	53.71	ppb	#	83
81)	1,2-Dichlorobenzene	12.05	146	316153	52.67	ppb	#	100
82)	p-Isopropyltoluene	11.49	119	694396	55.14	ppb	#	100
83)	n-Butylbenzene	11.96	91	737829	59.81	ppb	#	100
84)	1,2,4,5-Tetramethylbenzene	12.82	119	483546	58.64	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.96	75	31687	58.43	ppb		98
86)	1,2,4-Trichlorobenzene	13.86	180	184341	58.60	ppb		100
87)	Naphthalene	14.15	128	267891	60.23	ppb	#	97
88)	Hexachloro-1,3-Butadiene	14.00	225	149460	58.52	ppb	#	70
89)	1,2,3-Trichlorobenzene	14.43	182	151879	58.09	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466901L.D Vial: 2
Acq On : 30 Sep 2014 9:37 am Operator: BK
Sample : BI41538-BS1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:40 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466902U.D Vial: 3
Acq On : 30 Sep 2014 10:11 am Operator: BK
Sample : BI41538-BSD1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:41 2014 Quant Results File: V4C00234.RES

Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) FLUOROBENZENE(ISTD)	6.03	70	133259	50.00	ppb		0.00
35) CHLOROBENZENE-d5(ISTD)	9.05	117	434904	50.00	ppb		0.00
64) 1,2-DICHLOROBENZENE-d4(IST	12.02	152	185745	50.00	ppb		0.00
System Monitoring Compounds							
31) d4-1,2-Dichloroethane(SURR	5.76	65	211191	50.51	ppb		0.00
Spiked Amount 50.000	Range 67 - 128		Recovery = 101.02%				
47) Toluene-d8(SURR)	7.54	98	563839	49.40	ppb		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.80%				
66) p-Bromofluorobenzene(SURR)	10.31	174	175338	50.28	ppb		0.00
Spiked Amount 50.000	Range 63 - 166		Recovery = 100.56%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.72	85	271220m	56.22	ppb		
3) Chloromethane	1.98	50	217833m	56.99	ppb		
4) Vinyl Chloride	2.04	62	210669m	56.53	ppb		
5) Bromomethane	2.39	94	118384m	53.87	ppb		
6) Chloroethane	2.50	64	132104m	55.97	ppb		
7) Trichlorofluoromethane	2.74	101	392948	56.35	ppb		100
8) Ethyl Ether	3.04	59	123375	53.82	ppb	#	65
9) Freon-113	3.25	101	206152	52.32	ppb		97
10) 1,1-Dichloroethylene	3.28	61	317204	52.25	ppb	#	79
11) Acrolein	3.22	56	10282	55.04	ppb		91
12) Iodomethane	3.45	142	156447	45.77	ppb		97
13) Methyl Acetate	3.67	43	95748	51.71	ppb		100
14) tert Butyl Alcohol (TBA)	3.91	59	16190	58.08	ppb	#	100
15) Acrylonitrile	4.06	53	34199	56.15	ppb	#	58
16) trans-1,2-Dichloroethylene	4.01	61	288832	53.36	ppb		99
17) Carbon Disulfide	3.50	76	550754	51.61	ppb		100
18) Methylene Chloride	3.78	49	246404	52.45	ppb		98
19) tert-Butyl Methyl Ether (M	3.99	73	489203	52.81	ppb	#	87
20) Acetone	3.38	43	60360	46.78	ppb		99
21) 1,1-Dichloroethane	4.43	63	343729	51.25	ppb		100
22) Vinyl Acetate	4.46	43	195708	59.59	ppb		100
23) cis-1,2-Dichloroethylene	4.98	96	205480	52.45	ppb	#	24
24) 2-Butanone	5.00	43	70110	61.44	ppb		99
25) 2,2-Dichloropropane	4.96	77	376113	55.37	ppb		100
26) Bromochloromethane	5.22	49	145490	54.02	ppb		99
27) Chloroform	5.27	83	381961	53.14	ppb		99
28) 1,1,1-Trichloroethane	5.42	97	368015	52.43	ppb		99
29) Cyclohexane	5.44	56	299592	53.27	ppb	#	100
30) 1,1-Dichloropropylene	5.56	75	295941	53.84	ppb		100
32) Carbon Tetrachloride	5.56	117	329199	53.05	ppb		100
33) 1,2-Dichloroethane	5.83	62	291740	53.19	ppb		99
34) Benzene	5.78	78	637910	52.71	ppb		100
36) Tetrahydrofuran	5.26	42	33258	54.29	ppb		99
37) Trichloroethylene	6.37	95	209621	52.81	ppb		100
38) Methyl Cyclohexane	6.51	83	324077	54.46	ppb	#	99
39) Methyl Methyacrylate	6.68	69	96935	58.33	ppb	#	77
40) Dibromomethane	6.75	93	109842	53.67	ppb		98
41) Bromodichloromethane	6.89	83	282626	53.17	ppb	#	100
42) 1,2-Dichloropropane	6.62	63	151366	51.94	ppb		98
43) 1,4-Dioxane	6.76	88	19457	1820.21	ppb	#	100
45) cis-1,3-Dichloropropene	7.31	75	264193	51.11	ppb	#	88
46) 2-Hexanone	8.28	43	90853	54.44	ppb		100
48) Toluene	7.61	91	722628	51.88	ppb		100
49) trans-1,3-Dichloropropene	7.87	75	266544	53.47	ppb	#	88
50) 1,1,2-Trichloroethane	8.07	83	106267	52.47	ppb	#	81

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466902U.D Vial: 3
Acq On : 30 Sep 2014 10:11 am Operator: BK
Sample : BI41538-BSD1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:41 2014 Quant Results File: V4C00234.RES

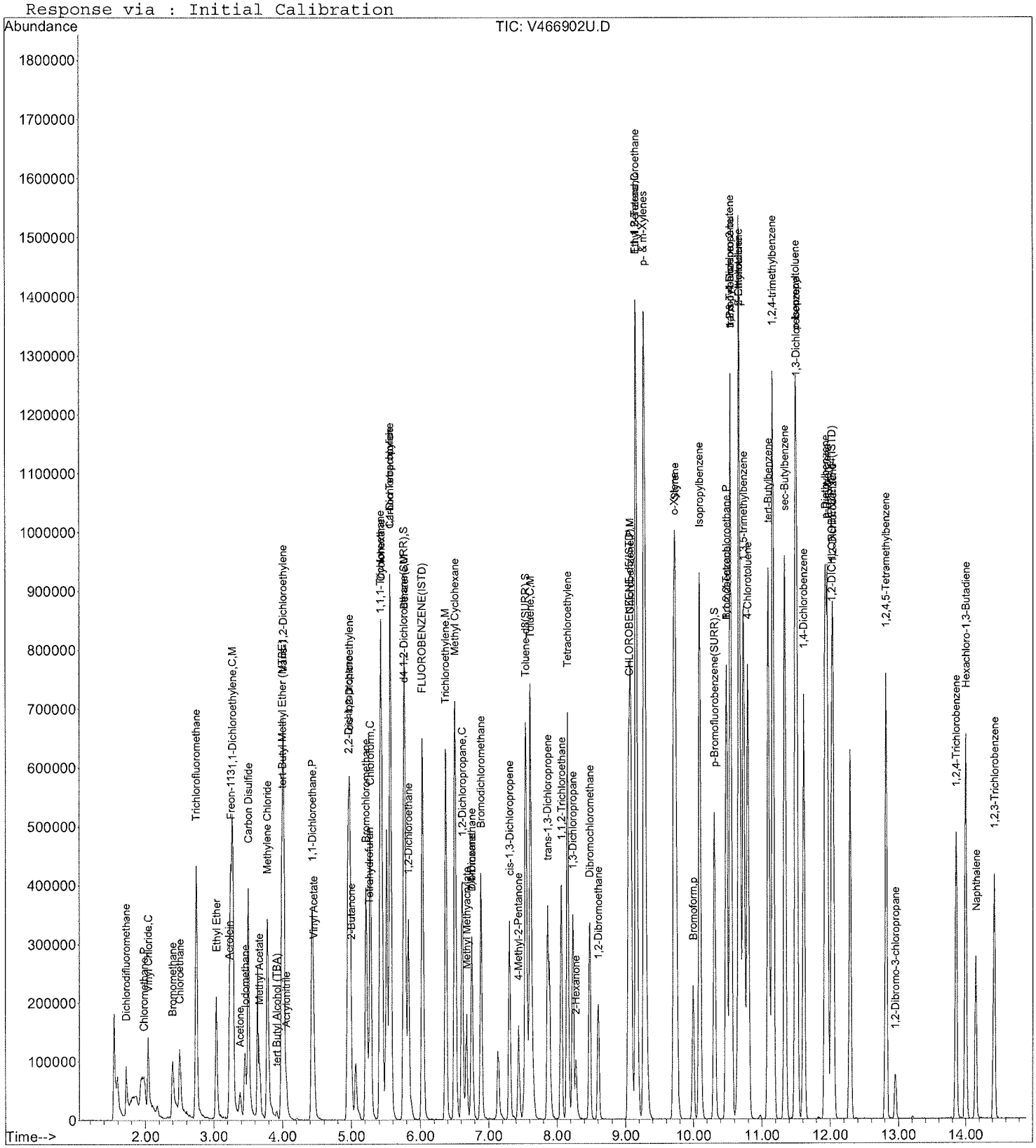
Quant Method : C:\HPCHEM\1\METHODS\V4C00234.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Tue Sep 30 09:05:52 2014
Response via : Initial Calibration
DataAcq Meth : V4CACQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,3-Dichloropropane	8.23	76	239163	53.50	ppb	#	100
52)	Tetrachloroethylene	8.15	166	235423	48.59	ppb	#	100
53)	4-Methyl-2-Pentanone	7.44	43	134410	54.04	ppb		100
54)	Dibromochloromethane	8.48	129	190166	53.93	ppb	#	100
55)	1,2-Dibromoethane	8.60	107	143203	53.88	ppb		99
56)	Chlorobenzene	9.08	112	468646	51.92	ppb	#	100
57)	Ethyl Benzene	9.16	91	856486	53.18	ppb		100
58)	p- & m-Xylenes	9.28	91	1346168	106.18	ppb		100
59)	o-Xylene	9.72	91	665418	52.53	ppb		100
60)	Styrene	9.74	104	480279	52.76	ppb	#	75
61)	1,1,1,2-Tetrachloroethane	9.16	131	188490	52.14	ppb		99
62)	p-Ethyltoulene	10.67	105	777759	54.12	ppb		100
63)	p-Diethylbenzene	11.92	119	390375	60.87	ppb		97
65)	Bromoform	10.00	173	113830	55.09	ppb	#	100
67)	1,1,2,2-Tetrachloroethane	10.49	83	149111	53.06	ppb	#	71
68)	trans-1,4-Dichloro-2-buten	10.55	75	166177	54.10	ppb	#	86
69)	1,2,3-Trichloropropane	10.55	110	47689	51.10	ppb		94
70)	Isopropylbenzene	10.09	105	841446	51.36	ppb	#	95
71)	Bromobenzene	10.48	77	306699	52.43	ppb		99
72)	n-Propylbenzene	10.55	91	982183	53.09	ppb		100
73)	2-Chlorotoluene	10.67	91	666842	52.32	ppb	#	100
74)	4-Chlorotoluene	10.79	91	613384	53.51	ppb	#	97
75)	tert-Butylbenzene	11.09	119	584120	52.41	ppb	#	100
76)	1,3,5-trimethylbenzene	10.73	105	711006	54.07	ppb		100
77)	1,2,4-trimethylbenzene	11.16	105	658906	54.08	ppb		100
78)	sec-Butylbenzene	11.34	105	871557	53.59	ppb	#	94
79)	1,3-Dichlorobenzene	11.51	146	361284	53.61	ppb	#	100
80)	1,4-Dichlorobenzene	11.61	146	364674	54.39	ppb	#	83
81)	1,2-Dichlorobenzene	12.04	146	325660	53.11	ppb	#	99
82)	p-Isopropyltoluene	11.49	119	721906	56.12	ppb	#	100
83)	n-Butylbenzene	11.96	91	749921	59.50	ppb	#	99
84)	1,2,4,5-Tetramethylbenzene	12.81	119	482553	57.29	ppb		98
85)	1,2-Dibromo-3-chloropropan	12.95	75	29670	53.56	ppb		97
86)	1,2,4-Trichlorobenzene	13.86	180	176580	55.33	ppb	#	58
87)	Naphthalene	14.15	128	254688	56.56	ppb	#	100
88)	Hexachloro-1,3-Butadiene	14.00	225	147279	56.45	ppb	#	98
89)	1,2,3-Trichlorobenzene	14.43	182	149632	56.25	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : G:\MSVOA4 V4\DAILYDAT\V4093014\V466902U.D Vial: 3
Acq On : 30 Sep 2014 10:11 am Operator: BK
Sample : BI41538-BSD1 Inst : GCMS-VOA4
Misc : QBV4093014A Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 30 11:41 2014 Quant Results File: V4C00234.RES

Method : C:\HPCHEM\1\METHODS\V4C00233.M (RTE Integrator)
Title : VOCs BY GC/MS 8240/8260
Last Update : Thu Sep 11 09:53:16 2014
Response via : Initial Calibration



PREPARATION BENCH SHEET

BI41538

York Analytical Laboratories, Inc.

Printed: 10/1/2014 9:30:56AM

Matrix: Soil **Prepared by: EPA 5035A** **Surrogate used: Y14I061**

Lab Number	Analysis	Prepared	By	Initial (g)	Final (ml)	Spike ID	Source ID	ul Spike	ul Surrogate	pH Data			Decanted Y/N	Sample Comments
										Initial	Acid	Basic		
14I0908-01	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	10.12	5				1					From BI41494 by BK or
14I0908-01RE1	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	6.85	5				1					Added 9/30/2014 by BK
14I0908-02	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	10.62	5				1					From BI41494 by BK or
14I0908-03	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	9.34	5				1					From BI41494 by BK or
14I0908-04	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	10.6	5				1					From BI41494 by BK or
14I0908-05	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	9.06	5				1					From BI41494 by BK or
14I0908-06	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	9.34	5				1					From BI41494 by BK or
14I0908-07	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	7.92	5				1					From BI41494 by BK or
14I0908-07RE1	Volatile Organics, 8260 Hal	09/30/2014 08:2	BK	9.74	5				1					Added 9/30/2014 by BC
14I0954-14	Volatile Organics, Tentative	09/30/2014 08:2	BGS	5.14	5				1					
14I0954-14	Volatile Organics, NJDEP/T	09/30/2014 08:2	BGS	5.14	5				1					
14I0954-16	Volatile Organics, NJDEP/T	09/30/2014 08:2	BGS	4.9	5				1					
14I0954-16	Volatile Organics, Tentative	09/30/2014 08:2	BGS	4.9	5				1					
14I0991-01	Volatile Organics, CP-51 (fc	09/30/2014 08:2	BGS	4.9	5				1					
14I0991-02	Volatile Organics, CP-51 (fc	09/30/2014 08:2	BGS	4.9	5				1					
14I1017-01	Volatile Organics, BTEX +	09/30/2014 08:2	BGS	5.69	5				1					
BI41538-BLK1	QC	09/30/2014 07:2	BK	5	5				1					
BI41538-BS1	QC	09/30/2014 07:2	BK	5	5	Y14I078		5	1					
BI41538-BSD1	QC	09/30/2014 07:2	BK	5	5	Y14I078		5	1					

Batch Comments:

Bench Sheet and Injection Log Data

Injection Log

Directory: g:\msvoa4~1\dailydat\v4093014

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	v466900c.d	1.	50PPB VOA CAL CHECK STD	QBV4093014A	30 Sep 14 09:00
2	2	v466901l.d	1.	BI41538-BS1	QBV4093014A	30 Sep 14 09:37
3	3	v466902u.d	1.	BI41538-BSD1	QBV4093014A	30 Sep 14 10:11
4	4	v466903b.d	1.	BI41538-BLK1	QBV4093014A	30 Sep 14 10:45
5	5	v466904s.d	100.	14I0908-01RE1	QBV4093014A 8260 HALO 6.85g 100UL/5ML	30 Sep 14 11:20
6	6	v466905s.d	100.	14I0908-02	QBV4093014A 8260 HALO 10.62g 100UL/5ML	30 Sep 14 11:54
7	7	v466906s.d	100.	14I0908-03	QBV4093014A 8260 HALO 9.34g 100UL/5ML	30 Sep 14 12:37
8	8	v466907s.d	100.	14I0908-04	QBV4093014A 8260 HALO 10.60g 100UL/5ML	30 Sep 14 13:11
9	9	v466908s.d	1.	14I0908-05	QBV4093014A 8260 HALO 9.06g	30 Sep 14 13:44
10	10	v466909s.d	100.	14I0908-06	QBV4093014A 8260 HALO 9.34g 100UL/5ML	30 Sep 14 14:33
11	11	v466910s.d	1.	14I0908-07	QBV4093014A 8260 HALO 7.92g	30 Sep 14 15:07
12	12	v466911s.d	1.	14I0908-01	QBV4093014A 8260 HALO 10.12g RE	30 Sep 14 15:41
13	13	v466912s.d	100.	14I0908-07RE1	QBV4093014A 8260 HALO 9.74g 100UL/5ML	30 Sep 14 16:15
14	14	v466913s.d	1.	14I0908-03	QBV4093014A 8260 HALO 8.30g	30 Sep 14 16:49
15	15	v466914s.d	1.	14I0908-04 V4C00234.M	QBV4093014A 8260 HALO 7.00g	30 Sep 14 17:23
16	16	v466915s.d	1.	14I0954-14	QBV4093014A NJDEP/TCL/375/TIC 5.14g	30 Sep 14 17:57
17	17	v466916s.d	1.	14I0954-16	QBV4093014A NJDEP/TCL/375/TIC 4.90g	30 Sep 14 18:30
18	18	v466917s.d	1.	14I0991-01	QBV4093014A CP51 4.90g	30 Sep 14 19:04
19	19	v466918s.d	1.	14I0991-02	QBV4093014A CP51 4.90g	30 Sep 14 19:38
20	20	v466919s.d	100.	14I1017-01	QBV4093014A BTEX+ADDITIONAL 5.69g 100UL	30 Sep 14 20:12
21	21	v466920b.d	1.	MBLK	QBV4093014B	30 Sep 14 20:46
22	22	v466921c.d	1.	50PPB VOA CAL CHECK STD	QBV4093014B	30 Sep 14 21:19
23	23	v466922c.d	1.	50PPB VOA CAL CHECK STD	QBV4093014B	30 Sep 14 21:53
24	24	v466923l.d	1.	BI41572-BS1	QBV4093014B	30 Sep 14 22:27
25	25	v466924u.d	1.	BI41572-BSD1	QBV4093014B	30 Sep 14 23:01
26	26	v466925b.d	1.	BI41572-BLK1	QBV4093014B	30 Sep 14 23:35
27	27	v466926b.d	10.	BI41571-BLK2	QBV4093014B TCLP BLANK 092614 5ML/50ML	1 Oct 14 00:08
28	28	v466927s.d	10.	14I1039-01	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 00:42
29	29	v466928s.d	10.	14I1039-03	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 01:16
30	30	v466929s.d	10.	14I1039-05	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 01:50
31	31	v466930s.d	10.	14I1039-08	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 02:24
32	32	v466931s.d	10.	14I1039-10	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 02:57
33	33	v466932s.d	10.	14I1039-12	QBV4093014B TCLP RCRA 5ML/50ML	1 Oct 14 03:31
34	34	v466933d.d	10.	BI41571-DUP1	QBV4093014B 14I1039-12 5ML/50ML	1 Oct 14 04:05
35	35	v466934s.d	1.	14I1039-02	QBV4093014B NJDEP/TCL/375 6.08g	1 Oct 14 04:39

Injection Log

Directory: g:\msvoa4~1\dailydat\v4093014

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
36	36	v466935s.d	1.	14I1039-04	QBV4093014B NJDEP/TCL/375 5.16g	1 Oct 14 05:12
37	37	v466936s.d	1.	14I1039-06	QBV4093014B NJDEP/TCL/375 5.25g	1 Oct 14 05:46
38	38	v466937s.d	1.	14I1039-07	QBV4093014B NJDEP/TCL/375 7.27g	1 Oct 14 06:20
39	39	v466938s.d	1.	14I1039-09	QBV4093014B NJDEP/TCL/375 6.07g	1 Oct 14 06:54
40		v466939s.d	1.			

York Analytical Laboratories, Inc.
SDG: 14I0908
CLASS: WET
METHOD: ASTM D 2974-87

DATA PACKAGE COVER PAGE

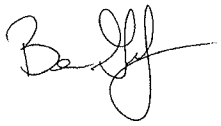
ASTM D 2974-87

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Client Sample Id:	Lab Sample Id:
SB21_11-12	14I0908-02
SB21_14-15	14I0908-03
SB20_14-15	14I0908-06
SB20_24-25	14I0908-07

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 

Namc: Benjamin Gulizia

Date: 10/5/2014

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

ASTM D 2974-87

SB21_11-12

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-02 File ID:

Sampled: 09/23/14 09:15 Prepared: 09/29/14 12:32 Analyzed: 09/30/14 10:15

Solids: 85.76 Preparation: Analysis Preparation Initial/Final: 1 g / 1 mL

Batch: BI41454 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	Q	Method
	Fraction Organic Carbon (FOC@440C)	0.400	1		ASTM D 2974-87
	Fraction Inorganic/ Recalcitrant Org. Carbon@	0.659	1		ASTM D 2974-87

FORM I **INORGANIC ANALYSIS DATA SHEET**

ASTM D 2974-87

SB21_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 1410908-03 File ID:

Sampled: 09/23/14 09:30 Prepared: 09/29/14 12:32 Analyzed: 09/30/14 10:15

Solids: 77.17 Preparation: Analysis Preparation Initial/Final: 1 g / 1 mL

Batch: BI41454 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	Q	Method
	Fraction Organic Carbon (FOC@440C)	0.982	1		ASTM D 2974-87
	Fraction Inorganic/ Recalcitrant Org. Carbon@	1.84	1		ASTM D 2974-87

FORM I **INORGANIC ANALYSIS DATA SHEET**

ASTM D 2974-87

SB20_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-06 File ID:

Sampled: 09/23/14 08:25 Prepared: 09/29/14 12:32 Analyzed: 09/30/14 10:15

Solids: 82.28 Preparation: Analysis Preparation Initial/Final: 1 g / 1 mL

Batch: BI41454 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	Q	Method
	Fraction Organic Carbon (FOC@440C)	1.03	1		ASTM D 2974-87
	Fraction Inorganic/ Recalcitrant Org. Carbon@	5.60	1		ASTM D 2974-87

FORM I **INORGANIC ANALYSIS DATA SHEET**

ASTM D 2974-87

SB20_24-25

Laboratory: York Analytical Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-07 File ID:

Sampled: 09/23/14 08:40 Prepared: 09/29/14 12:32 Analyzed: 09/30/14 10:15

Solids: 85.47 Preparation: Analysis Preparation Initial/Final: 1 g / 1 mL

Batch: BI41454 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	Q	Method
	Fraction Organic Carbon (FOC@440C)	0.215	1		ASTM D 2974-87
	Fraction Inorganic/ Recalcitrant Org. Carbon@	0.229	1		ASTM D 2974-87

FORM IV

PREPARATION BATCH SUMMARY

ASTM D 2974-87

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Batch: BI41454 Batch Matrix: Soil Preparation: Analysis Preparation

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB21_11-12	14I0908-02		09/29/14 12:32	
SB21_14-15	14I0908-03		09/29/14 12:32	
SB20_14-15	14I0908-06		09/29/14 12:32	
SB20_24-25	14I0908-07		09/29/14 12:32	

HOLDING TIME SUMMARY

ASTM D 2974-87

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Clicnt: Langan Engineering & Environmental Services (NYC) Project: 170282501

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Datc Analyzed	Days to Analysis	Max Days to Analysis	Q
SB21_11-12	09/23/14 09:15	09/23/14 18:15	09/29/14 12:32	6.14	14.00	09/30/14 10:15	7.04	14.00	
SB21_14-15	09/23/14 09:30	09/23/14 18:15	09/29/14 12:32	6.13	14.00	09/30/14 10:15	7.03	14.00	
SB20_14-15	09/23/14 08:25	09/23/14 18:15	09/29/14 12:32	6.17	14.00	09/30/14 10:15	7.08	14.00	
SB20_24-25	09/23/14 08:40	09/23/14 18:15	09/29/14 12:32	6.16	14.00	09/30/14 10:15	7.07	14.00	

METHOD DETECTION AND REPORTING LIMITS

ASTM D 2974-87

Laboratory: York Analytical Laboratories, Inc. **SDG:** 14I0908

Client: Langan Engineering & Environmental Services (NYC) **Project:** 170282501

Matrix: Soil **Instrument:**

Analyte	LOD	LOQ	Units
Fraction Organic Carbon (FOC@440C)		0.100	%
Fraction Inorganic/ Recalcitrant Org. Ca		0.100	%

Organic Content or Fraction Organic Carbon and Fraction Inorganic/Recalcitrant Organic Carbon

Date: 9/29/14

Batch: BI41454

Analyst: AA

Oven Temp: 440° / 750°

Time in: 12:30 / 16:30

Time out: 15:30 / 18:30

	Sample ID	1410908-02	-03	-06	-07	-07 DUP	
	Vessel No.	DX	Q	JIII	C	F	
	Tare wt. (g)	25.1937	24.7732	19.4778	23.0519	23.9675	
	Vessel + Wet Sample wt. (g)	35.8526	34.9603	29.9462	33.9221	39.9905	
A	Wet Sample Wt. (g)	10.6589	10.1871	10.4684	10.8702	16.0230	
	Vessel + Ash wt. (g)	35.8160	34.8831	29.8571	33.9021	39.9508	
B	Ash wt. (g)	10.6223	10.1099	10.3793	10.8502	15.9833	
	Vessel + 750° Ash wt. (g)	35.7560	34.7397	29.3786	33.8808	39.9160	
C	750° Ash wt. (g)	10.5623	9.9665	9.9008	10.8289	15.9484	
% OC = [100 x ~~(A/B)~~] $\frac{A-B}{A}$							
% FOC = [100 x ((A-B)/A))]		0.343	0.758	0.851	0.184	0.248	
% FI/ROC = [100 x ((B-C)/A))]		0.565	1.42	4.61	0.196	0.218	

Organic content is ashed at 455° C. FOC is ashed at 440° C. FI/ROC is ashed at 750° C.

9/30/14

Log Book Records

York Analytical Laboratories, Inc.
SDG: 14I0908
CLASS: WET
METHOD: EPA 9045D

DATA PACKAGE COVER PAGE

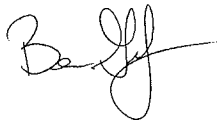
EPA 9045D

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Client Sample Id:	Lab Sample Id:
SB21_11-12	14I0908-02
SB21_14-15	14I0908-03
SB20_14-15	14I0908-06
SB20_24-25	14I0908-07

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 

Name: Benjamin Gulizia

Date: 10/5/2014

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 9045D

SB21_11-12

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-02 File ID:

Sampled: 09/23/14 09:15 Prepared: 09/29/14 10:58 Analyzed: 09/29/14 12:01

Solids: 85.76 Preparation: Analysis Preparation Initial/Final: 20 g / 20 mL

Batch: BI41449 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (pH units)	Dilution Factor	Q	Method
	pH	8.03	1		EPA 9045D

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 9045D

SB21_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-03 File ID:

Sampled: 09/23/14 09:30 Prepared: 09/29/14 10:58 Analyzed: 09/29/14 12:01

Solids: 77.17 Preparation: Analysis Preparation Initial/Final: 20 g / 20 mL

Batch: BI41449 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (pH units)	Dilution Factor	Q	Method
	pH	8.57	1		EPA 9045D

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 9045D

SB20_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 1410908-06 File ID:

Sampled: 09/23/14 08:25 Prepared: 09/29/14 10:58 Analyzed: 09/29/14 12:01

Solids: 82.28 Preparation: Analysis Preparation Initial/Final: 20 g / 20 mL

Batch: B141449 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (pH units)	Dilution Factor	Q	Method
	pH	9.24	1		EPA 9045D

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 9045D

SB20_24-25

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-07 File ID:

Sampled: 09/23/14 08:40 Prepared: 09/29/14 10:58 Analyzed: 09/29/14 12:01

Solids: 85.47 Preparation: Analysis Preparation Initial/Final: 20 g / 20 mL

Batch: BI41449 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (pH units)	Dilution Factor	Q	Method
	pH	8.35	1		EPA 9045D

FORM IV **PREPARATION BATCH SUMMARY**

EPA 9045D

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Batch: BI41449 Batch Matrix: Soil Preparation: Analysis Preparation

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB21_11-12	14I0908-02		09/29/14 10:58	
SB21_14-15	14I0908-03		09/29/14 10:58	
SB20_14-15	14I0908-06		09/29/14 10:58	
SB20_24-25	14I0908-07		09/29/14 10:58	

HOLDING TIME SUMMARY

EPA 9045D

Laboratory: York Analytieal Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SB21_11-12	09/23/14 09:15	09/23/14 18:15	09/29/14 10:58	6.07	0.05	09/29/14 12:01	6.12	0.05	*
SB21_14-15	09/23/14 09:30	09/23/14 18:15	09/29/14 10:58	6.06	0.05	09/29/14 12:01	6.11	0.05	*
SB20_14-15	09/23/14 08:25	09/23/14 18:15	09/29/14 10:58	6.11	0.05	09/29/14 12:01	6.15	0.05	*
SB20_24-25	09/23/14 08:40	09/23/14 18:15	09/29/14 10:58	6.10	0.05	09/29/14 12:01	6.14	0.05	*

METHOD DETECTION AND REPORTING LIMITS

EPA 9045D

Laboratory: York Analytical Laboratories, Inc. **SDG:** 14I0908

Client: Langan Engineering & Environmental Services (NYC) **Project:** 170282501

Matrix: Soil **Instrument:**

Analyte	LOD	LOQ	Units
pH		0.500	pH units

pH

DATE: 092914

BATCH ID: BI41449

ANALYST: KK

	Sample ID	Matrix	pH	QA/QC
	CCV	liquid	7.01	
1	14I0906-35	Soil	8.88	
2	-37		9.50	
3	-39		9.26	
4	-41		9.72	
5	-43		9.77	
6	-45		11.11	
7	-47		11.03	Checked with
8	908-02		8.03	pH strip
9	-03		8.57	
10	-08		9.24	
11	-07		8.35	
12	940-01		6.80	
13	-02		7.11	
14	974-01		8.22	
15	997-01		7.43	
16	-02		7.62	
17	-03		7.88	
18	-04		8.20	
19	-05		7.91	
20	-06		7.72	
DUP	-06		7.71	
	CCV	liquid		

Standard	Traceability
CCV (pH 7 buffer)	Page A

9/30/14

00024

York Analytical Laboratories, Inc.
SDG: 14I0908
CLASS: WET
METHOD: SM 2540G

DATA PACKAGE COVER PAGE

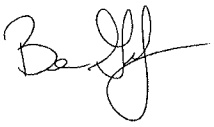
SM 2540G

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Client Sample Id:	Lab Sample Id:
SB21_9-10	14I0908-01
SB21_11-12	14I0908-02
SB21_14-15	14I0908-03
SB21_24-25	14I0908-04
SB20_9-10	14I0908-05
SB20_14-15	14I0908-06
SB20_24-25	14I0908-07

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:  Name: Benjamin Gulizia

Date: 10/5/2014 Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB21_9-10

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-01 File ID:

Sampled: 09/23/14 09:03 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 81.84 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: BI41438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	81.8	1		SM 2540G

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB21_11-12

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-02 File ID:

Sampled: 09/23/14 09:15 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 85.76 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: BI41438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	85.8	1		SM 2540G

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB21_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-03 File ID:

Sampled: 09/23/14 09:30 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 77.17 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: BI41438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	77.2	1		SM 2540G

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB21_24-25

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-04 File ID:

Sampled: 09/23/14 09:45 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 88.43 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: BI41438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	88.4	1		SM 2540G

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB20_14-15

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-06 File ID:

Sampled: 09/23/14 08:25 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 82.28 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: B141438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	82.3	1		SM 2540G

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

SB20_24-25

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Matrix: Soil Laboratory ID: 14I0908-07 File ID:

Sampled: 09/23/14 08:40 Prepared: 09/29/14 09:36 Analyzed: 09/29/14 14:30

Solids: 85.47 Preparation: % Solids Prep Initial/Final: 5 g / 5 mL

Batch: BI4I438 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	85.5	1		SM 2540G

FORM IV

PREPARATION BATCH SUMMARY

SM 2540G

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Batch: BI41438 Batch Matrix: Soil Preparation: % Solids Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB21_9-10	14I0908-01		09/29/14 09:36	
SB21_11-12	14I0908-02		09/29/14 09:36	
SB21_14-15	14I0908-03		09/29/14 09:36	
SB21_24-25	14I0908-04		09/29/14 09:36	
SB20_9-10	14I0908-05		09/29/14 09:36	
SB20_14-15	14I0908-06		09/29/14 09:36	
SB20_24-25	14I0908-07		09/29/14 09:36	

HOLDING TIME SUMMARY

SM 2540G

Laboratory: York Analytical Laboratories, Inc. SDG: 14I0908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SB21_9-10	09/23/14 09:03	09/23/14 18:15	09/29/14 09:36	6.02	28.00	09/29/14 14:30	6.23	28.00	
SB21_11-12	09/23/14 09:15	09/23/14 18:15	09/29/14 09:36	6.01	28.00	09/29/14 14:30	6.22	28.00	
SB21_14-15	09/23/14 09:30	09/23/14 18:15	09/29/14 09:36	6.00	28.00	09/29/14 14:30	6.21	28.00	
SB21_24-25	09/23/14 09:45	09/23/14 18:15	09/29/14 09:36	5.99	28.00	09/29/14 14:30	6.20	28.00	
SB20_9-10	09/23/14 08:10	09/23/14 18:15	09/29/14 09:36	6.06	28.00	09/29/14 14:30	6.26	28.00	
SB20_14-15	09/23/14 08:25	09/23/14 18:15	09/29/14 09:36	6.05	28.00	09/29/14 14:30	6.25	28.00	
SB20_24-25	09/23/14 08:40	09/23/14 18:15	09/29/14 09:36	6.04	28.00	09/29/14 14:30	6.24	28.00	

METHOD DETECTION AND REPORTING LIMITS

SM 2540G

Laboratory: York Analytical Laboratories, Inc. **SDG:** 14I0908

Client: Langan Engineering & Environmental Services (NYC) **Project:** 170282501

Matrix: Soil **Instrument:**

Analyte	LOD	LOQ	Units
% Solids	0.100	0.100	%

YORK
ANALYTICAL LABORATORIES, INC.

TOTAL SOLIDS ELECTRONIC LOG

Sample No.	Analyte	Analysis Date	Analyst	Batch ID	Init. Result	Final Result	Units	Prep. Units
14I0908-01	% Solids	9/29/2014 2:30:05PM	KK	BI41438	81.84	81.8	%	g
14I0908-01	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	8.70	8.70	%	g
14I0908-01	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	10.35	10.3	%	g
14I0908-01	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.30	1.30	%	g
14I0908-02	% Solids	9/29/2014 2:30:05PM	KK	BI41438	85.76	85.8	%	g
14I0908-02	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.55	6.55	%	g
14I0908-02	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	7.42	7.42	%	g
14I0908-02	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
14I0908-03	% Solids	9/29/2014 2:30:05PM	KK	BI41438	77.17	77.2	%	g
14I0908-03	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.42	6.42	%	g
14I0908-03	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	7.94	7.94	%	g
14I0908-03	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.27	1.27	%	g
14I0908-04	% Solids	9/29/2014 2:30:05PM	KK	BI41438	88.43	88.4	%	g
14I0908-04	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.06	6.06	%	g
14I0908-04	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.68	6.68	%	g
14I0908-04	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
14I0908-05	% Solids	9/29/2014 2:30:05PM	KK	BI41438	78.39	78.4	%	g
14I0908-05	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	5.25	5.25	%	g
14I0908-05	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.34	6.34	%	g
14I0908-05	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
14I0908-06	% Solids	9/29/2014 2:30:05PM	KK	BI41438	82.28	82.3	%	g
14I0908-06	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	4.40	4.40	%	g
14I0908-06	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	5.07	5.07	%	g
14I0908-06	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
14I0908-07	% Solids	9/29/2014 2:30:05PM	KK	BI41438	85.47	85.5	%	g
14I0908-07	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	10.58	10.6	%	g
14I0908-07	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	12.16	12.2	%	g
14I0908-07	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
14I1012-03	% Solids	9/29/2014 2:30:05PM	KK	BI41438	76.48	76.5	%	g
14I1012-03	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	9.01	9.01	%	g
14I1012-03	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	11.39	11.4	%	g
14I1012-03	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.29	1.29	%	g
BI41438-DUP1	% Solids	9/29/2014 2:30:05PM	KK	BI41438	72.79	72.8	%	g
BI41438-DUP1	Final Wt.	9/29/2014 2:30:05PM	KK	BI41438	6.26	6.26	%	g
BI41438-DUP1	Initial Wt.	9/29/2014 2:30:05PM	KK	BI41438	8.12	8.12	%	g
BI41438-DUP1	Tare Wt.	9/29/2014 2:30:05PM	KK	BI41438	1.28	1.28	%	g

Note: Units for Tare, Initial and Final Wts. are in grams

ATTACHMENT C
DATA USABILITY SUMMARY REPORT

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Gerald Nicholls, Langan Senior Project Engineer

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: October 10, 2014

Re: Data Usability Summary Report
For 44-30 Purves Street, Queens, New York
Soil Samples Collected September 2014
Langan Project No.: 170282501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on September 23, 2014 by Langan Engineering and Environmental Services ("Langan") at 44-30 Purves Street located in Queens, New York ("the Site"). The samples were analyzed by York Analytical (NYSDOH ELAP registration # 10854) for halogenated volatile organic compounds (VOCs), fraction of organic carbon (FOC), pH, and percent solids.

- Halogenated VOCs by SW-846 Method 8260C
- FOC by ASTM Method D 297487
- pH by EPA Method 9045D
- Percent solids by Method SM 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
14I0908	14I0908-01	SB21_9-10	9/23/2014	VOCs
14I0908	14I0908-02	SB21_11-12	9/23/2014	VOCs, FOC
14I0908	14I0908-03	SB21_14-15	9/23/2014	VOCs, FOC
14I0908	14I0908-04	SB21_24-25	9/23/2014	VOCs
14I0908	14I0908-05	SB20_9-10	9/23/2014	VOCs
14I0908	14I0908-06	SB20_14-15	9/23/2014	VOCs, FOC
14I0908	14I0908-07	SB20_24-25	9/23/2014	VOCs, FOC

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), and the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Qualification Summary:

The data did not require qualification.

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. No minor deficiencies were identified.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

pH by EPA Method 9045D:

The analysis of pH was completed at the laboratory outside of the technical holding time period. On the basis of professional judgment, qualification is not necessary.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. The data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 14D908

YOUR Information

Company: LANGAN
Address: 360 W 31st St
NY NY 10001
Phone No: 212 479 5451
Contact Person: PMcMahon@Langan.com
E-Mail Address:

Report To:

Company: SAME
Address:
Phone No: 212 479-5500
Attention: GNicholls@Langan.com
E-Mail Address:

Invoice To:

Company: SAME
Address:
Phone No:
Attention:
E-Mail Address:

YOUR Project ID

170182501

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

RUSH - Same Day ☐
RUSH - Next Day ☐
RUSH - Two Day ☐
RUSH - Three Day ☐
RUSH - Four Day ☐
Standard(5-7 Days) X

Report Type

Summary Report X
Summary w/ QA Summary ___
CT RCP Package ___
CTRCP DQA/DUE Pkg ___
NY ASP A Package ___
NY ASP B Package X
NJDEP Red. Deliv. ___

Electronic Data Deliverables (EDD)

Simple Excel ___
NYSDEC EQuIS X
EQuIS (std) ___
HZ-EDD (EQuIS) ___
NJDEP SRP HazSite EDD ___
GIS/KEY (std) ___
Other ___
York Regulatory Comparison
Excel Spreadsheet ___
Compared to the following criteria (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Paul McMahon
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
A-A - ambient air
A-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	PriPoll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	GW Only	8151Herb	TAL	CT ETPH	Al MetCN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360 Metals	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360 Organics	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360 Pesticides	TPH
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	NYCDEP Semi-VOC	Aquatic Tox
Halog only	NJDEP list	App. IX	Chlordane	Soluble Metals	Air TICs	NYCDEP Pesticides	TOC
App IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Here	Methane	NYSDEC Semi-VOC	Asbestos
8021H list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB2_9-10	9/13/14 9:03	S	HALOGENATED VOCs	4 VOA
SB2_11-12	9:15		+ FOC	+ 1 8oz
SB2_14-15	9:30		+ FOC	+ 1 8oz
SB2_24-25	9:45			
SB20_9-10	8:10		+ FOC	+ 1 8oz
SB20_14-15	8:25		+ FOC	+ 1 8oz
SB20_24-25	8:40	↓	↓	↓

Comments
Analyst need ASAP

Preservation
Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Samples Relinquished By — Date/Time: 9/23 12:30
Samples Relinquished By — Date/Time:
Samples Received By — Date/Time: 9/23/14 12:30
Samples Received in LAB by — Date/Time: 9-23-14 1815

Temperature on Receipt: 4.3 °C

HOLDING TIME SUMMARY

EPA 9045D

Laboratory: York Analytieal Laboratories, Inc. SDG: 1410908

Client: Langan Engineering & Environmental Services (NYC) Project: 170282501

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
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SB20_14-15	09/23/14 08:25	09/23/14 18:15	09/29/14 10:58	6.11	0.05	09/29/14 12:01	6.15	0.05	*
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Appendix D

Sanborn Fire Insurance Maps

27-21 44th Drive and 44-18 Purves Street
44-18 Purves Street
Long Island City, NY 11101

Inquiry Number: 3798265.3
December 02, 2013

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/02/13

Site Name:
27-21 44th Drive and 44-18
44-18 Purves Street
Long Island City, NY 11101

Client Name:
Langan Engineering, Inc.
360 W. 31st Street
New York, NY 10001

EDR Inquiry # 3798265.3

Contact: Jessica Alzamora

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Langan Engineering, Inc. were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: 27-21 44th Drive and 44-18 Purves Street
Address: 44-18 Purves Street
City, State, Zip: Long Island City, NY 11101
Cross Street:
P.O. # 170281401
Project: 27-21 44th Drive
Certification # D3A8-4CA6-9D89

Maps Provided:

2006	1999	1991	1980	1936
2005	1996	1990	1979	1915
2004	1995	1989	1977	1898
2003	1994	1988	1970	
2002	1993	1986	1950	
2001	1992	1985	1947	

Sanborn® Library search results
Certification # D3A8-4CA6-9D89

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

2006 Source Sheets

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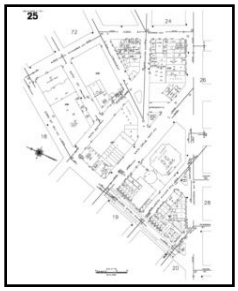

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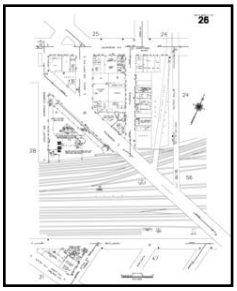

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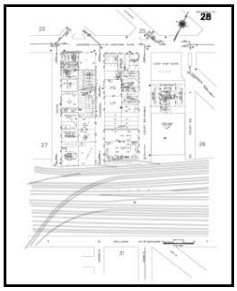

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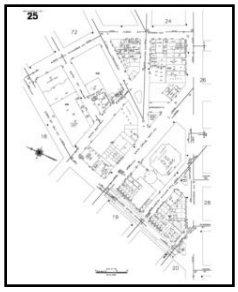

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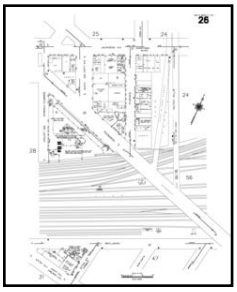

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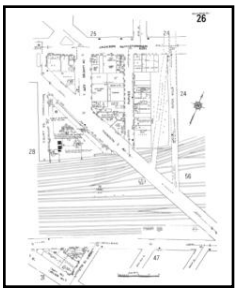

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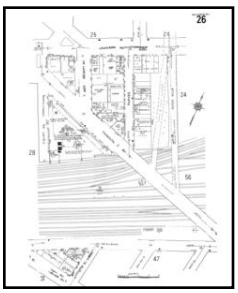

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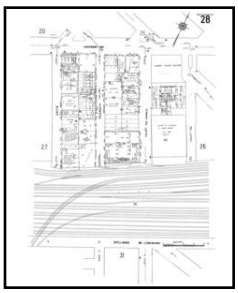

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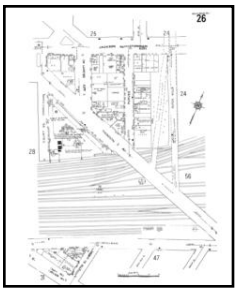

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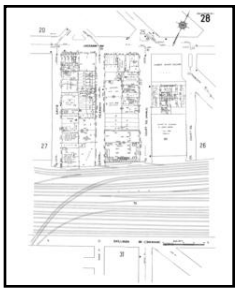

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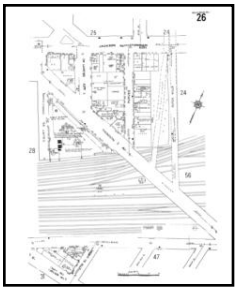

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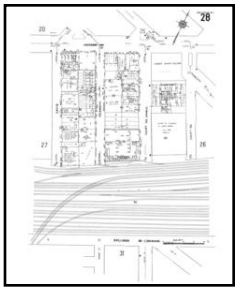

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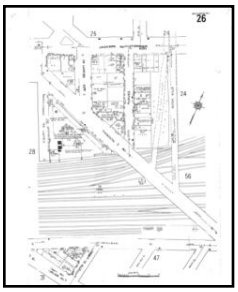

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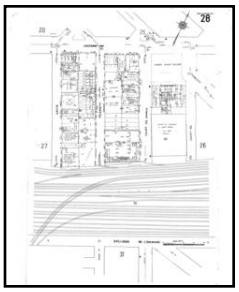

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Volume 1, Sheet 26

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Volume 1, Sheet 24

Volume 1, Sheet 25

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Volume 1, Sheet 28

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Volume 1, Sheet 25

Volume 1, Sheet 26

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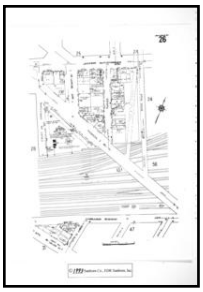
Volume 1, Sheet 24

Volume 1, Sheet 25



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Volume 1, Sheet 26

1991 Source Sheets

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Volume 1, Sheet 26

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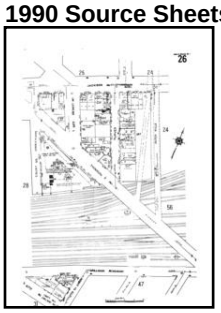

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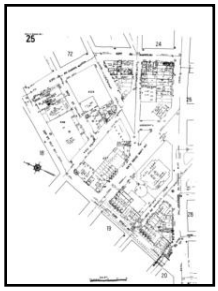

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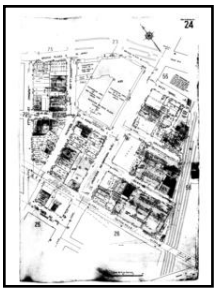

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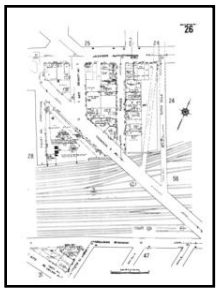

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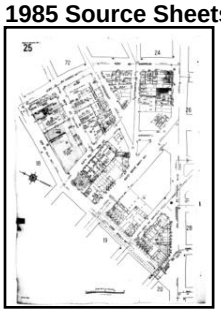

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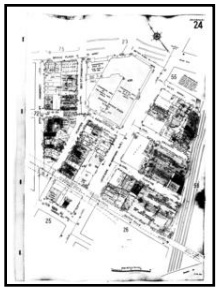

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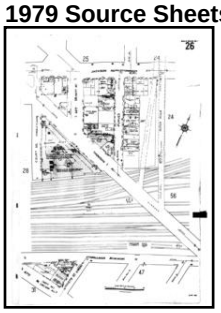

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1977 Source Sheets

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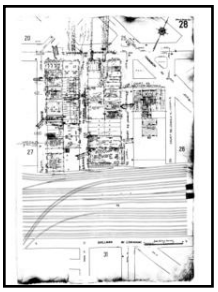

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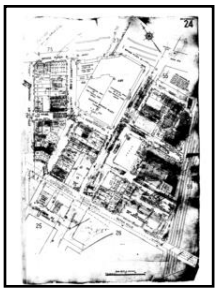

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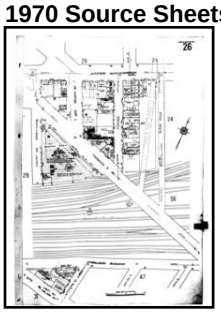

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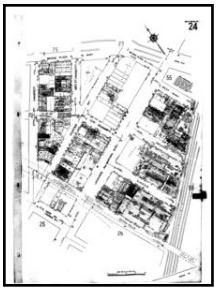

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1950 Source Sheets

Volume 1, Sheet 24

Volume 1, Sheet 25

Volume 1, Sheet 26

1947 Source Sheets

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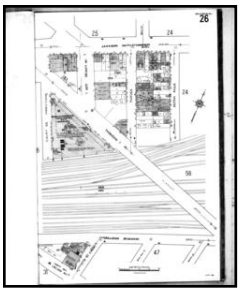
Volume 1, Sheet 25

Volume 1, Sheet 26

1936 Source Sheets

Volume 1, Sheet 24

Volume 1, Sheet 25



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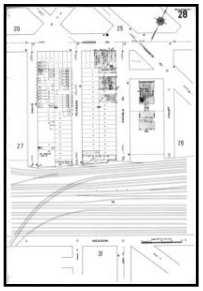

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1898 Source Sheets

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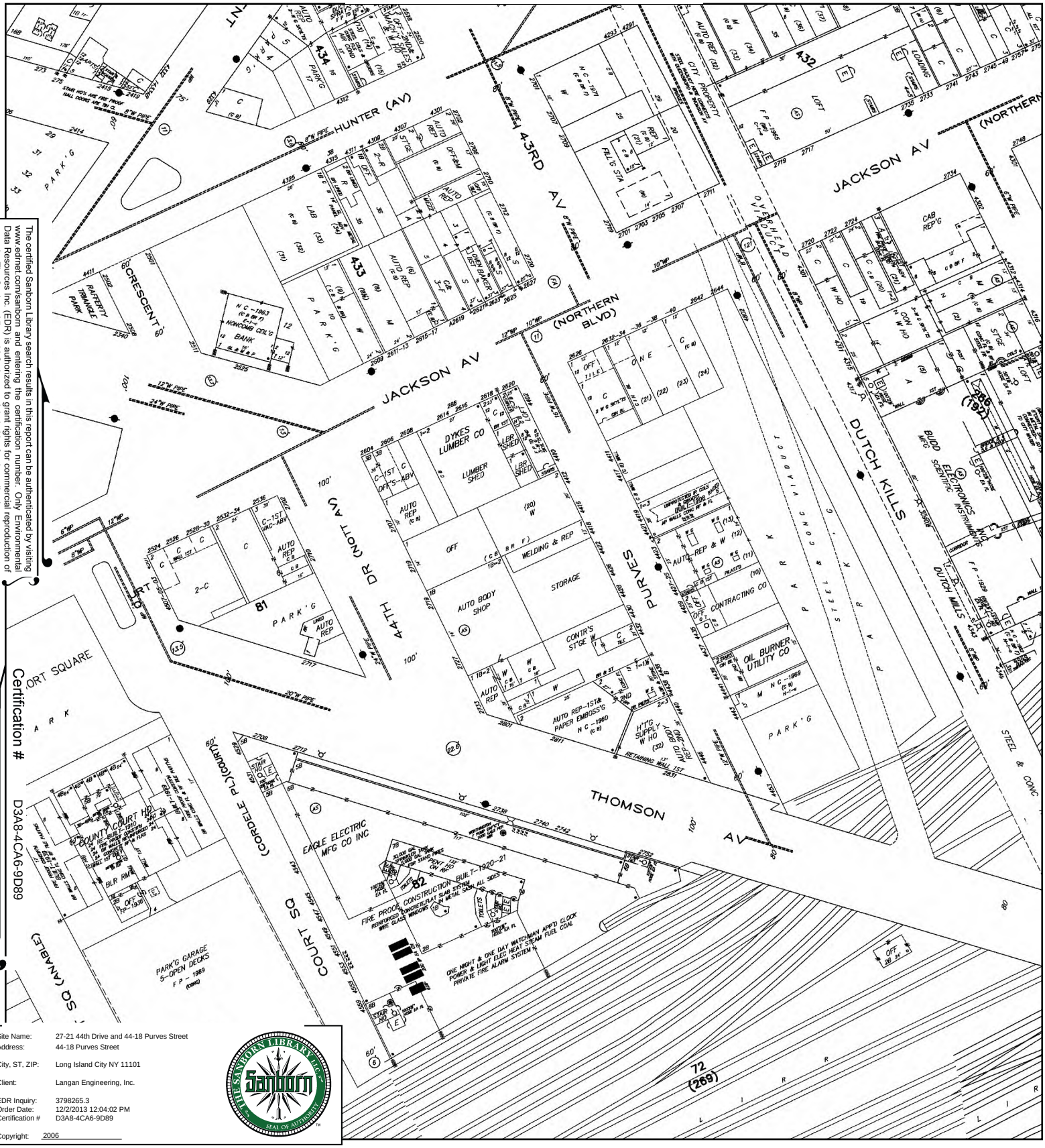
2006 Certified Sanborn Map



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Certification # D3A8-4CA6-9D89

Site Name:	27-21 44th Drive and 44-18 Purves Street
Address:	44-18 Purves Street
City, ST, ZIP:	Long Island City NY 11101
Client:	Langan Engineering, Inc.
EDR Inquiry:	3798265.3
Order Date:	12/2/2013 12:04:02 PM
Certification #	D3A8-4CA6-9D89
Copyright:	2006

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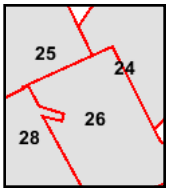

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Volume 1, Sheet 25
Volume 1, Sheet 26
Volume 1, Sheet 28

0 Feet 150 300 600

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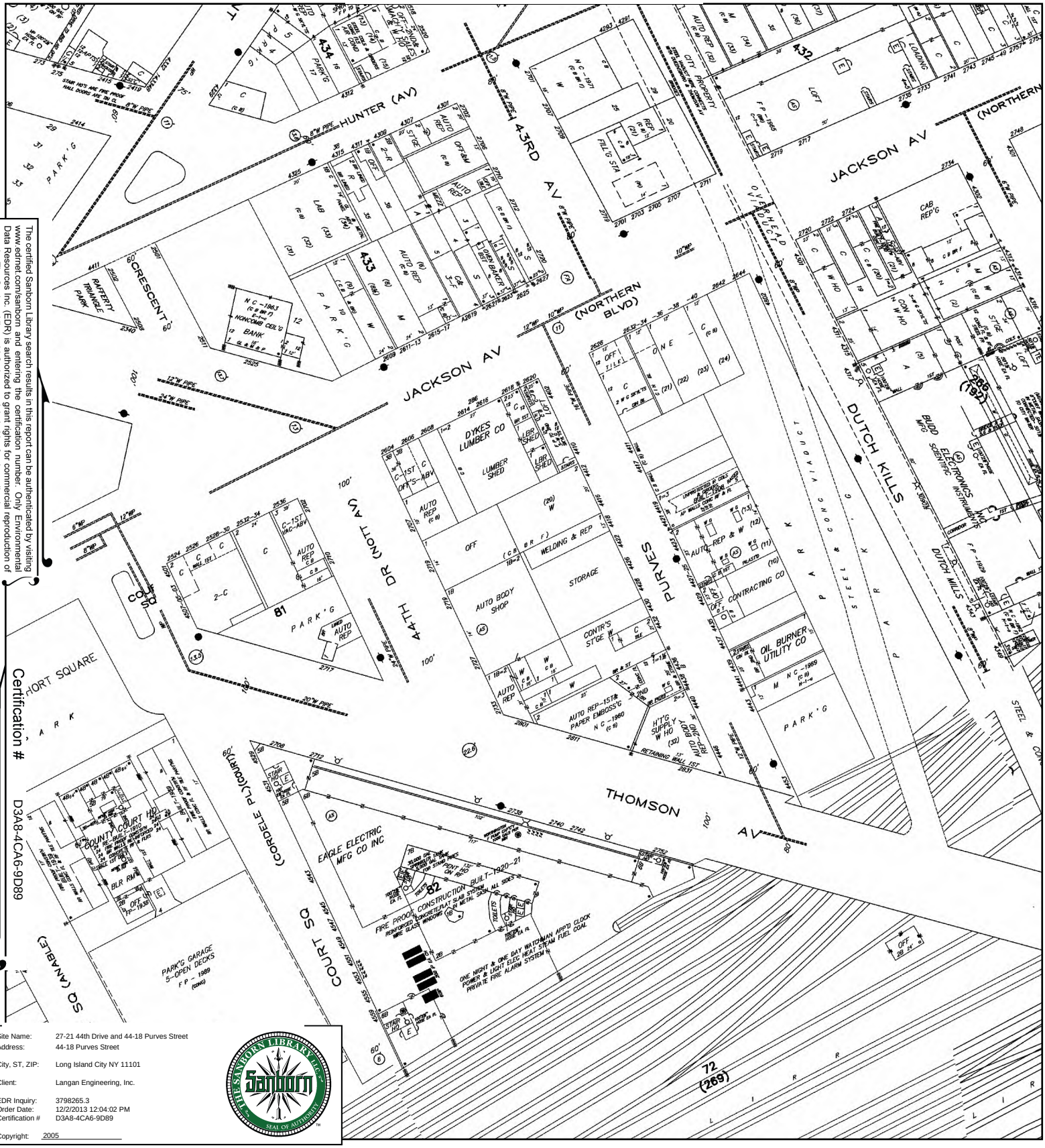
2005 Certified Sanborn Map



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Site Name:	27-21 44th Drive and 44-18 Purves Street
Address:	44-18 Purves Street
City, ST, ZIP:	Long Island City NY 11101
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EDR Inquiry:	3798265.3
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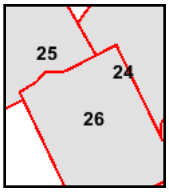

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Volume 1, Sheet 25
Volume 1, Sheet 26

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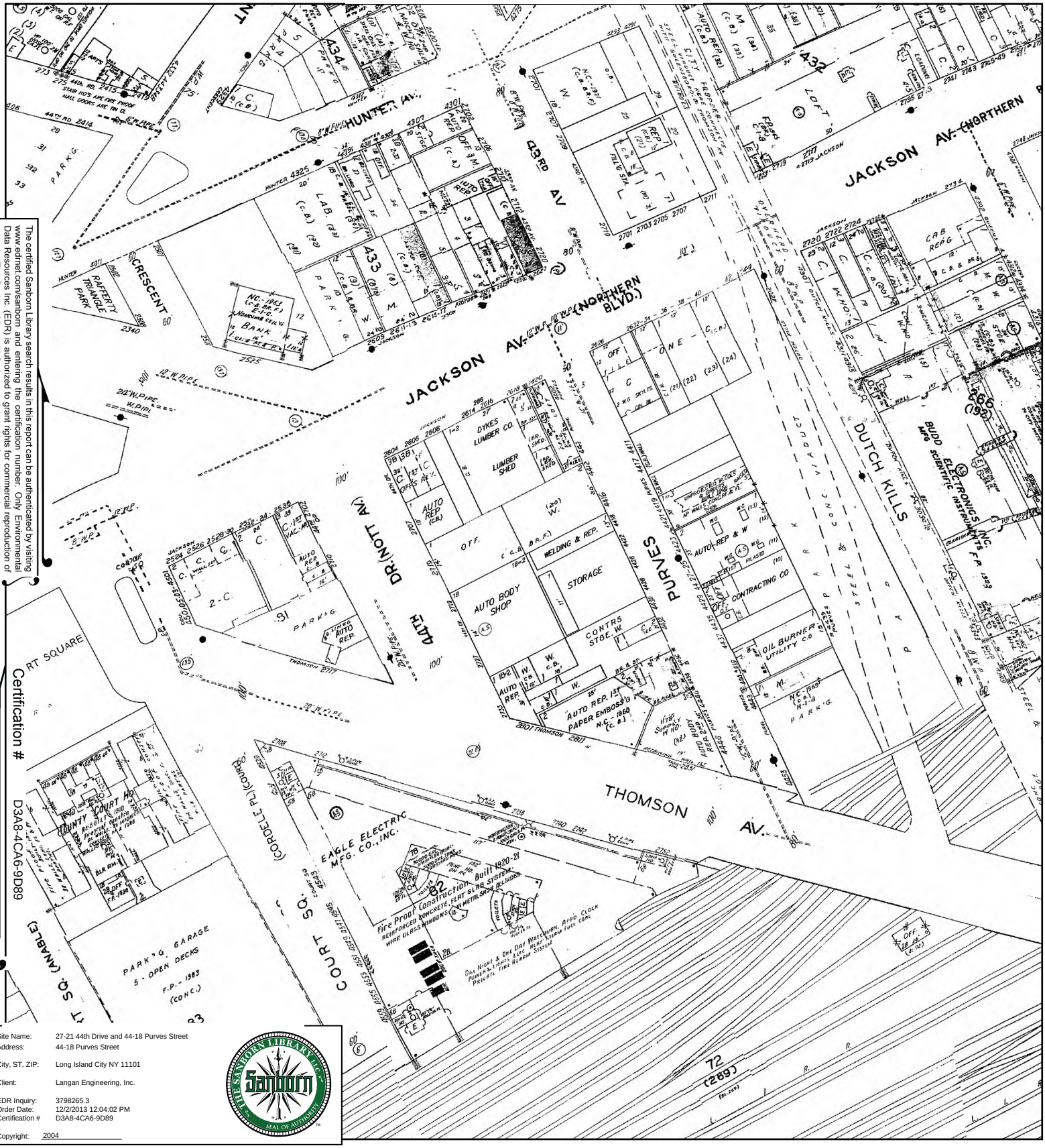
2004 Certified Sanborn Map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JACKSON AV. (NORTHERN BLVD.)
HUNTER AV.
CRESCENT
RAFFERTY TRIANGLE PARK
43RD AV
DRAKE
DRAKE
DRAKE

2003 Certified Sanborn Map

JACKSON AV.
HUNTER (AV.)
CRESCENT
RAFFERTY TRIANGLE PARK
JACKSON AV. (NORTHERN BLVD.)
DR. NOTT AV.
PURVES
DUTCH KILLS
THOMSON AV.
COURT SQ.
(CABLE)
(CORDELE PL.)
SHORT SQUARE
DYKES LUMBER CO.
LUMBER SHED
AUTO BODY SHOP
WELDING & REP.
STORAGE
AUTO REP. & W
CONTRACTING CO
OIL BURNER UTILITY CO
BUDD MFG. SCIENTIFIC ELECTRONICS INSTRUMENTS
EAGLE ELECTRIC MFG. CO., INC.
COUNTY COURT HO.
PARK'G GARAGE
5 - OPEN DECKS
F.P. - 1909
(CONC.)
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REINFORCED CONCRETE, FLAT SLAB SYSTEM
WIRE GLASS WINDOWS
PARK'G.
LOFT
BANK
LAB.
AUTO REP.
OFF.
STORE
2 - C.
1 - C.
ONE - C
CAB REP.
AUTO REP. PAPER EMBOSSING
N.C.-1960
N.C.-1963
N.C.-1971
N.C.-1968
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N.C.-2011

2002 Certified Sanborn Map

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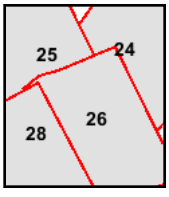

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0 Feet 150 300 600

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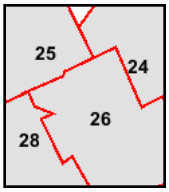

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0 Feet 150 300 600

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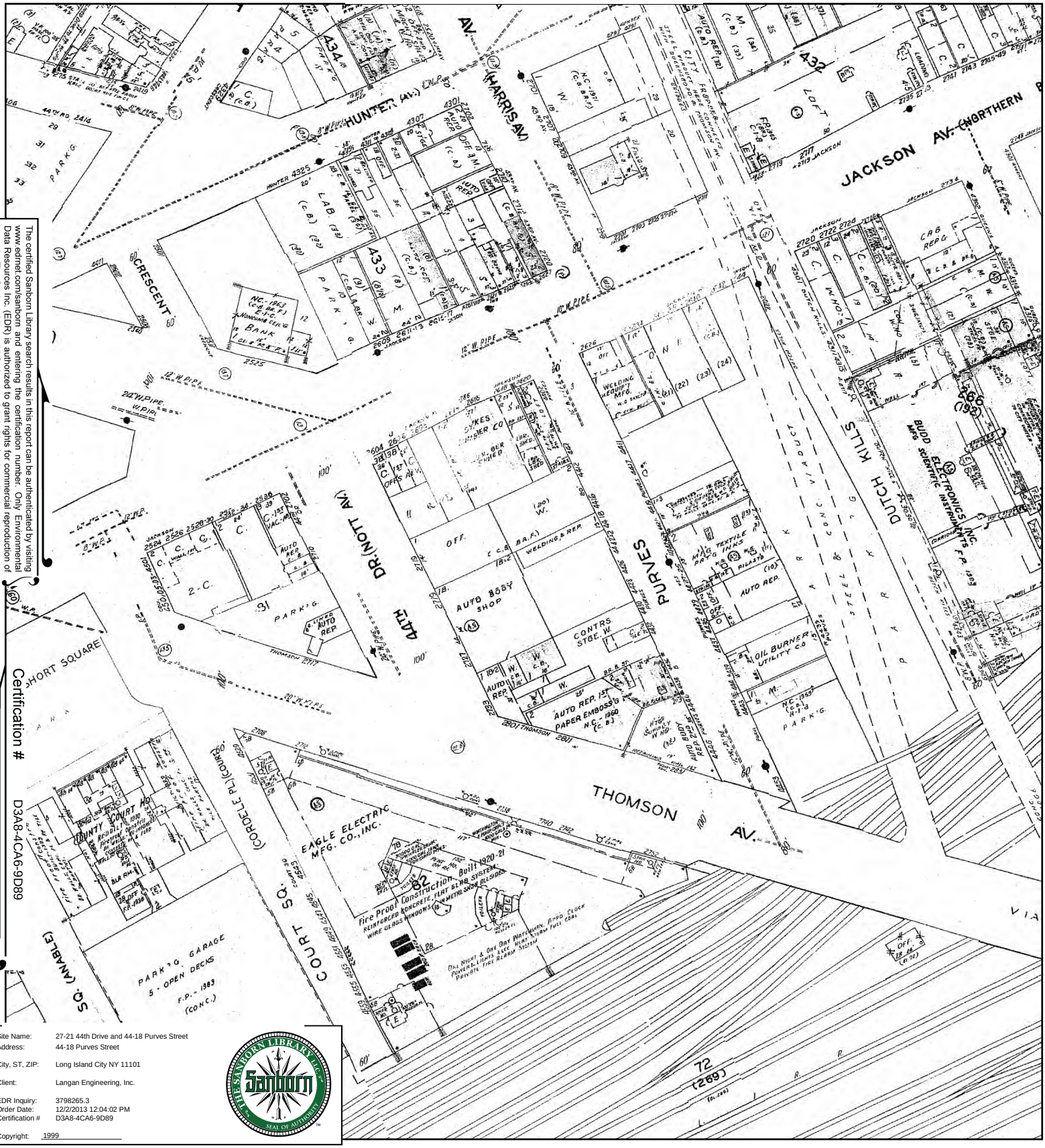
1999 Certified Sanborn Map



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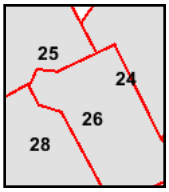

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0 Feet 150 300 600

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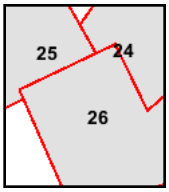

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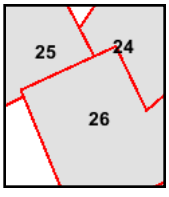

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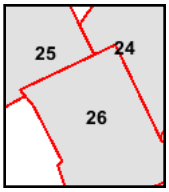

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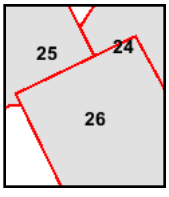

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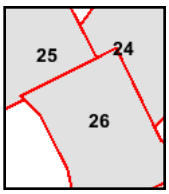

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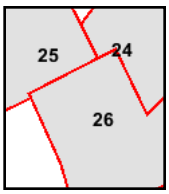

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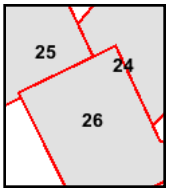

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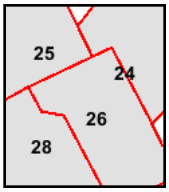

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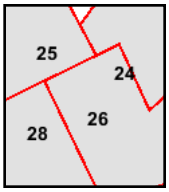

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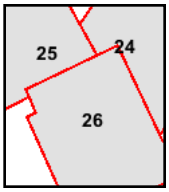

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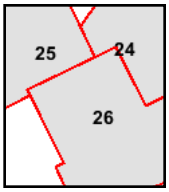

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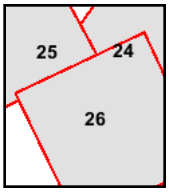

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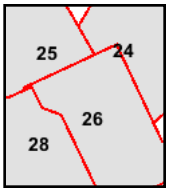

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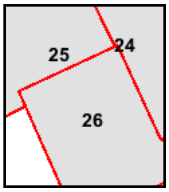

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Copyright:	1950

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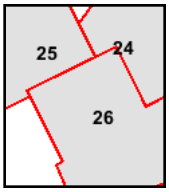

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Copyright:	1947

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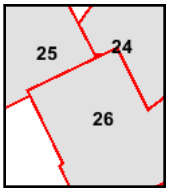

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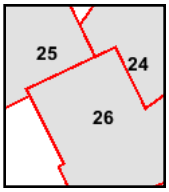

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1915 Certified Sanborn Map

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City, ST, ZIP:	Long Island City NY 11101
Client:	Langan Engineering, Inc.
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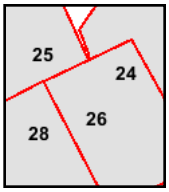

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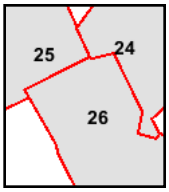

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Appendix E
Health and Safety Plan

HEALTH AND SAFETY PLAN
44-30 Purves Street
LONG ISLAND CITY, NEW YORK

Prepared For:

Purves Street Owners LLC
c/o Brause Realty
52 Vanderbilt Avenue
New York, New York 10017

Prepared By:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001

Jason J. Hayes, P.E.
Senior Associate

July 2014

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HEALTH AND SAFETY PLAN (HASP) SUMMARY

Emergency Contacts

Emergency contacts are listed on Table 0.1.

Emergency Procedures

Emergency procedures are described in Section 6.

Site Specific Hazards and Training

Site Specific Hazards are described in Section 2.

The Field Safety Officer (FSO) will be responsible for providing site-specific training to all personnel that work at the site. This training will cover the following topics:

- Names of personnel responsible for site safety and health.
- Hazards potentially present at the site.
- Proper use of personal protective equipment (PPE).
- Work practices by which the employee can minimize risk from hazards.
- Acute effects of compounds at the site.
- Decontamination procedures.

Personnel will be required to sign and date the Site-Specific Training Form provided in Attachment B prior to working on-site.

General Health and Safety Requirements

Personnel will be required to sign and date the HASP and Work Plan Acceptance Form provided in Attachment B prior to working on-site.

Personnel Protective Equipment

Level D protection will be worn for initial entry on-site and for all activities except as noted in Section 3. Level D protection will consist of:

- Standard work clothes
- Steel-toe safety boots
- Safety glasses or goggles must be worn when splash hazard is present
- Nitrile outer gloves and polyvinyl chloride (PVC) or nitrile inner gloves must be worn during all sampling activities
- Hard hat (must be worn during all sampling activities)

Modified Level D protection may be required under conditions where potential contact of the skin or clothes with significant contamination occurs. Modified Level D is the same as Level D but includes Tyvek coveralls and disposable polyethylene overboots.

Level C protection, unless otherwise specified in Section 3, will consist of Level D equipment and the following additional equipment:

- Full-face or half-mask air-purifying respirator (APR)
- Combination dust/organic vapor cartridges
- Tyvek coveralls if particulate hazard present
- PE-Coated Tyvek coverall if liquid contamination present
- PVC or nitrile inner and nitrile outer gloves
- 5-minute escape self-contained breathing apparatus (SCBA)

Level B protection, unless otherwise specified in Section 3, will consist of Level D equipment and the following additional equipment:

- Hard hat
- Positive Pressure SCBA or positive pressure air line and respirator with escape SCBA
- PE-Coated Tyvek coverall
- Nitrile outer and PVC or nitrile inner gloves
- Nitrile boot covers

Air Monitoring

A summary of the action levels and restrictions is presented on Table 0.2.

FIGURE 1 - HOSPITAL ROUTE PLAN (New York Presbyterian Hospital)

Site Location: **44-30 Purves Street**

Long Island City, NY

Hospital Location: **New York Presbyterian Hospital**

Emergency Room (212) 746-5454

525 East 68th Street, New York, NY

Route to Hospital

From 44-30 Purves Street, Long Island City to New York Presbyterian Hospital, located at 525 East 68th Street, New York, NY:

1: Start going NW on Purves Street

2: Turn right onto Jackson Avenue/NY-25A

3: Turn left onto Queens Plaza E

4: Stay straight onto NY-25/Queens Blvd.

5: Turn slight right onto ramp

6: Turn right onto E 60th Street

7: Turn left onto York Avenue

8: Turn right onto E 68th Street – Destination will be on the left

Total Est. Time: 9 minutes **Total Est. Distance:** 2.6 miles

TABLE 0.1
EMERGENCY CONTACTS

In the event of any situation or unplanned occurrence requiring assistance, the appropriate contact(s) should be made from the list below. For emergency situations, contact should first be made with the Field Team Leader (or designee) and the Site Safety Officer, who will notify emergency personnel who will then contact the appropriate response teams. This emergency contacts list must be in an easily accessible location at the site.

Emergency Contacts	**Phone Number**
Fire Department:	911
Police:	911
New York City-Long Island One Call Center: (3 day notice required for utility markouts)	(800) 272-4480
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802

Medical Emergency

Ambulance Service:	911
Hospital Name:	New York Presbyterian Hospital
Hospital Phone Number:	(212) 746-5454
Hospital Address:	525 East 68th Street New York, New York 10021
Route to Hospital:	See Pages 3 and 4
Travel Time From Site:	9± minutes

Langan Contacts

Principal/Associate:	Jason Hayes, P.E.	(212) 479-5404
Project Manager:	Gerald Nicholls, P.E	(212) 479-5559
Langan Health & Safety Officer:	Tony Moffa	(215) 491-6545
Field Safety Officer:	William Bohrer	(410) 984-3068
Field Team Leader:	Paul McMahon	(212) 479-5451
Quality Assurance Officer:	Nicole Rice	(212) 479-5491

TABLE 0.2
SUMMARY OF ACTION LEVELS AND RESTRICTIONS

Conditions for Level D:

All areas

- Photoionization detector (PID) readings < 25 parts per million (ppm) and benzene < 1 ppm
- No visible fugitive dust emissions from site activities

Conditions for Level C:

All areas

- Where PID readings > 25 ppm (sustained for 15 minutes in the breathing zone) to 200 ppm and benzene < 5ppm, and/or
- Any visible fugitive dust emissions from site activities that disturb contaminated soil.

Conditions for Level B (or retreat):

All areas

- Where PID readings > 200 ppm or benzene > 5 ppm,
- Visible fugitive dust emissions from site activities cloud the surrounding air.

SECTION 1 INTRODUCTION

1.1 PURPOSE AND POLICY

The purpose of this Health and Safety Plan (HASP) is to establish personnel protection standards and mandatory safety practices and procedures for the implementation of a Remedial Action Work Plan (RAWP) at 44-20 Purves Street, (the "site") in Long Island City, New York.

The site activities will include the following tasks and are discussed in more detail within the RAWP:

- Excavation (to the extent practical) and off-site disposal of soils exceeding Track 4 site-specific SCOs (Restricted Residential Use SCOs) and grossly-impacted soil, if encountered;
- Due to the planned excavation of two elevator pits into the ground water table, dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system;
- Removal of underground storage tanks (UST), if encountered;
- Collection of documentation soil samples;
- Backfilling of excavated areas to development grade with certified-clean material (meeting the lower of the Protection of Groundwater SCO or the Protection of Public Health SCO for Restricted Residential Use in Part 375-6.7(d)(ii)(b)), recycled concrete aggregate (RCA) or virgin, native crushed stone;
- Installation of a vapor membrane under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion into Site buildings;
- Installation of a submembrane depressurization (SMD) system under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion;
- Development and execution of plans for the protection of on-site workers, community, and environment during remediation and construction activities;
- Installation of a site cover system consisting of either of the structures such as buildings, pavement, sidewalks comprising the site development or a minimum 2 foot thick clean soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs; and
- Implementation of long-term Institutional Controls in the form of a Site Management Plan (SMP) and an Environmental Easement.

This plan assigns responsibilities, establishes standard operating procedures, and provides for contingencies that may arise while operations are being conducted during the work activities at the site.

The provisions of the plan are mandatory for all on-site personnel. Any supplemental plans used by subcontractors shall conform to this plan at a minimum. All personnel who engage in project activities must be familiar with this plan, comply with its requirements, and sign the Plan Acceptance Form (Attachment B), page number B-5, prior to working on the site. The Plan Acceptance Form must be submitted to the Langan Field Safety Officer (FSO). In addition to this plan, all work shall be performed in accordance with all applicable federal, state and local regulations.

1.2 SITE DESCRIPTION

The Site (Block 268, Lot 1) is located at 44-30 Purves Street in Long Island City, New York and consists of an irregularly-shaped lot with an area of 27,095 square feet (±0.62 acres). The Site is bounded by Purves Street to the east, Lot 31 with a two-story brick building to the southeast, Thomson Avenue to the southwest, 44th Drive to the west, and lots 4 (vacant one-story building) and 23 (vacant) to the north. The Site has approximately 175 feet of frontage along Purves Street, 150 feet of frontage along Thomson Avenue, and 60 feet of frontage along 44th Drive. The Site has been a vacant lot for since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes.

1.3 SCOPE OF WORK

The proposed RAWP would be executed by excavating contaminated historic fill to the extent practicable to achieve Track 4 site-specific SCOs. The exposure pathways to residual soil contaminants will be controlled through the use of a site cap and construction of a vapor barrier and SMD system on the proposed building will protect against potential vapor intrusion issues from residual on-site impacts or potential off-site sources.

A dust, odor, and organic vapor and nuisance control plan, described in Section 5.4.13 of the RAWP, will be implemented during ground intrusive and/or soil handling activities.

1.4 LANGAN PROJECT TEAM ORGANIZATION

Table 1.1 describes the responsibilities of Langan on-site personnel associated with this project. The names of principal personnel associated with this project are:

Principal/Associate:	Jason Hayes, P.E.	(212) 479-5404
Project Manager:	Gerald Nicholls, P.E	(212) 479-5559
Langan Health & Safety Officer:	Tony Moffa	(215) 491-6545
Field Safety Officer:	William Bohrer	(410) 984-3068
Field Team Leader:	Paul McMahon	(212) 479-5451
Quality Assurance Officer:	Nicole Rice	(212) 479-5491

All Langan personnel have been appropriately trained in first aid and hazardous waste safety procedures, including the operating and fitting of personal protective equipment, and are experienced with the field operations planned for this site.

TABLE 1.1
ON-SITE PERSONNEL AND RESPONSIBILITIES

PROJECT MANAGER - Assumes control over site activities. Reports to upper-level management. Has authority to direct response operations.

Responsibilities:

- Prepares and organizes the background review of the situation, the Work Plans, the Site Health and Safety Plan, and the field team.
- Obtains permission for site access and coordinates activities with appropriate officials.
- Ensures that the Work Plan is executed and on schedule.
- Briefs the field team on their specific assignments.
- Coordinates with the site Health and Safety Officer (HSO) to ensure that health and safety requirements are met.
- Prepares the final report and support files on the response activities.
- Serves as the liaison with public officials.

FIELD SAFETY OFFICER - Advises the HSO and Project Manager on aspects of health and safety on site. Stops work if operations threaten worker or public health or safety.

Responsibilities:

- Ensures that all necessary Health and Safety Equipment is available on-site. Ensures that all equipment is functional.
- Periodically inspects protective clothing and equipment.
- Ensures that protective clothing and equipment are properly stored and maintained.
- Controls entry and exit at the Access Control Points.
- Coordinates health and safety program activities with the Project HSO.
- Confirms each team member's suitability for work based on a physician's recommendation.
- Monitors the work parties for signs of stress, such as cold exposure, heat stress, and fatigue.
- Implements the Site HASP.
- Conducts periodic inspections to determine if the Site HASP is being followed.
- Enforces the "buddy" system.

- Knows emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.
- Notifies, when necessary, local public emergency officials.
- Coordinates emergency medical care.
- Sets up decontamination lines and the decontamination solutions appropriate for the type of chemical contamination on the site.
- Controls the decontamination of all equipment, personnel, and samples from the contaminated areas.
- Assures proper disposal of contaminated clothing and materials.
- Ensures that all required equipment is available.
- Advises medical personnel of potential exposures and consequences.
- Notifies emergency response personnel by telephone or radio in the event of an emergency.

FIELD TEAM LEADER - Advises on all aspects of health and safety on site. Stops work if any operation threatens worker or public health or safety. Is directly responsible for the field team and the safety of site operations.

Responsibilities:

- Manages field operations.
- Executes the Work Plan and schedule.
- Enforces safety procedures.
- Coordinates with the Site Safety Officer in determining protection level.
- Enforces site control.
- Documents field activities and sample collection.
- Serves as a liaison with public officials.

WORK TEAM – Operators, laborers, samplers. The work party must consist of at least two people.

Responsibilities:

- Safely completes the on-site tasks required to fulfill the Work Plan.
- Complies with Site Safety Plan.
- Notifies Site Safety Officer or supervisor of suspected unsafe condition

1.5 GENERAL RESPONSIBILITIES OF CONTRACTORS AND SUBCONTRACTORS

Other site contractors and subcontractors shall develop and abide by their own HASP, which shall, at minimum adhere to this HASP. Where this HASP excludes provisions pertinent to the contractor's or subcontractor's work (i.e., permit-required confined space entry), they must perform such work under their own health and safety procedures in accordance with the applicable local, state and federal regulations and guidance. The following is a list of the subcontractor's responsibilities.

Responsibilities:

- Ensures their employees are trained in the use of all appropriate personal protective equipment (PPE) for the tasks involved.
- Ensure their employees have received current training in the appropriate levels of 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER), where applicable.
- Ensure their employees have been medically cleared and have been fit-tested within the year on the type respirator they will wear, if necessary.
- Have knowledge of, understand, and abide by all current federal, state and local health and safety regulations pertinent to the work on site.
- Safely complete the tasks required to fulfill the Work Plan.
- Notify FSO or supervisor of any hazardous material brought onto the job site; the hazards associated with the material, and must provide MSDS for the material to the FSO.
- Notifies FSO or supervisor of a suspected unsafe condition.
- Ensure that employees have been briefed on their HASP, complies with their HASP and have signed the Compliance Agreement.

SECTION 2 RISK ANALYSIS

2.1 CHEMICAL HAZARDS

The primary potential chemical hazard is exposure to volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), particularly polynuclear aromatic hydrocarbons (PAHs), and metals. Other compounds that may be encountered are site equipment fuels (gasoline, diesel, etc.) that also contain volatile components. Relevant properties of these compounds are outlined in Table 2.1.

Dust with chemical constituents will not likely be generated during RAWP implementation; regardless, air will be monitored for particulates and organic vapors.

Material Safety Data Sheets (MSDS) for substances that will be used on site are included in Attachment C.

TABLE 2.1
RELEVANT PROPERTIES OF VOLATILES (PETROLEUM [GASOLINE, DIESEL, ETC.]), METALS AND SEMIVOLATILES KNOWN OR SUSPECTED AT THE SITE

Compound (Synonym)	OSHA PEL[(1)] (ppm)	IDLH (ppm)	LEL (%)	Odor Threshold[(2)] (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State	Detectable w/ 10.6 eV lamp PID (I.P. eV)
Tetrachlorethene	25	150	NA	NA	Sweet	14	Noncombustible Liquid	Yes
Trichloroethene	50	1000	8	NA	Sweet	58	Combustible Liquid	Yes
Benzene	1	500	1.2	NA	Aromatic	75	Flammable Liquid	Yes
Mercury(Hg)	0.01 mg/m3	10 mg/m3	NA	NA	Odorless	0.0012	Noncombustible Liquid	NA
Arsenic	NA	5 mg/m3 (CA)	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Barium	0.5 mg/m3	0.5 mg/m3	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Cadmium	0.01	2330 (CA)	NA	NA	Odorless	0 (approx.)	Solid	NA
Chromium, trivalent	1 mg/m3	NA	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Chromium, hexavalent	0.1 mg/m3	143 (CA)	NA	NA	NA	0 (approx.)	Liquid	NA
Lead (Pb)	0.05 mg/m3	100 mg/m3	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Nickel	1 mg/m3	10 mg/m3 (Ca)	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Copper	1 mg/m3	100 mg/m3	NA	NA	NA	NA	Solid	NA
Iron	NA	NA	NA	NA	NA	0 (approx.)	Noncombustible Solid	NA

TABLE 2.1
RELEVANT PROPERTIES OF VOLATILES (PETROLEUM [GASOLINE, DIESEL, ETC.]), METALS AND SEMIVOLATILES KNOWN OR SUSPECTED AT THE SITE

Compound (Synonym)	OSHA PEL[(1)] (ppm)	IDLH (ppm)	LEL (%)	Odor Threshold (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State	Detectable w/ 10.6 eV lamp PID (I.P. eV)
Manganese	5 mg/m3	500 mg/m3	NA	NA	NA	0 (approx.)	Combustible Solid	NA
Sodium	NA	NA	NA	NA	NA	NA	Combustible Solid	NA
Zinc	NA	NA	NA	NA	NA	NA	Noncombustible Solid	NA
Dibenzo(a,h)anthracene	0.2 mg/m3	NA (CA)	NA	NA	NA	0 (approx.)	Combustible Solid	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	Odorless	0 (approx.)	Combustible Solid	NA
Chrysene	0.2 mg/m3	NA (CA)	NA	NA	Odorless	0 (approx.)	Noncombustible Solid	NA
Benzo(a)anthracene	0.2 mg/m3	NA (CA)	NA	NA	Odorless	0 (approx.)	Noncombustible	NA
Benzo(a)pyrene	0.2 mg/m3	80 (CA)	NA	NA	NA	0 (approx.)	Combustible Solid	NA
Benzo(b)fluoranthene	0.2 mg/m3	NA (CA)	NA	NA	Odorless	0 (approx.)	Combustible Solid	NA
Benzo(k)fluoranthene	NA	NA (CA)	NA	NA	NA	0 (approx.)	Solid	NA
Pentachlorophenol	0.5 mg/m3	NA	NA	NA	Pungent	0 (approx.)	Solid	NA
4-4'-DDD	NA	NA	NA	NA	NA	0 (approx.)	Solid	NA
4-4'-DDT	1 mg/m3	500 mg/m3	NA	NA	Aromatic	0 (approx.)	Solid	NA
Dieldrin	0.25 mg/m3	NA	NA	NA	Pungent, acrid	0 (approx.)	Crystalline Solid	NA

(1) 29 CFR 1910, June 30, 1993 (8-hour Time weighted average unless otherwise specified.)
(2) ACGIH 1989 Highest reported value of acceptable odor threshold range.
(3) Slight explosive hazard if dust is exposed to flame
(4) Sponge catalyst may ignite spontaneously in the air.
(5) Powder may ignite spontaneously in the air, and can continue burning under water.

[IDLH] Immediately dangerous to life or health
[CA] Suspect carcinogen - Minimize all possible exposures
[OSHA PEL] Occupational Safety and Health Administrations – Permissible Exposure Limit
[LEL} Lower Explosive Limit

2.2 RADIATION HAZARDS

No radiation hazards are known or expected at the site.

2.3 BIOLOGICAL HAZARDS

2.3.1 Animals

During site operations, animals such as dogs, pigeons, sea gulls, mice, and rats may be encountered. Workers will use discretion and avoid all contact with animals. Bites and scratches from dogs can be painful and if the animal is rabid, the potential for contracting rabies exists. Contact with rat and mice droppings may lead to contracting hantavirus. Inhalation of dried pigeon droppings may lead to psittacosis; crytococcosis and histoplasmosis are also diseases associated with exposure to dried bird droppings but these are less likely to occur in this occupational setting.

2.3.2 Insects

Insects, including bees, wasps, hornets, mosquitoes, and spiders, may be present at this site. Some individuals may have a severe allergic reaction to an insect bite or sting that can result in a life threatening condition. In addition, mosquito bites may lead to St. Louis encephalitis or West Nile encephalitis. Personnel that have been bitten or stung by an insect at the Site should notify the HSO or FSO of such immediately. The following is a list of preventive measures:

- Apply insect repellent prior to fieldwork and or as often as needed throughout the shift.
- Wear proper protective clothing (work boots, socks and light colored pants).
- When walking in wooded areas, to the extent possible avoid contact with bushes, tall grass, or brush.
- Field personnel who may have insect allergies (e.g., bee sting) should provide this information to the HSO or FSO prior to commencing work, and will have allergy medication on Site.
- The HSO or FSO will instruct the project personnel in the recognition and procedures for encountering potentially hazardous insects at the Site.

Lyme disease is caused by infection from a deer tick that carries a spirochete. During the painless tick bite, the spirochete may be transmitted into the bloodstream, which could lead to the worker contracting Lyme disease. This flu like illness occurs out of season, commonly happening between May and October when ticks are more active. Symptoms can include a stiff neck, chills, fever, sore throat, headache, fatigue and joint

pain. Early signs may include an expanding skin rash and joint pain. If left untreated, Lyme disease can cause serious nerve or heart problems as well as a disabling type of arthritis. If personnel feel sick or have signs similar to those above, they should notify the HSO or FSO immediately.

It is recommended that personnel check themselves when in areas that could harbor deer ticks, wear light color clothing and visually check themselves and their buddy when coming from wooded or vegetation covered areas. If a tick is found biting an individual, the HSO or FSO should be contacted immediately. The tick can be removed by pulling gently at the head with tweezers. The affected area should then be disinfected with an antiseptic wipe.

2.4 PHYSICAL HAZARDS

2.4.1 Explosion

No explosion hazards are expected for the scope of work at this site.

2.4.2 Heat Stress

The use of Level C protective equipment, or greater, may create heat stress. Monitoring of personnel wearing personal protective clothing should commence when the ambient temperature is 72°F or above. Table 2.2 presents the suggested frequency for such monitoring. Monitoring frequency should increase as ambient temperature increases or as slow recovery rates are observed. Refer to the Table 2.3 below to assist in assessing when the risk for heat related illness is likely. To use this table, the ambient temperature and relative humidity must be obtained (a regional weather report should suffice). Heat stress monitoring should be performed by the Field Safety Officer, who shall be able to recognize symptoms related to heat stress.

To monitor the workers, be familiar with the following heat-related disorders and their symptoms:

- **Prickly Heat** (Heat rash)
  - Painful, itchy red rash. Occurs during sweating, on skin covered by clothing.
- **Heat Cramps**
  - Painful spasm of arm, leg or abdominal muscles, during or after work.
- **Heat Exhaustion**
  - Headache, nausea, dizziness. Cool, clammy, moist skin. Heavy sweating. Weak, fast pulse. Shallow respiration, normal temperature.

- **Heat Fatigue**
  - Weariness, irritability, loss of skill for fine or precision work. Decreased ability to concentrate. No loss of temperature control.
- **Heat Syncope** (Heat Collapse)
  - Fainting while standing in a hot environment.
- **Heat Stroke**
  - Headache, nausea, weakness, hot dry skin, fever, rapid strong pulse, rapid deep respirations, loss of consciousness, convulsions, coma. **This is a life threatening condition.**

    Do not permit a worker to wear a semi-permeable or impermeable garment when they are showing signs or symptoms of heat-related illness.

To monitor the worker, measure:

- Heart rate. Count the radial pulse during a 30-second period as early as possible in the rest period.
  - If the heart rate exceeds 100 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same.
  - If the heart rate still exceeds 100 beats per minute at the next rest period, shorten the following work cycle by one-third. A worker cannot return to work after a rest period until their heart rate is below 100 beats per minute.
- Oral temperature. Use a clinical thermometer (3 minutes under the tongue) or similar device to measure the oral temperature at the end of the work period (before drinking).
  - If oral temperature exceeds 99.6^{o}F (37.6^{o}C), shorten the next work cycle by one-third without changing the rest period. A worker cannot return to work after a rest period until their oral temperature is below 99.6^{o}F.
  - If oral temperature still exceeds 99.6^{o}F (37.6^{o}C) at the beginning of the next rest period, shorten the following cycle by one-third.
  - Do not permit a worker to wear a semi-permeable or impermeable garment when oral temperature exceeds 100.6^{o}F (38.1^{o}C).

Prevention of Heat Stress - Proper training and preventative measures will aid in averting loss of worker productivity and serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat related illness. To avoid heat stress the following steps should be taken:

- Adjust work schedules.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat, id., eight fluid ounces (0.23 liters) of water must be ingested for approximately every eight ounces (0.23 kg) of weight lost. The normal thirst mechanism is not sensitive enough to ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more. The following strategies may be useful:
    - Maintain water temperature 50° to 60°F (10° to 16.6^{O}C).
    - Provide small disposal cups that hold about four ounces (0.1 liter).
    - Have workers drink 16 ounces (0.5 liters) of fluid (preferably water or dilute drinks) before beginning work.
    - Urge workers to drink a cup or two every 15 to 20 minutes, or at each monitoring break. A total of 1 to 1.6 gallons (4 to 6 liters) of fluid per day are recommended, but more may be necessary to maintain body weight.
    - Train workers to recognize the symptoms of heat related illness.

2.4.3 Cold-Related Illness

If work on this project begins in the winter months, thermal injury due to cold exposure can become a problem for field personnel. Systemic cold exposure is referred to as hypothermia. Local cold exposure is generally called frostbite.

Hypothermia - Hypothermia is defined as a decrease in the patient core temperature below 96°F. The body temperature is normally maintained by a combination of central (brain and spinal cord) and peripheral (skin and muscle) activity. Interference with any of these mechanisms can result in hypothermia, even in the absence of what normally is considered a "cold" ambient temperature. Symptoms of hypothermia include: shivering, apathy, listlessness, sleepiness, and unconsciousness.

Frostbite - Frostbite is both a general and medical term given to areas of local cold injury. Unlike systemic hypothermia, frostbite rarely occurs unless the ambient temperatures are less than freezing and usually less than 20°F. Symptoms of frostbite are: a sudden blanching or whitening of the skin; the skin has a waxy or white appearance and is firm to the touch; tissues are cold, pale, and solid.

Prevention of Cold-Related Illness - To prevent cold-related illness:

- Educate workers to recognize the symptoms of frostbite and hypothermia
- Identify and limit known risk factors:
- Assure the availability of enclosed, heated environment on or adjacent to the site.
- Assure the availability of dry changes of clothing.
- Assure the availability of warm drinks.
- Start (oral) temperature recording at the job site:
    - At the FSO or Field Team Leader's discretion when suspicion is based on changes in a worker's performance or mental status.
    - At a worker's request.
    - As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind-chill less than 20°F, or wind-chill less than 30°F with precipitation).
    - As a screening measure whenever any one worker on the site develops hypothermia.

Any person developing moderate hypothermia (a core temperature of 92°F) cannot return to work for 48 hours.

2.4.4 Noise

The operation of drilling equipment may result in momentary high noise levels during advancement of soil borings. Hearing protection (e.g., ear plugs, headphones) will be used as necessary.

2.4.5 Hand and Power Tools

In order to adjust drilling equipment and sever PVC riser, personnel will utilize hand and/or power tools. The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut or struck by the tool, fire, and electrocution. Ground Fault Circuit Interrupters (GFCIs) are required for power tools.

2.4.6 Slips, Trips and Fall Hazards

Care should be exercised when walking at the site, especially when carrying equipment. The presence of surface debris, uneven surfaces, pits, facility equipment, and soil piles contribute to tripping hazards and fall hazards. To the extent possible, all hazards should be identified and marked on the Site, with hazards communicated to all workers in the area.

2.4.7 Utilities (Electrocution and Fire Hazards)

The possibility of encountering underground utilities poses fire, explosion, and electrocution hazards. All intrusive work will be preceded by notification of the subsurface work to the N.Y. One Call Center. Potential adverse effects of electrical hazards include burns and electrocution, which could result in death.

2.5 TASK HAZARD ANALYSIS

The following hazards are associated with RAWP activities (e.g., excavation, soil transport and grading,):

- Heavy excavation and grading equipment (impact hazard to on-foot workers and public)
- Uneven land surface (slip and trip hazard)
- Contaminated media (chemical exposure hazard)

2.5.1 Excavation and Grading Hazards

Soil excavation and grading activities are inherently dangerous. Special attention should be given to establishing the location of any underground utilities prior to excavating.

Excavation may require limited dewatering and support of excavation measures (e.g., shoring or sloping) to protect buildings and roadways immediately adjacent to the Site.

Appropriate management of structural stability of on-site or off-site structures during on-site activities, including excavation, is the sole responsibility of the Volunteer and its contractors. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this Plan. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved Plan.

2.5.2 Site Traffic Management

Site traffic will be controlled through designated points of access along Purves Street. Access points will be continuously monitored and a flagging system will be used to protect workers, pedestrians and authorized guests. Traffic will also adhere to applicable local, state and federal law.

2.5.3 Chemical Exposure Hazards

Chemical exposure may occur as these activities progress across the site, where workers may be exposed to contaminants in the excavated soils, encountered groundwater, or products used on-site including gasoline, diesel, and motor oil.

Activities will be conducted initially in Level D but may be upgraded to Modified Level D. Although not anticipated, there will be a Level C and B contingency should pockets of contaminants be brought to the surface and breathing zone air becomes contaminated.

If evidence of historic or unknown contamination is encountered during remediation activities or other contaminated materials, such as oily materials, high PID readings, etc., the FSO will make a determination of the appropriate level of personnel protection.

Table 2.2
Suggested Frequency of Physiological Monitoring
For Fit and Acclimated Workers[a]

Adjusted Temperature[b]	Normal Work Ensemble[c]	Impermeable Ensemble
90°F or above (32.2°C) or above	After each 45 min. of work	After each 15 min. of work
87.5°F (30.8°-32.2°C)	After each 60 min. of work	After each 30 min. of work
82.5°-87.5°F (28.1°-30.8°C)	After each 90 min. of work	After each 60 min. of work
77.5°-82.5°F (25.3°-28.1°C)	After each 120 min. of work	After each 90 min. of work
72.5°-77.5°F (22.5°-25.3°C)	After each 150 min. of work	After each 120 min. of work

a For work levels of 250 kilocalories/hour.

b Calculate the adjusted air temperature (ta adj) by using this equation: ta adj ^{o}F = ta ^{o}F + (13 x % sunshine). Measure air temperature (ta) with a standard mercury-in-glass thermometer, with the bulb shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow. (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows.)

c A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.

Table 2.3 - HEAT INDEX

	ENVIRONMENTAL TEMPERATURE (Fahrenheit)										
	70	**75**	**80**	**85**	**90**	**95**	**100**	**105**	**110**	**115**	**120**
RELATIVE HUMIDITY	**APPARENT TEMPERATURE***										
0%	64	69	73	78	83	87	91	95	99	103	107
10%	65	70	75	80	85	90	95	100	105	111	116
20%	66	72	77	82	87	93	99	105	112	120	**130**
30%	67	73	78	84	90	96	104	113	123	**135**	**148**
40%	68	74	79	86	93	101	110	123	**137**	**151**	
50%	69	75	81	88	96	107	120	**135**	**150**		
60%	70	76	82	90	100	114	**132**	**149**			
70%	70	77	85	93	106	124	**144**				
80%	71	78	86	97	113	**136**					
90%	71	79	88	102	122						
100%	72	80	91	108							

*Combined Index of Heat and Humidity…what it "feels like" to the body

Source: National Oceanic and Atmospheric Administration

How to use Heat Index:

1. Across top locate Environmental Temperature
2. Down left side locate Relative Humidity
3. Follow across and down to find Apparent Temperature
4. Determine Heat Stress Risk on chart at right

Note: Exposure to full sunshine can increase Heat Index values by up to 15 degrees F.

Apparent Temperature	**Heat Stress Risk with Physical Activity and/or Prolonged Exposure**
90-105	Heat Cramps or Heat Exhaustion Possible
105-130	Heat Cramps or Heat Exhaustion Likely, Heat Stroke Possible
>130	Heatstroke Highly Likely

SECTION 3 PERSONNEL PROTECTION AND MONITORING

3.1 OSHA TRAINING

All on-site personnel who will be actively involved in boring, test pitting, and sampling activities and can potentially encounter hazardous waste must have completed hazardous waste operations-related training, as required by OSHA Regulations 29 CFR 1910.120. Personnel who completed this training more than 12 months prior to the start of the project must have completed an 8-hour refresher course within the past 12 months. Documentation of OSHA training for project personnel must be provided to Langan prior to starting work.

3.2 SITE-SPECIFIC TRAINING

The Field Safety Officer will be responsible for developing a site-specific occupational hazard training program and providing training to all personnel that are to work at the site. This training will be conducted prior to starting field work and will consist of the following topics:

- Names of personnel responsible for site safety and health.
- Hazards potentially present at the site.
- Proper use of personal protective equipment.
- Requirements of this HASP.
- Work practices by which the employee can minimize risk from hazards. This may include a specific review of heavy equipment safety, safety during inclement weather, changes in common escape rendezvous point, site security measures, or other site-specific issues that need to be addressed before work begins.
- Safe use of engineering controls and equipment on the site.
- Acute effects of compounds present at the site.
- Decontamination procedures.

Upon completion of site-specific training, workers will sign the Site-Specific-Training Form provided in Attachment B. A copy of the completed Site-Specific Training Form will be included in the project files for future reference.

3.3 SITE SECURITY

No unauthorized personnel shall be permitted access to the work areas. The site perimeter will be secured with gated, signed, plywood fencing with one point of entry in

accordance with NYCDOB and NYCDOT permits and requirements. The purpose of the fencing is to limit site access to authorized personnel, protect pedestrians from site activities, and maintain site security.

3.4 MONITORING REQUIREMENTS

Worker air monitoring and community air monitoring (as described in Section 6.4) will be conducted at the start of field work.

Fugitive dust generation that could affect site workers, site occupants, or the public may occur. Care will be taken to minimize dust generation. The FSO will visually monitor the perimeter of the work area for evidence of sustained visible emissions. Work activities will be suspended until dust levels diminish to an acceptable level if sustained emissions are observed

Air monitoring of the breathing zone will be conducted periodically or continuously during boring advancement, sampling activities tank removal, and excavation to assure proper health and safety protection.

VOCs will be monitored with a PID in accordance with the HASP with an action level of 25 ppm in the absence of benzene. If the action level is exceeded and adequate ventilation cannot be provided, work will cease and the potential affected portion of the work area will be evacuated until adequate mechanical ventilation can be setup to control the hazard. Level C respiratory protection may be donned in accordance with the HASP if untrained personnel are not present and the action level is exceeded.

If air monitoring during operations identifies the presence of volatile organic compounds (not anticipated because of natural ventilation), the action levels, permissible exposure, engineering controls, and personal protective equipment specified in this HASP will be implemented. A PID (MiniRAE 2000 or equivalent) will be used to monitor for organic vapors in the breathing zone and to screen soil samples. Air monitoring results will be recorded in the field book during investigation activities and made available for review.

3.5 SUMMARY OF ACTION LEVELS AND RESTRICTIONS

A PID, such as the RAE Systems MiniRAE 2000 equipped with a 10.6 eV lamp, shall be used to screen for total organic vapors. All readings pertain to sustained readings for 15 minutes in the worker breathing zone. The following conditions shall apply to each level of protection.

Conditions for Level D:

All areas

- PID readings < 25 ppm and benzene < 1 ppm

- No visible fugitive dust emissions from site activities

Conditions for Level C:

All areas

- Where PID readings > 25 ppm (sustained for 15 minutes in the breathing zone) to 200 ppm and benzene < 5ppm, and/or
- Any visible fugitive dust emissions from site activities that disturb contaminated soil.

Conditions for Level B (or retreat):

All areas

- Where PID readings > 500 ppm or benzene > 25 ppm,
- Visible fugitive dust emissions from site activities cloud the surrounding air.

3.5.1 Level D and Modified Level D

Level D protection will be worn for initial entry on-site and initially for all activities. Level D protection will consist of:

- Standard work clothes
- Steel-toe safety boots
- Safety glasses (goggles must be worn when splash hazard is present)
- Nitrile outer gloves and PVC inner gloves must be worn during all activities requiring contact with soils.
- Hard hat (must be worn during all site activities)

Modified Level D is the same as Level D but includes Tyvek coveralls and disposable polyethylene overboots to contact with the skin or clothes if significant contamination is present in subsurface materials.

3.5.2 Level C

The level of personal protection will be upgraded to Level C if the concentration of volatile organic compounds which can be detected with a PID in the breathing zone equals or exceeds the specified action limits and the contaminants of concern have characteristic warning properties appropriate for air purifying respirators (e.g. taste, odor). Level C protection will consist of the following equipment:

- Full-face or half-mask air-purifying respirator (APR) or powered air purifier (PAPR), depending on presence and abundance of airborne toxic constituents of concern
- Combination high efficiency particulate air (HEPA) filter/organic vapor cartridges
- Tyvek coveralls must be worn if particulate hazard present
- PE-coated Tyvek coveralls if liquid contamination present
- Steel-toe safety boots
- Nitrile outer gloves and PVC inner gloves must be worn during all activities requiring contact with soils.
- Hard hat (must be worn during all site activities)

Cartridges will be disposed at the end of each day's use.

3.5.3 Level B (Retreat)

If the concentration of volatile organics which can be detected with a PID equals or exceeds the specified action levels, all field personnel associated with the project will immediately retreat to a location up-wind of the source of contamination. At this point the Site Safety Officer must consult with the Langan HSO to discuss appropriate actions.

3.5.4 OSHA Requirements for Personal Protective Equipment

All personal protective equipment used during the course of this field investigation must meet the following OSHA standards:

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133 29 CFR 1926.102	ANSI Z87.1-1968
Respiratory	29 CFR 1910.134 29 CFR 1926.103	ANSI Z88.1-1980
Head	29 CFR 1910.135 29 CFR 1926.100	ANSI Z89.1-1969
Foot	29 CFR 1910.136 29 CFR 1926.96	ANSI Z41.1-1967

ANSI = American National Standards Institute

Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.1025; 29 CFR 1910.134).

Based on performance criteria, air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency;
- IDLH concentrations;
- High relative humidity; and
- If contaminant levels exceed designated use concentrations.

SECTION 4 WORK ZONES AND DECONTAMINATION

4.1 SITE WORK ZONES

Work zones will be established if hazardous materials are encountered.

4.1.1 Hot Zone

Hot zones will be established within a 25 foot radius around each intrusive activity, where possible. Barriers will be established at the perimeter of the activity area where the perimeter is shared with an area accessible to the public. Unprotected onlookers should be located 25 feet upwind of the activities. All personnel within the hot zone must don the appropriate levels of personal protection as set forth by the FSO. It is not anticipated that Level C or higher will be required for this site.

All personnel within the hot zone will be required to use the specified level of protection. No food, drink, or smoking will be allowed in the hot or warm zones.

4.1.2 Warm Zone

A warm zone will be established and utilized during the field activities. This zone will be established between the hot zone and the cold zone (discussed below), and will include the personnel and equipment necessary for decontamination of equipment and personnel exiting the hot zone. Personnel and equipment in the hot zone must pass through this zone before entering the cold zone. This zone should always be located upwind of the hot zone.

4.1.3 Cold Zone

The cold zone will include the remaining areas of the job site. Break areas and support facilities (include equipment storage and maintenance areas) will be located in this zone. No equipment or personnel will be permitted to enter the cold zone from the hot zone without passing through the decontamination station in the warm zone. Eating, smoking, and drinking will be allowed only in this area.

4.2 DECONTAMINATION

Generally, any water used in decontamination procedures will be placed in containers, temporarily stored on-site, and properly characterized and disposed.

4.2.1 Decontamination of Personnel

Decontamination of personnel will be necessary if Level C or Level B protection is used, which is not anticipated based on current knowledge of the Site history. Decontamination will not be necessary if only Level D protection is used. However, disposable gloves used during sampling activities should be removed and bagged;

personnel should be encouraged to remove clothing and shower as soon as is practicable at the end of the day. All clothing should be machine-washed. All personnel will wash hands and face prior to eating and before and after using the restroom.

4.2.2 Decontamination of Field Equipment

Decontamination of field equipment will be necessary for all equipment in contact with contaminated materials. Decontamination activities shall be performed in a designated area lined with polyethylene sheeting that is designed to collect the decontamination rinsate.

4.3 REMEDIAL ACTIVITY-DERIVED WASTE

All personal protective equipment (PPE)-related remedial activity-derived waste materials (PPE, decontamination waste) will be placed in labeled containers and appropriately disposed.

SECTION 5 SAMPLE SHIPMENT

5.1 NON-HAZARDOUS SAMPLES

Samples collected in this study will be classified as environmental samples.

5.1.1 Environmental Samples

In general, non-hazardous environmental samples that are collected from soils or wells are not expected to contain high levels of hazardous materials, and are submitted for environmental testing.

Sample containers must have a completed sample identification tag and the outside container must be marked "Environmental Sample". The sample tag will be legibly written and completed with an indelible pencil or waterproof ink. The information will also be recorded in a log book. At a minimum, it will include:

- Exact location of sample;
- Time and date sample was collected;
- Name of sampler witnesses (if necessary);
- Project codes, sample station number, and identifying code (if applicable);
- Type of sample (if known);
- Laboratory number (if applicable); and
- Any other pertinent information.

Environmental samples will be packaged and shipped according to the following procedure:

1. Place sample container, properly identified and with a sealed lid, in a polyethylene bag, and seal bag;
2. Place sample in a fiberboard container or metal picnic cooler which has been lined with a large polyethylene bag;
3. Pack cooler with ice to maintain temperature of 4 degrees C;
4. Pack with enough noncombustible, absorbent, cushioning material to minimize the possibility of the container breaking;
5. Seal large bag; and
6. Seal or close outside container.

The appropriate side of the container must be marked "This End Up" and arrows should be drawn accordingly. No Department of Transportation (DOT) marking labeling is required. No DOT shipping papers are required. There are no DOT restrictions on mode of transportation.

5.2 HAZARDOUS SAMPLES

Hazardous materials are not anticipated at the Site. However, should hazardous materials be encountered or samples at the Site, the following procedures will be implemented. Personnel who must complete a Hazardous Goods Airway Bill must first be DOT trained and certified every two years. Drummed waste samples, tank samples, sludge samples, and grossly contaminated soil samples will be shipped as DOT Hazardous Materials. The designation "Flammable Liquid" or "Flammable Solid" will be used. The samples will be transported as follows:

1. Collect sample in a 16 ounce or smaller glass or polyethylene container with nonmetallic Teflon-lined screw cap. Allow sufficient air space (approximately 10% by volume) so container is not liquid full at 54 ^{O}C (130 ^{O}F). If collecting a solid material, the container plus contents should not exceed 1 pound net weight. If sampling for volatile organic analysis, fill VOA container to septum but place the VOA container inside a 16 ounce or smaller container so the required air space may be provided. Large quantities, up to 3.786 liters (1 gallon), may be collected if the sample's flash point is 23 ^{O}C (75 ^{O}F) or higher. In this case, the flash point must be marked on the outside container (e.g., carton, cooler), and shipping papers should state that "Flash point is 73 ^{O}F or higher."
2. Seal sample and place in a 4-mil thick polyethylene bag, one sample per bag.
3. Place sealed bag inside a metal can with noncombustible, absorbent cushioning material (e.g., vermiculite or earth) to prevent breakage, one bag per can. Pressure-close the can and use clips, tape or other positive means to hold the lid securely.
4. Mark the can with:
    - Name and address of originator
    - "Flammable Liquid N.O.S. UN 1993"
    - (or "Flammable Solid N.O.S. UN 1325)
    - NOTE: UN numbers are now required in proper shipping names.

5. Place one or more metal cans in a strong outside container such as a picnic cooler or fiberboard box. Preservatives are not used for hazardous waste site samples.

6. Prepare for shipping:

   "Flammable Liquid, N.O.S. UN 1993" or "Flammable Solid, N.O.S. UN 1325"; "Cargo Aircraft Only" (if more than 1 quart net per outside package); "Limited Quantity" or "Ltd. Qty."; "Laboratory Samples"; "Net Weight ___" or "Net Volume ___" (of hazardous contents) should be indicated on shipping papers and on outside of shipping container. "This Side Up" or "This End Up" should also be on container. Sign shipper certification.

7. Stand by for possible carrier requests to open outside containers for inspection or modify packaging. It is wise to contact carrier before packing to ascertain local packaging requirements and not to leave area before the carrier vehicle (aircraft, truck) is on its way. The International Air Transport Association's Dangerous Goods regulations will need to be followed for using FedEx for the shipment of hazardous samples.

5.2.1 Shipping Papers

A blank Langan shipping paper should be filled out and maintained within the driver's reach, whenever a Langan employee carries hazardous materials in a vehicle in quantities above those allowed for Materials of Trade (MOTs). Such materials may not include more than 8 gallons of the following:

- Gasoline (for use in a generator) UN 1203, Guide #27;
- Methanol (for use in decontamination procedures) UN 1230, Guide #28;
- Nitric Acid (for use in decontamination procedures) UN 1760, Guide #60; and
- Hydrochloric Acid (for use in decontamination procedures) UN 1789, Guide #60.

Other materials may include the following:

- > 220 pounds of compressed Gas [Air, Compressed] (calibration gas for the PID, or Grade D breathing air for Level B work) UN 1002, Class 2.2; and
- Other hazardous materials as defined by the DOT.

Appropriate MSDSs should be maintained with the shipping papers and/or the pocket DOT Emergency Response Guidebook.

SECTION 6 ACCIDENT PREVENTION AND CONTINGENCY PLAN

6.1 ACCIDENT PREVENTION

6.1.1 Site-Specific Training

All field personnel will receive health and safety training prior to the initiation of any site activities. The site-specific training form provided in Attachment B must be signed, dated, and returned to the Langan Field Safety Officer. On a day-to-day basis, individual personnel should be constantly alert for indicators of potentially hazardous situations and for signs and symptoms in themselves and others that warn of hazardous conditions and exposures. Rapid recognition of dangerous situations can avert an emergency. Before daily work assignments, a regular meeting should be held. Discussion should include:

- Tasks to be performed;
- Time constraints (e.g., rest breaks, cartridge changes);
- Hazards that may be encountered, including their effects, how to recognize symptoms or monitor them, concentration limits, or other danger signals; and
- Emergency procedures.

6.1.2 Vehicles and Heavy Equipment

Working with large motor vehicles and heavy equipment could be a major hazard at this site. Injuries can result from equipment hitting or running over personnel, impacts from flying objects, or overturning of vehicles. Vehicle and heavy equipment design and operation will be in accordance with 29 CFR, Subpart O, 1926.600 through 1926.602. In particular, the following precautions will be utilized to help prevent injuries/accidents.

- Brakes, hydraulic lines, light signals, fire extinguishers, fluid levels, steering, tires, horn, and other safety devices will be checked at the beginning of each shift.
- Large construction motor vehicles will not be backed up unless:
  - The vehicle has a reverse signal alarm audible above the surrounding noise level; or
  - The vehicle is backed up only when an observer signals that it is safe to do so.
- Heavy equipment or motor vehicle cable will be kept free of all nonessential items, and all loose items will be secured.

- Large construction motor vehicles and heavy equipment will be provided with necessary safety equipment (such as seat belts, roll-over protection, emergency shut-off in case of roll-over, backup warning lights and audible alarms).
- Blades and buckets will be lowered to the ground and parking brakes will be set before shutting off any heavy equipment or vehicles.

6.2 SPILL CONTROL PLAN

All personnel must take every precaution to minimize the potential for spills during site operations. Any spill shall be reported immediately to the FSO. Spill control apparatus (sorbent materials) will be located on-site. All materials used for the cleanup of spills will be containerized and labeled separately from other wastes.

6.3 CONTINGENCY PLAN

6.3.1 Emergency Procedures

In the event that an emergency develops on site, the procedures delineated herein are to be immediately followed. Emergency conditions are considered to exist if:

- Any member of the field crew is involved in an accident or experiences any adverse effects or symptoms of exposure while on site.
- A condition is discovered that suggests the existence of a situation more hazardous than anticipated.

General emergency procedures, and specific procedures for personal injury, chemical exposure and radiation exposure, are described below.

6.3.2 Chemical Exposure

If a member of the field crew demonstrates symptoms of chemical exposure the procedures outlined below should be followed:

- Another team member (buddy) should remove the individual from the immediate area of contamination. The buddy should communicate to the Field Team Leader (via voice and hand signals) of the chemical exposure. The Field Team Leader should contact the appropriate emergency response agency.
- Precautions should be taken to avoid exposure of other individuals to the chemical.
- If the chemical is on the individual's clothing, the chemical should be neutralized or removed if it is safe to do so.

- If the chemical has contacted the skin, the skin should be washed with copious amounts of water.
- In case of eye contact, an emergency eye wash should be used. Eyes should be washed for at least 15 minutes.
- All chemical exposure incidents must be reported in writing to the Langan Health and Safety Officer. The Field Safety Officer or Field Team Leader is responsible for completing the accident report.

6.3.3 Personal Injury

In case of personal injury at the site, the following procedures should be followed:

- Another team member (buddy) should signal the Field Team Leader that an injury has occurred.
- A field team member trained in first aid can administer treatment to an injured worker.
- The victim should then be transported to the nearest hospital or medical center. If necessary, an ambulance should be called to transport the victim.
- For less severe cases, the individual can be taken to the site dispensary.
- The Field Team Leader or Field Safety Officer is responsible for making certain that an Accident Report Form is completed. This form is to be submitted to the Langan Health and Safety Officer. Follow-up action should be taken to correct the situation that caused the accident.
- Any incident (near miss, property damage, first aid, medical treatment, etc.) must be reported.

A first-aid kit and blood-borne pathogens kit will be kept on-site during the field activities.

6.3.4 Evacuation Procedures

- The Field Team Leader will initiate evacuation procedures by signaling to leave the site.
- All personnel in the work area should evacuate the area and meet in the common designated area.
- All personnel suspected to be in or near the contract work area should be accounted for and the whereabouts or missing persons determined immediately.
- The Field Team Leader will then give further instruction.

6.3.5 Procedures Implemented in the Event of a Major Fire, Explosion, or Emergency

- Notify the paramedics and/or fire department, as necessary;
- Signal the evacuation procedure previously outlined and implement the entire procedure;
- Isolate the area;
- Stay upwind of any fire;
- Keep the area surrounding the problem source clear after the incident occurs;
- Complete accident report for and distribute to appropriate personnel.

6.4 COMMUNITY AIR MONITORING PLAN

Community air monitoring will be conducted in compliance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP) outlined below.

Monitoring for dust and odors will be conducted during all ground intrusive activities by the Remediation Engineer's field inspector. Continuous monitoring on the perimeter of the work zones for odor, VOCs, and dust will be required for all ground intrusive activities such as soil excavation and handling activities. The work zone is defined as the general area in which machinery is operating in support of remediation activities. A portable PID will be used to monitor the work zone and for periodic monitoring for VOCs during activities such as soil and groundwater sampling. The Site perimeter will be visually monitored for fugitive dust emissions.

The following actions will be taken based on VOC levels measured:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.
- If total VOC levels at the downwind perimeter of the hot zone persist at levels in excess of 5 ppm above background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps work activities will resume provided that the total organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.
- If the total VOC level is above 25 ppm at the perimeter of the hot zone, activities will be shutdown.

The following actions will be taken based on visual dust observations:

- If the downwind particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind PM10 levels do not exceed 150 $\mu g/m^3$ above the background level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 µg/m³ above the background level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration.

6.4.1 Vapor Emission Response Plan

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the hot zone, boring and well installation, and excavation activities will be halted or odor controls will be employed, and monitoring continued. When work shut-down occurs, downwind air monitoring as directed by the Field Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

If the organic vapor level decreases below 5 ppm above background, sampling and boring and well installation can resume, provided:

- The organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest residential or commercial structure, whichever is less, is below 1 ppm over background, and
- More frequent intervals of monitoring, as directed by the Site Health and Safety Officer, are conducted.

6.4.2 Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work site, or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted or odor controls must be implemented.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the hot zone, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If either of the following criteria is exceeded in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be implemented.

- Sustained organic vapor levels approaching 5 ppm above background for a period of more than 30 minutes, or

- Organic vapor levels greater than 5 ppm above background for any time period.

6.4.3 Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

1. The local police authorities will immediately be contacted by the Site Health and Safety Officer and advised of the situation;
2. Frequent air monitoring will be conducted at 30-minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Site Health and Safety Officer; and

All Emergency contacts will go into effect as appropriate.

ATTACHMENT A

Air Monitoring Equipment Calibration and Maintenance

All monitoring instruments must be calibrated and maintained periodically. Calibration and on-site maintenance records will be kept in the field log book. The operator must understand the limitations and possible sources of errors for each instrument. It is important that the operator checks that the instrument responds properly to the substances it was designed to monitor. Air quality monitoring equipment, including photoionization detectors (PIDs) must be calibrated at least once each day. The specific instructions for calibration and maintenance provided for each instrument should be followed.

ATTACHMENT B

Forms for Health and Safety Related Activity

Note: The OSHA Job Safety and Health Protection Poster must be posted prominently during field activities. The following page is an example of the poster to be used in the field. The actual poster must be an 11 inch by 17 inch size version of this page. The OSHA 300 Log of injuries and illnesses is maintained in the home office of each Langan employee.

You Have a Right to a Safe and Healthful Workplace.

IT'S THE LAW!

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in the inspection.
- You can file a complaint with OSHA within 30 days of discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have a right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violation.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records or records of your exposure to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.

The *Occupational Safety and Health Act of 1970 (OSH Act)*, P.L. 91-596, assures safe and healthful working conditions for working men and women throughout the Nation. The Occupational Safety and Health Administration, in the U.S. Department of Labor, has the primary responsibility for administering the *OSH Act*. The rights listed here may vary depending on the particular circumstances. To file a complaint, report an emergency, or seek OSHA advice, assistance, or products, call 1-800-321-OSHA or your nearest OSHA office: • Atlanta (404) 562-2300 • Boston (617) 565-9860 • Chicago (312) 353-2220 • Dallas (214) 767-4731 • Denver (303) 844-1600 • Kansas City (816) 426-5861 • New York (212) 337-2378 • Philadelphia (215) 861-4900 • San Francisco (415) 975-4310 • Seattle (206) 553-5930. Teletypewriter (TTY) number is 1-877-889-5627. To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website at **www.osha.gov**. If your workplace is in a state operating under an OSHA-approved plan, your employer must post the required state equivalent of this poster.

1-800-321-OSHA
www.osha.gov

U.S. Department of Labor • **Occupational Safety and Health Administration** • **OSHA 3165**

Langan **ACCIDENT REPORT FORM**

Project Name: 44-30 Purves Street____

Injured or Ill Employee

1. Name _____ Social Security #_____
   (First) (Middle) (Last)
2. Home Address _____
   (No. and Street) (City or Town) (State and Zip)
3. Age _____ 4. Sex: Male ( ) Female ( )
5. Occupation _____
   (Specific job title, not the specific activity employee was performing at time of injury)
6. Department _____
   (Enter name of department in which injured person is employed, even though they may have been temporarily working in another department at the time of injury)

Employer

7. Name _____
8. Mailing Address _____
   (No. and Street) (City or Town) (State and Zip)
9. Location (if different from mailing address):_____
   _____

The Accident or Exposure to Occupational Illness

10. Place of accident or exposure _____
    (No. and Street) (City or Town) (State and Zip)
11. Was place of accident or exposure on employer's premises? _____(Yes/No)
12. What was the employee doing when injured?_____
    _____
    (Be specific - was employee using tools or equipment or handling material?)
    _____
13. How did the accident occur? _____
    (Describe fully the events that resulted in the injury or
    _____
    occupational illness. Tell what happened and how. Name objects and substances involved.
    _____
    Give details on all factors that led to accident. Use separate sheet if needed)
14. Time of accident: _____
15. Date of injury or initial diagnosis of occupational illness _____

16. WITNESS TO ACCIDENT

(Name)	(Affiliation)	(Phone No.)
(Name)	(Affiliation)	(Phone No.)
(Name)	(Affiliation)	(Phone No.)

Occupational Injury or Occupational Illness

17. Describe the injury or illness in detail; indicate part of body affected.

18. Name the object or substance that directly injured the employee. (For example, object that struck employee; the vapor or poison inhaled or swallowed; the chemical or radiation that irritated the skin; or in cases of strains, hernias, etc., the object the employee was lifting, pulling, etc.)

19. Did the accident result in employee fatality? _____ (Yes or No)
20. Number of lost workdays ____/restricted workdays _____ resulting from injury or illness?

Other

21. Did you see a physician for treatment? _____ (Yes or No) _____ (Date)
22. Name and address of physician _____

(No. and Street) (City or Town) (State and Zip)

23. If hospitalized, name and address of hospital _____

(No. and Street) (City or Town) (State and Zip)

Date of report _____ Prepared by _____

Official position _____

Project Health and Safety Plan and Work plan Acceptance Form

(For Langan employees only)

I have read and agree to abide by the contents of the Work Plan and Health and Safety Plan for the following project:

44-30 Purves Street 170282501

(Project Title) (Project Number)

Furthermore, I have read and am familiar with the work plan or proposal that describes the field work to be conducted and the procedures to be utilized in the conduct of this work.

Name (print)	Signature	Date

Place in project Health and Safety File as soon as possible

Site-Specific Health and Safety Training

(For all Langan and subcontract employees on site)

I hereby confirm that site-specific health and safety training has been conducted by the site health and safety officer that included:

- Names of personnel responsible for site safety and health
- Safety, health, and other hazards at the site
- Proper use of personal protective equipment
- Work practices by which the employee can minimize risk from hazards
- Safe use of engineering controls and equipment on the site
- Acute effects of compounds at the site
- Decontamination procedures

For the following project:

44-30 Purves Street (Project Title) 170282501 (Project Number)

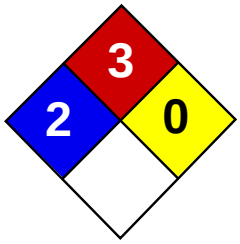
Name (print)	Signature	Date

Place in project Health and Safety File as soon as possible

ATTACHMENT C

Material Safety Data Sheets

- Acetone
- Vinyl Chloride
- Cis-1,2-dichloroethene
- Tetrachloroethene
- 1,4-dioxane
- 1,1 dichloroethane
- 1-1-dichloroethene
- Trans-1,2-dichloroethene
- 1,1,1-trichloroethane
- Chloroethane
- 1,2,4-trimethylbenzene
- MTBE
- Benzene
- Ethylbenzene
- Toluene
- Xylenes
- Trichloroethene
- Pentachlorophenol
- Benzo(a)anthracene
- Benzo(a)pyrene
- Dibenzo(a,h)anthracene
- Pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Chrysene
- Fluoranthene
- Ideno(1,2,3-cd)pyrene
- Naphthalene
- Phenol
- Bis(2-ethylhexyl)phthalate
- Fluorine
- Acenapthene
- Dibenzofuran
- Aluminum
- Antimony
- Arsenic
- Barium
- Cadmium
- Chromium
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Nickel
- Sodium
- Silver
- Zinc
- PCBs
- 4,4'-DDE
- 4,4'DDD
- 4,4'DDT
- Dieldrin
- Unleaded Gasoline
- Diesel Fuel
- Motor Oil, 10W-40
- Isobutylene Gas in Air, 100 ppm
- Compressed Air



Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
1,1-Dichloroethane MSDS

Section 1: Chemical Product and Company Identification

Product Name: 1,1-Dichloroethane

Catalog Codes: SLD3280

CAS#: 75-34-3

RTECS: KI0175000

TSCA: TSCA 8(b) inventory: 1,1-Dichloroethane

CI#: Not available.

Synonym:

Chemical Name: 1,1-Dichloroethane

Chemical Formula: C2-H4-Cl2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{1,1-}Dichloroethane	75-34-3	100

Toxicological Data on Ingredients: 1,1-Dichloroethane: ORAL (LD50): Acute: 725 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified 2 (Reasonably anticipated.) by NTP. A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE]. The substance is toxic to kidneys, lungs, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 458°C (856.4°F)

Flash Points: CLOSED CUP: -17°C (1.4°F). OPEN CUP: -6°C (21.2°F).

Flammable Limits: LOWER: 5.6% UPPER: 11.4%

Products of Combustion: These products are carbon oxides (CO, CO2), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, alkalis.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 STEL: 250 (ppm) from ACGIH (TLV) [1999] TWA: 100 (ppm) from OSHA (PEL) Australia: TWA: 200 (ppm) Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Oily liquid.)

Odor: Chloroform like odor (Slight.)

Taste: Not available.

Molecular Weight: 98.96 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 57.3°C (135.1°F)

Melting Point: -96.9°C (-142.4°F)

Critical Temperature: 261.5°C (502.7°F)

Specific Gravity: 1.175 (Water = 1)

Vapor Pressure: 180 mm of Hg (@ 20°C)

Vapor Density: 3.44 (Air = 1)

Volatility: Not available.

Odor Threshold: 120 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:
Partially dispersed in diethyl ether. See solubility in water, diethyl ether.

Solubility: Partially soluble in diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, alkalis.

Corrosivity: Corrosive in presence of aluminum.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Will attack some forms of plastic and rubber

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 725 mg/kg [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 2 (Reasonably anticipated.) by NTP. A4 (Not classifiable for human or animal.) by ACGIH. DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE]. The substance is toxic to kidneys, lungs, liver, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:
CLASS 3: Combustible liquid with a flash point greater than 37.8C (100F). Marine pollutant

Identification: : 1,1-Dichloroethane : UN2362 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65 (no significant risk level): 1,1-Dichloroethane California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: 1,1-Dichloroethane Rhode Island RTK hazardous substances: 1,1-Dichloroethane Pennsylvania RTK: 1,1-Dichloroethane Florida: 1,1-Dichloroethane Minnesota: 1,1-Dichloroethane Massachusetts RTK: 1,1-Dichloroethane New Jersey: 1,1-Dichloroethane New Jersey spill list: 1,1-Dichloroethane TSCA 8(b) inventory: 1,1-Dichloroethane TSCA 8(a) PAIR: 1,1-Dichloroethane TSCA 8(d) H and S data reporting: 1,1-Dichloroethane: June 1999 TSCA 12(b) one time export: 1,1-Dichloroethane SARA 313 toxic chemical notification and release reporting: 1,1-Dichloroethane: 1% CERCLA: Hazardous substances.: 1,1-Dichloroethane: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable. R22- Harmful if swallowed. R37/38- Irritating to respiratory system and skin. R41- Risk of serious damage to eyes. R52- Harmful to aquatic organisms.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 05:07 PM

Last Updated: 11/01/2010 12:00 PM

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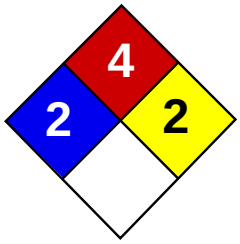

Material Safety Data Sheet
Vinylidene Chloride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Vinylidene Chloride

Catalog Codes: SLV1063

CAS#: 75-35-4

RTECS: KV9275000

TSCA: TSCA 8(b) inventory: Vinylidene Chloride

CI#: Not available.

Synonym: 1,1-Dichloroethylene

Chemical Name: Vinylidene Chloride

Chemical Formula: C2-H2-Cl2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Vinylidene Chloride	75-35-4	100

Toxicological Data on Ingredients: Vinylidene Chloride: ORAL (LD50): Acute: 194 mg/kg [Mouse]. 200 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant). Slightly hazardous in case of eye contact (irritant), of inhalation (lung irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP. A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE]. The substance may be toxic to kidneys, liver, bladder, gastrointestinal tract, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention if irritation occurs.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 520°C (968°F)

Flash Points: CLOSED CUP: -28°C (-18.4°F).

Flammable Limits: LOWER: 8.4% UPPER: 16.5%

Products of Combustion: These products are carbon oxides (CO, CO2), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call

for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with skin. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, moisture.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
STEL: 20 (ppm) from ACGIH (TLV) [United States] TWA: 1 from OSHA (PEL) [United States] TWA: 2 (ppm) [Austria] TWA: 5 (ppm) [Belgium] TWA: 5 (ppm) [Denmark] TWA: 2 (ppm) [Germany] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Chloroform-like (Slight.)

Taste: Not available.

Molecular Weight: 96.94 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 31°C (87.8°F)

Melting Point: -122.5°C (-188.5°F)

Critical Temperature: Not available.

Specific Gravity: 1.213 (Water = 1)

Vapor Pressure: 78.8 kPa (@ 20°C)

Vapor Density: 3.25 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Very slightly dispersed in cold water, hot water, diethyl ether, acetone.

Solubility: Very slightly soluble in cold water, hot water, diethyl ether, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, moisture.

Corrosivity: Corrosive in presence of steel.

Special Remarks on Reactivity:
Do not mix with Aluminum or Copper. May cause polymerization when exposed to Nitric Acid, Chlorosulfonic Acid, Oleum

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 194 mg/kg [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP. A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE]. May cause damage to the following organs: kidneys, liver, bladder, gastrointestinal tract, skin, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant). Slightly hazardous in case of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Vinylidene chloride, Inhibited UNNA: 1303 PG: I

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Vinylidene Chloride Florida: Vinylidene Chloride Minnesota: Vinylidene Chloride Michigan critical material: Vinylidene Chloride Massachusetts RTK: Vinylidene Chloride New Jersey: Vinylidene Chloride TSCA 8(b) inventory: Vinylidene Chloride TSCA 8(a) PAIR: Vinylidene Chloride TSCA 8(d) H and S data reporting: Vinylidene Chloride: 8/4/95 CERCLA: Hazardous substances.: Vinylidene Chloride: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

DSCL (EEC):
R12- Extremely flammable. R20- Harmful by inhalation. R40- Possible risks of irreversible effects.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 4

Reactivity: 0

Personal Protection: g

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 4

Reactivity: 2

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:15 AM

Last Updated: 11/01/2010 12:00 PM

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Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Creation Date 11-Jan-2010 **Revision Date** 11-Jan-2010 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **1,1,1-Trichloroethane, stabilized**

Cat No. **T391-4; T391-20; T398-4**

Synonyms Methylchloroform

Recommended Use Laboratory chemicals

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 703-527-3887

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Possible cancer hazard. May cause cancer based on animal data. Harmful if swallowed. Irritating to eyes and skin. Inhalation may cause central nervous system effects. May cause irritation of respiratory tract. Aspiration hazard if swallowed - can enter lungs and cause damage.

Appearance Colorless **Physical State** Liquid **odor** sweet

Target Organs Liver, Kidney, Central nervous system (CNS), Cardiovascular system, Lungs, Eyes, Skin

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes Irritating to eyes.
Skin Irritating to skin. May be harmful in contact with skin.
Inhalation May cause irritation of respiratory tract. May be harmful if inhaled. Inhalation may cause central nervous system effects.
Ingestion Harmful if swallowed. Aspiration hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Possible cancer hazard based on tests with laboratory animals. Tumorigenic effects have been reported in experimental animals.. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Preexisting eye disorders. Kidney disorders. Liver disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
1,1,1-Trichloroethane	71-55-6	>90
1,4-Dioxane	123-91-1	5-6

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point No information available.
Method No information available.

Autoignition Temperature 458°C / 856.4°F

Explosion Limits
Upper 15.5 vol %
Lower 8.0 vol %

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA **Health** 2 **Flammability** 1 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Use only under a chemical fume hood. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not ingest. Avoid contact with skin, eyes and clothing.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,1,1-Trichloroethane	TWA: 350 ppm STEL: 450 ppm	(Vacated) TWA: 350 ppm (Vacated) TWA: 1900 mg/m^3 (Vacated) STEL: 450 ppm (Vacated) STEL: 2450 mg/m^3 TWA: 1900 mg/m^3 TWA: 350 ppm	IDLH: 700 ppm Ceiling: 350 ppm Ceiling: 1900 mg/m^3
1,4-Dioxane	TWA: 20 ppm Skin	(Vacated) TWA: 25 ppm (Vacated) TWA: 90 mg/m^3 Skin TWA: 100 ppm TWA: 360 mg/m^3	IDLH: 500 ppm Ceiling: 3.6 mg/m^3 Ceiling: 1 ppm

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
1,1,1-Trichloroethane	TWA: 1910 mg/m^3 TWA: 350 ppm STEL: 2460 mg/m^3 STEL: 450 ppm	TWA: 1900 mg/m^3 TWA: 350 ppm STEL: 2460 mg/m^3 STEL: 450 ppm	TWA: 1910 mg/m^3 TWA: 350 ppm STEL: 2455 mg/m^3 STEL: 450 ppm

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
1,4-Dioxane	TWA: 20 ppm TWA: 72 mg/m^3 Skin	TWA: 25 ppm TWA: 90 mg/m^3 STEL: 100 ppm STEL: 360 mg/m^3	TWA: 20 ppm Skin

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colorless
odor	sweet
Odor Threshold	No information available.
pH	Not applicable
Vapor Pressure	100 mmHg @ 20°C
Vapor Density	4.55 (Air = 1.0)
Viscosity	0.86 mPa.s @ 20 °C
Boiling Point/Range	74 - 76°C / 165.2 - 168.8°F
Melting Point/Range	-33°C / -27.4°F
Decomposition temperature	95 °C
Flash Point	No information available.
Evaporation Rate	(Carbon Tetrachloride = 1.0)
Specific Gravity	1.33
Solubility	Insoluble in water
log Pow	No data available
Molecular Weight	133.4
Molecular Formula	C2 H3 Cl3

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO_2), Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing..

11. TOXICOLOGICAL INFORMATION

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,1,1-Trichloroethane	2000 mg/kg (Rat)	15800 mg/kg (Rabbit) 2000 mg/kg (Rat)	18000 ppm (Rat) 4 h
1,4-Dioxane	4200 mg/kg (Rat)	7600 mg/kg (Rabbit)	48.5 mg/L (Rat) 4 h

Irritation Irritating to eyes and skin

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Mexico
1,1,1-Trichloroethane	Not listed	Group 3	Not listed	Not listed	Not listed
1,4-Dioxane	A3	Group 2B	Reasonably Anticipated	X	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)
IARC: (International Agency for Research on Cancer)
IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects Developmental effects have occurred in experimental animals.

Teratogenicity Teratogenic effects have occurred in experimental animals..

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,1,1-Trichloroethane	EC50 >669 mg/L/96h	Not listed	EC50 = 105 mg/L 5 min	EC50 >530 mg/L 48h EC50: 2384 mg/L 48h
1,4-Dioxane	Not listed	Not listed	EC50 = 610 mg/L 5 min EC50 = 668 mg/L 15 min EC50 = 733 mg/L 30 min	EC50 = 163 mg/L 48h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility .

Component	log Pow
1,1,1-Trichloroethane	2.46
1,4-Dioxane	-0.42

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
1,1,1-Trichloroethane - 71-55-6	U226	-
1,4-Dioxane - 123-91-1	U108	-

14. TRANSPORT INFORMATION

DOT

UN-No UN2831
Proper Shipping Name 1,1,1-Trichloroethane
Hazard Class 6.1
Packing Group III

TDG

UN-No UN2831
Proper Shipping Name 1,1,1-TRICHLOROETHANE
Hazard Class 6.1
Packing Group III

IATA

UN-No UN2831

14. TRANSPORT INFORMATION

Proper Shipping Name 1,1,1-Trichloroethane (Mixture)
Hazard Class 6.1
Packing Group III

IMDG/IMO

UN-No UN2831
Proper Shipping Name 1,1,1-Trichloroethane (Mixture)
Hazard Class 6.1
Packing Group III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
1,1,1-Trichloroethane	X	X	-	200-756-3	-		X	X	X	X	KE-34068 X
1,4-Dioxane	X	X	-	204-661-8	-		X	X	X	X	KE-10463 X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
1,1,1-Trichloroethane	71-55-6	>90	1.0
1,4-Dioxane	123-91-1	5-6	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
1,1,1-Trichloroethane	-	-	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
1,1,1-Trichloroethane	X	X	-
1,4-Dioxane	X		-

OSHA
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
1,1,1-Trichloroethane	1000 lb	-
1,4-Dioxane	100 lb	-

California Proposition 65
This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL
1,4-Dioxane	123-91-1	Carcinogen	30 µg/day

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1,1,1-Trichloroethane	X	X	X	X	X
1,4-Dioxane	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ):	Y
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D1B Toxic materials
D2A Very toxic materials
D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Regulatory Affairs Thermo Fisher Scientific Tel: (412) 490-8929
Creation Date	11-Jan-2010
Print Date	11-Jan-2010
Revision Summary	"***", and red text indicates revision

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

Material Safety Data Sheet
1,2,4-Trimethylbenzene

MSDS# 73581

Section 1 - Chemical Product and Company Identification

MSDS Name:	1,2,4-Trimethylbenzene
Catalog Numbers:	AC140090000, AC140090010, AC140090025, AC140090100, AC140095000
Synonyms:	Pseudocumene.

Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#:	95-63-6
Chemical Name:	1,2,4-Trimethylbenzene
%:	98
EINECS#:	202-436-9

Hazard Symbols: XN N

Risk Phrases: 10 20 36/37/38 51/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. Harmful if inhaled. Causes eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Target Organs: Blood, central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye:	Causes eye irritation. Causes redness and pain.
Skin:	Causes skin irritation. Causes redness and pain. May be harmful if absorbed through the skin.
Ingestion:	May cause irritation of the digestive tract. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May be harmful if swallowed. May cause central nervous system depression.
Inhalation:	Harmful if inhaled. Causes respiratory tract irritation. May cause drowsiness, unconsciousness, and central nervous system depression.
Chronic:	Prolonged or repeated skin contact may cause dermatitis. May cause anemia and other blood cell abnormalities. Prolonged exposure may produce a narcotic effect. Prolonged or repeated exposure may cause nausea,

dizziness, and headache.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Possible aspiration hazard. Get medical aid immediately. Call a poison control center.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Possible aspiration hazard. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 500 deg C (932.00 deg F)

Flash Point: 48 deg C (118.40 deg F)

Explosion Limits: Lower: 0.9 vol %

Explosion Limits: Upper: 6.4 vol %

NFPA Rating: health: 2; flammability: 2; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood. Keep away from heat, sparks and flame.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,2,4-Trimethylbenzene	25 ppm TWA (listed under Trimethyl benzene).	25 ppm TWA; 125 mg/m3 TWA	none listed

OSHA Vacated PELs: 1,2,4-Trimethylbenzene: 25 ppm TWA; 125 mg/m3 TWA (listed under Trimethyl benzene)

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	colorless
Odor:	aromatic odor
pH:	Not available
Vapor Pressure:	7 mm Hg @ 44.4 deg C
Vapor Density:	4.15 (air=1)
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	168 deg C @ 760 mmHg (334.40°F)
Freezing/Melting Point:	-44 deg C (-47.20°F)
Decomposition Temperature:	Not available
Solubility in water:	Insoluble
Specific Gravity/Density:	0.880 g/cm3
Molecular Formula:	C9H12
Molecular Weight:	120.19

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 95-63-6: DC3325000
LD50/LC50:	RTECS: **CAS# 95-63-6:** Inhalation, rat: LC50 = 18000 mg/m3/4H; Oral, mouse: LD50 = 6900 mg/kg; Oral, rat: LD50 = 5 gm/kg; .
Carcinogenicity:	1,2,4-Trimethylbenzene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Fish: Fathead Minnow: LC50 = 77.2 mg/L; 96 Hr; Flow-through at 25 C (pH 7.24)
Other:	Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: FLAMMABLE LIQUIDS, N.O.S. (1,2,4-Trimethylbenzene)
Hazard Class: 3
UN Number: UN1993
Packing Group: III
Canada TDG

Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN N

Risk Phrases:

R 10 Flammable.

R 20 Harmful by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 95-63-6: 3

Canada

CAS# 95-63-6 is listed on Canada's DSL List

Canadian WHMIS Classifications: B3, D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 95-63-6 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 95-63-6 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 5/19/1999

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

Material Safety Data Sheet

1,4-Dioxane

MSDS# 26970

Section 1 - Chemical Product and Company Identification

MSDS Name:	1,4-Dioxane
Catalog Numbers:	AC117110000, AC117110010, AC117110025, AC117110050, AC117110250, AC167800000 AC167800000, AC167800010, AC167800025, AC167805000, AC268340000, AC268340010 AC268340010, AC268340025, AC270490000, AC270490010, AC270490025, AC270492500 AC270492500, AC326890000, AC326890010, AC326891000, AC326892500, AC364340000 AC364340000, AC364340010, AC364341000, AC408820000, AC408820010, AC61033019, AC61033019 AC61033019, AC61033050, AC61033050, AC61033115, AC61033115, AC61033200, AC61033200 AC61033200, 40882-5000, 61033-1000, 61512-0010, 61512-1000, BP2611-100, D111-4, D111-4LC, D111-500, D116-200, D116-4, D117-1, D117RS-19, D117RS-200, D117RS-50, D56S-4, NC9734646
Synonyms:	Diox; Diethylene dioxide; OptiDry.

Company Identification:	Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	201-796-7100
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#:	123-91-1
Chemical Name:	1,4-Dioxane
%:	97+
EINECS#:	204-661-8

Hazard Symbols: XN F

Risk Phrases: 11 19 36/37 40 66

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! May form explosive peroxides. Flammable liquid and vapor. Causes eye, skin, and respiratory tract irritation. Repeated exposure may cause skin dryness or cracking. Possible cancer hazard. May cause cancer based on animal data. Target Organs: Kidneys, central nervous system, liver, respiratory system, eyes, skin.

Potential Health Effects

Eye:	Causes eye irritation.
Skin:	May cause skin irritation. Causes skin irritation. May be harmful if absorbed through the skin. Repeated or prolonged exposure may cause drying and cracking of the skin.
Ingestion:	May cause irritation of the digestive tract. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May be harmful if swallowed.
	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache,

Inhalation: dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause liver and kidney damage. May be harmful if inhaled.

Chronic: Possible cancer hazard based on tests with laboratory animals. May cause liver and kidney damage. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Exposure to high concentrations may cause central nervous system depression. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor. May form explosive peroxides.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

Autoignition Temperature: 180 deg C (356.00 deg F)

Flash Point: 12 deg C (53.60 deg F)

Explosion Limits: Lower: 2 vol %

Explosion Limits: Upper: 22 vol %

NFPA Rating: health: 2; flammability: 3; instability: 3;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood. If peroxide formation is suspected, do not open or move container. Do not distill to dryness. Test for peroxide formation before distillation.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a dry area. Flammables-area. Regularly check inhibitor levels to maintain peroxide levels below 1%. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store under nitrogen. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. May form explosive peroxides on prolonged storage.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs

1,4-Dioxane	20 ppm; Skin - potential significant contribution to overall exposure by the cutaneous r oute	500 ppm IDLH	100 ppm TWA; 360 mg/m3 TWA

OSHA Vacated PELs: 1,4-Dioxane: 25 ppm TWA; 90 mg/m3 TWA

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: clear, colorless - APHA: 15 max

Odor: ethereal odor

pH: 6 - 8 (500 g/L aq.sol.)

Vapor Pressure: 41 mbar @ 20 deg C

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: 1.54 cPa @ 20 deg C

Boiling Point: 101 deg C @ 760 mmHg (213.80°F)

Freezing/Melting Point: 12 deg C (53.60°F)

Decomposition Temperature: Not available

Solubility in water: Soluble

Specific Gravity/Density: 1.030

Molecular Formula: C4H8O2

Molecular Weight: 88.11

Section 10 - Stability and Reactivity

Chemical Stability: May form explosive peroxides. Moisture sensitive.

Conditions to Avoid: Incompatible materials, light, ignition sources, excess heat, exposure to moist air or water, electrical sparks.

Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, halogens, silver perchlorate, oxygen.

Hazardous Decomposition Products: Carbon monoxide, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 123-91-1: JG8225000

RTECS:
CAS# 123-91-1: Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Inhalation, mouse: LC50 = 37 gm/m3/2H;
Inhalation, rat: LC50 = 46 gm/m3/2H;

LD50/LC50:
Oral, mouse: LD50 = 5300 mg/kg;
Oral, rabbit: LD50 = 2 gm/kg;
Oral, rat: LD50 = 4200 mg/kg;
Skin, rabbit: LD50 = 7600 uL/kg;
.

Carcinogenicity: 1,4-Dioxane - ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
California: carcinogen, initial date 1/1/88 NTP: Suspect carcinogen IARC: Group 2B carcinogen

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: LC50 = >10,000mg/L; 96 Hr.; Static conditions, 23 degrees C
Water flea Daphnia: EC50 =163 mg/L; 48 Hr.; Static Condition, 20-21 degrees C

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: DIOXANE
Hazard Class: 3
UN Number: UN1165
Packing Group: II
Canada TDG
Shipping Name: DIOXANE
Hazard Class: 3
UN Number: UN1165
Packing Group: II

USA RQ: CAS# 123-91-1: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 11 Highly flammable.

R 19 May form explosive peroxides.

R 36/37 Irritating to eyes and respiratory system.

R 40 Limited evidence of a carcinogenic effect.

R 66 Repeated exposure may cause skin dryness or cracking.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 36/37 Wear suitable protective clothing and gloves.

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 123-91-1: 2

Canada

CAS# 123-91-1 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D2A, D2B, F

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 123-91-1 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 123-91-1 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/16/1999

Revision #10 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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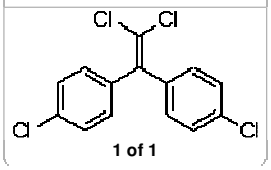

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- **123897 (Aldrich)**

123897 1,1-Dichloro-2,2-bis(4-chlorophenyl)ethene

Aldrich **99%**

Be the first to write a review.

Price and Availability

Product Number	Availability	Your Price USD	Quantity	Actions
123897-1G	In Stock details... Ships on 05/13/11	39.00		

Synonym:	4,4′-DDE
CAS Number:	72-55-9
Linear Formula:	$(ClC_6H_4)_2C=CCl_2$
Molecular Weight:	318.03
Beilstein Registry Number:	1913355
EC Number:	200-784-6
MDL number:	MFCD00000837
PubChem Substance ID:	24847587

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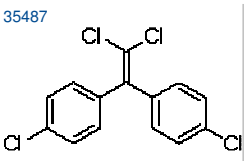
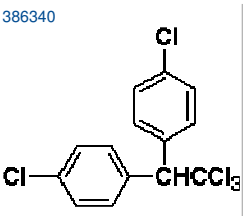


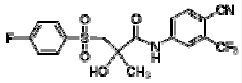
4,4′-DDE
PESTANAL®, analytical standard

386340



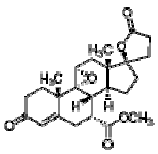
4,4′-DDT
98%

B9061



Bicalutamide (CDX)
≥98% (HPLC), powder

E6657



Eplerenone
≥98% (HPLC)

Details Related Products References Reviews

Description

Biochem/physiol Actions	Metabolite of DDT. Potent androgen receptor antagonist, the presence of which has been associated with an increased risk of breast cancer development.
Packaging	1, 5 g in glass btl

Properties

assay	99%
mp	88-90 °C(lit.)
Gene Information	Research your gene in Your Favorite Gene powered by Ingenuity mouse ... Esr1(13982) rat ... Ar(24208)

Safety

Symbol	GHS07, GHS08, GHS09
Signal word	Warning
Hazard statements	H302-H351-H410
Precautionary statements	P273-P281-P501
Personal Protective Equipment	Eyeshields, full-face particle respirator type N100 (US), Gloves, respirator cartridge type N100 (US), type P1 (EN143) respirator filter, type P3 (EN 143) respirator cartridges
Hazard Codes	Xn,N
Risk Statements	22-40-50/53

Safety Statements	36/37-60-61
RIDADR	UN 3077 9/PG 3
WGK Germany	3

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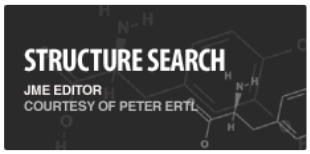

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Material Safety Data Sheet

Version 4.1
Revision Date 01/17/2012
Print Date 06/04/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	4,4′-DDD
Product Number	:	35486
Brand	:	Fluka
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Toxic by ingestion, Harmful by skin absorption., Possible carcinogen.

GHS Classification
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 3)
Carcinogenicity (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 4)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	0

NFPA Rating

Health hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,1-Dichloro-2,2-bis(4-chlorophenyl)ethane
TDE

Formula : $C_{14}H_{10}Cl_4$
Molecular Weight : 320.04 g/mol

Component		Concentration
2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane		
CAS-No.	72-54-8	-
EC-No.	200-783-0	

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	94.0 - 96.0 °C (201.2 - 204.8 °F)
Boiling point	193.0 °C (379.4 °F) at 1.3 hPa (1.0 mmHg)
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	< 0.00001 hPa (< 0.00001 mmHg) at 25.0 °C (77.0 °F)

Density	1.38 g/cm3
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 6.02
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - Hamster - > 5,000 mg/kg

TDLo Oral - Human - 428.5 mg/kg
Remarks: Endocrine:Adrenal cortex hypoplasia.

TDLo Oral - rat - 6,000 mg/kg
Remarks: Cardiac:Other changes. Gastrointestinal:Other changes. Kidney, Ureter, Bladder:Changes in both tubules and glomeruli.

TDLo Oral - rat - 14 mg/kg
Remarks: Liver:Changes in liver weight. Endocrine:Estrogenic. Musculoskeletal:Other changes.

TDLo Oral - rat - 2,100 mg/kg
Remarks: Behavioral:Altered sleep time (including change in righting reflex).

Inhalation LC50
no data available

Dermal LD50
LD50 Dermal - rabbit - 1,200 mg/kg
Remarks: Behavioral:Excitement. Behavioral:Convulsions or effect on seizure threshold. Skin irritation

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: KI0700000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - other fish - 1.18 - 9 mg/l - 96.0 h
	LC50 - Lepomis macrochirus (Bluegill) - 0.04 - 0.05 mg/l - 96.0 h
	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.06 - 0.09 mg/l - 96.0 h
	LC50 - Pimephales promelas (fathead minnow) - 3.47 - 5.58 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia pulex (Water flea) - 0.01 mg/l - 48 h

Persistence and degradability
no data available

Bioaccumulative potential
Indication of bioaccumulation.

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solids, organic, n.o.s. (2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane)
Reportable Quantity (RQ): 1 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane)
Marine pollutant: No

IATA
UN number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solid, organic, n.o.s. (2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane)

15. REGULATORY INFORMATION

OSHA Hazards
Toxic by ingestion, Harmful by skin absorption., Possible carcinogen.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane	72-54-8	2009-07-17

New Jersey Right To Know Components

	CAS-No.	Revision Date
2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane	72-54-8	2009-07-17

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. 2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane	72-54-8	

16. OTHER INFORMATION

Further information
Copyright 2012 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

4,4'-DDT: sc-238975

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 4,4'-DDT
Product Number: sc-238975

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Carcinogen, Toxic by ingestion, Toxic by skin absorption

Target Organs

Liver, Pancreas.

GHS Classification

Acute toxicity, Dermal (Category 3)
Acute toxicity, Oral (Category 3)
Carcinogenicity (Category 2)
Specific target organ toxicity - repeated exposure, Oral (Category 1)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 4)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H301 + H311	Toxic if swallowed or in contact with skin
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P314	Get medical advice/ attention if you feel unwell.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	0

NFPA Rating

Health hazard:	2
Fire:	2
Reactivity Hazard:	0

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	Toxic if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
Formula: C14H9Cl5
Molecular Weight: 354.49

CAS-No.	*EC-No.*	*Index-No.*	*Concentration*
4,4'-DDT			
50-29-3	200-024-3	602-045-00-7	-

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions - Carbon oxides, Hydrogen chloride gas

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane	50-29-3	TWA	0.5 mg/m3	USA. NIOSH Recommended Exposure Limits
Remarks	Potential Occupational Carcinogen See Appendix A			
		TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Liver damage Confirmed animal carcinogen with unknown relevance to humans			
		TWA	1 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation			
		TWA	1 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Skin designation Substance listed; for more information see OSHA document 1910.1044			

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	solid	pH	no data available
Melting point/range	107 - 110 °C - lit	Boiling point	260.0 °C
Flash point	72.0 - 77.0 °C	Ignition temperature	no data available
Autoignition temperature	no data available	Lower explosion limit	no data available

Upper explosion limit	no data available	Density	0.99 g/cm3
Water solubility	no data available	Relative vapor density	no data available
Odor	no data available	Odor Threshold	no data available
Evaporation rate	no data available	Partition coefficient	log Pow: 6.91
Vapor pressure	0.0000021 hPa at 20.0 °C	n-octanol/water	
log Pow: 6.91			

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
no data available
Conditions to avoid
no data available
Materials to avoid
Oxidizing agents, Iron and iron salts.
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50 LD50 Oral - rat - 87.0 mg/kg
Inhalation LC50 no data available
Dermal LD50 LD50 Dermal - rabbit - 300.0 mg/kg
Remarks: Behavioral: Tremor. Behavioral:Muscle weakness. Behavioral:Ataxia.
Other information on acute toxicity no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
Limited evidence of carcinogenicity in animal studies

IARC:	2B - Group 2B: Possibly carcinogenic to humans (1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane)
NTP:	Reasonably anticipated to be a human carcinogen (1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available
Teratogenicity
no data available
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System)
Ingestion - Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard
no data available
Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	Toxic if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure
CNS stimulation.
Synergistic effects
no data available
Additional Information
RTECS: KJ3325000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0.01 mg/l - 96.0 h
LC50 - Lepomis macrochirus (Bluegill) - 0.01 mg/l - 96.0 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 0.003400 mg/l - 96.0 h
LOEC - Oncorhynchus mykiss (rainbow trout) - 150 mg/l - 3.0 d
NOEC - Oncorhynchus mykiss (rainbow trout) - 113 mg/l - 3.0 d
Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 0.00108 mg/l - 48 h
Toxicity to algae LC100 - Scenedesmus quadricauda (Green algae) - > 20 mg/l - 7 d
Persistence and degradability
no data available
Bioaccumulative potential
Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 20 d
Bioconcentration factor (BCF): 46,670
Mobility in soil
no data available
PBT and vPvB assessment
no data available
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solids, organic, n.o.s. (1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane)
Reportable Quantity (RQ): 1 lbs
Marine pollutant: Severe marine pollutant
Poison Inhalation Hazard: No
IMDG
UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane)
Marine pollutant: Marine pollutant
IATA
UN number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solid, organic, n.o.s. (1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane)

15. REGULATORY INFORMATION

OSHA Hazards

Carcinogen, Toxic by ingestion, Toxic by skin absorption

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

4,4'-DDT CAS-No.: 50-29-3

Pennsylvania Right To Know Components

4,4'-DDT CAS-No.: 50-29-3

New Jersey Right To Know Components

4,4'-DDT CAS-No.: 50-29-3

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

4,4'-DDT CAS-No.: 50-29-3

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

9/14/2012

Material Safety Data Sheet

Version 4.2
Revision Date 01/17/2012
Print Date 06/07/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Acenaphthene
Product Number	:	215376
Brand	:	Aldrich
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Irritant

GHS Classification
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)
Acute aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard:	2
Flammability:	1
Physical hazards:	0

NFPA Rating

Health hazard:	2

Fire: 1
Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,8-Ethylenenaphthalene

Formula : $C_{12}H_{10}$
Molecular Weight : 154.21 g/mol

Component	Concentration
Acenaphthene	
CAS-No. 83-32-9 EC-No. 201-469-6	-

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 90 - 94 °C (194 - 201 °F) - lit.
Boiling point	279 °C (534 °F) - lit.
Flash point	125.0 °C (257.0 °F) - closed cup
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	13.3 hPa (10.0 mmHg) at 131.0 °C (267.8 °F)
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 3.39 - 4.19

Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
LD50 Intraperitoneal - rat - 600 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC:	3 - Group 3: Not classifiable as to its carcinogenicity to humans (Acenaphthene)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: AB1000000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.67 mg/l - 96.0 h
	LC50 - Pimephales promelas (fathead minnow) - 0.6 - 1.73 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1.27 - 3.45 mg/l - 48 h
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - 0.52 - 0.53 mg/l - 96 h

Persistence and degradability

Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus (Bluegill) - 28 d Bioconcentration factor (BCF): 387

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Acenaphthene)
Reportable Quantity (RQ): 100 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Acenaphthene)
Marine pollutant: No

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Acenaphthene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

OSHA Hazards
Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Acenaphthene	83-32-9	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Acenaphthene	83-32-9	2007-03-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Acenaphthene	83-32-9	2007-03-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
Copyright 2012 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **ACETONE**

CAS Number: 67-64-1
DOT Number: UN 1090
DOT Hazard Class: 3 (Flammable Liquid)

RTK Substance number: 0006
Date: May 1998 Revision: December 2005

HAZARD SUMMARY

* **Acetone** can affect you when breathed in and may be absorbed through the skin.
* Contact can irritate the skin. Repeated skin exposure can cause dryness and cracking of the skin.
* Exposure can irritate the eyes, nose and throat.
* Exposure to a high concentration can cause headache, dizziness, lightheadedness, nausea and vomiting, and even passing out.
* **Acetone** is a FLAMMABLE LIQUID and a FIRE HAZARD.

IDENTIFICATION

Acetone is a clear, colorless liquid with a sweet odor. It is used as a solvent in nail polish remover and to make other chemicals.

REASON FOR CITATION

* **Acetone** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, DOT, NIOSH, IRIS, NFPA and EPA.
* This chemical is on the Special Health Hazard Substance List because it is **FLAMMABLE**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard 29 CFR 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under the OSHA Standard 29 CFR 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

* **ODOR THRESHOLD = 62 ppm**.
* The range of accepted odor threshold values is quite broad. Caution should be used in relying on odor alone as a warning of potentially hazardous exposures.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **1,000 ppm** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **250 ppm** averaged over a 10-hour workshift.

ACGIH: The recommended airborne exposure limit is **500 ppm** averaged over an 8-hour workshift and **750 ppm** as a STEL (short term exposure limit).

* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Acetone** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Acetone** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Acetone**:

* Contact can irritate the skin.
* Exposure can irritate the eyes, nose and throat.
* Exposure to a high concentration can cause headache, dizziness, lightheadedness, nausea and vomiting, and even passing out.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Acetone** and can last for months or years:

Cancer Hazard

* According to the information presently available to the New Jersey Department of Health and Senior Services, **Acetone** has not been tested for its ability to cause cancer in animals.

Reproductive Hazard

* There is limited evidence that **Acetone** may damage the male reproductive system (including decrease in the sperm count) and affect female fertility in animals.

Other Long-Term Effects

* Repeated skin exposure can cause dryness and cracking of the skin.
* This chemical has not been adequately evaluated to determine whether brain or other nerve damage could occur with repeated exposure. However, many solvents and other petroleum-based chemicals have been shown to cause such damage. Effects may include reduced memory and concentration, personality changes (withdrawal, irritability), fatigue, sleep disturbances, reduced coordination, and/or effects on nerves supplying internal organs (autonomic nerves) and/or nerves to the arms and legs (weakness, "pins and needles").

MEDICAL

Medical Testing

If symptoms develop or overexposure is suspected, the following are recommended:

* **Acetone** can be measured in the blood, urine, and expired air, and can be used as an index of exposure.
* Evaluate for brain effects such as changes in memory, concentration, sleeping patterns and mood (especially irritability and social withdrawal), as well as headaches and fatigue. Consider evaluations of the cerebellar, autonomic and peripheral nervous systems. Positive and borderline individuals should be referred for neuropsychological testing.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under the OSHA Standard 29 CFR 1910.1020.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following controls are recommended:

* Where possible, automatically pump liquid **Acetone** from drums or other storage containers to process containers.
* Before entering a confined space where **Acetone** may be present, check to make sure that an explosive concentration does not exist.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Acetone** should change into clean clothing promptly.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Acetone**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Acetone**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Acetone**, whether or not known skin contact has occurred.

* Do not eat, smoke, or drink where **Acetone** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

The OSHA Standard 29 CFR 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Acetone**. Wear solvent-resistant gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* Safety equipment manufacturers recommend *Butyl Rubber; Viton®/Butyl*; *Silver Shield/4H®*; *Responder®*; and *Tychem® HPS, BR/LV, SL* and *TK* as protective materials.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear indirect-vent, impact and splash resistant goggles when working with liquids.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in the OSHA Standard 29 CFR 1910.134.

* Where the potential exists for exposure over **250 ppm**, use a NIOSH approved full facepiece respirator with an organic vapor cartridge. Increased protection is obtained from full facepiece powered-air purifying respirators.
* If while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Acetone**, or if while wearing particulate filters abnormal resistance to breathing is experienced, or eye irritation occurs while wearing a full facepiece respirator, leave the area immediately. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
* Be sure to consider all potential exposures in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
* Where the potential for high exposure exists, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **2,500 ppm** is immediately dangerous to life and health. If the possibility of exposure above **2,500 ppm** exists, use a NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

HANDLING AND STORAGE

* Prior to working with **Acetone** you should be trained on its proper handling and storage.
* **Acetone** may explode when mixed with CHLOROFORM; CHROMIC ANHYDRIDE; and OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).
* **Acetone** is not compatible with STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); AMINES; CLORINATED HYDROCARBONS; and METAL SALTS.
* Store in tightly closed containers in a cool, well-ventilated area away from HEAT, SPARKS, FLAME, RESINS, RUBBER, PLASTICS, and COMBUSTIBLES.
* Sources of ignition, such as smoking and open flames, are prohibited where **Acetone** is used, handled, or stored.
* Metal containers involving the transfer of **Acetone** should be grounded and bonded.
* Use only non-sparking tools and equipment, especially when opening and closing containers of **Acetone**.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?

A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?

A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Can men as well as women be affected by chemicals that cause reproductive system damage?
A: Yes. Some chemicals reduce potency or fertility in both men and women. Some damage sperm and eggs, possibly leading to birth defects.

Q: Who is at the greatest risk from reproductive hazards?
A: Pregnant women are at greatest risk from chemicals that harm the developing fetus. However, chemicals may affect the ability to have children, so both men and women of childbearing age are at high risk.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 984-7407 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information
Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation
If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations
Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources
The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know Survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

CFR is the Code of Federal Regulations, which consists of the regulations of the United States government.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

IRIS is the Integrated Risk Information System database of the federal EPA.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEL is the Permissible Exposure Limit which is enforceable by the Occupational Safety and Health Administration.

PIH is a DOT designation for chemicals which are Poison Inhalation Hazards.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

STEL is a Short Term Exposure Limit which is usually a 15-minute exposure that should not be exceeded at any time during a work day.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **Acetone**
DOT Number: **UN 1090**
DOT Hazard Class: **3 (Flammable Liquid)**
NAERG Code: **127**
CAS Number: **67-64-1**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	-	3
REACTIVITY	-	0
FLAMMABLE POISONOUS GASES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Acetone** is a FLAMMABLE LIQUID.
* Use dry chemical, CO_2, alcohol-resistant foam or other foaming agent, as water may not be effective in fighting fires.
* POISONOUS GASES ARE PRODUCED IN FIRE.
* CONTAINERS MAY EXPLODE IN FIRE.
* Use water spray to keep fire-exposed containers cool.
* Vapors may travel to a source of ignition and flash back.
* Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source.
* If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Standard 29 CFR 1910.156.

SPILLS AND EMERGENCIES

If **Acetone** is spilled or leaked, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill or leak until clean-up is complete.
* Remove all ignition sources.
* Cover with an activated charcoal adsorbent and place in covered containers for disposal.
* Ventilate and wash area after clean-up is complete.
* Keep **Acetone** out of a confined space, such as a sewer, because of the possibility of an explosion.
* It may be necessary to contain and dispose of **Acetone** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. The OSHA Standard 29 CFR 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: 1-877-WARN-DEP

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HANDLING AND STORAGE (See page 3)

FIRST AID

For POISON INFORMATION call 1-800-222-1222

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

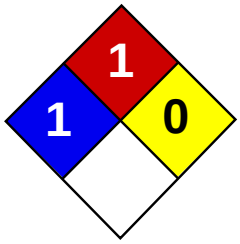
Vapor Pressure: 180 mm Hg at 68°F (20°C)
Flash Point: -4°F (-20°C)
Water Solubility: Miscible

OTHER COMMONLY USED NAMES

Chemical Name:
2-Propanone
Other Names:
Dimethylformaldehyde; Dimethyl Ketone; Ketone Propane

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202



Health	1
Fire	0
Reactivity	0
Personal Protection	B

Material Safety Data Sheet
Aluminum MSDS

Section 1: Chemical Product and Company Identification

Product Name: Aluminum

Catalog Codes: SLA4735, SLA2389, SLA3895, SLA1549, SLA3055, SLA4558, SLA2212, SLA3715

CAS#: 7429-90-5

RTECS: BD0330000

TSCA: TSCA 8(b) inventory: Aluminum

CI#: Not applicable.

Synonym: Aluminum metal pellets; Aluminum metal sheet; Aluminum metal shot; Aluminum metal wire

Chemical Name: Aluminum

Chemical Formula: Al

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Aluminum	7429-90-5	100

Toxicological Data on Ingredients: Aluminum LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Slightly hazardous in case of skin contact (irritant). Non-irritating to the eyes. Non-hazardous in case of ingestion.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Do not ingest. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Moisture sensitive.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Gloves.

Personal Protection in Case of a Large Spill: Safety glasses. Lab coat. Gloves.

Exposure Limits:
TWA: 5 (mg(Al)/m) from ACGIH (TLV) [United States] Inhalation (pyro powders, welding fumes) TWA: 10 (mg(Al)/m) from ACGIH (TLV) [United States] Inhalation (metal dust) Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Odorless.

Taste: Not available.

Molecular Weight: 26.98 g/mole

Color: Silver-white

pH (1% soln/water): Not applicable.

Boiling Point: 2327°C (4220.6°F)

Melting Point: 660°C (1220°F)

Critical Temperature: Not available.

Specific Gravity: Density: 2.7 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water. Soluble in alkalies, Sulfuric acid, Hydrochloric acid. Insoluble in concentrated Nitric Acid, hot Acetic acid.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, exposure to moist air or water.

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:
Moisture sensitive. Aluminum reacts vigorously with Sodium Hydroxide. Aluminum is also incompatible with strong oxdizers, acids, chromic anhydride, iodine, carbon disulfide, methyl chloride, and halogenated hydrocarbons, acid chlorides, ammonium nitrate, ammonium persulfate, antimony, arsenic oxides, barium bromate, barium chlorate, barium iodate, metal salts

Special Remarks on Corrosivity:
In moist air, oxide film forms which protects metal from corrosion. Aluminum is strongly electropositive so that it corrodes rapidly in contact with other metals.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Not available.

Toxicity to Animals: Not available

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:
Slightly hazardous in case of skin contact (irritant). Non-hazardous in case of ingestion. Non-hazardous in case of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Exposure to aluminum may cause skin irritation. Eyes: Not expected to be a hazard unless aluminum dust particles are present. Exposure to aluminum dust may cause eye irritation by mechanical action. Aluminum particles deposited in the eye are generally innocous. Inhalation: Not expected to be an inhalation hazard unless it is heatedor if aluminum dust is present It heated or in dust form, it may cause respiratory tract irritation. Heating Aluminum can release Aluminum Oxide fumes and cause fume metal fever when inhaled. This is a flu-like illness with symptoms of metallic taste, fever, chills, aches, chest tightness, and cough. Ingestion: Acute aluminum toxicity is unlikely. Chronic Potential Health Effects: Skin: Contact dermatitis occurs rarely after aluminum exposure. Most cases of aluminum toxicity in humans are in one of two categories: patients with chronic renal failure, or people exposed to aluminum fumes or dust in the workplace. The main source of aluminum in people with chronic renal failure was in the high aluminum content of the water for the dialysate used for dialysis in the 1970's. Even though this problem was recognized and corrected, aluminum toxicity continues to occur in some individuals with renal who chronically ingest aluminum-containing phosphate binders or antacids. Inhalation: Chronic exposure to aluminum dust may cause dyspnea, cough, asthma, chronic obstructive lung disease, pulmonary fibrosis, pneumothorax, pneumoconiosis, encephalopathy, weakness, incoordination and epileptiform seizures and other neurological symptoms similar to that described for chronic ingestion. Hepatic necrosis is also a reported effect of exposure to airborne particulates carrying aluminum. Ingestion: Chronic ingestion of aluminum may cause Aluminum Related Bone Disease or aluminum-induced Osteomalacia with fracturing Osteodystrophy, microcytic anemia, weakness, fatigue, visual and auditory hallucinations, memory loss, speech and language impairment (dysarthria, stuttering, stammering, anomia, hypofluency, aphasia and eventually, mutism), epileptic seizures(focal or grand mal), motor disturbance(tremors, myoclonic jerks, ataxia, convulsions, asterixis, motor apraxia, muscle fatigue), and dementia (personality changes, altered mood, depression, diminished alertness, lethargy, 'clouding of the sensorium', intellectual deterioration, obtundation, coma), and altered EEG.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. Connecticut hazardous material survey.: Aluminum Illinois toxic substances disclosure to employee act: Aluminum Rhode Island RTK hazardous substances: Aluminum Pennsylvania RTK: Aluminum Minnesota: Aluminum Massachusetts RTK: Aluminum New Jersey: Aluminum New Jersey spill list: Aluminum California Director's List of Hazardous Substances: Aluminum TSCA 8(b) inventory: Aluminum SARA 313 toxic chemical notification and release reporting: Aluminum

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: B

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Not applicable. Safety glasses.

Section 16: Other Information

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec. -SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986. 037 Waste manifest or notification not required.

Other Special Considerations: Not available.

Created: 10/09/2005 03:39 PM

Last Updated: 11/01/2010 12:00 PM

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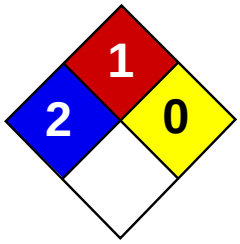

Material Safety Data Sheet
Antimony MSDS

Section 1: Chemical Product and Company Identification

Product Name: Antimony

Catalog Codes: SLA1453, SLA4462

CAS#: 7440-36-0

RTECS: CC4025000

TSCA: TSCA 8(b) inventory: Antimony

CI#: Not available.

Synonym: Stibium

Chemical Name: Not available.

Chemical Formula: Sb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Antimony	7440-36-0	100

Toxicological Data on Ingredients: Antimony: ORAL (LD50): Acute: 7000 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In

case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.5 Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 121.75 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 1635°C (2975°F)

Melting Point: 630°C (1166°F)

Critical Temperature: Not available.

Specific Gravity: 6.691 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 7000 mg/kg [Rat].

Chronic Effects on Humans: Causes damage to the following organs: blood, kidneys, lungs, the nervous system, liver, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Antimony powder UNNA: UN2871 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Antimony Massachusetts RTK: Antimony TSCA 8(b) inventory: Antimony

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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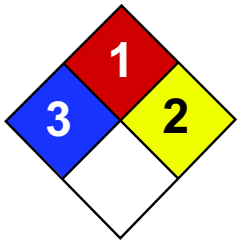

Material Safety Data Sheet
Arsenic MSDS

Section 1: Chemical Product and Company Identification

Product Name: Arsenic

Catalog Codes: SLA1006

CAS#: 7440-38-2

RTECS: CG0525000

TSCA: TSCA 8(b) inventory: Arsenic

CI#: Not applicable.

Synonym:

Chemical Name: Arsenic

Chemical Formula: As

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Arsenic	7440-38-2	100

Toxicological Data on Ingredients: Arsenic: ORAL (LD50): Acute: 763 mg/kg [Rat]. 145 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to kidneys, lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable

protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 from ACGIH (TLV) [United States] [1995] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 74.92 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Sublimation temperature: 615°C (1139°F)

Critical Temperature: Not available.

Specific Gravity: 5.72 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, acids, moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 145 mg/kg [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH. Causes damage to the following organs: kidneys, lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Arsenic UNNA: UN1558 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Arsenic California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Arsenic Pennsylvania RTK: Arsenic Massachusetts RTK: Arsenic TSCA 8(b) inventory: Arsenic

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R22- Harmful if swallowed. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 2

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 2

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References:
-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Liste des produits purs tératogènes, mutagènes, cancérogènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec. -Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec. -SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986.

Other Special Considerations: Not available.

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New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **BARIUM**

CAS Number: 7440-39-3
DOT Number: UN 1400

RTK Substance number: 0180
Date: January 1986 Revision: September 2000

HAZARD SUMMARY

* **Barium** can affect you when breathed in.
* Contact can irritate and burn the skin and eyes.
* Breathing **Barium** can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.
* Very high exposure can cause **Barium** poisoning with symptoms of nausea, vomiting, diarrhea, irregular heartbeat, muscle weakness, tremors, paralysis and even death.
* **Barium** may damage the kidneys.
* **Barium** is a FLAMMABLE and REACTIVE chemical and a FIRE and EXPLOSION HAZARD.

IDENTIFICATION

Barium is a silver-white or yellowish metal powder. It is used in spark plugs and engine rod bearings, and to remove gas from vacuum tubes and television picture tubes.

REASON FOR CITATION

* **Barium** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, DOT, NIOSH, DEP, HHAG and EPA.
* This chemical is on the Special Health Hazard Substance List because it is **FLAMMABLE** and **REACTIVE**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **0.5 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **0.5 mg/m^3** averaged over a 10-hour workshift.

ACGIH: The recommended airborne exposure limit is **0.5 mg/m^3** averaged over an 8-hour workshift.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Barium** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Barium** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Barium**:

* Contact can irritate and burn the skin and eyes.
* Breathing **Barium** can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.
* Very high exposure can cause **Barium** poisoning with symptoms of nausea, vomiting, diarrhea, irregular heartbeat, muscle weakness, tremors, paralysis and even death.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Barium** and can last for months or years:

Cancer Hazard

* There is no evidence that **Barium** causes cancer in animals. This is based on test results presently available to the New Jersey Department of Health and Senior Services from published studies.

Reproductive Hazard

* There is no evidence that **Barium** affects reproduction. This is based on test results presently available to the New Jersey Department of Health and Senior Services from published studies.

Other Long-Term Effects

* **Barium** can irritate the lungs. Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.
* **Barium** may damage the kidneys.
* Repeated exposure can cause an abnormal chest x-ray. This usually takes years to develop.

MEDICAL

Medical Testing

For those with frequent or potentially high exposure (half the TLV or greater), the following are recommended before beginning work and at regular times after that:

* Lung function tests.
* Kidney function tests.
* EKG.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

Mixed Exposures

* Because smoking can cause heart disease, as well as lung cancer, emphysema, and other respiratory problems, it may worsen respiratory conditions caused by chemical exposure. Even if you have smoked for a long time, stopping now will reduce your risk of developing health problems.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following controls are recommended:

* Where possible, automatically transfer **Barium** from drums or other storage containers to process containers.
* Before entering a confined space where **Barium** may be present, check to make sure that an explosive concentration does not exist.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Barium** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Barium**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.

* On skin contact with **Barium**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Barium**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Barium** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* Use a vacuum to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Barium**. Wear protective gloves and clothing. Safety equipment suppliers/manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* NIOSH has established new testing and certification requirements for negative pressure, air purifying, particulate filter and filtering facepiece respirators. The filter classifications of dust/mist/fume, paint spray or pesticide prefilters, and filters for radon daughters, have been replaced with the N, R, and P series. Each series has three levels of filtering efficiency: 95%, 99%, and 99.9%. Check with your safety equipment supplier or your respirator manufacturer to determine which respirator is appropriate for your facility.
* If while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Barium**, or if while wearing particulate filters abnormal resistance to breathing is experienced, or eye irritation occurs while wearing a full facepiece respirator, leave the area immediately. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
* Be sure to consider all potential exposures in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
* Where the potential for high exposure exists, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **50 mg/m^3** is immediately dangerous to life and health. If the possibility of exposure above **50 mg/m^3** exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

HANDLING AND STORAGE

* Prior to working with **Barium** you should be trained on its proper handling and storage.
* **Barium** reacts violently with WATER, releasing flammable and/or explosive *Hydrogen gas*.
* **Barium** must be stored to avoid contact with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); HALOGENATED HYDROCARBONS; and OXYGEN since violent reactions occur.
* **Barium** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMAN-GANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE) and CHLORINATED SOLVENTS (such as CARBON TETRACHLORIDE and TRICHLOROETHYLENE).
* Store **Barium** under *Inert Gas*, *Petroleum*, or an *Oxygen-free liquid* to exclude air.
* Store in tightly closed containers in a cool, well-ventilated area away from MOISTURE and COMBUSTIBLES.
* Sources of ignition, such as smoking and open flames, are prohibited where **Barium** is used, handled, or stored.
* Use only non-sparking tools and equipment, especially when opening and closing containers of **Barium**.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

PIH is a DOT designation for chemicals which are Poison Inhalation Hazards.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **BARIUM**
DOT Number: **UN 1400**
NAERG Code: **138**
CAS Number: **7440-39-3**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	3	-
REACTIVITY	2	-
FLAMMABLE AND REACTIVE POISONOUS FUMES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE DO NOT USE WATER OR CARBON DIOXIDE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Barium** is a FLAMMABLE SOLID.
* Use dry chemical powder only to extinguish fire. DO NOT USE WATER or CARBON DIOXIDE.
* POISONOUS FUMES ARE PRODUCED IN FIRE, including *Barium Oxide*.
* CONTAINERS MAY EXPLODE IN FIRE.
* Use water spray only to keep fire-exposed containers cool.
* FIRE MAY RESTART AFTER IT HAS BEEN EXTINGUISHED.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Barium** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Remove all ignition sources.
* Cover with dry lime, sand or soda ash, and place in covered containers for disposal.
* DO NOT USE WATER OR WET METHOD.
* Ventilate area after clean-up is complete.
* It may be necessary to contain and dispose of **Barium** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: 1-877-WARN-DEP

HANDLING AND STORAGE (See page 3)

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids. Seek medical attention immediately.

Skin Contact

* Remove contaminated clothing. Wash contaminated skin with soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: 10 mm Hg at 1,922^{o}F (1,050^{o}C)
Water Solubility: Insoluble

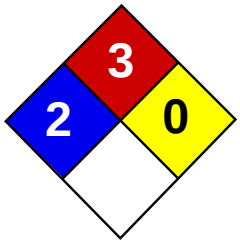
OTHER COMMONLY USED NAMES

Chemical Name:

Barium

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202



Material Safety Data Sheet
Benzene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Benzene

Catalog Codes: SLB1564, SLB3055, SLB2881

CAS#: 71-43-2

RTECS: CY1400000

TSCA: TSCA 8(b) inventory: Benzene

CI#: Not available.

Synonym: Benzol; Benzine

Chemical Name: Benzene

Chemical Formula: C6-H6

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Benzene	71-43-2	100

Toxicological Data on Ingredients: Benzene: ORAL (LD50): Acute: 930 mg/kg [Rat]. 4700 mg/kg [Mouse]. DERMAL (LD50): Acute: >9400 mg/kg [Rabbit]. VAPOR (LC50): Acute: 10000 ppm 7 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of eye contact (irritant), of inhalation. Hazardous in case of skin contact (irritant, permeator), of ingestion. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC. MUTAGENIC EFFECTS: Classified POSSIBLE for human. Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE]. The substance is toxic to blood, bone marrow, central nervous system (CNS). The substance may be toxic to liver, Urinary System. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 497.78°C (928°F)

Flash Points: CLOSED CUP: -11.1°C (12°F). (Setaflash)

Flammable Limits: LOWER: 1.2% UPPER: 7.8%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Explosive in presence of oxidizing materials, of acids.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Extremely flammable liquid and vapor. Vapor may cause flash fire. Reacts on contact with iodine heptafluoride gas. Dioxygenyl tetrafluoroborate is as very powferful oxidant. The addition of a small particle to small samples of benzene, at ambient temperature, causes ignition. Contact with sodium peroxide with benzene causes ignition. Benzene ignites in contact with powdered chromic anhydride. Virgorous or incandescent reaction with hydrogen + Raney nickel (above 210 C) and bromine trifluoride.

Special Remarks on Explosion Hazards:
Benzene vapors + chlorine and light causes explosion. Reacts explosively with bromine pentafluoride, chlorine, chlorine trifluoride, diborane, nitric acid, nitryl perchlorate, liquid oxygen, ozone, silver perchlorate. Benzene + pentafluoride and methoxide (from arsenic pentafluoride and potassium methoxide) in trichlorotrifluoroethane causes explosion. Interaction

of nitryl perchlorate with benzene gave a slight explosion and flash. The solution of permanganic acid (or its explosive anhydride, dimaganese heptoxide) produced by interaction of permanganates and sulfuric acid will explode on contact with benzene. Peroxodisulfuric acid is a very powferful oxidant. Uncontrolled contact with benzene may cause explosion. Mixtures of peroxomonsulfuric acid with benzene explodes.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.5 STEL: 2.5 (ppm) from ACGIH (TLV) [United States] TWA: 1.6 STEL: 8 (mg/m3) from ACGIH (TLV) [United States] TWA: 0.1 STEL: 1 from NIOSH TWA: 1 STEL: 5 (ppm) from OSHA (PEL) [United States] TWA: 10 (ppm) from OSHA (PEL) [United States] TWA: 3 (ppm) [United Kingdom (UK)] TWA: 1.6 (mg/m3) [United Kingdom (UK)] TWA: 1 (ppm) [Canada] TWA: 3.2 (mg/m3) [Canada] TWA: 0.5 (ppm) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor:
Aromatic. Gasoline-like, rather pleasant. (Strong.)

Taste: Not available.

Molecular Weight: 78.11 g/mole

Color: Clear Colorless. Colorless to light yellow.

pH (1% soln/water): Not available.

Boiling Point: 80.1 (176.2°F)

Melting Point: 5.5°C (41.9°F)

Critical Temperature: 288.9°C (552°F)

Specific Gravity: 0.8787 @ 15 C (Water = 1)

Vapor Pressure: 10 kPa (@ 20°C)

Vapor Density: 2.8 (Air = 1)

Volatility: Not available.

Odor Threshold: 4.68 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Miscible in alcohol, chloroform, carbon disulfide oils, carbon tetrachloride, glacial acetic acid, diethyl ether, acetone. Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles.

Incompatibility with various substances: Highly reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Benzene vapors + chlorine and light causes explosion. Reacts explosively with bromine pentafluoride, chlorine, chlorine trifluoride, diborane, nitric acid, nitryl perchlorate, liquid oxygen, ozone, silver perchlorate. Benzene + pentafluoride and methoxide (from arsenic pentafluoride and potassium methoxide) in trichlorotrifluoroethane causes explosion. Interaction of nitryl perchlorate with benzene gave a slight explosion and flash. The solution of permanganic acid (or its explosive anhydride, dimaganese heptoxide) produced by interaction of permanganates and sulfuric acid will explode on contact with benzene. Peroxodisulfuric acid is a very powferful oxidant. Uncontrolled contact with benzene may cause explosion. Mixtures of peroxomonsulfuric acid with benzene explodes.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 930 mg/kg [Rat]. Acute dermal toxicity (LD50): >9400 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 10000 7 hours [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC. MUTAGENIC EFFECTS: Classified POSSIBLE for human. Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE]. Causes damage to the following organs: blood, bone marrow, central nervous system (CNS). May cause damage to the following organs: liver, Urinary System.

Other Toxic Effects on Humans:
Very hazardous in case of inhalation. Hazardous in case of skin contact (irritant, permeator), of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects (female fertility, Embryotoxic and/or foetotoxic in animal) and birth defects. May affect genetic material (mutagenic). May cause cancer (tumorigenic, leukemia)) Human: passes the placental barrier, detected in maternal milk.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. It can be absorbed through intact skin and affect the liver, blood, metabolism,and urinary system. Eyes: Causes eye irritation. Inhalation: Causes respiratory tract and mucous membrane irritation. Can be absorbed through the lungs. May affect behavior/Central and Peripheral nervous systems (somnolence, muscle weakness, general anesthetic, and other symptoms similar to ingestion), gastrointestinal tract (nausea), blood metabolism, urinary system. Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation including vomiting. May affect behavior/Central and Peripheral nervous systems (convulsions, seizures, tremor, irritability, initial CNS stimulation followed by depression, loss of coordination, dizziness, headache, weakness, pallor, flushing), respiration (breathlessness and chest constriction), cardiovascular system, (shallow/rapid pulse), and blood.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Benzene UNNA: 1114 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Benzene California prop. 65 (no significant risk level): Benzene: 0.007 mg/day (value) California prop. 65: This product contains the following ingredients

for which the State of California has found to cause cancer which would require a warning under the statute: Benzene Connecticut carcinogen reporting list.: Benzene Connecticut hazardous material survey.: Benzene Illinois toxic substances disclosure to employee act: Benzene Illinois chemical safety act: Benzene New York release reporting list: Benzene Rhode Island RTK hazardous substances: Benzene Pennsylvania RTK: Benzene Minnesota: Benzene Michigan critical material: Benzene Massachusetts RTK: Benzene Massachusetts spill list: Benzene New Jersey: Benzene New Jersey spill list: Benzene Louisiana spill reporting: Benzene California Director's list of Hazardous Substances: Benzene TSCA 8(b) inventory: Benzene SARA 313 toxic chemical notification and release reporting: Benzene CERCLA: Hazardous substances.: Benzene: 10 lbs. (4.536 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. R45- May cause cancer. R62- Possible risk of impaired fertility. S2- Keep out of the reach of children. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39- Wear eye/face protection. S46- If swallowed, seek medical advice immediately and show this container or label. S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:35 PM

Last Updated: 11/01/2010 12:00 PM

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SAFETY DATA SHEET

Based on Directive 2001/58/EC et seq. of the Commission of the European Communities

BENZ[a]ANTHRACENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: benzo(a)anthracene

CAS No.	: 56-55-3	**BCR number**	: BCR-271
EC index No.	: 601-033-00-9	**NFPA code**	: N.D.
EINECS No.	: 200-280-6	**Molecular weight**	: 228.30
RTECS No.	: CV9275000	**Formula**	: C18H12

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
Benzo[a]anthracene	56-55-3 200-280-6	100	T;N	45-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- May cause cancer
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service if irritation persists
- Rinse immediately with water

4.2 Skin contact:
- Consult a doctor/medical service if irritation persists
- Wash with water and soap
- Remove clothing before washing

4.3 After inhalation:
- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service if you feel unwell
- Immediately give lots of water to drink
- Never give water to an unconscious person

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- Not easily combustible
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately

7.2 Storage:
- Keep container tightly closed. Store in a cool area. Store in a dry area.
- Store in a dark area.
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

Storage temperature : N.D. **°C**
Quantity limits : N.D. **kg**
Storage life : N.D.
Materials for packaging :
- suitable : no data available
- to avoid : no data available

7.3 Specific uses:
See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	**:**	**mg/m^3**	**-**	**ppm**
TLV-STEL	**:**	**mg/m^3**	**-**	**ppm**
TLV-Ceiling	**:**	**mg/m^3**		**ppm**
OES-LTEL	**:**	**mg/m^3**		**ppm**
OES-STEL	**:**	**mg/m^3**		**ppm**
MAK	**:**	**mg/m^3**		**ppm**
TRK	**:**	**mg/m^3**		**ppm**
MAC-TGG 8 h	**:**	**mg/m^3**		
MAC-TGG 15 min.	**:**	**mg/m^3**		
MAC-Ceiling	**:**	**mg/m^3**		
VME-8 h	**:**	**mg/m^3**		**ppm**
VLE-15 min.	**:**	**mg/m^3**		**ppm**
GWBB-8 h	**:**	**mg/m^3**		**ppm**
GWK-15 min.	**:**	**mg/m^3**		**ppm**
Momentary value	**:**	**mg/m^3**		**ppm**
EC	**:**	**mg/m^3**		**ppm**
EC-STEL	**:**	**mg/m^3**		**ppm**

Sampling methods:

- Benz(a)Anthracene (Polynuclear aromatic hydrocarbons) NIOSH 5506
- Benz(a)Anthracene (Polynuclear aromatic hydrocarbons) NIOSH 5515
- Benz(a)Anthracene OSHA CSI

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: No data available
- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Scales
Odour	:	Odourless
Colour	:	Colourless to fluorescent yellow-green

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	N.A.	**°C**
Flashpoint	:	N.D.	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	0.00007	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.3	
Water solubility	:	0.00001	**g/100 ml**
Soluble in	:	Ether, acetone, oils/fats	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.61/5.79	
Evaporation rate			
ratio to butyl acetate	:	N.D.	
ratio to ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	160	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m³**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed
- Reacts violently with (strong) oxidizers
- Decomposes on exposure to (strong) acids

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	N.D.	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	2
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	A2
Carcinogenicity (MAC)	:	K
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	2
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	-
IARC classification	:	2A

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER SKIN CONTACT
- Slight irritation

11.5 Chronic effects:

- Probably human carcinogenic
- Mutagenicity: AMES test positive
- Probably human mutagenic

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- No specific information available

SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
- Feeling of weakness
- Photoallergy
- Skin rash/inflammation
- Cracking of the skin
- Skin cancer
- Lung tissue affection/degeneration
- Enlargement/affection of the liver
- Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

- LC50 (65 h) : 0.0018 mg/l (PIMEPHALES PROMELAS)
- EC50 (96 h) : 0.01 mg/l (DAPHNIA PULEX)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%

- Photolysis in water
- Ozonation in water
- Insoluble in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- **biodegradation BOD_5** : N.D. **% ThOD**
- **water** : - Not readily biodegradable in water
- **soil** : **T ½:** > 100 **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.61/5.79
- **BCF** : 72 h : 350 (LEUCISCUS IDUS)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) 3093/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

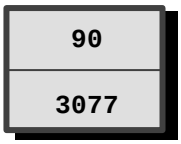
13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water (2000/60/EEC, Council Decision 2455/2001/EC)

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (benzo[a]anthracene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Enumerated in substance list Annex I of directive 67/548/EEC et sequens

Toxic

Dangerous for the environment

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S53 : Avoid exposure - obtain special instructions before use
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)
S60 : This material and/or its container must be disposed of as hazardous waste
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Chronic toxicity:
K : List of the carcinogenic substances and processes - The Netherlands 2002

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **BENZO(a)PYRENE**

CAS Number: 50-32-8
DOT Number: None

RTK Substance number: 0207
Date: August 1992 Revision: July 1998

HAZARD SUMMARY

* **Benzo(a)pyrene** can affect you when breathed in and by passing through your skin.
* **Benzo(a)pyrene** is a CARCINOGEN--HANDLE WITH EXTREME CAUTION.
* Exposure may damage the developing fetus.
* **Benzo(a)pyrene** can cause skin irritation with rash and/or burning sensations. Repeated exposure can cause skin changes such as thickening and darkening.
* Exposure can irritate and/or burn the eyes on contact.
* Except in laboratories, **Benzo(a)pyrene** is usually mixed with other "Coal Tar Pitch" chemicals. CONSULT THE NEW JERSEY DEPARTMENT OF HEALTH and SENIOR SERVICES HAZARDOUS SUBSTANCE FACT SHEETS ON COAL TAR SUBSTANCES.

IDENTIFICATION

Benzo(a)pyrene is a pale yellow, crystalline solid or a powder. In its pure form it is used as a laboratory reagent. **Benzo(a)pyrene** also forms as a gaseous by-product when certain carbon substances burn, such as coal tar pitch chemicals.

REASON FOR CITATION

* **Benzo(a)pyrene** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, IARC, NIOSH, NTP, EPA, HHAG and DOT.
* This chemical is on the Special Health Hazard Substance List because it is a **CARCINOGEN** and a **MUTAGEN**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.20.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) for *Coal Tar Pitch Volatiles* (*benzene*-soluble fraction) is **0.2 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit for *Coal Tar Pitch Volatiles* (*cyclohexane*-extractable fraction) is **0.1 mg/m^3** averaged over a 10-hour workshift.

ACGIH: ACGIH recommends that worker exposures, by all routes, be controlled to levels as low as can be reasonably achieved.

* **Benzo(a)pyrene** is a PROBABLE CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.
* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* A regulated, marked area should be established where **Benzo(a)pyrene** is handled, used, stored, or formed.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Benzo(a)pyrene** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Benzo(a)pyrene** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Benzo(a)pyrene**:

* **Benzo(a)pyrene** can cause skin irritation with rash and/or burning sensations. Exposure to sunlight and the chemical together can increase these effects.
* Exposure can irritate and/or burn the eyes on contact.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Benzo(a)pyrene** and can last for months or years:

Cancer Hazard

* **Benzo(a)pyrene** is a PROBABLE CARCINOGEN in humans. There is some evidence that it causes skin, lung, and bladder cancer in humans and in animals.
* **Benzo(a)pyrene** has caused CANCER in the offspring of animals exposed to the substance during pregnancy.
* Many scientists believe there is no safe level of exposure to a carcinogen.

Reproductive Hazard

* **Benzo(a)pyrene** may damage the developing fetus.
* There is some evidence that **Benzo(a)pyrene** may affect sperm and testes (male reproductive glands).
* **Benzo(a)pyrene** may be transferred to nursing infants through the exposed mother's milk.

Other Long-Term Effects

* Repeated exposure to **Benzo(a)pyrene** can cause skin changes such as thickening, darkening, and pimples. Later skin changes include loss of color, reddish areas, thinning of the skin, and warts.

MEDICAL

Medical Testing

If warts or other growths on the skin get larger or change color, they should be examined by a doctor for possible early skin cancer. Skin cancer is very often easily cured when detected early.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.20.

Mixed Exposures

* Sunlight may cause a rash to develop in people exposed to **Benzo(a)pyrene** and increases the risk of skin cancer.
* Tobacco smoke also contains **Benzo(a)pyrene**. Smoking may increase the risk of lung cancer with exposure to **Benzo(a)pyrene**.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following controls are recommended:

* Where possible, automatically transfer **Benzo(a)pyrene** from drums or other storage containers to process containers.
* Use a Class I, Type B, biological safety hood when working with **Benzo(a)pyrene** in a laboratory.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Benzo(a)pyrene** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Benzo(a)pyrene**.

* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Benzo(a)pyrene**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Benzo(a)pyrene**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where the above chemicals or **Benzo(a)pyrene** are handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating or smoking.
* In laboratories DO NOT DRY SWEEP for clean-up. Use a vacuum or a wet method to reduce dust during clean-up.
* When vacuuming, a high efficiency particulate absolute (HEPA) filter should be used, not a standard shop vacuum.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Benzo(a)pyrene**. Wear protective gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear dust-proof goggles and face shield when working with powders or dust, unless full facepiece respiratory protection is worn.
* Where exposure to volatilized *Coal Tar* products may occur, wear gas-proof goggles and face shield, unless full facepiece respiratory protection is worn.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* Where the potential exists for exposures over **0.1 mg/m^3**, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **80 mg/m^3** of *Coal Tar Pitch Volatiles* is immediately dangerous to life and health. If the possibility of exposure above **80 mg/m^3** exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. Because of this, and because of exposure of children or people who are already ill, community exposures may cause health problems.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

Q: Can men as well as women be affected by chemicals that cause reproductive system damage?
A: Yes. Some chemicals reduce potency or fertility in both men and women. Some damage sperm and eggs, possibly leading to birth defects.

Q: But aren't pregnant women at the greatest risk from reproductive hazards?
A: Not necessarily. Pregnant women are at greatest risk from chemicals which harm the developing fetus. However, chemicals may affect the ability to have children, so both men and women of childbearing age are at high risk.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Disease and Injury Services
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Disease and Injury Services, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<<<

Common Name: **BENZO(a)PYRENE**
DOT Number: **None**
NAERG Code: **No Citation**
CAS Number: **50-32-8**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	1	-
REACTIVITY	0	-
CARCINOGEN POISONOUS GASES ARE PRODUCED IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Benzo(a)pyrene** may burn, but does not readily ignite.
* Use dry chemical, CO_2, water spray, or foam extinguishers.
* POISONOUS GASES ARE PRODUCED IN FIRE, including *Carbon Monoxide*.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Benzo(a)pyrene** or other *Coal Tar* Products are spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate the area after clean-up is complete.
* It may be necessary to contain and dispose of **Benzo(a)pyrene** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

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HANDLING AND STORAGE

* Prior to working with **Benzo(a)pyrene** you should be trained on its proper handling and storage.
* A regulated, marked area should be established where **Benzo(a)pyrene** is handled, used, stored, or formed.
* **Benzo(a)pyrene** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE)
* Store in tightly closed containers in a cool, well-ventilated area.

FIRST AID

In NJ, POISON INFORMATION 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Breathing

* Remove the person from exposure.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: Greater than 1 mm Hg at 68°F (20°C)
Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:

Benzo(a)pyrene

Other Names:

B(a)P; BP; 3,4-Benzopyrene

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NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **BENZO(b)FLUORANTHENE**

CAS Number: 205-99-2
DOT Number: None

RTK Substance number: 0208
Date: September 1995 Revision: July 2001

HAZARD SUMMARY

* **Benzo(b)fluoranthene** can affect you when breathed in and may be absorbed through the skin.
* **Benzo(b)fluoranthene** is a CARCINOGEN--HANDLE WITH EXTREME CAUTION.
* Contact with **Benzo(b)fluoranthene** can cause skin and eye irritation.
* Because the major hazards associated with **Benzo(b)fluoranthene** come from exposure to *Coal Tar Pitch, CONSULT THE NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES HAZARDOUS SUBSTANCE FACT SHEET ON COAL TAR PITCH.*

IDENTIFICATION

Benzo(b)fluoranthene is a colorless, needle-shaped solid. It is used as a research chemical and is present in coal, and coke oven emissions, and petroleum products.

REASON FOR CITATION

* **Benzo(b)fluoranthene** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, NIOSH, NTP, IARC, HHAG and EPA.
* This chemical is on the Special Health Hazard Substance List because it is a **CARCINOGEN**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

The following exposure limits are for **Benzo(b)fluoranthene** (measured as *Coal Tar Pitch volatiles*):

OSHA: The legal airborne permissible exposure limit (PEL) is **0.2 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **0.1 mg/m^3** averaged over a 10-hour workshift.

ACGIH: The recommended airborne exposure limit is **0.2 mg/m^3** averaged over an 8-hour workshift.

* **Benzo(b)fluoranthene** is a PROBABLE CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.
* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* A regulated, marked area should be established where **Benzo(b)fluoranthene** is handled, used, or stored.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Benzo(b)fluoranthene** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Benzo(b)fluoranthene** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Benzo(b)fluoranthene**:

* Contact with **Benzo(b)fluoranthene** can cause skin and eye irritation.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Benzo(b)fluoranthene** and can last for months or years:

Cancer Hazard

* **Benzo(b)fluoranthene** is a PROBABLE CARCINOGEN in humans. It has been shown to cause lung, liver and skin cancer in animals.
* Many scientists believe there is no safe level of exposure to a carcinogen. Such substances may also have the potential for causing reproductive damage in humans.

Reproductive Hazard

* According to the information presently available to the New Jersey Department of Health and Senior Services, **Benzo(b)fluoranthene** has not been tested for its ability to affect reproduction.

Other Long-Term Effects

* **Benzo(b)fluoranthene** has not been tested for other chronic (long-term) health effects.

MEDICAL

Medical Testing

There is no special test for this chemical. However, if illness occurs or overexposure is suspected, medical attention is recommended.

Examine your skin periodically for growths or changes in warts or moles. Skin cancers are usually easily curable when removed early.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following controls are recommended:

* Where possible, automatically transfer **Benzo(b)fluoranthene** from drums or other storage containers to process containers.
* A Class I, Type B, biological safety hood should be used when mixing, handling, or preparing **Benzo(b)fluoranthene**.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Benzo(b)fluoranthene** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Benzo(b)fluoranthene**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Benzo(b)fluoranthene**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Benzo(b)fluoranthene**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Benzo(b)fluoranthene** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* Use a vacuum or a wet method to reduce dust during clean-up. DO NOT DRY SWEEP.
* When vacuuming, a high efficiency particulate air (HEPA) filter should be used, not a standard shop vacuum.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Benzo(b)fluoranthene**. Wear protective gloves and clothing. Safety equipment suppliers/manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* Where the potential exists for exposure over **0.1 mg/m^3** (as *Coal Tar Pitch volatiles*), use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **80 mg/m^3** (as *Coal Tar Pitch volatiles*) is immediately dangerous to life and health. If the possibility of exposure above **80 mg/m^3** (as *Coal Tar Pitch volatiles*) exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know Survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

PIH is a DOT designation for chemicals which are Poison Inhalation Hazards.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **BENZO(b)FLUORANTHENE**
DOT Number: **None**
NAERG Code: **No Citation**
CAS Number: **205-99-2**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	Not Found	Not Rated
REACTIVITY	Not Found	Not Rated
CARCINOGEN POISONOUS GASES ARE PRODUCED IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Benzo(b)fluoranthene** may burn, but does not readily ignite.
* Use dry chemical, CO_2, water spray, alcohol or polymer foam extinguishers.
* POISONOUS GASES ARE PRODUCED IN FIRE.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Benzo(b)fluoranthene** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate and wash area after clean-up is complete.
* It may be necessary to contain and dispose of **Benzo(b)fluoranthene** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: 1-877-WARN-DEP

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HANDLING AND STORAGE

* Prior to working with **Benzo(b)fluoranthene** you should be trained on its proper handling and storage.
* A regulated, marked area should be established where **Benzo(b)fluoranthene** is handled, used, or stored.
* **Benzo(b)fluoranthene** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); OZONE; NITROGEN OXIDES; and SULFUR OXIDES.
* Store in tightly closed containers in a cool, well-ventilated area.

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: 5×10^{-7} mm Hg at 68°F (20°C)
Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:

Benz(e)acephenanthrylene

Other Names:

2,3-Benzfluoranthene; 3,4-Benzfluoranthene; B(b)F

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NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202 H4985

Material Safety Data Sheet

Version 4.7
Revision Date 09/10/2012
Print Date 11/14/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Benzo[*k*]fluoranthene
Product Number	:	48492
Brand	:	Supelco
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Carcinogen, Irritant

GHS Classification
Skin irritation (Category 2)
Eye irritation (Category 2A)
Carcinogenicity (Category 1B)
Acute aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	0

NFPA Rating

Health hazard:	2
Fire:	0
Reactivity Hazard:	0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C20H12
Molecular Weight : 252.31 g/mol

Component		Concentration
Benzo[k]fluoranthene		
CAS-No.	207-08-9	-
EC-No.	205-916-6	
Index-No.	601-036-00-5	

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	yellow

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 215 - 217 °C (419 - 423 °F) - lit.
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available

Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Carcinogenicity - rat - Implant
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors.
Tumorigenic:Tumors at site or application.

Carcinogenicity - mouse - Skin
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.
Tumorigenic:Tumors at site or application.

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Benzo[k]fluoranthene)
	2B - Group 2B: Possibly carcinogenic to humans (Benzo[k]fluoranthene)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	Reasonably anticipated to be human carcinogens. (Benzo[k]fluoranthene)
	Reasonably anticipated to be a human carcinogen (Benzo[k]fluoranthene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: DF6350000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Benzo[k]fluoranthene)
Reportable Quantity (RQ): 5000 lbs
Marine pollutant:
Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzo[k]fluoranthene)
Marine pollutant: No

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benzo[k]fluoranthene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

OSHA Hazards
Carcinogen, Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	2007-03-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date

Benzo[k]fluoranthene	207-08-9	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	2007-03-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	2007-03-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	2007-09-28

16. OTHER INFORMATION

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name Bis(2−Ethylhexyl) Phthalate

Product Code 821874

Manufacturer EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.

Effective Date 3/3/2003

For More Information Call
856−423−6300 Technical Service
Monday−Friday: 8:00 AM − 5:00 PM

In Case of Emergency Call
800−424−9300 CHEMTREC (USA)
613−996−6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Synonym OCTYL PHTHALATE

Material Uses Analytical reagent.

Chemical Family Aromatic ester.

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Dioctyl Phthalate, For Synthesis	117−81−7	100

Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview
WARNING!
SUSPECT CANCER HAZARD.
MAY CAUSE CANCER.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF INHALED OR SWALLOWED.
BIRTH DEFECT HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: REPRODUCTIVE SYSTEM, LIVER, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Routes of Entry Absorbed through skin. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation (lung irritant). May be hazardous in case of inhalation.

Ingestion May be hazardous in case of ingestion.

Potential Chronic Health Effects

Carcinogenic Effects Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH. Classified 2 (Reasonably Anticipated To Be Human Carcinogens.) by NTP.
Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

Flammability of the Product May be combustible at high temperature.

Auto−ignition Temperature 390.6°C (735.1°F)

Flash Points Closed cup: 217.9°C (424.2°F).

Flammable Limits LOWER: 0.3%

Products of Combustion These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances Not available.

Explosion Hazards in Presence of Various Substances **Risks of explosion of the product in presence of static discharge:** No.

Risks of explosion of the product in presence of mechanical impact: No.

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Clothing (Fire) Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards Not available.

Special Remarks on Not available.

Explosion Hazards

Section 6. Accidental Release Measures

Small Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information No specific spill kit required for this product.

Section 7. Handling and Storage

Handling Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapors or spray mists. Keep container closed.

Storage Keep container in a cool, well−ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work−station location.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing (Pictograms)

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self−contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name	Exposure Limits
Dioctyl Phthalate, For Synthesis	**INRS (France, 1996).** VME: 5 mg/m3 **AFS (Sweden, 1996).** KTV: 5 mg/m3 NGV: 3 mg/m3 **EH40−OES (United Kingdom (UK), 1997).** STEL: 10 mg/m3 TWA: 5 mg/m3 **NIOSH REL (United States, 1994).** STEL: 10 mg/m3 TWA: 5 mg/m3 Period: 10 hour(s). **BMWA_MAK (Austria, 2001).** STEL: 50 mg/m3 1 times per shift, Period: 30 minute(s).

TWA: 5 mg/m3
NOHSC (Australia, 1995). Notes: Documentation for the substances with this footnote can be found in the 5th Edition of the ACGIH documentation of the threshold limit values and biological exposure indices.1 For all other substances with 'H' in Column 7 the documentation can be found i n the 6th Edition of the ACGIH documentation of the threshold limit values and biological exposure indices.2
STEL: 10 mg/m3
TWA: 5 mg/m3
Lijst Grenswaarden (Belgium, 1998).
VCD: 10 mg/m3
VL: 5 mg/m3
SUVA (Switzerland, 2001). Notes: Not Temporary
MAK: 5 mg/m3 Form: Dust
MAK−Werte Liste (Germany, 2000).
Spitzenbegrenzung: 100 mg/m3 1 times per shift, Period: 30 minute(s).
MAK: 10 mg/m3
TRGS900 (Germany, 2000). Notes: Not Tentative
Spitzenbegrenzung: 40 mg/m3
MAK: 10 mg/m3
Arbejdstilsynet (Denmark, 2000).
GV: 3 mg/m3
Tyterveyslaitos (Finland, 2001).
STEL: 10 mg/m3
TWA: 5 mg/m3
NAOSH (Ireland, 1999).
STEL: 10 mg/m3
OEL: 5 mg/m3
JSOH (Japan, 1996).
TWA: 5 mg/m3
Ministry of Labor (KR, 1997).
STEL: 10 mg/m3
TWA: 5 mg/m3
Secretary of Work and Social Security (MX, 1994).
CCT: 10 mg/m3 Period: 15 minute(s).
CPT: 5 mg/m3 Period: 8 hour(s).
Nationale MAC−lijst (Netherlands, 2001). Notes: Legal
TGG 8 uur: 5 mg/m3 Form: Dust
Arbeidstilsynet (Norway, 2001).
AN: 3 mg/m3
NZ OSH (NZ, 1994).
STEL: 10 mg/m3
TWA: 5 mg/m3
ACGIH TLV (United States, 2000). Notes: 1999 Adoption.
TWA: 5 mg/m3
OSHA PEL 1989 (United States, 1989).
STEL: 10 mg/m3

TWA: 5 mg/m3

Section 9. Physical and Chemical Properties

Odor	Not available.
Color	Colorless to light yellow.
Physical State and Appearance	Liquid.
Molecular Weight	390.62 g/mole
Molecular Formula	C24−H38−O4
pH	Not applicable.
Boiling/Condensation Point	386.16°C (727.1°F)
Melting/Freezing Point	−46.06°C (−50.9°F)
Specific Gravity	0.9861 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	16 (Air = 1)
Odor Threshold	Not available.
Evaporation Rate	
LogKow	Not available.
Solubility	Insoluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Reactive with oxidizing agents.
Rem/Incompatibility	Not available.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:

Dioctyl Phthalate, For Synthesis TI0350000

Toxicity	Acute oral toxicity (LD50): 1500 mg/kg [Mouse].
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH. Classified 2 (Reasonably Anticipated To Be Human Carcinogens.) by NTP. **DEVELOPMENTAL TOXICITY**: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN].
Acute Effects on Humans	Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation (lung irritant). May be hazardous in case of inhalation. May be hazardous

	in case of ingestion.
Synergetic Products (Toxicologically)	Not available.
Irritancy	Draize Test (Rabbit): Skin: 500mg/24h. Reaction: Mild. Eye: 500 mg/24H Mild
Sensitization	Not available.
Carcinogenic Effects	Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH. Classified 2 (Reasonably Anticipated To Be Human Carcinogens.) by NTP.
Toxicity to Reproductive System	Tests on laboratory animals for reproductive effects are cited in Registry of Toxic Effects on Chemical Substances (RTECS).
Teratogenic Effects	Not available.
Mutagenic Effects	Tests on laboratory animals for mutagenic effects are cited in Registry of Toxic Effects of Chemical Substances (RTECS).

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number	U107
Treatment	Specified Technology − Incineration to a level below TCA (Total Constituent Analyses) levels. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transport Information

DOT Classification	Not available.
TDG Classification	Not available.
IMO/IMDG Classification	Not available.
ICAO/IATA Classification	Not available.

Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 4(a) final test rules: Dioctyl Phthalate, For Synthesis TSCA 8(b) inventory: Dioctyl Phthalate, For Synthesis TSCA 8(d) H and S data reporting: Dioctyl Phthalate, For Synthesis: 1982 TSCA 12(b) one time export: Dioctyl Phthalate, For Synthesis SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Dioctyl Phthalate, For Synthesis
SARA 311/312 MSDS distribution − chemical inventory − hazard identification: Dioctyl Phthalate, For Synthesis: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
SARA 313 toxic chemical notification and release reporting: Dioctyl Phthalate, For Synthesis
Clean Water Act (CWA) 307: Dioctyl Phthalate, For Synthesis
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada)

Class D−2A: Material causing other toxic effects (VERY TOXIC).
Class D−2B: Material causing other toxic effects (TOXIC).
CEPA DSL: Dioctyl Phthalate, For Synthesis
This product has been classiifed in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS

Dioctyl Phthalate, For Synthesis 204−211−0

DSCL (EEC)

R37/38− Irritating to respiratory system and skin.
R41− Risk of serious damage to eyes.

International Lists

Australia (NICNAS): Dioctyl Phthalate, For Synthesis

China: Dioctyl Phthalate, For Synthesis

Germany water class: Dioctyl Phthalate, For Synthesis

Japan (MITI): Dioctyl Phthalate, For Synthesis

Korea (TCCL): Dioctyl Phthalate, For Synthesis

Philippines (RA6969): Dioctyl Phthalate, For Synthesis
China: Dioctyl Phthalate, For Synthesis

State Regulations

Pennsylvania RTK: Dioctyl Phthalate, For Synthesis: (special hazard, environmental hazard, generic environmental hazard)
Massachusetts RTK: Dioctyl Phthalate, For Synthesis
New Jersey: Dioctyl Phthalate, For Synthesis
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Dioctyl Phthalate, For Synthesis
California prop. 65 (no significant risk level): Dioctyl Phthalate, For Synthesis
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Dioctyl Phthalate, For Synthesis

Section 16. Other Information

National Fire Protection Association (U.S.A.)		**1**	**Fire Hazard**
	Health	**0**	**Reactivity**
		0	**Specific Hazard**

Changed Since Last Revision +

Notice to Reader

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New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **CADMIUM**

CAS Number: 7440-43-9
DOT Number: UN 2570

RTK Substance number: 0305
Date: April 1994 Revision: December 1999

HAZARD SUMMARY

* **Cadmium** can affect you when breathed in.
* **Cadmium** is a CARCINOGEN and a TERATOGEN -- HANDLE WITH EXTREME CAUTION.
* **Cadmium** can cause a flu-like illness with chills, headache, aching and/or fever.
* High exposure to **Cadmium** may cause nausea, salivation, vomiting, abdominal cramps and diarrhea.
* Breathing **Cadmium** can irritate the lungs causing coughing and/or shortness of breath. Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency, with severe shortness of breath.
* Repeated low exposures can cause kidney and liver damage, anemia, and loss of smell.

IDENTIFICATION

Cadmium is a blue-white solid or gray-black powder. It is used in silver solder, making batteries and metal plating, for plastics and pigments, and as a catalyst.

REASON FOR CITATION

* **Cadmium** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, DOT, NIOSH, NTP, DEP, IARC, HHAG and EPA.
* This chemical is on the Special Health Hazard Substance List because it is a **CARCINOGEN** and a **TERATOGEN**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **0.005 mg/m^3** for **Cadmium** *dust* or *fume* averaged over an 8-hour workshift.

OSHA has recognized that some processes in certain industries may be unable to achieve the **0.005 mg/m^3** limit through engineering and work practices. These industries must follow SECALs (separate engineering control air limits) of either **0.015** or **0.05 mg/m^3**.

NIOSH: Recommends that exposure to occupational carcinogens be limited to the lowest feasible concentration.

ACGIH: The recommended airborne exposure limit is **0.01 mg/m^3** for *elemental* **Cadmium** and **0.002 mg/m^3** for **Cadmium** *compounds* (*respirable fraction*), averaged over an 8-hour workshift.

* **Cadmium** is a PROBABLE CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.

WAYS OF REDUCING EXPOSURE

* Enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* A regulated, marked area should be established where **Cadmium** is handled, used, or stored as required by the OSHA Standard: 29 CFR 1910.1027.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Cadmium** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Cadmium** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

Metal, metal compounds and alloys are often used in "hot" operations in the workplace. These may include, but are not limited to, welding, brazing, soldering, plating, cutting, and metallizing. At the high temperatures reached in these operations, metals often form metal fumes which have different health effects and exposure standards than the original metal or metal compound and require specialized controls. Your workplace can be evaluated for the presence of particular fumes which may be generated. Consult the appropriate New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheets.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Cadmium**:

* **Cadmium** can cause a flu-like illness with chills, headache, aching and/or fever.
* High exposure to **Cadmium** may cause nausea, salivation, vomiting, abdominal cramps and diarrhea.
* Breathing **Cadmium** can irritate the lungs causing coughing and/or shortness of breath. Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency, with severe shortness of breath.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Cadmium** and can last for months or years:

Cancer Hazard

* **Cadmium** is a PROBABLE CARCINOGEN in humans. There is some evidence that it causes prostate and kidney cancer in humans and it has been shown to cause lung and testes cancer in animals.
* Many scientists believe there is no safe level of exposure to a carcinogen.

Reproductive Hazard

* **Cadmium** is a PROBABLE TERATOGEN in humans.
* **Cadmium** may damage the testes (male reproductive glands) and may affect the female reproductive cycle.

Other Long-Term Effects

* **Cadmium** can irritate the lungs. Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.
* Repeated low exposures can cause permanent kidney damage which can lead to kidney stones.
* Long term exposure can cause anemia, loss of sense of smell, fatigue and/or yellow staining of teeth.
* **Cadmium** can damage the liver.

MEDICAL

Medical Testing

For those with frequent or potentially high exposure (half the TLV or greater, or significant skin contact), the following are recommended before beginning work and at regular times after that:

* Blood test for **Cadmium** (levels should be less than **5 micrograms per liter** of whole blood).
* Urine test for **Cadmium** (levels should be less than **3 micrograms per liter** of urine).
* Urine test for Beta-2-microglobulin to detect kidney damage.
* Urinalysis (UA).
* Lung function tests.
* Liver function tests.
* Complete blood count.
* Consider chest x-ray after acute overexposure.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

Mixed Exposures

* Cigarette smoke contains some **Cadmium**. Because it is hard for the body to eliminate **Cadmium**, it tends to build up in the body. Any workplace exposure adds to these levels.
* Smoking cigarettes near **Cadmium** increases release of toxic fumes. Also, because both smoking and **Cadmium** can cause emphysema, lung effects may be greater in smokers.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following controls are recommended:

* If **Cadmium** is used in a "hot" process such as smelting, steel fabricating or melting **Cadmium** *ingots*, **Cadmium** *fume* may be released. This is more acutely toxic than **Cadmium** *dust* and proper controls and protective equipment are necessary.
* Where possible, automatically transfer **Cadmium** from drums or other storage containers to process containers.
* Specific engineering controls are required for this chemical by OSHA. Refer to the OSHA Standards: 1910.1027, 1915.1027, 1926.63, and 1928.1027.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Cadmium** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Cadmium**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Cadmium**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Cadmium**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Cadmium** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* Use a vacuum or a wet method to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Cadmium**. Wear protective gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* Where the potential exists for exposure over **0.002 mg/m^3**, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **9 mg/m^3** is immediately dangerous to life and health. If the possibility of exposure above **9 mg/m^3** exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

HANDLING AND STORAGE

* Prior to working with **Cadmium** you should be trained on its proper handling and storage.
* A regulated, marked area should be established where **Cadmium** is handled, used, or stored as required by the OSHA Standard: 1910.1027.
* **Cadmium** *powder* and *metal* must be stored to avoid contact with POTASSIUM, HYDRAZOIC ACID, and OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE) since violent reactions occur.
* **Cadmium** may react with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) to release flammable *Hydrogen gas*.
* **Cadmium** *powder* is not compatible with SULFUR, SELENIUM, TELLURIUM, AMMONIUM NITRATE, and ZINC.
* Store in tightly closed containers in a cool, well-ventilated area away from AIR.

* Sources of ignition, such as smoking and open flames, are prohibited where **Cadmium** *powder* is used, handled, or stored.
* Store **Cadmium** *powder* under *Nitrogen*.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

Q: Can men as well as women be affected by chemicals that cause reproductive system damage?
A: Yes. Some chemicals reduce potency or fertility in both men and women. Some damage sperm and eggs, possibly leading to birth defects.

Q: Who is at the greatest risk from reproductive hazards?
A: Pregnant women are at greatest risk from chemicals that harm the developing fetus. However, chemicals may affect the ability to have children, so both men and women of childbearing age are at high risk.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information
Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation
If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations
Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources
The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> **E M E R G E N C Y I N F O R M A T I O N** <<<<<<<<<<<<<<<<<

Common Name: **CADMIUM**
DOT Number: **UN 2570**
NAERG Code: **154**
CAS Number: **7440-43-9**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	Not Found	Not Rated
REACTIVITY	Not Found	Not Rated
CARCINOGEN FLAMMABLE IN POWDER FORM TOXIC FUMES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Cadmium** is a noncombustible solid but finely divided **Cadmium** *powder* is FLAMMABLE.
* Use dry chemical or CO_2 extinguishers for **Cadmium** *powder*.
* FIRE MAY RESTART AFTER IT HAS BEEN EXTINGUISHED.
* TOXIC FUMES ARE PRODUCED IN A FIRE.
* CONTAINERS MAY EXPLODE IN FIRE.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Cadmium** *powder* is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Remove all ignition sources.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate and wash area after clean-up is complete.
* It may be necessary to contain and dispose of **Cadmium** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

==========

FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

HANDLING AND STORAGE (See page 3)

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids. Seek medical attention immediately.

Skin Contact

* Remove contaminated clothing. Wash contaminated skin with soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.
* Medical observation is recommended for 24 to 48 hours after breathing overexposure, as pulmonary edema may be delayed.

PHYSICAL DATA

Vapor Pressure: 0 mm Hg at 68°F (20°C)
Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:
Cadmium
Other Names:
C.I. 77180; Colloidal Cadmium

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

Material Safety Data Sheet
Chloroethane

ACC# 89460

Section 1 - Chemical Product and Company Identification

MSDS Name: Chloroethane
Catalog Numbers: AC404600000, AC404601000, AC404605000
Synonyms: Ethyl chloride; monchloroethane.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
75-00-3	Ethyl chloride	ca.100	200-830-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless gas. Flash Point: -50 deg C.
Danger! Extremely flammable liquid and vapor. Vapor may cause flash fire. Possible risks of irreversible effects. May cause eye and skin irritation. May cause respiratory tract irritation. Cancer suspect agent. Dangerous for the environment.
Target Organs: Reproductive system.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract.
Inhalation: May cause respiratory tract irritation. Vapors may cause dizziness or suffocation. Inhalation of vapors causes irritation of the mucous membranes.
Chronic: Possible risk of irreversible effects.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT

induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Extremely flammable liquid and vapor. Containers may explode in the heat of a fire. Will be easily ignited by heat, sparks or flame.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water.
Flash Point: -50 deg C (-58.00 deg F)
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 4; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigerator/flammables.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethyl chloride	100 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous r oute	3800 ppm IDLH (10% LEL)	1000 ppm TWA; 2600 mg/m3 TWA

OSHA Vacated PELs: Ethyl chloride: 1000 ppm TWA; 2600 mg/m3 TWA

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Gas
Appearance: colorless
Odor: pungent odor
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: 2.22
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 12 - 14 deg C
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Not available.
Specific Gravity/Density:.9200g/cm3
Molecular Formula:C2H5Cl
Molecular Weight:64.51

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Forms explosive mixtures with air (flash point -58°F/-50°C).

Conditions to Avoid: Incompatible materials, ignition sources, moisture, excess heat, strong oxidants.

Incompatibilities with Other Materials: Metals, strong oxidizing agents, plastics, rubber, potassium, sodium.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon monoxide, carbon dioxide, phosgene gas.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:
CAS# 75-00-3: KH7525000
LD50/LC50:
CAS# 75-00-3:
Inhalation, mouse: LC50 = 121300 mg/m3/2H;
Inhalation, rat: LC50 = 152 gm/m3/2H;
Inhalation, rat: LC50 = 150000 mg/m3/2H;
.

Carcinogenicity:
CAS# 75-00-3:

- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **California:** carcinogen, initial date 7/1/90
- **NTP:** Not listed.
- **IARC:** Not listed.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information found.
Physical: No information found.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 75-00-3 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 75-00-3: Effective 6/1/87, Sunset 6/1/97
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 75-00-3: 100 lb final RQ; 45.4 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 75-00-3: immediate, delayed, fire, sudden release of pressure.
Section 313
Ethyl chloride is not at a high enough concentration to be reportable under Section 313. No chemicals are reportable under Section 313.
Clean Air Act:
CAS# 75-00-3 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
CAS# 75-00-3 is listed as a Priority Pollutant under the Clean Water Act.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 75-00-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65
The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:
WARNING: This product contains Ethyl chloride, a chemical known to the state of California to cause cancer.
California No Significant Risk Level: CAS# 75-00-3: 150 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols:
XN F+
Risk Phrases:
R 12 Extremely flammable.
R 40 Limited evidence of a carcinogenic effect.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 33 Take precautionary measures against static discharges.
S 36/37 Wear suitable protective clothing and gloves.
S 37 Wear suitable gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 9 Keep container in a well-ventilated place.
S 28A After contact with skin, wash immediately with plenty of water .
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)
CAS# 75-00-3: 2
Canada - DSL/NDSL
CAS# 75-00-3 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of B1, D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List
CAS# 75-00-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/05/1997
Revision #9 Date: 11/20/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **CHROMIUM**

CAS Number: 7440-47-3
DOT Number: None

RTK Substance number: 0432
Date: April 1994 Revision: January 2000

HAZARD SUMMARY

* **Chromium** can affect you when breathed in.
* Exposure to **Chromium** *fumes* can cause "*metal fume fever*." This is a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness and cough.
* **Chromium** may cause a skin allergy. If allergy develops, very low future exposure can cause itching and a skin rash.
* **Chromium** *ore* has been reported to cause lung allergy. Once allergy develops, even small future exposure may cause coughing, wheezing or shortness of breath.

IDENTIFICATION

Chromium is a steel-gray, lustrous metal or a metallic grey powder. It is used in stainless and alloy steels, refractory products, tanning agents for leather, pigments, electroplating, catalysts, and corrosion-resistant products.

REASON FOR CITATION

* **Chromium** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, NIOSH, DEP and EPA.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **1 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **0.5 mg/m^3** averaged over a 10-hour workshift.

ACGIH: The recommended airborne exposure limit is **0.5 mg/m^3** averaged over an 8-hour workshift.

* **Chromium** may form metal fumes which present different hazards than the substance itself.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Chromium** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Chromium** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

Metal, metal compounds and alloys are often used in "hot" operations in the workplace. These may include, but are not limited to, welding, brazing, soldering, plating, cutting, and metallizing. At the high temperatures reached in these operations, metals often form metal fumes which have different health effects and exposure standards than the original metal or metal compound and require specialized controls. Your workplace can be evaluated for the presence of particular fumes which may be generated. Consult the appropriate New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheets.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Chromium**:

* Exposure to **Chromium** *fumes* can cause "*metal fume fever*." This is a flu-like illness with symptoms of metallic taste in the mouth, headache, fever and chills, aches, chest tightness and cough. The symptoms may be delayed for several hours after exposure and usually last for a day or two.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Chromium** and can last for months or years:

Cancer Hazard

* There is no evidence that **Chromium** *metal* is a CARCINOGEN. Roasting of *Chromite ore* is suspected of having CARCINOGENIC potential.

Reproductive Hazard

* There is no evidence that **Chromium** affects reproduction. This is based on test results presently available to the New Jersey Department of Health and Senior Services from published studies.

Other Long-Term Effects

* **Chromium** may cause a skin allergy. If allergy develops, very low future exposure can cause itching and a skin rash.
* *Chromite ore* has been reported to cause lung allergy. Once allergy develops, even small future exposure may cause coughing, wheezing, or shortness of breath.

MEDICAL

Medical Testing

For those with frequent or potentially high exposure (half the TLV or greater), the following are recommended before beginning work and at regular times after that:

* Lung function tests. These may be normal if the person is not having an attack at the time of the test.

If symptoms develop or overexposure is suspected, the following is recommended:

* Evaluation by a qualified allergist, including careful exposure history and special testing, may help diagnose skin allergy.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

Mixed Exposures

* Because smoking can cause heart disease, as well as lung cancer, emphysema, and other respiratory problems, it may worsen respiratory conditions caused by chemical exposure. Even if you have smoked for a long time, stopping now will reduce your risk of developing health problems.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following control is recommended:

* Where possible, automatically transfer **Chromium** from drums or other storage containers to process containers.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Chromium** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Chromium**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Chromium**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Chromium**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Chromium** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* Use a vacuum or a wet method to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Chromium**. Wear protective gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* NIOSH has established new testing and certification requirements for negative pressure, air purifying, particulate filter and filtering facepiece respirators. The filter classifications of dust/mist/fume, paint spray or pesticide prefilters, and filters for radon daughters, have been replaced with the N, R, and P series. Each series has three levels of filtering efficiency: 95%, 99%, and 99.9%. Check with your safety equipment supplier or your respirator manufacturer to determine which respirator is appropriate for your facility.
* If while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Chromium**, or if while wearing particulate filters abnormal resistance to breathing is experienced, or eye irritation occurs while wearing a full facepiece respirator, leave the area immediately. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
* Be sure to consider all potential exposures in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
* Where the potential for high exposure exists, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **250 mg/m^3** is immediately dangerous to life and health. If the possibility of exposure above **250 mg/m^3** exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?

A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?

A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **CHROMIUM**
DOT Number: **None**
NAERG Code: **No Citation**
CAS Number: **7440-47-3**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	Not Found	Not Rated
REACTIVITY	Not Found	Not Rated
POISONOUS GASES ARE PRODUCED IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* Extinguish fire using an agent suitable for type of surrounding fire. **Chromium** itself does not burn.
* POISONOUS GASES ARE PRODUCED IN FIRE.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Chromium** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Cover with dry lime, sand or soda ash, and place in covered containers for disposal.
* Ventilate and wash area after clean-up is complete.
* It may be necessary to contain and dispose of **Chromium** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

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HANDLING AND STORAGE

* Prior to working with **Chromium** you should be trained on its proper handling and storage.
* **Chromium** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); and STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC).

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids. Seek medical attention.

Skin Contact

* Remove contaminated clothing. Wash contaminated skin with soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: 0 mm Hg at 68°F (20°C)
Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:
Chromium
Other Names:
Chrome

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **CHRYSENE**

CAS Number: 218-01-9
DOT Number: None

RTK Substance number: 0441
Date: April 1994 Revision: December 1999

HAZARD SUMMARY

* **Chrysene** can affect you when breathed in and by passing through your skin.
* If skin contaminated with **Chrysene** is exposed to sunlight, a rash or sunburn effect and permanent changes in skin pigment can occur.
* **Chrysene** is almost always found in *Coal Tar Pitch*, *Coal Tar Creosote*, or other coal tar products. If you work with coal, tar, soot, pitch, asphalt, etc., you may be exposed to **Chrysene**.
* *CONSULT THE NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES HAZARDOUS SUBSTANCE FACT SHEETS ON COAL TAR PITCH AND COAL TAR CREOSOTE.*

IDENTIFICATION

Pure **Chrysene** is a colorless to off-white flake which is used in laboratories and dye manufacturing. **Chrysene** is most often found in black or brown tars and pitches.

REASON FOR CITATION

* **Chrysene** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, DOT, NIOSH, HHAG and EPA.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

The following exposure limits are for *Coal Tar Pitch Volatiles*:

OSHA: The legal airborne permissible exposure limit (PEL) is **0.2 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **0.1 mg/m^3** averaged over a 10-hour workshift.

ACGIH: An exposure limit has not been determined for this suspected carcinogen. Worker exposure by all routes should be carefully controlled to the lowest possible level.

* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Chrysene** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Chrysene** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Chrysene**:

* If skin contaminated with **Chrysene** is exposed to sunlight, a rash or sunburn effect can occur, sometimes with blisters.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Chrysene** and can last for months or years:

Cancer Hazard

* There is limited evidence that **Chrysene** causes cancer in animals. It may cause skin cancer.
* Many scientists believe there is no safe level of exposure to a carcinogen. Such substances may also have the potential for causing reproductive damage in humans.

Reproductive Hazard

* According to the information presently available to the New Jersey Department of Health and Senior Services, **Chrysene** has not been tested for its ability to affect reproduction.

Other Long-Term Effects

* Permanent changes in skin pigment can occur if contaminated skin is exposed to sunlight.

MEDICAL

Medical Testing

* There is no special test for this chemical. However, monthly, carefully look at any skin areas that have been exposed. Any growth (like a mole) that increases in size or shows changes in color should be examined by a physician. Skin cancer is curable when detected early.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

Mixed Exposures

* Sunlight exposure on skin contaminated with *Coal Tar* chemicals can cause rash and later, pigment changes. Persons who smoke cigarettes may be at increased risk for lung cancer with his chemical. This can be significantly reduced by stopping smoking as well as by reducing exposures.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following control is recommended:

* Where possible, automatically transfer pure **Chrysene** from drums or other storage containers to process containers.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Chrysene** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Chrysene**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Chrysene**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Chrysene**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Chrysene** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* For pure **Chrysene** use a vacuum or a wet method to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Chrysene**. Wear protective gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* For pure **Chrysene** wear impact resistant eye protection with side shields or goggles.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* Where the potential exists for exposure over **0.1 mg/m^3**, (as *Coal Tar Pitch Volatiles*) use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **80 mg/m^3** (as *Coal Tar Pitch Volatiles*) is immediately dangerous to life and health. If the possibility of exposure above **80 mg/m^3** (as *Coal Tar Pitch Volatiles*) exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
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DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

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A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

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PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

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A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **CHRYSENE**
DOT Number: **None**
NAERG Code: **No Citation**
CAS Number: **218-01-9**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	0	Not Rated
REACTIVITY	Not Found	Not Rated
POISONOUS GASES ARE PRODUCED IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Chrysene** is a noncombustible solid.
* Use dry chemical, CO_2, water spray, alcohol or polymer foam extinguishers.
* POISONOUS GASES ARE PRODUCED IN FIRE.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If pure **Chrysene** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate and wash area after clean-up is complete.
* It may be necessary to contain and dispose of **Chrysene** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

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HANDLING AND STORAGE

* Prior to working with **Chrysene** you should be trained on its proper handling and storage.
* **Chrysene** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).
* Store in tightly closed containers in a cool, well-ventilated area.

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Remove contaminated clothing. Wash contaminated skin with soap and water.

Breathing

* Remove the person from exposure.

PHYSICAL DATA

Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:

1,2,5,6-Dibenzonaphthalene

Other Names:

1,2-Benzophenanthrene; Benzo[a]phenanthrene

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

Material Safety Data Sheet

Version 3.1
Revision Date 01/19/2012
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	cis-Dichloroethylene
Product Number	:	48597
Brand	:	Supelco
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid

Target Organs

Central nervous system, Liver, Kidney

GHS Classification
Flammable liquids (Category 2)
Acute toxicity, Inhalation (Category 4)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H402	Harmful to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

HMIS Classification

Health hazard:	1
Chronic Health Hazard:	*
Flammability:	3
Physical hazards:	1

NFPA Rating

Health hazard:	2
Fire:	3

Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C2H2Cl2
Molecular Weight : 96.94 g/mol

Component		Concentration
cis-Dichloroethylene		
CAS-No.	156-59-2	-
EC-No.	205-859-7	
Index-No.	602-026-00-3	

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

Handle and store under inert gas. Air and moisture sensitive. Light sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
cis-Dichloroethylene	156-59-2	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Central Nervous System impairment Eye irritation			

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	light yellow

Safety data

pH	no data available

Melting point/freezing point	-80.0 °C (-112.0 °F)
Boiling point	60.0 - 61.0 °C (140.0 - 141.8 °F)
Flash point	6.0 °C (42.8 °F) - closed cup
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.28 g/cm3
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid
Oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
Inhalation LC50
LC50 Inhalation - rat - 13700 ppm
Remarks: Behavioral:Somnolence (general depressed activity). Liver:Fatty liver degeneration.

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure
narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: KV9420000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1150 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: 1,2-DICHLOROETHYLENE
Marine pollutant: No

IATA
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

BOC GASES

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: AIR, COMPRESSED

1. Chemical Product and Company Identification

BOC Gases,
Division of
The BOC Group, Inc.
575 Mountain Avenue
Murray Hill, NJ 07974

TELEPHONE NUMBER: (908) 464-8100
24-HOUR EMERGENCY TELEPHONE NUMBER:
CHEMTREC (800) 424-9300

BOC Gases
Division of
BOC Canada Limited
5975 Falbourne Street, Unit 2
Mississauga, Ontario L5R 3W6

TELEPHONE NUMBER: (905) 501-1700
24-HOUR EMERGENCY TELEPHONE NUMBER:
(905) 501-0802
EMERGENCY RESPONSE PLAN NO: 20101

PRODUCT NAME: AIR, COMPRESSED **or** COMPRESSED OXYGEN AND NITROGEN MIXTURE
CHEMICAL NAME: Oxygen and Nitrogen Mixture
COMMON NAMES/SYNONYMS: Compressed Oxygen and Nitrogen Mixture
TDG (Canada) CLASSIFICATION: 2.2 (5.1)
WHMIS CLASSIFICATION: A, C

PREPARED BY: Loss Control (908)464-8100/(905)501-1700
PREPARATION DATE: 6/1/95
REVIEW DATES: 6/7/96

2. Composition, Information on Ingredients

INGREDIENT	% VOLUME	PEL-OSHA[1]	TLV-ACGIH[2]	LD_{50} or LC_{50} Route/Species
Nitrogen FORMULA: N_2 CAS: 7727-37-9 RTECS #: QW9700000	2.0 to 98.0	Simple Asphyxiant	Simple Asphyxiant	Not Available
Oxygen FORMULA: O_2 CAS: 7782-44-7 RTECS #: RS2060000	2.0 to 98.0	Not Available	Not Available	Not Available

[1] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)
[2] As stated in the ACGIH 1994-95 Threshold Limit Values for Chemical Substances and Physical Agents

3. Hazards Identification

EMERGENCY OVERVIEW

Mixtures with less than 19.5% oxygen act as an asphyxiant. Effects may include headaches, dizziness and loss of consciousness. High oxygen concentrations may promote combustion of flammable materials.

ROUTE OF ENTRY:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	No	No	Yes	No

HEALTH EFFECTS:

Exposure Limits	Irritant	Sensitization
No	No	No
Teratogen	Reproductive Hazard	Mutagen
No	No	Yes
Synergistic Effects None Reported		

Carcinogenicity: -- NTP: No IARC: No OSHA: No

EYE EFFECTS:
None known.

SKIN EFFECTS:
None known.

INGESTION EFFECTS:
None known.

INHALATION EFFECTS:
Air is nontoxic and necessary to support life. Mixtures with less than 19.5% oxygen act as an asphyxiant. Effects may include headaches, dizziness and loss of consciousness.

Not to be used as breathing air!

NFPA HAZARD CODES	HMIS HAZARD CODES	RATINGS SYSTEM
Health: 0	Health: 0	0 = No Hazard
Flammability: 0	Flammability: 0	1 = Slight Hazard
Reactivity: 0	Reactivity: 0	2 = Moderate Hazard
		3 = Serious Hazard
		4 = Severe Hazard

4. First Aid Measures

EYES:
None required.

SKIN:
None required.

INGESTION:
None required.

INHALATION:
Not to be used as breathing air!

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

Victims should be assisted toa an uncontaminated area and inhale fresh air. Quick removal from the contaminated is most important. Unconscious persons should be moved to an uncontaminated area. If they are not breathing, administer artificial resusitation. Further treatment should be symptomatic and supportive.

5. Fire Fighting Measures

Conditions of Flammability: Oxidizer		
Flash point: None	Method: Not Applicable	Autoignition Temperature: None
LEL(%): None	UEL(%): None	
Hazardous combustion products: None		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

FIRE AND EXPLOSION HAZARDS:
High oxygen concentrations vigorously accelerate combustion.

EXTINGUISHING MEDIA:
Water spray to keep cylinders cool.

FIRE FIGHTING INSTRUCTIONS:
If possible, stop the flow of gas which is supporting the fire.

6. Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest BOC location.

7. Handling and Storage

Electrical classification:
Nonhazardous.

Dry air is noncorrosive and may be used with all materials of construction. Moisture causes metal oxides which are formed with air to be hydrated so that they include volume and lose their protective role (rust formation). Concentrations of SO_2, Cl_2, salt, etc. in the moisture enhances the rusting of metals in air.

Oxygen should not be used as a substitute for compressed air in pneumatic equipment since this type of tool generally contains flammable lubricants.

Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping or systems. Do not heat cylinder by

any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the system.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "NO SMOKING OR OPEN FLAMES" signs in the storage area or use area. There should be no sources of ignition in the storage or use area.

For additional storage recommendations, consult Compressed Gas Association Pamphlets P-1, G-7, and G-7.1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

8. Exposure Controls, Personal Protection

EXPOSURE LIMITS[1]:

INGREDIENT	% VOLUME	PEL-OSHA[2]	TLV-ACGIH[3]	LD_{50} or LC_{50} Route/Species
Nitrogen FORMULA: N_2 CAS: 7727-37-9 RTECS #: QW9700000	2.0 to 98.0	Simple Asphyxiant	Simple Asphyxiant	Not Available
Oxygen FORMULA: O_2 CAS: 7782-44-7 RTECS #: RS2060000	2.0 to 98.0	Not Available	Not Available	Not Available]

[1] Refer to individual state of provincial regulations, as applicable, for limits which may be more stringent than those listed here.
[2] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)
[3] As stated in the ACGIH 1994-1995 Threshold Limit Values for Chemical Substances and Physical Agents.

EYE/FACE PROTECTION:
Safety goggles or glasses.

SKIN PROTECTION:
Protective gloves made of any suitable material.

OTHER/GENERAL PROTECTION:
Safety shoes, safety shower.

9. Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Above critical temp.	psia
Vapor density at STP (Air = 1)	: 1.0	
Evaporation point	: Not Available	
Boiling point	: -317.8	^{o}F
	: -194	^{o}C
Freezing point	: Not Available	
	: Not Available	
pH	: Not Available	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H20)	: Slightly soluble	
Odor threshold	: Not Applicable	
Odor and appearance	: Odorless; Colorless Gas	

10. Stability and Reactivity

STABILITY:
Stable

INCOMPATIBLE MATERIALS:
All flammable materials.

HAZARDOUS DECOMPOSITION PRODUCTS:
None

HAZARDOUS POLYMERIZATION:
Will not occur.

11. Toxicological Information

REPRODUCTIVE:
Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

MUTAGENIC:
Oxygen concentrations between 20 to 95% have produced genetic changes in mammalian cell assay test systems.

OTHER:
High pressure effects (greater than two atmospheres of oxygen) are on the central nervous system. Improper decompression results in the accumulation of nitrogen in the blood.

NOTE: Compressed air is not intended for breathing use, since its oxygen contents may be below that which supports life.

12. Ecological Information

No data given.

13. Disposal Considerations

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED, WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to BOC Gases or authorized distributor for proper disposal.

14. Transport Information *

Parameter	United States DOT	Canada TDG
PROPER SHIPPING NAME:	Air, Compressed Compressed gases, n.o.s. (Oxygen, Nitrogen)/ Compressed gases, oxidizing, n.o.s. (Oxygen, Nitrogen)	Air, Compressed Compressed gases, n.o.s. (Oxygen, Nitrogen)/ Compressed gases, oxidizing, n.o.s. (Oxygen, Nitrogen)
HAZARD CLASS:	2.2	2.2 (5.1)
DOT ID NUMBER:	UN 1002 UN 1956 UN 3156	UN 1002 UN 1956 UN 3156
SHIPPING LABEL:	NONFLAMMABLE GAS NONFLAMMABLE GAS NONFLAMMABLE GAS, OXIDIZER	NONFLAMMABLE GAS NONFLAMMABLE GAS NONFLAMMABLE GAS, OXIDIZER

* Transport information is dependent on oxygen concentration. At concentrations greater than 22.5% oxygen, this product is classified as Compressed gases, oxidizing, n.o.s. At oxygen concentrations less than or equal to 22.5%, this product is classified as compressed gases, n.o.s.

15. Regulatory Information

SARA TITLE III NOTIFICATIONS AND INFORMATION

SARA TITLE III - HAZARD CLASSES:
Sudden Release of Pressure Hazard

16. Other Information

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:
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ERROR: undefined
OFFENDING COMMAND: get

STACK:

/quit
-dictionary-
-mark-
```

SUPELCO INC -- 48574, DIBENZO (A,H) ANTHRACENE 0.1G -- 6810-00N032523

========== Product Identification ==========

Product ID:48574, DIBENZO (A,H) ANTHRACENE 0.1G
MSDS Date:12/19/1985
FSC:6810
NIIN:00N032523
MSDS Number: BNSSL
=== Responsible Party ===
Company Name:SUPELCO INC
Address:SUPELCO PARK
City:BELLEFONTE
State:PA
ZIP:16823-0048
Country:US
Info Phone Num:814-359-3441
Emergency Phone Num:814-359-3441
CAGE:54968
=== Contractor Identification ===
Company Name:SIGMA-ALDRICH INC.
Address:3050 SPRUCE STREET
Box:14508
City:ST. LOUIS
State:MO
ZIP:63103
Country:US
Phone:314-771-5765/414-273-3850X5996
CAGE:54968

========== Composition/Information on Ingredients ==========

Ingred Name:DIBENZ A,H ANTHRACENE
CAS:53-70-3
RTECS #:HN2625000
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:REPORTED ANIMAL CARCINOGEN.
Explanation of Carcinogenicity:DIBENZ(A,H) ANTHRACENE: GROUP 2A(IARC),
ANTICIPATED TO BE CARCINOGEN (NTP).
Effects of Overexposure:NONE SPECIFIED BY MANUFACTURER.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

========== First Aid Measures ==========

First Aid:EYES: FLUSH WITH WATER FOR AT LEAST 15 MIN. CONTACT A
PHYSICIAN. SKIN: FLUSH WITH LARGE VOLUMES OF WATER. CONTACT A
PHYSICIAN. INHAL: IMMED MOVE TO FRESH AIR. INGEST: CONTACT A
PHYSICIAN.

========== Fire Fighting Measures ==========

Lower Limits:1%

Extinguishing Media:WATER, CO2, DRY CHEMICAL.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL
PROTECTIVE EQUIPMENT .

========== Accidental Release Measures ==========

Spill Release Procedures:SWEEP UP MATERIAL. AVOID GENERATING DUST.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:STORE IN SEALED CONTAINER IN COOL, DRY
LOCATION. AVOID GENERATING DUST.
Other Precautions:REPORTED CANCER HAZARD. AVOID EYE OR SKIN CONTACT.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:WEAR NIOSH/MSHA APPROVED SCBA.
Ventilation:USE ONLY IN WELL VENTILATED AREA.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:CHEMICAL WORKERS GOGGLES .
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

HCC:T6
Boiling Pt:B.P. Text:509F,265C
Vapor Density:9.60
Spec Gravity:>1(H2O=1)
Appearance and Odor:OFF-WHITE TO YELLOW-GREEN CRYSTALLINE

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
OXIDIZING AGENTS.

========== Disposal Considerations ==========

Waste Disposal Methods:COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR
LOCAL REGULATIONS.

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Material Safety Data Sheet
Dibenzofuran

ACC# 95339

Section 1 - Chemical Product and Company Identification

MSDS Name: Dibenzofuran
Catalog Numbers: AC159300000, AC159300050, AC159300250, AC159300500, AC159301000, AC159302500 AC159302500, AC217030000, AC217030050, AC217030500
Synonyms: Diphenylene oxide; 2,2'-Biphenylene oxide; Dibenzo(b,d)furan; a polynuclear aromatic compound; oxygen heterocyclic PAH.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
132-64-9	Dibenzofuran	> 98	205-071-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to pale yellow crystalline powder.
Warning! Causes eye irritation. May cause skin and respiratory tract irritation. The toxicological properties of this material have not been fully investigated.
Target Organs: Eyes.

Potential Health Effects

Eye: Causes eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.
Inhalation: May cause respiratory tract irritation.
Chronic: Some polycyclic aromatic hydrocarbons are suspect carcinogens, as well as air and water contaminants.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing

and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.
Flash Point: 130 deg C (266.00 deg F)
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid breathing dust.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Local exhaust may be necessary to control concentrations to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Dibenzofuran	none listed	none listed	none listed

OSHA Vacated PELs: Dibenzofuran: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear a chemical apron.
Respirators: A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Appearance: white to pale yellow
Odor: Not available.
pH: Not available.
Vapor Pressure: 0.0175 mm Hg @ 25 deg C
Vapor Density: 5.8 (air=1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 285 deg C @ 760 mm Hg
Freezing/Melting Point:81 - 85 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density: Not available.
Molecular Formula:C12H8O
Molecular Weight:168.19

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Dust generation, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 132-64-9: HP4430000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 132-64-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Mortality studies have demonstrated that exposure to coke oven emissions, which contain a variety of PAHs (Polycyclic aromatic hydrocarbons), caused increased incidences of lung and genitourinary cancer mortality in coke oven workers.

Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: See actual entry in RTECS for complete information.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Fish toxicity : time to produce sickness at 5 ppm : brown trout 4 hr.; bluegill sunfish 6 hr; goldfish 6 hr. All species died within 8 hr. Time to produce sickness at 1 ppm : brown trout 22 hr. Water characteristics for tests were pH7, dissolved oxygen conc. 7.5 ppm, total hardness 300ppm (soap method), methyl orange alkalinity 310ppm, free carbon dioxide 5 ppm, temperature 35øC (USEPA August 1987. Part I : The toxicity of 3400 chemicals to fish EPA 560/6-87-002)
Environmental: Considered to be persistent, bioaccumulative, and toxic. Even when released in very small amounts, can accumulate and cause environmental problems.
Physical: No information available.
Other: Dibenzofuran has been listed as a pollutant of concern to EPA's Great Waters Program due to its persistence in the environment, potential to bioaccumulate, and toxicity to humans and the environment. It is a Persistent Organic Pollutant (POPs).

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SO
Hazard Class:	9	9
UN Number:	UN3077	UN3077
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 132-64-9 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 132-64-9: 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains Dibenzofuran (CAS# 132-64-9, > 98%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 132-64-9 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 132-64-9 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

N

Risk Phrases:

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.
S 29 Do not empty into drains.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 132-64-9: No information available.

Canada - DSL/NDSL

CAS# 132-64-9 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #5 Date: 11/20/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **DIELDRIN**

CAS Number: 60-57-1
DOT Number: NA 2761

RTK Substance number: 0683
Date: December 1986 Revision: November 1998

HAZARD SUMMARY

* **Dieldrin** can affect you when breathed in and by passing through your skin.
* **Dieldrin** may damage the developing fetus and may reduce fertility in males and females.
* Contact may cause a skin rash.
* **Dieldrin** may irritate the eyes and affect vision.
* **Dieldrin** can cause nausea, vomiting, loss of appetite, weight loss and weakness.
* Exposure to **Dieldrin** can cause headache, irritability, dizziness and disturbances in sleep.
* Repeated higher exposure can cause tremors, muscle twitching and seizures (convulsions), and may lead to coma and death.
* Repeated exposure may cause personality changes of depression, anxiety or irritability.
* **Dieldrin** may damage the liver.

IDENTIFICATION

Dieldrin is a colorless to light tan solid with a mild odor. It was sprayed as a liquid to control insects and termites. Its use has been restricted by EPA to soil injection for termite control.

REASON FOR CITATION

* **Dieldrin** is on the Hazardous Substance List because it is regulated by OSHA and cited by NIOSH, ACGIH, EPA, and DOT.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020**.**
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.
* **ODOR THRESHOLD = 0.041 ppm**.
* The range of accepted odor threshold values is quite broad. Caution should be used in relying on odor alone as a warning of potentially hazardous exposures.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **0.25 mg/m^3** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit is **0.25 mg/m^3** averaged over a 10-hour workshift.

ACGIH: The recommended airborne exposure limit is **0.25 mg/m^3** averaged over an 8-hour workshift.

* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Dieldrin** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Dieldrin** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Dieldrin**:

* Contact may cause a skin rash.
* **Dieldrin** may irritate the eyes and affect vision.
* **Dieldrin** can cause nausea, vomiting, loss of appetite, weight loss and weakness.
* Exposure to **Dieldrin** can cause headache, irritability, dizziness and disturbances in sleep.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Dieldrin** and can last for months or years:

Cancer Hazard

* There is limited evidence that **Dieldrin** causes cancer in animals. It may cause cancer of the liver.
* Many scientists believe there is no safe level of exposure to a carcinogen.

Reproductive Hazard

* **Dieldrin** may damage the developing fetus.
* It may reduce fertility in males and females.
* It concentrates in breast milk, and therefore, may be transferred to breast feeding infants.

Other Long-Term Effects

* Repeated higher exposure can cause tremors, muscle twitching and seizures (convulsions), and may lead to coma and death.
* Convulsions are sometimes delayed and may occur weeks or months after an exposure.
* Repeated exposure may cause personality changes of depression, anxiety or irritability.
* **Dieldrin** may damage the liver.

MEDICAL

Medical Testing

Before beginning employment and at regular times after that, the following are recommended:

* Blood **Dieldrin** level (Norm = less than **1 mg/100 ml**; level should not exceed **15 mg/100 ml**).
* Examination of the nervous system.

If symptoms develop or overexposure has occurred, the following may be useful:

* Liver function tests.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following control is recommended:

* Where possible, automatically transfer **Dieldrin** from drums or other storage containers to process containers.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Dieldrin** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Dieldrin**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Dieldrin**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Dieldrin**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Dieldrin** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.

* Use a vacuum or a wet method to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Wear protective gloves and clothing. Safety equipment suppliers/manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles when working with solid **Dieldrin**.
* Wear indirect-vent, impact and splash resistant goggles when working with **Dieldrin** in solution.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.
* Contact lenses should not be worn when working with this substance.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* For field applications check with your supervisor and your safety equipment supplier regarding the appropriate respiratory equipment.
* NIOSH has established new testing and certification requirements for negative pressure, air purifying, particulate filter and filtering facepiece respirators. The filter classifications of dust/mist/fume, paint spray or pesticide prefilters, and filters for radon daughters, have been replaced with the N, R, and P series. Each series has three levels of filtering efficiency: 95%, 99%, and 99.9%. Check with your safety equipment supplier or your respirator manufacturer to determine which respirator is appropriate for your facility.
* If while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Dieldrin**, or if while wearing particulate filters abnormal resistance to breathing is experienced, or eye irritation occurs while wearing a full facepiece respirator, leave the area immediately. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
* Be sure to consider all potential exposures in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
* Where the potential exists for exposure over **0.25 mg/m^3**, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
* Exposure to **50 mg/m^3** is immediately dangerous to life and health. If the possibility of exposure above **50 mg/m^3** exists, use a MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?

A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?

A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?

A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?

A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

Q: Can men as well as women be affected by chemicals that cause reproductive system damage?
A: Yes. Some chemicals reduce potency or fertility in both men and women. Some damage sperm and eggs, possibly leading to birth defects.

Q: Who is at the greatest risk from reproductive hazards?
A: Pregnant women are at greatest risk from chemicals that harm the developing fetus. However, chemicals may affect the ability to have children, so both men and women of childbearing age are at high risk.

Q: Should I be concerned if a chemical is a teratogen in animals?
A: Yes. Although some chemicals may affect humans differently than they affect animals, damage to animals suggests that similar damage can occur in humans.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Disease and Injury Services
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Disease and Injury Services, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **DIELDRIN**
DOT Number: **NA 2761**
NAERG Code: **151**
CAS Number: **60-57-1**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	Not Found	Not Rated
REACTIVITY	Not Found	Not Rated
POISONOUS GASES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Dieldrin** is a NONCOMBUSTIBLE SOLID. However commercial products may contain **Dieldrin** in solution with flammable or combustible liquids.
* Use dry chemical, CO_2, water spray, alcohol or polymer foam extinguishers.
* POISONOUS GASES ARE PRODUCED IN FIRE, including *Hydrogen Chloride* and *Carbon Monoxide*.
* CONTAINERS MAY EXPLODE IN FIRE.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Dieldrin** in solution is spilled or leaked, or **Dieldrin** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill or leak until clean-up is complete.
* Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate area after clean-up is complete.
* It may be necessary to contain and dispose of **Dieldrin** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

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HANDLING AND STORAGE

* Prior to working with **Dieldrin** you should be trained on its proper handling and storage.
* **Dieldrin** is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES and NITRATES); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); CHEMICALLY ACTIVE METALS (such as POTASSIUM, SODIUM, MAGNESIUM and ZINC) and PHENOLS.
* Store in tightly closed containers in a cool, well-ventilated area away from COPPER and IRON and their SALTS.

FIRST AID

In NJ, POISON INFORMATION 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Quickly remove contaminated clothing. Immediately wash area with large amounts of soap and water. Seek medical attention.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: $8x10^{-7}$ mm Hg at 77°F (25°C)
Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

Chemical Name:

2,7:3,6-Dimethanonaphth 2,3-B Oxirene, 3,4,5,6,9,9-Hexachloro-1A,2,2A,3,6,6A,7,7A-Octahydro-, (1A alpha, 2 beta, 2A alpha, 3 beta, 6 beta, 6A alpha, 7 beta, 7A alpha)-

Other Names:

HEOD; ALVIT; Quintox; Octalox

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

MSDS SUMMARY SHEET

Manufacturer:
Name: PHILLIPS PETROLEUM COMPANY
Address 1:
Address 2:
Address 3:
CSZ: BARTLESVILLE **State:** OK **Zipcode:** 74004
Emergency phone: (800) 424-9300
Business phone: 800-762-0942

Product:

Ferndale MSDS#: 1354 **Version # :** 6
Manufacturer MSDS#: 0041
Current? : 2002
Name:

NO. 2 DIESEL FUEL

Synonyms:

CARB **Diesel** TF3
CARB **Diesel**
CARB **Diesel** 10%
Diesel Fuel Oil
EPA Low Sulfur **Diesel** Fuel
EPA Low Sulfur **Diesel** Fuel – Dyed
EPA Off Road High Sulfur **Diesel –** Dyed
Fuel Oil No. 2 – CAS # 68476-30-2
No. 2 **Diesel** Fuel Oil
No. 2 Fuel Oil – Non Hiway – Dyed
No. 2 High Sulfur **Diesel** – Dyed
No. 2 Low Sulfur **Diesel** - Dyed
No. 2 Low Sulfur **Diesel** - Undyed
Crude column 3rd IR
Crude column 3rd side cut
Atmospheric tower 3rd side cut
Ultra Low Sulfur **Diesel** No. 2
Finished **Diesel**
DHT Reactor Feed
Straight Run **Diesel**
Diesel
Middle Distillate

Product/Catalog Numbers:
MSDS Date: 01/01/2002 **(received:** 01/14/2002**)**

NFPA codes:
Health: 0 **Flammability:** 2 **Reactivity:** 0

MATERIAL SAFETY DATA SHEET
No. 2 Diesel Fuel

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: No. 2 Diesel Fuel
Product Code: Multiple
SAP Code:
Synonyms: 1354
CARB Diesel TF3
CARB Diesel
CARB Diesel 10%
Diesel Fuel Oil
EPA Low Sulfur Diesel Fuel
EPA Low Sulfur Diesel Fuel – Dyed
EPA Off Road High Sulfur Diesel – Dyed
Fuel Oil No. 2 – CAS # 68476-30-2
No. 2 Diesel Fuel Oil
No. 2 Fuel Oil – Non Hiway – Dyed
No. 2 High Sulfur Diesel – Dyed
No. 2 Low Sulfur Diesel - Dyed
No. 2 Low Sulfur Diesel – Undyed
No. 2 Ultra Low Sulfur Diesel – Dyed
No. 2 Ultra Low Sulfur Diesel - Undyed
Intended Use: Fuel
Chemical Family:
Responsible Party: Phillip's Petroleum Company
Bartlesville, Oklahoma 74004
For Additional MSDSs: 800-762-0942
Technical Information:

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident
Call CHEMTREC
North America: (800) 424-9300
Others: (703) 527-3887 (collect)

California Poison Control System: 800-356-3120

Health Hazards/Precautionary Measures: Causes severe skin irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Flammable liquid and vapor. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

Appearance: Straw-colored to dyed red
Physical Form: Liquid
Odor: Characteristic petroleum

HFPA Hazard Class:
Health: 0 (Least)
Flammability: 2 (Moderate)
Reactivity: 0 (Least)

HMIS Hazard Class
Not Evaluated

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% VOLUME		EXPOSURE GUIDELINE	
		Limits	Agency	Type
Diesel Fuel No. 2 CAS# 68476-34-6	100	100* mg/m3	ACGIH	TWA-SKIN
Naphthalene CAS# 91-20-3	<1	10ppm	ACGIH	TWA
		15ppm	ACGIH	STEL
		10ppm	OSHA	TWA
		250ppm	NIOSH	IDLH

All components are listed on the TSCA inventory

Tosco Low Sulfur No. 2 Diesel meets the specifications of 40 CFR 60.41 for low sulfur diesel fuel.

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

*Proposed ACGIH (1999)

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Severe skin irritant. Contact may cause redness, itching, burning, and severe skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation). Not actually toxic by skin absorption, but prolonged or repeated skin contact may be harmful (see Section 11).

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): Low degree of toxicity by ingestion. ASPIRATION HAZARD – This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea, diarrhea and transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

Cancer: Possible skin cancer hazard (see Sections 11 and 14).

Target Organs: There is limited evidence from animal studies that overexposure may cause injury to the kidney (see Section 11).

Developmental: Inadequate data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders and kidney disorders.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Immediately remove contaminated shoes, clothing, and constrictive jewelry and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek immediate medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek immediate medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): Aspiration hazard; Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point: >125°F/>52°
OSHA Flammability Class: Combustible liquid
LEL %: 0.3 / UEL %; 10.0
Autoignition Temperature: 500°F/260°C

Unusual Fire & Explosion Hazards: This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use foam on spills to minimize vapors (see Section 5). Spilled material may be absorbed into an appropriate material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharged. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing or high pressure hydraulic oil equipment.

“Empty” containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. “Empty” drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSIZ49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area “No Smoking or Open Flame.” Store only in approved containers. Keep away from incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentration below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with an organic vapor cartridge maybe used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is a potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrants a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

Eyes/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1atm).

Appearance: Straw-colored to dyed red
Physical State: Liquid
Odor: Characteristic petroleum
pH: unavailable
Vapor Pressure (mm Hg): 0.40
Vapor Densisty (air=1):>3
Boiling Point/Range: 320-700°F /160-371°C
Freezing/Melting Point: No Data
Solubility in Water: Negligible
Specific Gravity: 0.81-0.88 @ 60°F
Percent Volatile: Negligible
Evaporation Rate (nBuAc=1): <1
Viscosity: 32.6-40.0 SUS @ 100°F
Bulk Density: 7.08 lbs/gal
Flash Point: >125°F / >52°C
Flammable/Expolsive Limits (%): LEL: 0.3 / UEL: 10.0

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Flammable liquid and vapor. Vapor can cause flash fire.

Conditions To Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc.

Hazardous Decomposition Products: The use of hydrocarbon fuels in an area without adequate ventilation may result in hazardous levels of combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. ACGIH has included a TLV of 0.05 mg/m3 TWA for diesel exhaust particulate on its 1999 Notice of Intended Changes. See Section 11 for additional information on hazards of engine exhaust.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Diesel Fuel No. 2 (CAS# 68476-34-6)

Carcinogenicity: Chronic dermal application of certain middle distillate streams contained in diesel fuel No. 2 resulted in an increased incidence of skin tumors in mice. This material has not been identified as carcinogen by NTP, IARC, or OSHA. Diesel exhaust is a probable cancer hazard based on tests with laboratory animals.

Target Organ(s): Limited evidence of renal impairment has been noted from a few case reports involving excessive exposure to diesel fuel No. 2.

Naphthalene (CAS# 91-20-3)

Carcinogenicity: Naphthalene has been evaluated in two year inhalation studies in both rats and mice. The National Toxicology Program (NTP) concluded that there is clear evidence of carcinogenicity in male and female rats based on increased incidences of respiratory epithelial adenomas and olfactory epithelial neuroblastomas of the nose. NTP found some evidence of carcinogenicity in female mice (alveolar adenomas) and no evidence of carcinogenicity in male mice. Naphthalene has not been identified as a carcinogen by IARC or OSHA.

12. ECOLOGICAL INFORMATION

Not evaluated at this time

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA “characteristic” hazardous waste due to the characteristic(s) of ignitability (D001) and benzene (D018). If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent then the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container ?insate? could be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller containers, consult with state and local regulations and disposal authorities.

14. TRANSPORT INFORMATION

DOT Shipping Description: Diesel Fuel, NA1983
Non-Bulk Package Marking: Diesel Fuel, 3, NA 1993, III

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health:	Yes
Chronic Health:	Yes
Fire Hazard:	Yes
Pressure Hazard:	No
Reactive Hazard:	No

SARA 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
-- None known --		

California Proposition 65:

Warning: This material contains the following chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Component	Effect
Benzene	Cancer, Developmental and Reproductive Toxicant
Toluene	Developmental Toxicant

Diesel engine exhaust, while not a component of this material, is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any. Diesel exhaust is a probable cancer hazard based on tests in laboratory animals. It has been identified as carcinogen by IARC.

EPA (CERCLA Reportable Quantity: None

16. OTHER INFORMATION

Issue Date: 01/01/02
Previous Issue Date: 05/15/01
Product Code: Multiple
Revised Sections: None
Previous Product Code: Multiple
MSDS Number: 0041

Disclaimer of Expressed and Implied Warranties:

The information presented in this Material Data Safety Sheet is based on data believed to be accurate as of the date this Material Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THE PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Tosco Refining Company ***Ferndale Refinery***

UltraLow Sulfur Diesel Product Specification

Ferndale Product Code:34380xx (5) Product Code: ULSD2

(COMETS)

Specification	Unit	Limit	Test Procedure	Typical
Appearance				
Water & Sediment	Vol %	0.05 Max	D 2709	
Color	Number	3.0 Max	D 1500	
Haze Rating	Rating	2 Max	D 4176	
Composition				
Carbon Residue (Ramsbottom)	Wt %	0.35 Max	D 524, D 189	
Volatility				
90% Recovered	Deg; F	540 Min	D 86	
	Deg; F	640 Min	D 86	
Flash Point	Deg; F	125 Min (1)	D 93	130 F
Gravity	API	30 Min	D 287, D4052	
Fluidity				
Pour Point	Deg; F	See Season Table (6)	D 97	
Cloud Point	Deg; F	See Season Table (6)	D 2500	10 F
Viscosity @ 104F	cSt	1.9 Min	D 445	
	cSt	4.1 Max	D 445	
Lubricity, SLBOCLE	grams	3100 Min	D 6078	3300gm
Lubricity, HFRR	mm	.45	D 6079	
Combustion				
Cetane Index or Cetane Number (3,4)	Number	40.0 Min	D 976, D613	47.0
Corrosion				
Copper Strip, 3hr @ 50 deg C	Number	3 Max (2)	D 130	
Aromatics (4)	Vol %	35 Max	D 1319	25 %
Contaminants				
Total Sulfur	PPM	30 Max	D 2622, D4294	15-20ppm
Water & Sediment	Vol %	0.05 Max	D 1796	
Ash	Wt %	0.01 Max	D 482	
Additives				
Cetane Improver	Lb/MBbl	675 Max		
Dye		Undyed		

1. Minimum release specification is 125 deg. F. The refinery should target 135 deg. F.
2. Test result reported as a number and letter (e.g. 1a). Any letter is allowable as long as the number meets the spec shown.
3. Either specification must be met.
4. Either cetane index minimum or aromatics maximum must be met.
5. Winter cloud and pour specifications may be relaxed to the summer specifications by agreement with the customer.
6. Season Table

Month	Product Code	Pour Point	Cloud Point
Jan, Feb, Nov, Dec	WI	0 max (5)	14 max (5)
Mar - Oct	SU	15 max	24 max

Material Safety Data Sheet
Ethylbenzene

MSDS# 00596

Section 1 - Chemical Product and Company Identification

MSDS Name:	Ethylbenzene
Catalog Numbers:	AC118080000, AC118080025, AC118080250, AC118080251, AC118085000, 11808-0010, O2751-1
Synonyms:	Ethylbenzol; Phenylethane.

Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#:	100-41-4
Chemical Name:	Ethylbenzene
%:	>99
EINECS#:	202-849-4

Hazard Symbols: XN F

Risk Phrases: 11 20

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. May cause central nervous system depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. May be harmful if inhaled. Causes eye, skin, and respiratory tract irritation. Target Organs: Central nervous system.

Potential Health Effects

Eye:	Causes severe eye irritation. Causes redness and pain.
Skin:	Causes skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May be absorbed through the skin. Causes redness and pain.
Ingestion:	May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation:	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Vapors may cause dizziness or suffocation.
Chronic:	Chronic inhalation may cause effects similar to those of acute inhalation.

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin:	Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion:	Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:	

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire. May accumulate static electricity.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Autoignition Temperature:	432 deg C (809.60 deg F)
Flash Point:	15 deg C (59.00 deg F)
Explosion Limits: Lower:	1.2%
Explosion Limits: Upper:	6.8%
NFPA Rating:	health: 2; flammability: 3; instability: 0;

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. Control runoff and isolate discharged material for proper disposal. Use water spray to cool and disperse vapors and protect personnel.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid breathing vapor or mist.
Storage:	Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethylbenzene	100 ppm; 125 ppm STEL	100 ppm TWA; 435 mg/m3 TWA 800 ppm IDLH (10% LEL)	100 ppm TWA; 435 mg/m3 TWA

OSHA Vacated PELs: Ethylbenzene: 100 ppm TWA; 435 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	clear, colorless
Odor:	aromatic odor
pH:	Not available
Vapor Pressure:	9.6 mm Hg @ 25 deg C
Vapor Density:	3.7 (air=1)
Evaporation Rate:	<1 (butyl acetate=1)
Viscosity:	0.63 mPa s 20 C
Boiling Point:	136 deg C (276.80°F)
Freezing/Melting Point:	-95 deg C (-139.00°F)
Decomposition Temperature:	Not available
Solubility in water:	Insoluble
Specific Gravity/Density:	0.86
Molecular Formula:	C8H10
Molecular Weight:	106.17

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Ignition sources, excess heat.
Incompatibilities with Other Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 100-41-4: DA0700000

RTECS:

CAS# 100-41-4: Draize test, rabbit, eye: 500 mg Severe;
Inhalation, mouse: LC50 = 35500 mg/m3/2H;
Inhalation, rat: LC50 = 55000 mg/m3/2H;

LD50/LC50: Oral, rat: LD50 = 3500 mg/kg;
Oral, rat: LD50 = 3500 mg/kg;
Skin, rabbit: LD50 = 17800 uL/kg;
.
Other: Inhalation rat LC50: 17.2 mg/l/4H from BASF.

Carcinogenicity: Ethylbenzene - ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
California: carcinogen, initial date 6/11/04 IARC: Group 2B carcinogen

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Fish: Rainbow trout: LC50 = 14.0 mg/L; 96 Hr.; Static Bioassay
Fish: Fathead Minnow: LC50 = 12.1 mg/L; 96 Hr.; Flow-through Bioassay
Ecotoxicity: Fish: Bluegill/Sunfish: LC50 = 150.0 mg/L; 96 Hr.; Static Bioassay, pH 6.5-7.9, 21-23 degrees C
Water flea EC50 = 2.1 mg/L; 48 Hr.; Static Bioassay
Water flea EC50 = 75.0 mg/L; 48 Hr.; Static Bioassay

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: ETHYLBENZENE
Hazard Class: 3
UN Number: UN1175
Packing Group: II
Canada TDG
Shipping Name: ETHYLBENZENE
Hazard Class: 3
UN Number: UN1175
Packing Group: II

USA RQ: CAS# 100-41-4: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 11 Highly flammable.

R 20 Harmful by inhalation.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 29 Do not empty into drains.

WGK (Water Danger/Protection)

CAS# 100-41-4: 1

Canada

CAS# 100-41-4 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D2B, D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 100-41-4 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 100-41-4 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 4/28/1999

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied,

with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

SAFETY DATA SHEET

Based on Directive 2001/58/EC et seq. of the Commission of the European Communities

FLUORANTHENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: 1,2-benzacenaphthene, benzo(jk)fluorene

CAS No.	: 206-44-0	**BCR number**	: BCR-160R
EC index No.	: N.A.	**NFPA code**	: N.D.
EINECS No.	: 205-912-4	**Molecular weight**	: 202.26
RTECS No.	: LL4025000	**Formula**	: $C_{16}H_{10}$

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
fluoranthene	206-44-0 205-912-4	100	Xn;N	22-36-51/53-68 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Harmful if swallowed
- Irritating to eyes
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Possible risk of irreversible effects

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service
- Rinse immediately with plenty of water
- Do not apply neutralizing agents

4.2 Skin contact:
- Consult a doctor/medical service
- Wash immediately with lots of water
- -Do not apply (chemical) neutralizing agents

4.3 After inhalation:
- Consult a doctor/medical service
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service

- Never give water to an unconscious person

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- No data available

5.3 Special exposure hazards:
- Combustible
- It's dust is explosive with air
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill
- Knock down/dilute dust cloud with water spray

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:
- Keep container tightly closed
- Store in a dry area
- Store in a dark area
- Meet the legal requirements.
- Keep away from: heat sources, oxidizing agents

Storage temperature : < 4 **°C**
Quantity limits : N.D. **kg**
Storage life : N.D.
Materials for packaging :
- suitable : glass
- to avoid : no data available

7.3 Specific uses: N.D.

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRK	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed

Sampling methods:

- Fluoranthene (Polynuclear aromatic hydrocarbon)	NIOSH 5506
- Fluoranthene	OSHA CSI
- Fluoranthene (Polynuclear aromatic hydrocarbon)	NIOSH 5515

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: Rubber

- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: Rubber

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Needles
Odour	:	N.D.
Colour	:	Colourless to light-yellow

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	384	**°C**
Flashpoint	:	198	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	< 0.01	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.30	
Water solubility	:	0.00002	**g/100 ml**
Soluble in	:	Ethanol, ether, chloroform, acetic acid, carbondisulfide	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.33	
Evaporation rate			
ratio butyl acetate	:	N.D.	
ratio ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	110	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m³**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- No data available

10.2 Materials to avoid:
- Keep away from: heat sources, oxidizing agents

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	2000	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	3180	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	not listed
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	not listed
Carcinogenicity (MAC)	:	not listed
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	not listed
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	not listed
IARC classification	:	3

11.3 Routes of exposure: ingestion, inhalation, eyes and skin

11.4 Acute effects/symptoms:

- **AFTER EYE CONTACT**
- Irritation of the eye tissue

11.5 Chronic effects:

- Possible risks of irreversible effects
- Not classified as toxic to reproduction (EC)

- **SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:**
- Tingling/irritation of the skin
- Nausea
- Accelerated heart action
- Disturbances of heart rate
- Enlargement/affection of the liver
- Risk of lung oedema

12. Ecological information

12.1 Ecotoxicity:

fluoranthene:
- LC50 (96 h) : 4 mg/l (LEPOMIS MACROCHIRUS)
- LC50 (48 h) : 320 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 54 mg/l (SELENASTRUM CAPRICORNUTUM)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%

- Forming sediments in water
- Insoluble in water
- Substance sinks in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- biodegradation BOD_5 : N.D. **% ThOD**

- water : - N.D.

- soil : **T ½:** N.D. **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.33
- **BCF** : h : 3981 (PIMEPHALES PROMELAS)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) No 3093/94, O.J. L333 of 22/12/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

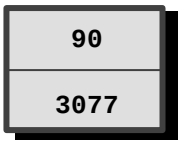
13. Disposal considerations

13.1 Provisions relating to waste:
- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:
- Do not discharge into surface water (2000/60/EEC, Council Decision 2455/2001/EC, O.J. L331 of 15/12/2001)
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber

13.3 Packaging/Container:
- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (fluoranthene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Not listed in Annex I of directive 67/548/EEC et sequens. Labelling established on the basis of the available data.

Harmful

Dangerous for the environment

R22 : Harmful if swallowed
R36 : Irritating to eyes
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68 : Possible risk of irreversible effects

S(02) : (Keep out of reach of children)
S22 : Do not breathe dust
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37 : Wear suitable protective clothing and gloves
S46 : If swallowed, seek medical advice immediately and show this container or label
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R22 : Harmful if swallowed
R36 : Irritating to eyes
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68 : Possible risk of irreversible effects

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Material Safety Data Sheet

Fluorene

MSDS# 92820

Section 1 - Chemical Product and Company Identification

MSDS Name:	Fluorene
Catalog Numbers:	AC156130000, AC156130250, AC156131000, AC156135000
Synonyms:	Diphenylenemethane.
Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#:	86-73-7
Chemical Name:	Fluorene
%:	98
EINECS#:	201-695-5

Hazard Symbols: N

Risk Phrases: 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! May cause eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Target Organs: None known.

Potential Health Effects

Eye:	May cause eye irritation.
Skin:	May cause skin irritation. May be harmful if absorbed through the skin.
Ingestion:	May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation:	May cause respiratory tract irritation. May be harmful if inhaled.
Chronic:	No information found.

Section 4 - First Aid Measures

Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Do not induce vomiting. Get medical aid if irritation or symptoms occur.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not available.

Flash Point: 151 deg C (303.80 deg F)

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Do not let this chemical enter the environment. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Fluorene	none listed	none listed	none listed

OSHA Vacated PELs: Fluorene: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Color: almost white - light brown

Odor: None reported.
pH: Not available
Vapor Pressure: 13 hPa @ 146 deg C
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 298 deg C @ 760 mmHg (568.40°F)
Freezing/Melting Point: 112 - 116 deg C
Decomposition Temperature: Not available
Solubility in water: Insoluble
Specific Gravity/Density: 1.2
Molecular Formula: C13H10
Molecular Weight: 166.22

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, dust generation, excess heat.
Incompatibilities with Other Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:	CAS# 86-73-7: LL5670000
LD50/LC50:	RTECS: Not available.
Carcinogenicity:	Fluorene - IARC: Group 3 (not classifiable)
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Not available

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

USA RQ: CAS# 86-73-7: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: N

Risk Phrases:

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 86-73-7: Not available

Canada

CAS# 86-73-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 86-73-7 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 86-73-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 2/25/1999

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

IPCS INCHEM Home

INDENO(1,2,3-cd)PYRENE

ICSC: 0730

Date of Peer Review: March 1999

o-Phenylenepyrene
2,3-Phenylenepyrene

CAS #	193-39-5	$C_{22}H_{12}$
RTECS #	NK9300000	Molecular mass: 276.3
UN #		
EC Index #		

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		**AVOID ALL CONTACT!**	
Inhalation		Local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	**EU Classification** **UN Classification**
EMERGENCY RESPONSE	**STORAGE**
	Provision to contain effluent from fire extinguishing. Well closed.

IPCS
International Programme on

Prepared in the context of cooperation between the International Programme on Chemical Safety and the Commission of the European Communities © IPCS, CEC 2005

Chemical Safety

SEE IMPORTANT INFORMATION ON BACK

INDENO(1,2,3-cd)PYRENE	ICSC: 0730

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE: YELLOW CRYSTALS **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established. MAK: Carcinogen category: 2; (DFG 2004).	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and through the skin. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 536°C Melting point: 164°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.58

ENVIRONMENTAL DATA

This substance may be hazardous to the environment; special attention should be given to air quality and water quality. Bioaccumulation of this chemical may occur in fish.

NOTES

Indeno(1,2,3-cd)pyrene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco. ACGIH recommends environment containing Indeno(1,2,3-c,d)pyrene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m³. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Card has been partly updated in October 2005. See section Occupational Exposure Limits.

ADDITIONAL INFORMATION

LEGAL NOTICE Neither the CEC nor the IPCS nor any person acting on behalf of the CEC or the IPCS is responsible for the use which might be made of this information

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See Also:
Toxicological Abbreviations
Indeno(1,2,3-cd)Pyrene (IARC Summary & Evaluation, Volume 3, 1973)

NIOSH Pocket Guide to Chemical Hazards

NPG Home | Introduction | Synonyms & Trade Names | Chemical Names | CAS Numbers | RTECS Numbers | Appendices | Se

Iron oxide dust and fume (as Fe)

CAS 1309-37-1

Fe_2O_3

RTECS NO74(NO7525000 (fun

Synonyms & Trade Names
Ferric oxide, Iron(III) oxide

DOT ID & Gui
1376 135 (spent)

Exposure Limits	**NIOSH REL**: TWA 5 mg/m^3
	OSHA PEL: TWA 10 mg/m^3

IDLH 2500 mg/m^3 (as Fe) See: 1309371

Conversion

Physical Description
Reddish-brown solid. [Note: Exposure to fume may occur during the arc-welding of iron.]

MW: 159.7	BP: ?	MLT: 2664°F	Sol: Insoluble
VP: 0 mmHg (approx)	IP: NA		Sp.Gr: 5.24
Fl.P: NA	UEL: NA	LEL: NA	

Noncombustible Solid

Incompatibilities & Reactivities
Calcium hypochlorite

Measurement Methods
NIOSH 7300, 7301, 7303, 9102; OSHA ID121, ID125G
See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

First Aid (See procedures)

Breathing: Respiratory support

Respirator Recommendations NIOSH

Up to 50 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering face quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100. Click here for inform selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 125 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered air-purifying respirator with a high-efficiency particulate filter.

Up to 250 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. Click here for information on sel or P filters.
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece
Up to 2500 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode
Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand o pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positiv mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
Escape:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. Click here for information on sel or P filters./Any appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes inhalation

Symptoms Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis (siderosis)

Target Organs respiratory system

See also: INTRODUCTION See ICSC CARD: 1577 MEDICAL TESTS: 0122

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For the following RAE Part Numbers:

600-0001-000, 600-0002-000

600-0002-001, 600-0026-000

600-0027-000, 600-0069-000

AIR LIQUIDE

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS: NONFLAMMABLE GAS MIXTURE

Containing One or More of the Following Components in a Nitrogen Balance Gas: Oxygen 0-23.5%; Isobutylene, 0.0005-0.9%

SYNONYMS: Not Applicable
CHEMICAL FAMILY NAME: Not Applicable
FORMULA: Not Applicable
Document Number: 50054

Note: The Material Safety Data Sheet is for this gas mixture supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT - 39 cylinders). This MSDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 2 (Composition and Information on Ingredients). Refer to the product label for information on the actual composition of the product.

PRODUCT USE:	Calibration of Monitoring and Research Equipment
SUPPLIER/MANUFACTURER'S NAME:	CALGAZ
ADDRESS:	821 Chesapeake Drive Cambridge, MD 21613
EMERGENCY PHONE:	CHEMTREC: 1-800-424-9300
BUSINESS PHONE:	1-410-228-6400
General MSDS Information:	1-713/868-0440
Fax on Demand:	1-800/231-1366

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		NIOSH	OTHER
			TWA ppm	STEL ppm	TWA ppm	STEL ppm	IDLH ppm	ppm
Isobutylene	115-11-7	0.0005-0.9%	There are no specific exposure limits for Isobutylene.					
Oxygen	7782-44-7	0-23.5%	There are no specific exposure limits for Oxygen.					
Nitrogen	7727-37-9	Balance	There are no specific exposure limits for Nitrogen. Nitrogen is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					

NE = Not Established. See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This gas mixture has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is a colorless, odorless gas mixture. Releases of this gas mixture may produce oxygen-deficient atmospheres (especially in confined spaces or other poorly-ventilated environments); individuals in such atmospheres may be asphyxiated. Isobutylene, a component of this gas mixture, may cause drowsiness and other central nervous system effects in high concentrations; however, due to its low concentration in this gas mixture, this is unlikely to occur.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant route of over-exposure for this gas mixture is by inhalation.

INHALATION: Due to the small size of an individual cylinder of this gas mixture, no unusual health effects from over-exposure to the product are anticipated under routine circumstances of use. The chief health hazard associated with this gas mixture is when this gas mixture contains less than 19.5% Oxygen and is released in a small, poorly-ventilated area (i.e. an enclosed or confined space). Under this circumstance, an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The effects associated with various levels of oxygen are as follows:

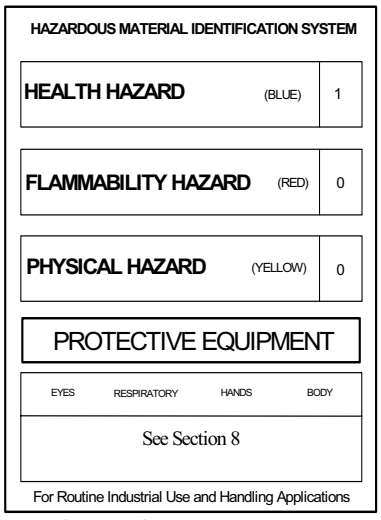
CONCENTRATION OF OXYGEN	OBSERVED EFFECT
12-16% Oxygen:	Breathing and pulse rate increase, muscular coordination slightly disturbed.
10-14% Oxygen:	Emotional upset, abnormal fatigue, disturbed respiration.
6-10% Oxygen:	Nausea, vomiting, collapse, or loss of consciousness.
Below 6%:	Convulsive movements, possible respiratory collapse, and death.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Over-exposure to this gas mixture may cause the following health effects:

ACUTE: Due to the small size of the individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. The most significant hazard associated with this gas mixture when it contains less than 19.5% oxygen is the potential for exposure to oxygen-deficient atmospheres. Symptoms of oxygen deficiency include respiratory difficulty, ringing in ears, headaches, shortness of breath, wheezing, headache, dizziness, indigestion, nausea, unconsciousness, and death. The skin of a victim of over-exposure may have a blue color. Additionally, Isobutylene, a component of this gas mixture, may cause drowsiness or central nervous system effects in high concentrations; however, due to its low concentration in this gas mixture, this is unlikely to occur.

CHRONIC: Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may affect the heart and nervous system.

TARGET ORGANS: ACUTE: Respiratory system, eyes. CHRONIC: Heart, cardiovascular system, central nervous system.



4. FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS GAS MIXTURE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn.

No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. If any adverse symptom develops after over-exposure to this gas mixture, remove victim(s) to fresh air as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute or chronic respiratory conditions may be aggravated by over-exposure to this gas mixture.

RECOMMENDATIONS TO PHYSICIANS: Administer oxygen, if necessary; treat symptoms and eliminate exposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

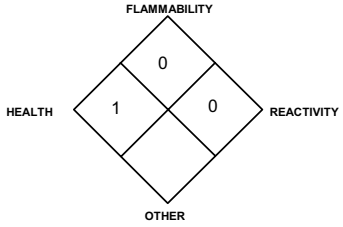
FIRE EXTINGUISHING MATERIALS: Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment.

NFPA RATING



6. ACCIDENTAL RELEASE MEASURES

LEAK RESPONSE: Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk of an oxygen deficient environment and other safety hazards than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel.

Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for oxygen. Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area.

If leaking incidentally from the cylinder, contact your supplier.

7. HANDLING and USE

WORK PRACTICES AND HYGIENE PRACTICES: Be aware of any signs of dizziness or fatigue; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to oxygen deficiency. Do not attempt to repair, adjust, or in any other way modify the cylinders containing this gas mixture. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

STORAGE AND HANDLING PRACTICES: Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21•C [70•F]). Cylinders should be stored in dry, well-ventilated areas, away from sources of heat, ignition, and direct sunlight. Protect cylinders against physical damage. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. These cylinders are not refillable. **WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.**

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: WARNING! Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use product in areas where adequate ventilation is provided.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: No special ventilation systems or engineering controls are needed under normal circumstances of use. As with all chemicals, use this gas mixture in well-ventilated areas. If this gas mixture is used in a poorly-ventilated area, install automatic monitoring equipment to detect the levels of Nitrous Oxide and Oxygen.

RESPIRATORY PROTECTION: No special respiratory protection is required under normal circumstances of use. Maintain oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection when oxygen levels are below 19.5%, or during emergency response to a release of this gas mixture. During an emergency situation, before entering the area, check the concentration of Methane and Oxygen. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

EYE PROTECTION: Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Wear leather gloves when handling cylinders. Chemically resistant gloves should be worn when using this gas mixture. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: No special protection is needed under normal circumstances of use. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for Nitrogen, a main component of this gas mixture.

GAS DENSITY @ 32°F (0ºC) and 1 atm: 0.072 lbs/ ft^3 (1.153 kg/m^3)

BOILING POINT: -195.8°C (-320.4°F)
FREEZING/MELTING POINT @ 10 psig: -210°C (-345.8°F)
SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 0.906
pH: Not applicable.
SOLUBILITY IN WATER vol/vol @ 32°F (0ºC) and 1 atm: 0.023
MOLECULAR WEIGHT: 28.01
EVAPORATION RATE (nBuAc = 1): Not applicable.
EXPANSION RATIO: Not applicable.
ODOR THRESHOLD: Not applicable.
SPECIFIC VOLUME (ft^3/lb): 13.8
VAPOR PRESSURE @ 70°F (21.1°C) psig: Not applicable.
COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

The following information is for Oxygen, a main component of this gas mixture.

GAS DENSITY @ 32°F (0°C) and 1 atm: 0.083 lb/cu ft (1.326 kg/m^3)

FREEZING/MELTING POINT @ 10 psig: -218.8°C (-361.8°F)
BOILING POINT: -183.0°C (-297.4°F)
SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 1.105
pH: Not applicable.
SOLUBILITY IN WATER vol/vol at 32ºF (0ºC) and 1 atm: 0.04.91
MOLECULAR WEIGHT: 32.00
EVAPORATION RATE (nBuAc = 1): Not applicable.
EXPANSION RATIO: Not applicable.
ODOR THRESHOLD: Not applicable.
VOLUME (ft^3/lb): 12.1
VAPOR PRESSURE @ 70°F (21.1°C) psig: Not applicable.
COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

The following information is for the gas mixture.

APPEARANCE AND COLOR: This is a colorless, odorless gas mixture.

HOW TO DETECT THIS SUBSTANCE (warning properties): There are no unusual warning properties associated with a release of this gas mixture. In terms of leak detection, fittings and joints can be painted with a soap solution to detect leaks, which will be indicated by a bubble formation.

10. STABILITY and REACTIVITY

STABILITY: Normally stable in gaseous state.
DECOMPOSITION PRODUCTS: The thermal decomposition products of Isobutylene include carbon oxides. The other components of this gas mixture do not decompose, per se, but can react with other compounds in the heat of a fire.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Titanium will burn in the Nitrogen component of this gas mixture. Lithium reacts slowly with Nitrogen at ambient temperatures. The Isobutylene component of this gas mixture is also incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride).
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Contact with incompatible materials. Cylinders exposed to high temperatures or direct flame can rupture or burst.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology data are available for the components of this gas mixture:
ISOBUTYLENE:
LC_{50} (inhalation, rat) = 620,000 mg/kg/4 hours
LC_{50} (inhalation, mouse) = 415,000 mg/kg
NITROGEN:
There are no specific toxicology data for Nitrogen. Nitrogen is a simple asphyxiant, which acts to displace oxygen in the environment.
SUSPECTED CANCER AGENT: The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.
IRRITANCY OF PRODUCT: Contact with rapidly expanding gases can be irritating to exposed skin and eyes.
SENSITIZATION TO THE PRODUCT: The components of this gas mixture are not known to cause human skin or respiratory sensitization.
REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this gas mixture and its components on the human reproductive system.
Mutagenicity: No mutagenicity effects have been described for the components in this gas mixture.
Embryotoxcity: No embryotoxic effects have been described for the components in this gas mixture.
Teratogenicity: No teratogenicity effects have been described for the components in this gas mixture.
Reproductive Toxicity: No reproductive toxicity effects have been described for the components in gas mixture.
A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generation lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.
BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, Biological Exposure Indices (BEIs) are not applicable for the components of this gas mixture.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: The components of this gas mixture occur naturally in the atmosphere. The gas will be dissipated rapidly in well-ventilated areas. The following environmental data are applicable to the components of this gas mixture.
OXYGEN: Water Solubility = 1 volume Oxygen/32 volumes water at 20•C. Log K_{ow} = -0.65
NITROGEN: Water Solubility = 2.4 volumes Nitrogen/100 volumes water at 0•C. 1.6 volumes Nitrogen/100 volumes water at 20•C.
EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on the effects of this gas mixture on plant and animal life.
EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on the effects of this gas mixture on aquatic life.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

14. TRANSPORTATION INFORMATION

THIS GAS MIXTURE IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.
PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.
HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER: UN 1956
PACKING GROUP: Not applicable.
DOT LABEL(S) REQUIRED: Class 2.2 (Non-Flammable Gas)
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126
MARINE POLLUTANT: The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).
SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.
Note: DOT 39 Cylinders ship in a strong outer carton (overpack). Pertinent shipping information goes on the outside of the overpack. DOT 39 Cylinders do not have transportation information on the cylinder itself.
TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This gas is considered as Dangerous Goods, per regulations of Transport Canada.
PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.
HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER: UN 1956
PACKING GROUP: Not Applicable
HAZARD LABEL: Class 2.2 (Non-Flammable Gas)
SPECIAL PROVISIONS: None
EXPLOSIVE LIMIT AND LIMITED QUANTITY INDEX: 0.12
ERAP INDEX: None
PASSENGER CARRYING SHIP INDEX: None
PASSENGER CARRYING ROAD VEHICLE OR PASSENGER CARRYING RAILWAY VEHICLE INDEX: 75
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126
NOTE: Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992).

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:
U.S. SARA REPORTING REQUIREMENTS: The components of this gas mixture are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.
U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this gas mixture. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.
U.S. TSCA INVENTORY STATUS: The components of this gas mixture are listed on the TSCA Inventory.
U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.
OTHER U.S. FEDERAL REGULATIONS:
- No component of this gas mixture is subject to the requirements of CFR 29 1910.1000 (under the 1989 PELs).
- Isobutylene is subject to the reporting requirements of Section 112(r) of the Clean Air Act. The Threshold Quantity for this gas is 10,000 pounds.
- The regulations of the Process Safety Management of Highly Hazardous Chemicals are not applicable (29 CFR 1910.119).
- This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR Part 82).

15. REGULATORY INFORMATION (continued)

- Nitrogen and Oxygen are not listed as Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Releases. Isobutylene is listed under this regulation in Table 3 as Regulated Substances (Flammable Substances), in quantities of 10,000 lbs (4,554 kg) or greater.

U.S. STATE REGULATORY INFORMATION: The components of this gas mixture are covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: No.
California - Permissible Exposure Limits for Chemical Contaminants: Nitrogen.
Florida - Substance List: Oxygen, Isobutylene.
Illinois - Toxic Substance List: No.
Kansas - Section 302/313 List: No.
Massachusetts - Substance List: Oxygen, Isobutylene.
Michigan - Critical Materials Register: No.
Minnesota - List of Hazardous Substances: No.
Missouri - Employer Information/Toxic Substance List: No.
New Jersey - Right to Know Hazardous Substance List: Oxygen, Nitrogen, Isobutylene.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.
Pennsylvania - Hazardous Substance List: Oxygen, Nitrogen, Isobutylene.
Rhode Island - Hazardous Substance List: Oxygen, Nitrogen.
Texas - Hazardous Substance List: No.
West Virginia - Hazardous Substance List: No.
Wisconsin - Toxic and Hazardous Substances: : No.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this gas mixture is on the California Proposition 65 lists.

ADDITIONAL CANADIAN REGULATIONS:
CANADIAN DSL/NDSL INVENTORY STATUS: The components of this gas mixture are listed on the DSL Inventory.
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this gas mixture are not on the CEPA Priorities Substances Lists.
CANADIAN WHMIS REGULATIONS: This gas mixture is categorized as a Controlled Product, Hazard Class A, as per the Controlled Product Regulations.

16. OTHER INFORMATION

INFORMATION ABOUT DOT-39 NRC (Non-Refillable Cylinder) PRODUCTS

DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixtures typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures.

For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content. CALGAZ will do this for any customer that wishes to return cylinders to us prepaid. All that is required is a phone call to make arrangements so we may anticipate arrival. Scrapping cylinders involves some preparation before the metal dealer may accept them. We perform this operation as a service to valued customers who want to participate.

MIXTURES: When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

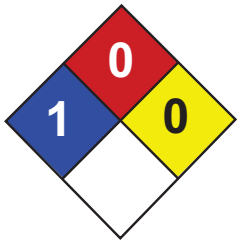
Further information about the handling of compressed gases can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

P-1 *"Safe Handling of Compressed Gases in Containers"*
AV-1 *"Safe Handling and Storage of Compressed Gases"*
"Handbook of Compressed Gases"

PREPARED BY:
CHEMICAL SAFETY ASSOCIATES, Inc.
PO Box 3519, La Mesa, CA 91944-3519
619/670-0609
Fax on Demand: 1-800/231-1366

AIR LIQUIDE

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.



Material Safety Data Sheet
Lead MSDS

Section 1: Chemical Product and Company Identification

Product Name: Lead

Catalog Codes: SLL1291, SLL1669, SLL1081, SLL1459, SLL1834

CAS#: 7439-92-1

RTECS: OF7525000

TSCA: TSCA 8(b) inventory: Lead

CI#: Not available.

Synonym: Lead Metal, granular; Lead Metal, foil; Lead Metal, sheet; Lead Metal, shot

Chemical Name: Lead

Chemical Formula: Pb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Lead	7439-92-1	100

Toxicological Data on Ingredients: Lead LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (permeator). CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Non-flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: When heated to decomposition it emits highly toxic fumes of lead.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable

protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.05 (mg/m3) from ACGIH (TLV) [United States] TWA: 0.05 (mg/m3) from OSHA (PEL) [United States] TWA: 0.03 (mg/m3) from NIOSH [United States] TWA: 0.05 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 207.21 g/mole

Color: Bluish-white. Silvery. Gray

pH (1% soln/water): Not applicable.

Boiling Point: 1740°C (3164°F)

Melting Point: 327.43°C (621.4°F)

Critical Temperature: Not available.

Specific Gravity: 11.3 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, excess heat

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials. Incompatible with sodium carbide, chlorine trifluoride, trioxane + hydrogen peroxide, ammonium nitrate, sodium azide, disodium acetylide, sodium acetylide, hot concentrated nitric acid, hot concentrated hydrochloric acid, hot concentrated sulfuric acid, zirconium.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. May cause damage to the following organs: blood, kidneys, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential: Skin: Lead metal granules or dust: May cause skin irritation by mechanical action. Lead metal foil, shot or sheets: Not likely to cause skin irritation Eyes: Lead metal granules or dust: Can irritate eyes by mechanical action. Lead metal foil, shot or sheets: No hazard. Will not cause eye irritation. Inhalation: In an industrial setting, exposure to lead mainly occurs from inhalation of dust or fumes. Lead dust or fumes: Can irritate the upper respiratory tract (nose, throat) as well as the bronchi and lungsby mechanical action. Lead dust can be absorbed through the respiratory system. However, inhaled lead does not accumulate in the lungs. All of an inhaled dose is eventually abssorbed or transferred to the gastrointestinal tract. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include metallic taste, chest pain, decreased physical fitness, fatigue, sleep disturbance, headache, irritability, reduces memory, mood and personality changes, aching bones and muscles, constipation, abdominal pains, decreasing appetite. Inhalation of large amounts may lead to ataxia, deliriuim, convulsions/seizures, coma, and death. Lead metal foil, shot, or sheets: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count. Ingestion: Lead metal granules or dust: The symptoms of lead poisoning include abdominal pain or cramps (lead cholic), spasms, nausea, vomiting, headache, muscle weakness, hallucinations, distorted perceptions, "lead line" on the gums, metallic taste, loss of appetite, insomnia, dizziness and other symptoms similar to that of inhalation. Acute poisoning may result in high lead levels in the blood and urine, shock, coma and death in extreme cases. Lead metal foil, shot or sheets: Not an ingestion hazard for usual industrial handling.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Lead California prop. 65 (no significant risk level): Lead: 0.0005 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead Connecticut hazardous material survey.: Lead Illinois toxic substances disclosure to employee act: Lead Illinois chemical safety act: Lead New York release reporting list: Lead Rhode Island RTK hazardous substances: Lead Pennsylvania RTK: Lead

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R20/22- Harmful by inhalation and if swallowed. R33- Danger of cumulative effects. R61- May cause harm to the unborn child. R62- Possible risk of impaired fertility. S36/37- Wear suitable protective clothing and gloves. S44- If you feel unwell, seek medical advice (show the label when possible). S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **MAGNESIUM**

CAS Number: 7439-95-4
DOT Number: UN 1869
UN 1418 (powder)

RTK Substance number: 1136
Date: January 1986 Revision: September 1999

HAZARD SUMMARY

* **Magnesium** *dust* or *fume* can affect you when breathed in.
* Contact can irritate the skin and eyes.
* Breathing **Magnesium** *dust* can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.
* Repeated exposure to the *dust* can cause **Magnesium** to accumulate in the body. This will cause an upset stomach.

IDENTIFICATION

Magnesium is a light, silvery-white metal. It is an essential trace element. It is used in making structural parts, diecast auto parts, missiles, precision instruments, optical mirrors, flash bulbs and flares, pyrotechnics, and batteries.

REASON FOR CITATION

* **Magnesium** is on the Hazardous Substance List because it is cited by DOT and NFPA.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

No occupational exposure limits have been established for **Magnesium**. This does not mean that this substance is not harmful. Safe work practices should always be followed.

WAYS OF REDUCING EXPOSURE

* Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Magnesium**.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Magnesium** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

Metal, metal compounds and alloys are often used in "hot" operations in the workplace. These may include, but are not limited to, welding, brazing, soldering, plating, cutting, and metallizing. At the high temperatures reached in these operations, metals often form metal fumes which have different health effects and exposure standards than the original metal or metal compound and require specialized controls. Your workplace can be evaluated for the presence of particular fumes which may be generated. Consult the appropriate New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheets.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Magnesium**:

* **Magnesium** *dust* can irritate the eyes and skin.
* Breathing **Magnesium** *dust* can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Magnesium** and can last for months or years:

Cancer Hazard

* According to the information presently available to the New Jersey Department of Health and Senior Services, **Magnesium** has not been tested for its ability to cause cancer in animals.

Reproductive Hazard

* According to the information presently available to the New Jersey Department of Health and Senior Services, **Magnesium** has not been tested for its ability to affect reproduction.

Other Long-Term Effects

* Repeated exposure to the *dust* can cause **Magnesium** to accumulate in the body. This will cause an upset stomach.

MEDICAL

Medical Testing

There is no special test for this chemical. However, if illness occurs or overexposure is suspected, medical attention is recommended.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following control is recommended:

* Where possible, automatically transfer **Magnesium** from drums or other storage containers to process containers.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Magnesium** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.
* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Magnesium**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Magnesium**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Magnesium**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Magnesium** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.
* Use a vacuum to reduce dust during clean-up. DO NOT DRY SWEEP.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Magnesium**. Wear protective gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

* Wear impact resistant eye protection with side shields or goggles.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* NIOSH has established new testing and certification requirements for negative pressure, air purifying, particulate filter and filtering facepiece respirators. The filter classifications of dust/mist/fume, paint spray or pesticide prefilters, and filters for radon daughters, have been replaced with the N, R, and P series. Each series has three levels of filtering efficiency: 95%, 99%, and 99.9%. Check with your safety equipment supplier or your respirator manufacturer to determine which respirator is appropriate for your facility.
* If while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Magnesium**, or if while wearing particulate filters abnormal resistance to breathing is experienced, or eye irritation occurs while wearing a full facepiece respirator, leave the area immediately. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
* Be sure to consider all potential exposures in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
* Where the potential for high exposure exists, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.

HANDLING AND STORAGE

* Prior to working with **Magnesium** you should be trained on its proper handling and storage.
* *Finely powdered* **Magnesium** must be stored to avoid contact with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC, and NITRIC); HALOCARBONS; CARBONATES; SULFATES; CYANIDES; CHLORINATED HYDROCARBONS (such as CARBON TETRACHLORIDE and CHLOROFORM); METHANOL; ACETYLENE; ETHYLENE OXIDE; BERYLLIUM FLUORIDE; AMMONIUM SALTS; ARSENIC; PHOSPHATES; and METAL OXIDES (such as MERCURIC OXIDE and CUPRIC OXIDE) since violent reactions occur.
* Store in tightly closed containers in a cool, well-ventilated area away from WATER and MOISTURE as **Magnesium** in finely *powdered*, *chip* or *sheet* form will react with WATER to form flammable *Hydrogen gas*.
* Use only non-sparking tools and equipment, especially when opening and closing containers of **Magnesium**.
* Sources of ignition, such as smoking and open flames, are prohibited where **Magnesium** is used, handled, or stored.
* Protect storage containers from physical damage.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?

A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?

A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **MAGNESIUM**
DOT Number: **UN 1869**
UN 1418 (powder)
NAERG Code: **138**
CAS Number: **7439-95-4**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	-	1
REACTIVITY	-	1
FLAMMABLE OR COMBUSTIBLE DO NOT USE WATER POISONOUS GASES ARE PRODUCED IN FIRE POWDERS ARE EXPLOSIVE IN AIR		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* **Magnesium** is a COMBUSTIBLE SOLID or a FLAMMABLE POWDER.
* Use dry sand, MetL-X powder or graphite powder, soda ash, Class D extinguishers or talc to extinguish fires.
* DO NOT USE water, CO_2, foam or dry chemical extinguishers.
* POISONOUS GASES ARE PRODUCED IN FIRE.
* FIRE MAY RESTART AFTER IT HAS BEEN EXTINGUISHED.
* POWDERS FORM EXPLOSIVE MIXTURES WITH AIR.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Magnesium** is spilled, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill until clean-up is complete.
* Remove all ignition sources.
* Collect powdered material in the most convenient and safe manner and deposit in sealed containers.
* Ventilate area of spill or leak after clean-up is complete.
* Keep **Magnesium** out of a confined space, such as a sewer, because of the possibility of an explosion, unless the sewer is designed to prevent the build-up of explosive concentrations.
* It may be necessary to contain and dispose of **Magnesium** as a HAZARDOUS WASTE. Contact your Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: (609) 292-7172

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HANDLING AND STORAGE (See page 3)

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

* Remove contaminated clothing. Wash contaminated skin with soap and water.

Breathing

* Remove the person from exposure.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Water Solubility: Insoluble and Reactive

OTHER COMMONLY USED NAMES

Chemical Name:

Magnesium

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202

September 2005

NIOSH Pocket Guide to Chemical Hazards

NPG Home | Introduction | Synonyms & Trade Names | Chemical Names | CAS Numbers | RTECS Numbers | Appendices | Search

Manganese compounds and fume (as Mn)

CAS 7439-96-5 (metal)

Mn (metal)

RTECS OO9275000 (metal)

Synonyms & Trade Names
Manganese metal: Colloidal manganese, Manganese-55
Synonyms of other compounds vary depending upon the specific manganese compound.

DOT ID & Guide

Exposure Limits

NIOSH REL*: TWA 1 mg/m^3 ST 3 mg/m^3 [*Note: Also see specific listings for Manganese cyclopentadienyl tricarbonyl, Methyl cyclopentadienyl manganese tricarbonyl, and Manganese tetroxide.]

OSHA PEL*: C 5 mg/m^3 [*Note: Also see specific listings for Manganese cyclopentadienyl tricarbonyl and Methyl cyclopentadienyl manganese tricarbonyl.]

IDLH 500 mg/m^3 (as Mn) See: 7439965

Conversion

Physical Description
A lustrous, brittle, silvery solid.

MW: 54.9	BP: 3564°F	MLT: 2271°F	Sol: Insoluble
VP: 0 mmHg (approx)	IP: NA		Sp.Gr: 7.20 (metal)
Fl.P: NA	UEL: NA	LEL: NA	

Metal: Combustible Solid

Incompatibilities & Reactivities
Oxidizers [Note: Will react with water or steam to produce hydrogen.]

Measurement Methods
NIOSH 7300, 7301, 7303, 9102; OSHA ID121, ID125G
See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

First Aid (See procedures)

Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations NIOSH

Up to 10 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100. Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered air-purifying respirator with a high-efficiency particulate filter.

Up to 50 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. Click here for information on selection of N, R, or P filters.
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 500 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. Click here for information on selection of N, R, or P filters./Any appropriate escape-type, self-contained breathing apparatus
Important additional information about respirator selection

Exposure Routes inhalation, ingestion

Symptoms Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage

Target Organs respiratory system, central nervous system, blood, kidneys

See also: INTRODUCTION See ICSC CARD: 0174 See MEDICAL TESTS: 0131

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ERROR: undefined
OFFENDING COMMAND: get

STACK:

/quit
-dictionary-
-mark-
```

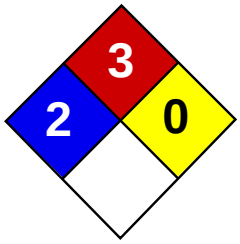

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Methyl tert-butyl ether MSDS

Section 1: Chemical Product and Company Identification

Product Name: Methyl tert-butyl ether

Catalog Codes: SLM2152

CAS#: 1634-04-4

RTECS: KN5250000

TSCA: TSCA 8(b) inventory: Methyl tert-butyl ether

CI#: Not available.

Synonym:

Chemical Name: Methyl tert-Butyl Ether

Chemical Formula: C5-H12-O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Methyl {tert-}butyl ether	1634-04-4	100

Toxicological Data on Ingredients: Methyl tert-butyl ether: ORAL (LD50): Acute: 4000 mg/kg [Rat]. 5960 mg/kg [Mouse]. VAPOR (LC50): Acute: 23576 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Extremely hazardous in case of eye contact (irritant), of ingestion. Very hazardous in case of skin contact (irritant), of inhalation. Hazardous in case of skin contact (permeator). Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Extremely hazardous in case of eye contact (irritant), of ingestion. Very hazardous in case of skin contact (irritant), of inhalation. Hazardous in case of skin contact (permeator). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 224°C (435.2°F)

Flash Points: CLOSED CUP: -28°C (-18.4°F).

Flammable Limits: LOWER: 2.5% UPPER: 15.1%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Characteristic. (Strong.)

Taste: Not available.

Molecular Weight: 88.15 g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 55.2°C (131.4°F)

Melting Point: -109°C (-164.2°F)

Critical Temperature: Not available.

Specific Gravity: 0.7405 (Water = 1)

Vapor Pressure: 245 mm of Hg (@ 20°C)

Vapor Density: 3.1 (Air = 1)

Volatility: 100% (v/v).

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether.

Solubility:

Soluble in methanol, diethyl ether. Partially soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 4000 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 23576 ppm 4 hour(s) [Rat].

Chronic Effects on Humans: The substance is toxic to lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans:
Extremely hazardous in case of ingestion. Very hazardous in case of skin contact (irritant), of inhalation. Hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Class 3: Flammable liquid.

Identification: : Methyl tert-butyl ether : UN2398 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Methyl tert-butyl ether Massachusetts RTK: Methyl tert-butyl ether TSCA 8(b) inventory: Methyl tert-butyl ether SARA 313 toxic chemical notification and release reporting: Methyl tert-butyl ether CERCLA: Hazardous substances.: Methyl tert-butyl ether

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:23 PM

Last Updated: 11/01/2010 12:00 PM

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New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

Common Name: **METHYLENE CHLORIDE**

CAS Number: 75-09-2
DOT Number: UN 1593

RTK Substance number: 1255
Date: November 1995 Revision: May 2001

HAZARD SUMMARY

* **Methylene Chloride** can affect you when breathed in and by passing through your skin.
* **Methylene Chloride** should be handled as a CARCINOGEN—WITH EXTREME CAUTION.
* Contact can irritate and burn the skin and eyes with possible eye damage.
* Breathing **Methylene Chloride** can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.
* **Methylene Chloride** may damage the liver and affect the kidneys and brain.

IDENTIFICATION

Methylene Chloride is a colorless liquid with a pleasant *Chloroform*-like odor. It is used in food, furniture and plastics processing, and as a paint remover.

REASON FOR CITATION

* **Methylene Chloride** is on the Hazardous Substance List because it is regulated by OSHA and cited by ACGIH, DOT, NIOSH, NTP, DEP, IARC, HHAG, NFPA and EPA.
* This chemical is on the Special Health Hazard Substance List because it is a **CARCINOGEN**, **MUTAGEN** and **TERATOGEN**.
* Definitions are provided on page 5.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information and training concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard, 1910.1200, requires private employers to provide similar training and information to their employees.

* Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.1020.
* If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is **25 ppm** averaged over an 8-hour workshift and **125 ppm**, not to be exceeded during any 15 minute work period.

NIOSH: Recommends that exposure to occupational carcinogens be limited to the lowest feasible concentration.

ACGIH: The recommended airborne exposure limit is **50 ppm** averaged over an 8-hour workshift.

* **Methylene Chloride** may be a CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.
* The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

WAYS OF REDUCING EXPOSURE

* Enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
* A regulated, marked area should be established where **Methylene Chloride** is handled, used, or stored as required by the OSHA Standard 29 CFR 1910.1052.
* Wear protective work clothing.
* Wash thoroughly immediately after exposure to **Methylene Chloride** and at the end of the workshift.
* Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of **Methylene Chloride** to potentially exposed workers.

This Fact Sheet is a summary source of information of all potential and most severe health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

HEALTH HAZARD INFORMATION

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Methylene Chloride**:

* Contact can irritate and burn the skin and eyes with possible eye damage.
* Breathing **Methylene Chloride** can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Methylene Chloride** and can last for months or years:

Cancer Hazard

* **Methylene Chloride** may be a CARCINOGEN in humans since it has been shown to cause liver and lung cancer in animals.
* Many scientists believe there is no safe level of exposure to a carcinogen. Such substances may also have the potential for causing reproductive damage in humans.

Reproductive Hazard

* There is limited evidence that **Methylene Chloride** causes spontaneous abortions.

Other Long-Term Effects

* **Methylene Chloride** can irritate the lungs. Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.
* **Methylene Chloride** may damage the liver and affect the kidneys.
* Long term exposure may affect the brain, causing memory loss, poor coordination, and reduced thinking ability.

MEDICAL

Medical Testing

For those with frequent or potentially high exposure (half the PEL or greater, or significant skin contact), the following are recommended before beginning work and at regular times after that:

* Lung function tests.
* Liver and kidney function tests.
* Exam of the nervous system.
* Evaluate for brain effects such as changes in memory, concentration, sleeping patterns and mood (especially irritability and social withdrawal), as well as headaches and fatigue. Consider evaluations of the cerebellar, autonomic and peripheral nervous systems. Positive and borderline individuals should be referred for neuropsychological testing.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

Request copies of your medical testing. You have a legal right to this information under OSHA 1910.1020.

Mixed Exposures

* Because more than light alcohol consumption can cause liver damage, drinking alcohol can increase the liver damage caused by **Methylene Chloride**.

WORKPLACE CONTROLS AND PRACTICES

Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

In evaluating the controls present in your workplace, consider: (1) how hazardous the substance is, (2) how much of the substance is released into the workplace and (3) whether harmful skin or eye contact could occur. Special controls should be in place for highly toxic chemicals or when significant skin, eye, or breathing exposures are possible.

In addition, the following control are recommended:

* Where possible, automatically pump liquid **Methylene Chloride** from drums or other storage containers to process containers.
* Specific engineering controls are required for this chemical by OSHA. Refer to the OSHA Standard: 29 CFR 1910.1052.

Good **WORK PRACTICES** can help to reduce hazardous exposures. The following work practices are recommended:

* Workers whose clothing has been contaminated by **Methylene Chloride** should change into clean clothing promptly.
* Do not take contaminated work clothes home. Family members could be exposed.

* Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to **Methylene Chloride**.
* Eye wash fountains should be provided in the immediate work area for emergency use.
* If there is the possibility of skin exposure, emergency shower facilities should be provided.
* On skin contact with **Methylene Chloride**, immediately wash or shower to remove the chemical. At the end of the workshift, wash any areas of the body that may have contacted **Methylene Chloride**, whether or not known skin contact has occurred.
* Do not eat, smoke, or drink where **Methylene Chloride** is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating, drinking, smoking, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

OSHA 1910.132 requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

* Avoid skin contact with **Methylene Chloride**. Wear solvent-resistant gloves and clothing. Safety equipment suppliers/ manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
* All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.
* ACGIH recommends *Polyvinyl Alcohol* as a protective material.

Eye Protection

* Wear indirect-vent, impact and splash resistant goggles when working with liquids.
* Wear a face shield along with goggles when working with corrosive, highly irritating or toxic substances.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing and medical exams, as described in OSHA 1910.134.

* Where the potential exists for exposure over **25 ppm**, use a MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?
A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?
A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?
A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time and the amount of material to which someone is exposed.

Q: When are higher exposures more likely?
A: Conditions which increase risk of exposure include physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers), and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?
A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. This may be a problem for children or people who are already ill.

Q: Don't all chemicals cause cancer?
A: No. Most chemicals tested by scientists are not cancer-causing.

Q: Should I be concerned if a chemical causes cancer in animals?
A: Yes. Most scientists agree that a chemical that causes cancer in animals should be treated as a suspected human carcinogen unless proven otherwise.

Q: But don't they test animals using much higher levels of a chemical than people usually are exposed to?
A: Yes. That's so effects can be seen more clearly using fewer animals. But high doses alone don't cause cancer unless it's a cancer agent. In fact, a chemical that causes cancer in animals at high doses could cause cancer in humans exposed to low doses.

Q: Can men as well as women be affected by chemicals that cause reproductive system damage?
A: Yes. Some chemicals reduce potency or fertility in both men and women. Some damage sperm and eggs, possibly leading to birth defects.

Q: Who is at the greatest risk from reproductive hazards?
A: Pregnant women are at greatest risk from chemicals that harm the developing fetus. However, chemicals may affect the ability to have children, so both men and women of childbearing age are at high risk.

Q: Should I be concerned if a chemical is a teratogen in animals?
A: Yes. Although some chemicals may affect humans differently than they affect animals, damage to animals suggests that similar damage can occur in humans.

Q: What are the likely health problems from chemicals which cause mutations?
A: There are two primary health concerns associated with mutagens: (1) cancers can result from changes induced in cells and, (2) adverse reproductive and developmental outcomes can result from damage to the egg and sperm cells.

The following information is available from:

New Jersey Department of Health and Senior Services
Occupational Health Service
PO Box 360
Trenton, NJ 08625-0360
(609) 984-1863
(609) 292-5677 (fax)

Web address: http://www.state.nj.us/health/eoh/odisweb/

Industrial Hygiene Information

Industrial hygienists are available to answer your questions regarding the control of chemical exposures using exhaust ventilation, special work practices, good housekeeping, good hygiene practices, and personal protective equipment including respirators. In addition, they can help to interpret the results of industrial hygiene survey data.

Medical Evaluation

If you think you are becoming sick because of exposure to chemicals at your workplace, you may call personnel at the Department of Health and Senior Services, Occupational Health Service, who can help you find the information you need.

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

Right to Know Information Resources

The Right to Know Infoline (609) 984-2202 can answer questions about the identity and potential health effects of chemicals, list of educational materials in occupational health, references used to prepare the Fact Sheets, preparation of the Right to Know Survey, education and training programs, labeling requirements, and general information regarding the Right to Know Act. Violations of the law should be reported to (609) 984-2202.

DEFINITIONS

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m^3 means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

PIH is a DOT designation for chemicals which are Poison Inhalation Hazards.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.

>>>>>>>>>>>>>>>>> EMERGENCY INFORMATION <<<<<<<<<<<<<<<<<

Common Name: **METHYLENE CHLORIDE**
DOT Number: **UN 1593**
NAERG Code: **160**
CAS Number: **75-09-2**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	-	1
REACTIVITY	-	0
CARCINOGEN POISONOUS GASES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

* Extinguish fire using an agent suitable for type of surrounding fire. **Methylene Chloride** itself does not burn.
* POISONOUS GASES ARE PRODUCED IN FIRE, including *Hydrogen Chloride* and *Phosgene*.
* CONTAINERS MAY EXPLODE IN FIRE.
* Use water spray to keep fire-exposed containers cool.
* If employees are expected to fight fires, they must be trained and equipped as stated in OSHA 1910.156.

SPILLS AND EMERGENCIES

If **Methylene Chloride** is spilled or leaked, take the following steps:

* Evacuate persons not wearing protective equipment from area of spill or leak until clean-up is complete.
* Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.
* Ventilate and wash area after clean-up is complete.
* It may be necessary to contain and dispose of **Methylene Chloride** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
* If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

==========

FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: 1-877-WARN-DEP

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HANDLING AND STORAGE

* Prior to working with **Methylene Chloride** you should be trained on its proper handling and storage.
* **Methylene Chloride** is not compatible with ALKALI METALS; ALUMINUM; LITHIUM; NITRIC ACID; OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); and CHEMICALLY ACTIVE METALS (such as POTASSIUM, SODIUM, MAGNESIUM and ZINC).
* Store in tightly closed containers in a cool, dry, well-ventilated area away from MOISTURE, AIR and HEAT.

FIRST AID

In NJ, for POISON INFORMATION call 1-800-764-7661

Eye Contact

* Immediately flush with large amounts of water. Continue without stopping for at least 30 minutes, occasionally lifting upper and lower lids. Seek medical attention immediately.

Skin Contact

* Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Breathing

* Remove the person from exposure.
* Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
* Transfer promptly to a medical facility.

PHYSICAL DATA

Vapor Pressure: 350 mm Hg at 68°F (20°C)
Water Solubility: Slightly soluble

OTHER COMMONLY USED NAMES

Chemical Name:

Methane, Dichloro-

Other Names:

Methylene Dichloride; Aerothene MM

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES
Right to Know Program
PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202 H4985

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Havoline® Motor Oil (Deposit Shield)

Product Use: Engine Oil
Product Number(s): CPS223391, CPS223392, CPS223393, CPS223394, CPS223395, CPS223396, CPS223397
Synonyms: Havoline® Motor Oil SAE 10W-30, Havoline® Motor Oil SAE 10W-40, Havoline® Motor Oil SAE 20W-50, Havoline® Motor Oil SAE 30, Havoline® Motor Oil SAE 40, Havoline® Motor Oil SAE 5W-20, Havoline® Motor Oil SAE 5W-30
Company Identification
Chevron Products Company
Global Lubricants
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevrontexaco.com
Product Information: 800-LUBE-TEK
MSDS Requests: 800-414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 95 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Min)
Autoignition: No Data Available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.
Respiratory Protection: No respiratory protection is normally required.
If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.
Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Amber
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 100 °C (212 °F)
Vapor Density (Air = 1): >1
Boiling Point: >315°C (599°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Specific Gravity: 0.87 @ 15.6°C (60.1°F) / 15.6°C (60.1°F) (Typical)
Density: 0.866 kg/l @ 15°C (59°F) (Typical)
Viscosity: 7.6 mm2/s @ 100°C (212°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen

with unknown relevance to humans (A3).

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE
This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR
Additional Information:NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	NO
2.	Delayed (Chronic) Health Effects:	NO
3.	Fire Hazard:	NO
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK

02=NTP Carcinogen 06=NJ RTK
07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components has been notified but may not be listed in the following chemical inventories: DSL (Canada). Secondary notification by the importer may be required.

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Motor oil)

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : ENGINE OIL 1 - ENG1

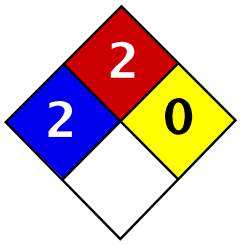
REVISION STATEMENT: This is a new Material Safety Data Sheet.
Revision Date: October 02, 2006

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



Health	2
Fire	2
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Naphthalene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Naphthalene

Catalog Codes: SLN1789, SLN2401

CAS#: 91-20-3

RTECS: QJ0525000

TSCA: TSCA 8(b) inventory: Naphthalene

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C10H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Naphthalene	91-20-3	100

Toxicological Data on Ingredients: Naphthalene: ORAL (LD50): Acute: 490 mg/kg [Rat]. 533 mg/kg [Mouse]. 1200 mg/kg [Guinea pig]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit]. VAPOR (LC50): Acute: 170 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant, permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 567°C (1052.6°F)

Flash Points: CLOSED CUP: 88°C (190.4°F). OPEN CUP: 79°C (174.2°F).

Flammable Limits: LOWER: 0.9% UPPER: 5.9%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Flammable solid.
Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Israel: TWA: 10 (ppm)
TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995]
TWA: 52 STEL: 79 (mg/m3) from ACGIH [1995]
Australia: STEL: 15 (ppm)
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: Aromatic.

Taste: Not available.

Molecular Weight: 128.19 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 218°C (424.4°F)

Melting Point: 80.2°C (176.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.162 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 4.4 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.038 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:
Partially dispersed in hot water, methanol, n-octanol.
Very slightly dispersed in cold water.
See solubility in methanol, n-octanol.

Solubility:
Partially soluble in methanol, n-octanol.
Very slightly soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Highly reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: May attack some forms of rubber and plastic

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 490 mg/kg [Rat].
Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 170 ppm 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of ingestion.
Hazardous in case of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 305.2 ppm 96 hour(s) [Trout].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Naphthalene, refined : UN1334 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Naphthalene
Pennsylvania RTK: Naphthalene
Florida: Naphthalene
Minnesota: Naphthalene
Massachusetts RTK: Naphthalene
TSCA 8(b) inventory: Naphthalene
TSCA 8(a) PAIR: Naphthalene
TSCA 8(d) H and S data reporting: Naphthalene: 06/01/87
SARA 313 toxic chemical notification and release reporting: Naphthalene: 1%
CERCLA: Hazardous substances.: Naphthalene: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-4: Flammable solid.
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36- Irritating to eyes.
R40- Possible risks of irreversible effects.
R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R63- Possible risk of harm to the unborn child.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/11/2005 01:30 PM

Last Updated: 10/11/2005 01:30 PM

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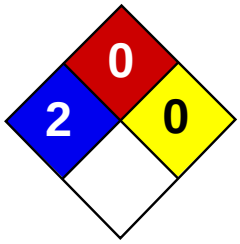

Health	2
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Nickel metal MSDS

Section 1: Chemical Product and Company Identification

Product Name: Nickel metal

Catalog Codes: SLN2296, SLN1342, SLN1954

CAS#: 7440-02-0

RTECS: QR5950000

TSCA: TSCA 8(b) inventory: Nickel metal

CI#: Not applicable.

Synonym: Nickel Metal shot; Nickel metal foil.

Chemical Name: Nickel

Chemical Formula: Ni

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Nickel metal	7440-02-0	100

Toxicological Data on Ingredients: Nickel metal LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of ingestion.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (sensitizer), of ingestion, of inhalation (lung sensitizer). CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to skin. The substance may be toxic to kidneys, lungs, liver, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Material in powder form, capable of creating a dust explosion. This material is flammable in powder form only.

Special Remarks on Explosion Hazards:
Material in powder form, capable of creating a dust explosion. Mixtures containing Potassium Perchlorate with Nickel & Titanium powders & infusorial earth can explode. Adding 2 or 3 drops of approximately 90% peroxyformic acid to powdered nickel will result in explosion. Powdered nickel reacts explosively upon contact with fused ammonium nitrate at temperatures below 200 deg. C.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents, combustible materials, metals, acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 1 (mg/m3) from ACGIH (TLV) [United States] Inhalation Respirable. TWA: 0.5 (mg/m3) [United Kingdom (UK)] TWA: 1 (mg/m3) from OSHA (PEL) [United States] InhalationConsult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid. Lustrous solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 58.71 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: 2730°C (4946°F)

Melting Point: 1455°C (2651°F)

Critical Temperature: Not available.

Specific Gravity: Density: 8.908 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:

Insoluble in cold water, hot water. Insoluble in Ammonia. Soluble in dilute Nitric Acid. Slightly soluble in Hydrochloric Acid, Sulfuric Acid.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, combustible materials, metals, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with strong acids, selenium, sulfur, wood and other combustibles, nickel nitrate, aluminum, aluminum trichloride, ethylene, p-dioxan, hydrogen, methanol, non-metals, oxidants, sulfur compounds, aniline, hydrogen sulfide, flammable solvents, hydrazine, and metal powders (especially zinc, aluminum, and magnesium), ammonium nitrate, nitryl fluoride, bromine pentafluoride, potassium perchlorate + titanium powder + indusorial earth.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP. Causes damage to the following organs: skin. May cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract.

Other Toxic Effects on Humans:
Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion.

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose/Conc: LDL [Rat] - Route: Oral; Dose: 5000 mg/kg LDL [Guinea Pig] - Route: Oral; Dose: 5000 mg/kg

Special Remarks on Chronic Effects on Humans: May cause cancer based on animal test data

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Nickel dust and fume can irritate skin. Eyes: Nickel dust and fume can irritate eyes. Inhalation: Inhalation of dust or fume may cause respiratory tract irritation with non-productive cough, hoarseness, sore throat, headache, vertigo, weakness, chest pain, followed by delayed effects, including tachypnea, dyspnea, and ARDS. Death due to ARDS has been reported following inhalation of high concentrations of respirable metallic nickel dust. Later effects may include pulmonary edema and fibrosis. Ingestion: Metallic nickel is generally considered not to be acutely toxic if ingested. Ingestion may cause nausea, vomiting, abdominal , and diarrhea. Nickel may damage the kidneys(proteinuria), and may affect liver function. It may also affect behavior (somnolence), and cardiovascular system (increased cornary artery resistance, decreased myocardial contractility, myocardial damage, regional or general arteriolar or venus dilation). Chronic Potential Health Effects: Skin: May cause skin allergy. Nickel and nickel compounds are among the most common sensitizers inducing allergic contact dermatitis. Inhalation: Chronic inhalation nickel dust or fume can cause chronic hypertrophic rhinitis, sinusitis, nasal polyps, perforation of the nasal septum, chronic pulmonary irritation, fibrosis, pulmonary edema, pulmonary eosinophilia, Pneumoconiosis, allergies (asthma-like allergy), and cancer of the nasal sinus cavities, lungs, and possibly other organs. Future exposures can cause asthma attacks with shortness of breath, wheezing, cough, and/or chest tightness. Chronic inhalation of nickel dust or fume may also affect the liver (impaired liver function tests), and blood (changes in red blood cell count). Ingestion: Prolonged or repeated ingestion of nickel can be a source chronic urticaria and other signs of allergy.

Chronic ingestion of NIckel may also affect respiration and cause pneumoconiosis or fibrosis. Note: In the general population, sensitization occurs from exposure to nickel-containing coins, jewelry, watches,

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Nickel metal California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Nickel metal Connecticut hazardous material survey.: Nickel metal Illinois toxic substances disclosure to employee act: Nickel metal Illinois chemical safety act: Nickel metal New York release reporting list: Nickel metal Rhode Island RTK hazardous substances: Nickel metal Pennsylvania RTK: Nickel metal Michigan critical material: Nickel metal Massachusetts RTK: Nickel metal Massachusetts spill list: Nickel metal New Jersey: Nickel metal New Jersey spill list: Nickel metal Louisiana spill reporting: Nickel metal California Director's List of Hazardous Substances: Nickel metal TSCA 8(b) inventory: Nickel metal

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R40- Possible risks of irreversible effects. R43- May cause sensitization by skin contact. S22- Do not breathe dust. S36- Wear suitable protective clothing.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 11/01/2010 12:00 PM

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MATERIAL SAFETY DATA SHEET

(POLYCHLORINATED BIPHENYLS)

COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name: polychlorinated biphenyls (PCBs)

HAZARD IDENTIFICATION

Reports of Carcinogenicity: YES

HEALTH HAZARDS ACUTE AND CHRONIC

- **Eyes**: Moderately irritating to eye tissues.
- **Skin**: Can be absorbed through intact skin, may cause de-fatting, potential for chloracne.
- **Inhalation**: Possible liver injury.
- **Ingestion**: Slightly toxic; reasonably anticipated to be carcinogenic.

EFFECTS OF OVER-EXPOSURE

Can cause dermatological symptoms; however, these are reversible upon removal of exposure source.

FIRST AID MEASURES

- **Eyes**: Irrigate immediately with copious quantities of running water for at least 15 minutes if liquid or solid PCBs get into them.
- **Skin:** Contaminated clothing should be removed and the skin washed thoroughly with soap and water. Hot PCBs may cause thermal burns.
- **Inhalation**: Remove to fresh air; if skin rash or respiratory irritation persists, consult a physician (if electrical equipment arcs over, PCBs may decompose to produce hydrochloric acid).
- **Ingestion**: Consult a physician. Do not induce vomiting or give any oily laxatives. (If large amounts are ingested, gastric lavage is suggested).

FIRE FIGHTING MEASURES: Flash Point: >141 ^{o}C (285.8 ^{o}F)

EXTINGUISHING MEDIA: PCBs are fire-resistant compounds.

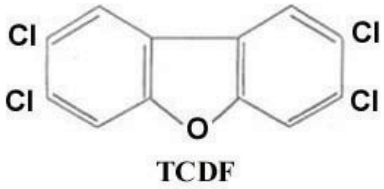
FIRE-FIGHTING PROCEDURES

Standard fire-fighting wearing apparel and self-contained breathing apparatus should be worn when fighting fires that involve possible exposure to chemical combustion products. Fire fighting equipment should be thoroughly cleaned and decontaminated after use.

UNUSUAL FIRE/EXPLOSION HAZARD

If a PCB transformer is involved in a fire-related incident, the owner of the transformer is required to report the incident. Consult and follow appropriate federal, provincial and local regulations.

***Note**: When askarel liquid becomes involved in a fire, toxic by-products of combustion are typically produced including polychlorinated dibenzofurans and polychlorinated dibenzodioxins, both known carcinogens. The structures of these chemical species are as follows:*

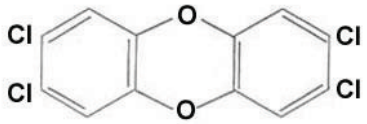


TCDF

$C_{12}H_{8-n}Cl_nO$

$n = 4 - 8$

2,3,7,8-tetrachlorodibenzofuran



TCDD

$C_{12}H_{8-n}Cl_nO_2$

$n = 4 - 8$

2,3,7,8-tetrachloro-dibenzo-p-dioxin

***Note**: 2,3,7,8-tetrachloro-dibenzo-p-dioxin is one of the most potent teratogenic, mutagenic and carcinogenic agents known to man.*

SPILL RELEASE PROCEDURES

Cleanup & disposal of liquid PCBs are strictly regulated by the federal government. Ventilate area. Contain spill/leak. Remove spill by means of absorptive material. Spill clean-up personnel should use proper protective clothing. All wastes and residues containing PCBs should be collected, containerized, marked and disposed of in the manner prescribed by applicable federal, provincial and local laws.

HANDLING AND STORAGE PRECAUTIONS

Care should be taken to prevent entry into the environment through spills, leakage, use, vaporization, or disposal of liquid. Avoid prolonged breathing of vapours or mists. Avoid contact with eyes or prolonged contact with skin. Comply with all federal, provincial and local regulations.

OTHER PRECAUTIONS

Federal regulations require PCBs, PCB items, storage areas, transformer vaults, and transport vehicles to be appropriately labelled.

RESPIRATORY PROTECTION

Use OHSA approved equipment when airborne exposure limits are exceeded. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical splash goggles. The respirator use limitations specified by the manufacturer must be observed.

VENTILATION

Provide natural or mechanical ventilation to control exposure levels below airborne exposure levels.

PROTECTIVE GLOVES: Wear appropriate chemical resistant gloves to prevent skin contact.

EYE PROTECTION: Wear chemical splash goggles and have eye baths available.

OTHER PROTECTIVE EQUIPMENT

Wear appropriate protective clothing. Provide a safety shower at any location where skin contact can occur.

WORK HYGIENIC PRACTICES

Wash thoroughly after handling. Supplemental safety and health : none

PHYSICAL/CHEMICAL PROPERTIES

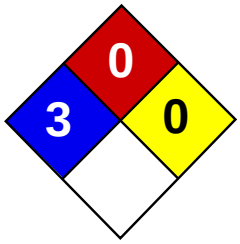
- **Vapour pressure:** (mm Hg @100 ^{o}F) 0.005 - 0.00006
- **Viscosity:** (CENTISTOKES) 3.6 - 540
- **Stability indicator/materials to avoid:** Yes
- **Stability Condition to Avoid:** PCBs are very stable, fire-resistant compounds.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide, hydrogen chloride, phenolics, aldehydes, furans, dioxins

WASTE DISPOSAL METHODS

Consult the applicable PCB regulations prior to any disposal of PCBs or PCB-contaminated items.



Material Safety Data Sheet
Pentachlorophenol MSDS

Section 1: Chemical Product and Company Identification

Product Name: Pentachlorophenol

Catalog Codes: SLP3943, SLP1126

CAS#: 87-86-5

RTECS: SM6300000

TSCA: TSCA 8(b) inventory: Pentachlorophenol

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C6Cl5OH

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Pentachlorophenol	87-86-5	100

Toxicological Data on Ingredients: Pentachlorophenol: ORAL (LD50): Acute: 27 mg/kg [Rat]. 117 mg/kg [Mouse]. VAPOR (LC50): Acute: 502 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (corrosive, sensitizer). Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.5 (mg/m3) from ACGIH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Pungent. (Strong.)

Taste: Not available.

Molecular Weight: 266.34 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: Decomposes. (310°C or 590°F)

Melting Point: 188°C (370.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.987 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 9.2 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 27 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 502 ppm 4 hour(s) [Rat].

Chronic Effects on Humans: The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (corrosive, sensitizer).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Chlorophenol, solid : UN2020 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Pentachlorophenol California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Pentachlorophenol Pennsylvania RTK: Pentachlorophenol Massachusetts RTK: Pentachlorophenol TSCA 8(b) inventory: Pentachlorophenol SARA 313 toxic chemical notification and release reporting: Pentachlorophenol

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R38- Irritating to skin. R41- Risk of serious damage to eyes. R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation. R48/25- Toxic: danger of serious damage to health in case of prolonged exposure if swallowed.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 11:12 AM

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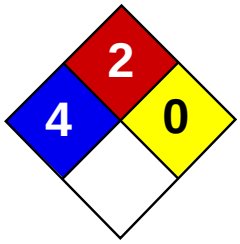

Health	3
Fire	2
Reactivity	0
Personal Protection	J

Material Safety Data Sheet
Phenol MSDS

Section 1: Chemical Product and Company Identification

Product Name: Phenol

Catalog Codes: SLP4453, SLP5251

CAS#: 108-95-2

RTECS: SJ3325000

TSCA: TSCA 8(b) inventory: Phenol

CI#: Not available.

Synonym: Monohydroxybenzene; Benzenol; Phenyl hyroxide; Phenylic acid

Chemical Name: Carbolic Acid

Chemical Formula: C6H5OH

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Phenol	108-95-2	100

Toxicological Data on Ingredients: Phenol: ORAL (LD50): Acute: 317 mg/kg [Rat]. 270 mg/kg [Mouse]. DERMAL (LD50): Acute: 630 mg/kg [Rabbit]. 669 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (sensitizer, permeator). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated

exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 715°C (1319°F)

Flash Points: CLOSED CUP: 79°C (174.2°F). OPEN CUP: 85°C (185°F).

Flammable Limits: LOWER: 1.7% UPPER: 8.6%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Phenol + nitrides results in heat and flammable gas generation. Phenol + mineral oxdizing acids results in fire. Phenol + calcium hypochlorite is an exothermic reaction producing toxic fumes which may ignite.

Special Remarks on Explosion Hazards:
Phenol + sodium nitrite causes explosion on heating. Peroxydisulfuric acid + phenol causes explosion.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Air Sensitive. Sensitive to light. Store in light-resistant containers. Moisture sensitive. Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 5 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 19 (mg/m3) from ACGIH (TLV) [United States] SKIN TWA: 5 from NIOSH [United States] TWA: 19 (mg/m3) from NIOSH [United States] TWA: 5 (ppm) from OSHA (PEL) [United States] TWA: 19 (mg/m3) from OSHA (PEL) [United States] TWA: 5 (ppm) [Canada] TWA: 19 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor:
Distinct, aromatic, somewhat sickening sweet and acrid

Taste: Burning.

Molecular Weight: 94.11 g/mole

Color: Colorless to light pink

pH (1% soln/water): Not available.

Boiling Point: 182°C (359.6°F)

Melting Point: 42°C (107.6°F)

Critical Temperature: 694.2 (1281.6°F)

Specific Gravity: 1.057 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 3.24 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.048 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 1.5

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:
Easily soluble in methanol, diethyl ether. Soluble in cold water, acetone. Solubility in water: 1g/15 ml water. Soluble in benzene. Very soluble in alcohol, chloroform, glycerol, petroleum, carbon disulfide, volatile and fixed oils, aqueous alkali hydroxides, carbon tetrachloride, acetic acid, liquid sulfur dioxide. Almost insoluble in petroleum ether. Miscible in acetone. Sparingly soluble in mineral oil.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks), light, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity:
Extremely corrosive in presence of copper. Slightly corrosive in presence of stainless steel(304), of stainless steel(316). Non-corrosive in presence of glass, of aluminum.

Special Remarks on Reactivity:
Air and light sensitive. Prone to redden on exposure to light and air. Incompatible with aluminum chloride, peroxydisulfuirc acid, acetaldehyde, sodium nitrite, boron trifluoride diethyl ether + 1,3-butadiene, isocyanates, nitrides, mineral oxidizing acids, calcium hypochlorite, halogens, formaldehyde, metals and alloys, lead, zinc, magnesium and their alloys, plastics, rubber, coatings, sodium nitrate + trifluoroacetic acid. Phenol + isocyanates results in heat generation, and violent polymerization. Phenol + 1,3-butadiene and boron trifluoride diethyl ether complex results in intense exothermic reaction. Phenol + acetaldehyde resultes in violent condensation.

Special Remarks on Corrosivity:
Minor corrosive effect on bronze. Severe corrosive effect on brass.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 270 mg/kg [Mouse]. Acute dermal toxicity (LD50): 630 mg/kg [Rabbit].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, liver, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (corrosive, irritant), of ingestion, . Hazardous in case of skin contact (sensitizer, permeator), of eye contact (corrosive), of inhalation (lung corrosive).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Human] - Route: Oral; Dose: 140 mg/kg LDL [Infant] - Route: Oral; Dose: 10,000 mg/kg

Special Remarks on Chronic Effects on Humans:
Animal: passes through the placental barrier. May cause adverse reproductive effects and birth defects (teratogenic) Embryotoxic and/or foetotoxic in animal. May affect genetic material (mutagenic).

Special Remarks on other Toxic Effects on Humans:

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 125 mg/l 24 hours [Fish (Goldfish)]. >50 mg/l 1 hours [Fish (Fathead minnow)]. >50 mg/l 24 hours [Fish (Fathead minnow)]. >33 mg/l 72 hours [Fish (Fathead minnow)]. >33 ppm 96 hours [Fish (Fathead minnow)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Phenol, solid UNNA: 1671 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Phenol Illinois toxic substances disclosure to employee act: Phenol Illinois chemical safety act: Phenol New York release reporting list: Phenol Rhode Island RTK hazardous substances: Phenol Pennsylvania RTK: Phenol Minnesota: Phenol Massachusetts RTK: Phenol Massachusetts spill list: Phenol New Jersey: Phenol New Jersey spill list: Phenol Louisiana RTK reporting list: Phenol Louisiana spill reporting: Phenol TSCA 8(b) inventory: Phenol TSCA 4(a) proposed test rules: Phenol TSCA 8(a) IUR: Phenol TSCA 8(d) H and S data reporting: Phenol: effective: 6/1/87; sunset:

6/01/97 SARA 302/304/311/312 extremely hazardous substances: Phenol SARA 313 toxic chemical notification and release reporting: Phenol CERCLA: Hazardous substances.: Phenol: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS E: Corrosive solid.

DSCL (EEC):
R24/25- Toxic in contact with skin and if swallowed. R34- Causes burns. R40- Possible risks of irreversible effects. R43- May cause sensitization by skin contact. R52- Harmful to aquatic organisms. S1/2- Keep locked up and out of the reach of children. S24- Avoid contact with skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water S37/39- Wear suitable gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S46- If swallowed, seek medical advice immediately and show this container or label. S56- Dispose of this material and its container at hazardous or special waste collection point.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 2

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 4

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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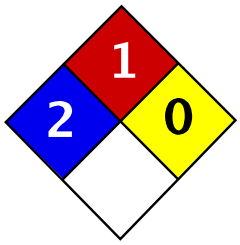

Health	2
Fire	1
Reactivity	0
Personal Protection	C

Material Safety Data Sheet
Pyrene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Pyrene

Catalog Codes: SLP3868

CAS#: 129-00-00

RTECS: UR2450000

TSCA: TSCA 8(b) inventory: Pyrene

CI#: Not available.

Synonym: Benzo(D,E,F)phenanthrene

Chemical Name: Pyrene

Chemical Formula: C16-H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

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CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Pyrene	129-00-00	100

Toxicological Data on Ingredients: Pyrene: ORAL (LD50): Acute: 2700 mg/kg [Rat]. 800 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of heat, of combustible materials.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of heat.
Non-explosive in presence of open flames and sparks.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F). Preferably refrigerate.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Synthetic apron. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid. Powdered solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 202.26 g/mole

Color: Yellow.

pH (1% soln/water): Not applicable.

Boiling Point: 404°C (759.2°F)

Melting Point: 151.2°C (304.2°F)

Critical Temperature: Not available.

Specific Gravity: 1.271 @ 23 C (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 4.9

Ionicity (in Water): Not available.

Dispersion Properties:
Is not dispersed in cold water, hot water.
See solubility in diethyl ether.

Solubility:
Soluble in diethyl ether.
Insoluble in cold water, hot water.
Pyrene is fairly soluble in organic solvents.
It is soluble in alcohol, benzene, carbon disulfide, ether, petroleum ether, and toluene

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 800 mg/kg [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenic).
May cause cancer (tumorigenic) according to animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: May cause skin irritation. May be absorbed through skin.
Eyes: May cause eye irritation. Conjunctival irritation may be noted.
Inhalation: May cause respiratory tract irritaiton.

Ingestion: May cause gastrointestinal tract irritation. May affect behavior/Central Nervous System (excitation and muscel spasicity), liver and urinary system, and immune system, and blood.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 1.8 mg/l 48 hours [Water flea].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut carcinogen reporting list.: Pyrene
Illinois chemical safety act: Pyrene
New York release reporting list: Pyrene
Pennsylvania RTK: Pyrene
Massachusetts RTK: Pyrene
Massachusetts spill list: Pyrene
New Jersey: Pyrene
New Jersey spill list: Pyrene
Louisiana RTK reporting list: Pyrene
Louisiana spill reporting: Pyrene
California Director's list of Hazardous Substances: Pyrene
TSCA 8(b) inventory: Pyrene
TSCA 8(a) CAIR: Pyrene
TSCA 8(d) H and S data reporting: Pyrene: June 1, 1987-June1, 1997
SARA 302/304/311/312 extremely hazardous substances: Pyrene
CERCLA: Hazardous substances.: Pyrene: 5000 lbs. (2268 kg)

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: C

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves (impervious).
Synthetic apron.
Not applicable.
Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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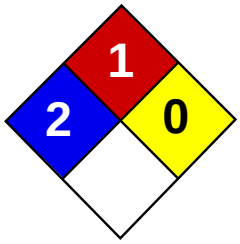

Material Safety Data Sheet
Silver MSDS

Section 1: Chemical Product and Company Identification

Product Name: Silver

Catalog Codes: SLS4222, SLS2005, SLS3427, SLS1210, SLS2632, SLS4054, SLS1837

CAS#: 7440-22-4

RTECS: VW3500000

TSCA: TSCA 8(b) inventory: Silver

CI#: Not applicable.

Synonym:

Chemical Formula: Ag

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Silver	7440-22-4	100

Toxicological Data on Ingredients: Silver: ORAL (LD50): Acute: 100 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact: No known effect on skin contact, rinse with water for a few minutes.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 (mg/m3) from OSHA (PEL) TWA: 0.01 (mg/m3) from OSHA NIOSH Australia: TWA: 0.1 (mg/m3)Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid metallic powder. Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 107.87 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 2212°C (4013.6°F)

Melting Point: 961°C (1761.8°F)

Critical Temperature: Not available.

Specific Gravity: 10.4 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Is not dispersed in cold water, hot water.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 100 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Very hazardous in case of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:

Identification:

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Silver Pennsylvania RTK: Silver Minnesota: Silver Massachusetts RTK: Silver New Jersey: Silver TSCA 8(b) inventory: Silver TSCA 8(a) PAIR: Silver TSCA 8(d) H and S data reporting: Silver SARA 313 toxic chemical notification and release reporting: Silver: 1% CERCLA: Hazardous substances.: Silver: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC): R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Not applicable. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 11/01/2010 12:00 PM

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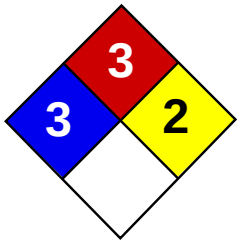

Material Safety Data Sheet
Sodium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sodium

Catalog Codes: SLS3505

CAS#: 7440-23-5

RTECS: VY0686000

TSCA: TSCA 8(b) inventory: Sodium

CI#: Not applicable.

Synonym: Natrium

Chemical Name: Sodium

Chemical Formula: Na

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sodium	7440-23-5	100

Toxicological Data on Ingredients: Sodium LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 115°C (239°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:
Extremely flammable in presence of moisture. Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid. Moisture reactive material. SMALL FIRE: Obtain advice on use of water. Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Do not use water jet.

Special Remarks on Fire Hazards: When heated to decomposition it emits toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Flammable solid that, in contact with water, emits flammable gases. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Cover with dry earth, sand or other non-combustible material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep under inert atmosphere. Keep container dry. Do not breathe dust. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 22.99 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: 881.4°C (1618.5°F)

Melting Point: 97.8°C (208°F)

Critical Temperature: Not available.

Specific Gravity: 0.97 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances:
Highly reactive with oxidizing agents, acids, moisture. The product reacts violently with water to emit flammable but non toxic gases.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Material is destructive to tissue of the mucous membranes and upper respiratory tract.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 4.3: Material that emits flammable gases on contact with water.

Identification: : Sodium : UN1428 PG: I

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Sodium Massachusetts RTK: Sodium TSCA 8(b) inventory: Sodium CERCLA: Hazardous substances.: Sodium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R17- Spontaneously flammable in air. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 3

Reactivity: 2

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 3

Reactivity: 2

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:
-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986.

Other Special Considerations: Not available.

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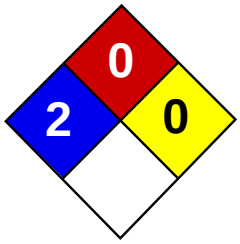

Health	2
Fire	0
Reactivity	0
Personal Protection	G

Material Safety Data Sheet
Tetrachloroethylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Tetrachloroethylene

Catalog Codes: SLT3220

CAS#: 127-18-4

RTECS: KX3850000

TSCA: TSCA 8(b) inventory: Tetrachloroethylene

CI#: Not available.

Synonym: Perchloroethylene; 1,1,2,2-Tetrachloroethylene; Carbon bichloride; Carbon dichloride; Ankilostin; Didakene; Dilatin PT; Ethene, tetrachloro-; Ethylene tetrachloride; Perawin; Perchlor; Perclene; Perclene D; Percosolvel; Tetrachloroethene; Tetraleno; Tetralex; Tetravec; Tetroguer; Tetropil

Chemical Name: Ethylene, tetrachloro-

Chemical Formula: C2-Cl4

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Tetrachloroethylene	127-18-4	100

Toxicological Data on Ingredients: Tetrachloroethylene: ORAL (LD50): Acute: 2629 mg/kg [Rat]. DERMAL (LD): Acute: >3228 mg/kg [Rabbit]. MIST(LC50): Acute: 34200 mg/m 8 hours [Rat]. VAPOR (LC50): Acute: 5200 ppm 4 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of eye contact (irritant), of ingestion.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH. Classified 2A (Probable for human.) by IARC, 2 (anticipated carcinogen) by NTP. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, peripheral nervous system, respiratory tract, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:
Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 25 (ppm) from OSHA (PEL) [United States] TWA: 25 STEL: 100 (ppm) from ACGIH (TLV) [United States] TWA: 170 (mg/m3) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Ethereal.

Taste: Not available.

Molecular Weight: 165.83 g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 121.3°C (250.3°F)

Melting Point: -22.3°C (-8.1°F)

Critical Temperature: 347.1°C (656.8°F)

Specific Gravity: 1.6227 (Water = 1)

Vapor Pressure: 1.7 kPa (@ 20°C)

Vapor Density: 5.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 5 - 50 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.4

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Miscible with alcohol, ether, chloroform, benzene, hexane. It dissolves in most of the fixed and volatile oils. Solubility in water: 0.015 g/100 ml @ 25 deg. C It slowly decomposes in water to yield Trichloroacetic and Hydrochloric acids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Oxidized by strong oxidizing agents. Incompatible with sodium hydroxide, finely divided or powdered metals such as zinc, aluminum, magnesium, potassium, chemically active metals such as lithium, beryllium , barium. Protect from light.

Special Remarks on Corrosivity: Slowly corrodes aluminum, iron, and zinc.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 2629 mg/kg [Rat]. Acute dermal toxicity (LD50): >3228 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 5200 4 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH. Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of ingestion.

Special Remarks on Toxicity to Animals:
Lowest Publishe Lethal Dose/Conc: LDL [Rabbit] - Route: Oral; Dose: 5000 mg/kg LDL [Dog] - Route: Oral; Dose: 4000 mg/kg LDL [Cat] - Route: Oral; Dose: 4000 mg/kg

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects and birth defects(teratogenic). May affect genetic material (mutagenic). May cause cancer.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation with possible dermal blistering or burns. Symtoms may include redness, itching, pain, and possible dermal blistering or burns. It may be absorbed through the skin with possible systemic effects. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts. Eyes: Contact causes transient eye irritation, lacrimation. Vapors cause eye/conjunctival irritation. Symptoms may include redness and pain. Inhalation: The main route to occupational exposure is by inhalation since it is readily absorbed through the lungs. It causes respiratory tract irritation, . It can affect behavior/central nervous system (CNS depressant and anesthesia ranging from slight inebriation to death, vertigo, somnolence, anxiety, headache, excitement, hallucinations, muscle incoordination, dizziness, lightheadness, disorentiation, seizures, enotional instability, stupor, coma). It may cause pulmonary edema Ingestion: It can cause nausea, vomiting, anorexia, diarrhea, bloody stool. It may affect the liver, urinary system (proteinuria, hematuria, renal failure, renal tubular disorder), heart (arrhythmias). It may affect behavior/central nervous system with symptoms similar to that of inhalation. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may result in excessive drying of the skin, and irritation. Ingestion/Inhalation: Chronic exposure can affect the liver(hepatitis,fatty liver degeneration), kidneys, spleen, and heart (irregular heartbeat/arrhythmias, cardiomyopathy, abnormal EEG), brain, behavior/ central nervous system/peripheral nervous system (impaired memory, numbness of extremeties, peripheral neuropathy and other

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 18.4 mg/l 96 hours [Fish (Fatthead Minnow)]. 18 mg/l 48 hours [Daphnia (daphnia)]. 5 mg/l 96 hours [Fish (Rainbow Trout)]. 13 mg/l 96 hours [Fish (Bluegill sunfish)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Tetrachloroethylene UNNA: 1897 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Tetrachloroethylene California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Tetrachloroethylene Connecticut hazardous material survey.: Tetrachloroethylene Illinois toxic substances disclosure to employee act: Tetrachloroethylene Illinois chemical safety act: Tetrachloroethylene New York release reporting list: Tetrachloroethylene Rhode Island RTK hazardous substances: Tetrachloroethylene Pennsylvania RTK: Tetrachloroethylene Minnesota: Tetrachloroethylene Michigan critical material: Tetrachloroethylene Massachusetts RTK: Tetrachloroethylene Massachusetts spill list: Tetrachloroethylene New Jersey: Tetrachloroethylene New Jersey spill list: Tetrachloroethylene Louisiana spill reporting: Tetrachloroethylene California Director's List of Hazardous Substances: Tetrachloroethylene TSCA 8(b) inventory: Tetrachloroethylene TSCA 8(d) H and S data reporting: Tetrachloroethylene: Effective date: 6/1/87; Sunset date: 6/1/97 SARA 313 toxic chemical notification and release reporting: Tetrachloroethylene CERCLA: Hazardous substances.: Tetrachloroethylene: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R40- Possible risks of irreversible effects. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S23- Do not breathe gas/fumes/vapour/spray S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: g

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:29 PM

Last Updated: 11/01/2010 12:00 PM

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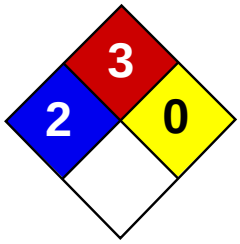

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Toluene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Toluene

Catalog Codes: SLT2857, SLT3277

CAS#: 108-88-3

RTECS: XS5250000

TSCA: TSCA 8(b) inventory: Toluene

CI#: Not available.

Synonym: Toluol, Tolu-Sol; Methylbenzene; Methacide; Phenylmethane; Methylbenzol

Chemical Name: Toluene

Chemical Formula: C6-H5-CH3 or C7-H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Toluene	108-88-3	100

Toxicological Data on Ingredients: Toluene: ORAL (LD50): Acute: 636 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit]. VAPOR (LC50): Acute: 49000 mg/m 4 hours [Rat]. 440 ppm 24 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, the nervous system, liver, brain, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F).

Flammable Limits: LOWER: 1.1% UPPER: 7.1%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:
Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide; concentrated nitric acid, sulfuric acid + nitric acid; N2O4; AgClO4; BrF3; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Toxic flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States] TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 100 STEL: 150 from NIOSH [United States] TWA: 375 STEL: 560 (mg/m3) from NIOSH [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweet, pungent, Benzene-like.

Taste: Not available.

Molecular Weight: 92.14 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 110.6°C (231.1°F)

Melting Point: -95°C (-139°F)

Critical Temperature: 318.6°C (605.5°F)

Specific Gravity: 0.8636 (Water = 1)

Vapor Pressure: 3.8 kPa (@ 25°C)

Vapor Density: 3.1 (Air = 1)

Volatility: Not available.

Odor Threshold: 1.6 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.7

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in diethyl ether, acetone. Practically insoluble in cold water. Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide. Solubility in water: 0.561 g/l @ 25 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride. Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C. Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 636 mg/kg [Rat]. Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 440 24 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Human] - Route: Oral; Dose: 50 mg/kg LCL [Rabbit] - Route: Inhalation; Dose: 55000 ppm/40min

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes mild to moderate skin irritation. It can be absorbed to some extent through the skin. Eyes: Cauess mild to moderate eye irritation with a burning sensation. Splash contact with eyes also causes conjunctivitis, blepharospasm, corneal edema, corneal abraisons. This usually resolves in 2 days. Inhalation: Inhalation of vapor may cause respiratory tract irritation causing coughing and wheezing, and nasal discharge. Inhalation of high concentrations may affect behavior and cause central nervous system effects characterized by nausea, headache, dizziness, tremors, restlessness, lightheadedness, exhilaration, memory loss, insomnia, impaired reaction time, drowsiness, ataxia, hallucinations, somnolence, muscle contraction or spasticity, unconsciousness and coma. Inhalation of high concentration of vapor may also affect the cardiovascular system (rapid heart beat, heart palpitations, increased or decreased blood pressure, dysrhythmia,), respiration (acute pulmonary edema, respiratory depression, apnea, asphyxia), cause vision disturbances and dilated pupils, and cause loss of appetite. Ingestion: Aspiration hazard. Aspiration of Toluene into the lungs may cause chemical pneumonitis. May cause irritation of the digestive tract with nausea, vomiting, pain. May have effects similar to that of acute inhalation. Chronic Potential Health Effects: Inhalation and Ingestion: Prolonged or repeated exposure via inhalation may cause central nervous system and cardiovascular symptoms similar to that of acute inhalation and ingestion as well liver damage/failure, kidney damage/failure (with hematuria, proteinuria, oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigmented or nucleated red blood cells, changes in white blood cell count), bone marrow changes, electrolyte imbalances (Hypokalemia, Hypophostatemia), severe, muscle weakness and Rhabdomyolysis. Skin: Repeated or prolonged skin contact may cause defatting dermatitis.

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 mg/l 24 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l 24 hours [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 56.8 ppm any hours [Fish (Goldfish)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Toluene UNNA: 1294 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene California prop. 65 (no significant risk level): Toluene: 7 mg/day (value) California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene Connecticut hazardous material survey.: Toluene Illinois

toxic substances disclosure to employee act: Toluene Illinois chemical safety act: Toluene New York release reporting list: Toluene Rhode Island RTK hazardous substances: Toluene Pennsylvania RTK: Toluene Florida: Toluene Minnesota: Toluene Michigan critical material: Toluene Massachusetts RTK: Toluene Massachusetts spill list: Toluene New Jersey: Toluene New Jersey spill list: Toluene Louisiana spill reporting: Toluene California Director's List of Hazardous Substances.: Toluene TSCA 8(b) inventory: Toluene TSCA 8(d) H and S data reporting: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92 SARA 313 toxic chemical notification and release reporting: Toluene CERCLA: Hazardous substances.: Toluene: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R20- Harmful by inhalation. S16- Keep away from sources of ignition - No smoking. S25- Avoid contact with eyes. S29- Do not empty into drains. S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:30 PM

Last Updated: 11/01/2010 12:00 PM

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Material Safety Data Sheet

Version 4.1
Revision Date 01/17/2012
Print Date 06/07/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	*trans*-1,2-Dichloroethylene
Product Number	:	D62209
Brand	:	Aldrich
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid, Harmful by ingestion., Irritant

Target Organs

Central nervous system, Liver, Kidney

GHS Classification

Flammable liquids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302 + H332	Harmful if swallowed or if inhaled
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H402	Harmful to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : trans-1,2-Dichloroethene
trans-Acetylene dichloride

Formula : $C_2H_2Cl_2$
Molecular Weight : 96.94 g/mol

Component		Concentration
trans-Dichloroethylene		
CAS-No.	156-60-5	-
EC-No.	205-860-2	
Index-No.	602-026-00-3	

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Air and moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
trans-Dichloroethylene	156-60-5	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Central Nervous System impairment Eye irritation			

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid, clear
Colour	light yellow

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 50 °C (122 °F) - lit.
Boiling point	48 °C (118 °F) - lit.
Flash point	6.0 °C (42.8 °F) - closed cup
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	9.7 %(V)
Upper explosion limit	12.8 %(V)
Vapour pressure	no data available
Density	1.257 g/mL at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid
Oxidizing agents, Bases

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat - 1,235 mg/kg

Inhalation LC50
LC50 Inhalation - rat - 24100 ppm
Remarks: Behavioral:Somnolence (general depressed activity).

Dermal LD50
LD50 Dermal - rabbit - > 5,000 mg/kg
Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Other information on acute toxicity
no data available

Skin corrosion/irritation
Skin - rabbit - Skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - rabbit - Eye irritation

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
prolonged or repeated exposure can cause:, narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: KV9400000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 220.00 mg/l - 48 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene
Reportable Quantity (RQ): 1000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1150 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: 1,2-DICHLOROETHYLENE
Marine pollutant: No

IATA
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Harmful by ingestion., Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
trans-Dichloroethylene	156-60-5	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
trans-Dichloroethylene	156-60-5	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
trans-Dichloroethylene	156-60-5	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information

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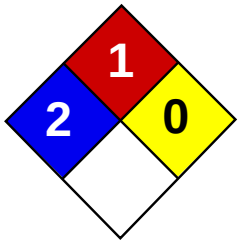
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.



Material Safety Data Sheet
Trichloroethylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Trichloroethylene

Catalog Codes: SLT3310, SLT2590

CAS#: 79-01-6

RTECS: KX4560000

TSCA: TSCA 8(b) inventory: Trichloroethylene

CI#: Not available.

Synonym:

Chemical Formula: C2HCl3

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Trichloroethylene	79-01-6	100

Toxicological Data on Ingredients: Trichloroethylene: ORAL (LD50): Acute: 5650 mg/kg [Rat]. 2402 mg/kg [Mouse]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 420°C (788°F)

Flash Points: Not available.

Flammable Limits: LOWER: 8% UPPER: 10.5%

Products of Combustion: These products are carbon oxides (CO, CO2), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/

spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Carcinogenic, teratogenic or mutagenic materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 50 STEL: 200 (ppm) from ACGIH (TLV) TWA: 269 STEL: 1070 (mg/m3) from ACGIH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 131.39 g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 86.7°C (188.1°F)

Melting Point: -87.1°C (-124.8°F)

Critical Temperature: Not available.

Specific Gravity: 1.4649 (Water = 1)

Vapor Pressure: 58 mm of Hg (@ 20°C)

Vapor Density: 4.53 (Air = 1)

Volatility: Not available.

Odor Threshold: 20 ppm

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; log(oil/water) = 0

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:
Easily soluble in methanol, diethyl ether, acetone. Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity:
Extremely corrosive in presence of aluminum. Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 2402 mg/kg [Mouse]. Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH. The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in human. Detected in maternal milk in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Trichloroethylene : UN1710 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Trichloroethylene California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Trichloroethylene Pennsylvania RTK: Trichloroethylene Florida: Trichloroethylene Minnesota: Trichloroethylene Massachusetts RTK: Trichloroethylene New Jersey: Trichloroethylene TSCA 8(b) inventory: Trichloroethylene CERCLA: Hazardous substances.: Trichloroethylene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36/38- Irritating to eyes and skin. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 11/01/2010 12:00 PM

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UNLEADED GASOLINE (ALL GRADES)
MATERIAL SAFETY DATA SHEET

Petrocom Energy Group, LLC
1330 Post Oak Blvd., Suite 2350
Houston, Texas 77056
Phone: 713-418-3000
Fax: 713-418-3001

Revision Date: 03/05/2008

Section 1: Product Identification

Name: Unleaded Gasoline
Synonyms: Regular/Midgrade/Premium Gasoline, Motor Fuel, Reformulated Gasoline, RFG, Conventional Gasoline.
CAS No.: 86290-81-5
MSDS No.: PEG-UNL
Use: Motor fuel

Section 2: Product Composition

Component	CAS Number	Amount (%)
Gasoline	86290-81-5	0 – 100
Benzene	71-43-2	0 – 5
Toluene	108-88-3	0 – 30
Xylene (all isomers)	1330-20-7	0 – 25
Hexane (other isomers)	Mixture	5 – 25
n-Hexane	110-54-3	0 – 3
Cyclohexane	110-82-7	0 – 3
Octanes (all isomers)	Mixture	0 – 20
Heptane (all isomers)	142-82-5	0 – 15
Ethanol	64-17-5	0 – 10
Pentanes (all isomers)	Mixture	0 – 20
Trimethylbenzenes (all isomers)	95-63-6	0 – 5
Ethylbenzene	100-41-4	0 – 5
Cumene	98-82-8	0 – 5
Methyl Tertiary Butyl Ether (MTBE)	1634-04-4	0 – 16
Tertiary Amyl Methyl Ether (TAME)	994-05-8	0 – 6

Section 3: Hazards Identification

Emergency Overview	Hazard Rankings
DANGER! Extremely Flammable liquid and vapor Harmful if swallowed Skin Irritant May cause eye and respiratory irritation Cancer Hazard – Contains material which can cause cancer	**NFPA**

Physical form: Liquid
Appearance: Clear to amber
Odor: Strong, Gasoline

Potential Health Effects

Eyes: Contact with eyes may cause irritation, redness, tearing, stinging, watering and blurred vision.

Skin: Contact with skin may cause irritation, itching, redness and skin damage. Prolonged or repeated contact may cause drying and cracking of the skin, and may also cause dermatitis and inflammation. (See also section 11).

Inhalation: Breathing high concentration can be harmful. Throat and lung irritation may occur. Central nervous system effects including nausea, euphoria, dizziness, headache, fatigue, drowsiness or unconsciousness may occur due to long term or high concentration exposure to vapors.

Ingestion: Toxic if swallowed. This product may cause nausea, vomiting, dizziness, drowsiness, diarrhea if swallowed. Central nervous system effects may be caused. Swallowing this product can result in severe lung damage and/or death.

Signs / Symptoms: When overexposed to this product effects such as nausea, vomiting, blurred vision, respiratory failure, central nervous system depression, unconsciousness, tremor, death may occur.

See toxicological Information (section 11)

Section 4: First Aid Measures

Eye contact: Flush eyes immediately with fresh, cool water for at least 15 minutes. If irritation or redness or any symptoms persist, seek medical attention.

Skin contact: Remove contaminated clothes and shoes. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, wash affected area thoroughly with soap and water. If irritation or redness develops, seek medical attention.

Inhalation (Breathing): If inhaled, immediately move person to fresh air. If there is difficulty breathing, give oxygen. If not breathing, immediately give artificial respiration. Seek medical attention.

Ingestion (Swallowing): This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. Do not induce vomiting. Do not give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is unconscious or drowsy, place on the left side with the head down. Seek immediate medical attention.

Notes to Physician: This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material.
Inhalation overexposure can produce toxic effects. Monitor respiratory distress. If difficulty in breathing evaluate upper respiratory tract inflammation, bronchitis and pneumonitis. Administer supplemental oxygen as required.
If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Cinsuder activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubtion or by placement of the body in a Trendelenburg and left lateral decubitus position.

Section 5: Fire Fighting Measures

NFPA Hazard Class: Health = 1 ; Flammability = 3 ; Instability = 0
(0 – Minimal ; 1 – Slight ; 2 – Moderate ; 3 – Serious ; 4 – Severe)

Auto – ignition temperature : >260 ˚C (500 ˚F)

Flash point : Closed cup: -43 ˚C (-45 ˚F)

Flammable limits : Lower: approximately 1.4%
Upper: approximately 7.6%

Products of combustion : Carbon monoxide, carbon dioxide, nitrogen and sulfur oxides, smoke, fumes, unburned hydrocarbons and other products of incomplete combustion.

Special properties : Flammable liquid! This material can be ignited by heat, sparks, flames or other sources of ignition. Vapors may travel long distances to a source where they can ignite and flash back, or explode. A mixture of vapor and air can create an explosion hazard in confined spaces. If container is not properly cooled, it can rupture n the heat of a fire.

Extinguishing media : Use of dry chemical, carbon dioxide, or foam is recommended to extinguish fire. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may not extinguish the fire, unless it is used by experienced fire fighters and under favorable conditions.

Protective Equipment for Fire Fighters : Fire fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Section 6: Accidental Release Measures

Personal precautions: This material is extremely flammable. Eliminate all ignition sources. Keep all hot metal surfaces away from spill/release. All equipment used when handling this material must be grounded.

Spill precautions: Stay upwind and away from spill. Notify persons down wind of the spill, isolate spill area and keep unauthorized personnel out. If it can be done with minimal risk, try to stop spill. Always wear protective equipment, including respiratory protection. Contact emergency personnel.

Environmental precautions: Prevent spilled material from entering sewers, drains, soil, and natural waterways. Use foam or spills to minimize vapors (section 5). Spilled material may be absorbed into an appropriate absorbent material.

Methods for cleaning up: Notify fire authorities and appropriate federal, state and local agencies. Immediate cleanup is recommended.

Section 7: Handling and Storage

Handling: Flammable liquid and vapor. To be used only as a motor fuel. Avoid inhalation of vapors and contact with skin. Wash hands thoroughly after handling this material. Use in a well ventilated area away from all ignition sources. Use product with caution around heat, sparks, static electricity and open flames. Static electricity may ignite vapors and cause fire.

Empty containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other ignition sources. The may explode and cause injury and/or death. Empty drums should be completely drained, properly bunged, and returned promptly to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Storage: Store in approved containers only. Keep in tightly closed containers in cool, dry, well ventilated areas. Keep isolated away from heat, sources of ignition and hot metal surfaces.

Section 8: Exposure Controls / Personal Protection

Engineering controls: Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below their occupational exposure limits. Eyewash stations and safety showers should be located near the work-station.

Personal Protection

Eye Protection: Keep away from eyes. Safety glasses complying with approved standards should be worn. Chemical type goggles should be worn.

Skin Protection: Keep away from skin. Skin protection should be worn. Chemical resistant, impervious gloves should be worn. Always follow good personal hygiene practices after handling the material.

Respiratory Protection: Approved respiratory equipment must be used if a risk assessment indicates it is necessary. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn.

General Protection: Use this material in well ventilated areas. Ventilation equipment should be explosion proof also.

Component	Applicable Workplace Exposure Limits
Gasoline	ACGIH – TWA: 300 ppm (8 hours) STEL: 500 ppm (15 minutes)
Benzene	ACGIH – TWA: 0.5 ppm (8 hours) STEL: 2.5 ppm (15 minutes) OSHA – TWA: 1 ppm (8 hours) STEL: 5 ppm (15 minutes)
Toluene	ACGIH – TWA: 20 ppm (8 hours) OSHA – TWA: 200 ppm (8 hours) CEIL: 300 ppm PEAK: 500 ppm (10 minutes)
Xylene (all isomers)	ACGIH – TWA: 100 ppm (8 hours) STEL: 150 ppm (15 minutes) OSHA – TWA: 100 ppm (8 hours)
Hexane (other isomers)	ACGIH – TWA: 500 ppm (8 hours) STEL: 1000 ppm (15 minutes)
n-Hexane	ACGIH – TWA: 50 ppm (8 hours) OSHA – TWA: 500 ppm (8 hours)
Cyclohexane	ACGIH – TWA: 100 ppm (8 hours) OSHA – TWA: 300 ppm (8 hours)
Octanes (all isomers)	ACGIH – TWA: 300 ppm (8 hours) OSHA – TWA: 500 ppm (8 hours)
Heptane (all isomers)	ACGIH – TWA: 400 ppm (8 hours) STEL: 5000 ppm (15 minutes) OSHA – TWA: 500 ppm (8 hours)
Ethanol	ACGIH – TWA: 1000 ppm (8 hours) OSHA – TWA: 1000 ppm (8 hours)
Pentanes (all isomers)	ACGIH – TWA: 600 ppm (8 hours) OSHA – TWA: 1000 ppm (8 hours)
Trimethylbenzenes (all isomers)	ACGIH – TWA: 25 ppm (8 hours)
Ethylbenzene	ACGIH – TWA: 100 ppm (8 hours) STEL: 125 ppm (15 minutes) OSHA – TWA: 100 ppm (8 hours)
Cumene	ACGIH – TWA: 50 ppm (8 hours) OSHA – TWA: 50 ppm (8 hours)
Methyl Tertiary Butyl Ether (MTBE)	ACGIH – TWA: 50 ppm (8 hours)
Tertiary Amyl Methyl Ether (TAME)	ACGIH – TWA: 20 ppm (8 hours)

Section 9: Physical and Chemical Properties

Physical State:	Liquid.
Color:	Transparent, clear to amber liquid.
Odor:	Strong. Characteristic gasoline odor.
pH:	Not applicable
Boiling Point:	>26 ˚C (>78 ˚F)
Melting Point:	Not applicable.
Specific gravity:	0.66 to 0.75 (Water = 1)
Vapor density:	3 to 4 (Air = 1)
Vapor pressure:	220-450 mm Hg at 20˚C (68˚F) / 6-15 Reid-psia at 37.8˚C (100˚F)
Volatility:	720 – 770 g/l VOC (w/v)
Viscosity (at 40 ˚C):	< 1
Flash Point:	< -45 ˚F / < 43˚C
Bulk Density:	6.0 – 6.4 lbs/gal
Solubility in water:	Negligible

Section 10: Stability and Reactivity

Stability:	Stable. Extremely flammable liquid and vapor. Vapor can cause fire.
Conditions to avoid:	Keep away from heat, flame and all other possible sources of ignition.
Materials to avoid:	Keep away from strong oxidizing agents such as acids, chlorine, hydrogen peroxide and oxygen.
Hazardous decomposition products:	Please refer to the combustion products identified in Section 5 of this MSDS.
Hazardous Polymerization:	Not expected to occur.

Section 11: Toxicological Information

Toxicology Information

Oral toxicity:	Almost non-toxic. LD 50: > 2000 mg/kg (species: rats)
Dermal toxicity:	Almost non-toxic. LD 50: > 2000 mg/kg (species: rabbits)
Inhalation toxicity:	Almost non-toxic. LD 50: > 5 mg/l (species: rats)
Eye irritation:	Almost non-irritating. Draize score: > 6 and < 15 (species: rabbits)
Skin irritation:	Irritant. Primary irritation index: > 3 and < 5 (species: rabbits)
Other data:	Inhalation of high concentrations of vapors or mists may cause respiratory system irritation and damage. It may also result in the damage and depression of the central nervous system and may cause death. Prolonged contact with the material may cause severe skin irritation.
Subchronic toxicity:	Dermal studies resulted in significant irritation but not systematic toxicity (species: rabbits). Inhalation exposures (90 day, approximately 1500 ppm vapor) produced light hydrocarbon nephropathy but no significant systemic toxicity (species: rats).
Neurotoxicity:	Repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments. However, no persistent neurotoxic effects were observed in subchronic inhalation studies of gasoline.
Reproductive toxicity:	An inhalation study with rats exposed to 0, 400 and 1600 ppm of wholly vaporized unleaded gasoline, 6 hours per day on day 6 through 16 of gestation, showed no teratogenic effects nor indication of toxicity to either the mother or the fetus. Another inhalation study in rats exposed to 3000, 6000, or 9000 ppm of gasoline vapor, 6 hours per day on day 6 through 20 of gestation, also showed no teratogenic effects nor indications of toxicity to either the mother or the fetus.
Chronic toxicity:	A lifetime mouse skin painting study of unleaded gasoline applied at 50 microliters, three time weekly, resulted in some severe skin irritation and changes, but no statistically significant increase in skin cancer or cancer to any other organ. Lifetime inhalation of wholly vaporized unleaded gasoline over 2000 ppm has caused increased liver tumors in female mice and increased kidney tumors in male rats. The EPA has concluded that mechanism by which wholly vaporzied unleaded gasoline causes kidney damage is unque to the male rat. The effects in that species (kidney damage and cancer) should not be used in human risk assessment.

Other toxic effects on humans
Extremely hazardous in case of ingestion.
Very hazardous in case of eye contact.
Hazardous in case of skin contact.
Slightly hazardous in case of inhalation.

Carcinogenic effects:
Contains material that may cause cancer depending on the level and duration of exposure.

Target organs:
Contains material that may cause damage to humans organs such as (but not limited to) blood, kidneys, lungs, liver, eye, skin, nervous system and upper respiratory tract.

Section 12: Ecological Information

Ecotoxicity:
This material may be toxic to aquatic organisms such as algae and daphnia. It has also shown to be toxic to fish.

Environmental fate:
The material is expected to be readily biodegradable. When released into the environment, some of the constituents of gasoline will volatilize and be photo degraded in the atmosphere. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions, photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

Section 13: Disposal Considerations

Waste disposal:
Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product and any of its by products should always comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.
This material would likely be identified as a federally regulated RCRA hazardous waste. See sections 7 and 8 for further information on handling, storage and personal protection. See section 9 for the material's physical and chemical properties.

Section 14: Transportation Information

This material is U.S Department of Transportation (DOT) regulated material.

Shipping name: Gasoline, 3, UN 1203, PG II
Gasohol, 3, NA 1203, PG II (for gasoline blended with less than 20% ethanol).

Hazard class: 3 DOT Class: Flammable liquid

Packing Group: II

UN / NA Number: UN1203 / NA1203

Emergency Response Code: 128

Label:

Section 15: Regulatory Information

TSCA Inventory: This product and/or its components are listed on the Toxic Substances Control Act (TSCA)

SARA 302 / 304: Emergency planning and notification The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for “Extremely Hazardous Substances” listed in 40 CFR 302.4 and CFR 355. No components were identified.

SARA 311 / 312: Hazard identification SARA Title III requires facilities subject to this subpart to submit aggregate information on chemicals by “Hazard Category” as defined in 40 CFR 370.2. This material would be classified under: Fire, Acute (immediate) Health Hazard, Chronic (Delayed) Health Hazard.

CERCLA / SARA 313: Toxic and chemical notification and release reporting

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372

Component	CAS Number	Amount (%)
Benzene	71-43-2	0 – 5
Toluene	108-88-3	0 – 30
Xylene (o, m, p isomers)	1330-20-7	0 – 25
n-Hexane	110-54-3	0 – 3
Cyclohexane	110-82-7	0 – 3
1, 2, 4 Trimethylbenzenes	95-63-6	0 – 5
Ethylbenzene	100-41-4	0 – 5
Cumene	98-82-8	0 – 5
Methyl Tertiary Butyl Ether (MTBE)	1634-04-4	0 – 16

California Proposition 65: This material may contain detectable quantities of the following chemicals known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
Benzene (CAS NO. 71-43-3)
Toluene (CAS No. 108-88-3)
Ethylbenzene (CAS No. 100-41-4)
Naphthalene (CAS No. 91-20-3)

Canadian Regulations: WHMIS Hazard Class: B2 – Flammable Liquids
D2A – Very Toxic Material

Section 16: Other Information

Issue date: March 5, 2008
Previous issue date: No previous date
Version: 1
MSDS Code: PEG-UNL

Legend:
ACGIH = American Conference of Governmental Industrial Hygienists
CAS = Chemical Abstracts Service Registry
CEIL = Ceiling Limit
CERCLA = The Comprehensive Environmental Response, Compensation and Liability Act
EPA = Environmental Protection Agency
NFPA = National Fire Protection Association
OSHA = Occupational Safety and Health Administration
SARA = Superfund Amendments and Reauthorization Act
STEL = Short Term Exposure Limit (15 minutes)
TWA = Time Weighted Average (8 hours)
WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer:
The information presented in this Material Safety Data Sheet (MSDS) d on data believed to be accurate as of the issuance date of this MSDS. No warranty is expressed or implied for the accuracy or completeness of the above provided information. Petrocom Energy Group, LLC does not assume any liability for any damage or injury arising out of product use by others. The end user of the product has the responsibility for evaluating the accuracy of the data, and determining the safety, toxicity and suitability of the product under any conditions.

Material Safety Data Sheet

Version 3.4
Revision Date 05/29/2012
Print Date 06/07/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Vinyl chloride
Product Number	:	387622
Brand	:	Aldrich
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable gas, Compressed Gas, Carcinogen, Toxic by ingestion

Target Organs

Liver, Blood, Brain., Central nervous system, Kidney, Eyes

GHS Classification
Flammable gases (Category 1)
Gases under pressure (Liquefied gas)
Carcinogenicity (Category 1A)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H350	May cause cancer.

Precautionary statement(s)

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	4
Physical hazards:	3

NFPA Rating

Health hazard: 2
Fire: 4
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Chloroethylene

Formula : C_2H_3Cl
Molecular Weight : 62.50 g/mol

Component		Concentration
Vinyl chloride		
CAS-No.	75-01-4	-
EC-No.	200-831-0	
Index-No.	602-023-00-7	

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of an oxidizing gas (eg air), a source of ignition, and when the concentration of the gas is between the lower and upper explosive limits. Keep away from heat/sparks/open flame/hot surface/oxidizing gas. No smoking.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Clean up promptly by sweeping or vacuum.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapour or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

Contents under pressure. Light sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Vinyl chloride	75-01-4	TWA	1 ppm	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Liver damage Lung cancer Confirmed human carcinogen			
		STEL	5 ppm	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		STEL	5 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	See 1910.1017			
	Potential Occupational Carcinogen See Appendix A			
Hydroquinone	123-31-9	TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye irritation Eye damage Confirmed animal carcinogen with unknown relevance to humans Sensitizer			
		TWA	2 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m3	USA. NIOSH Recommended Exposure Limits
	15 minute ceiling value			

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Liquefied gas
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: -153.8 °C (-244.8 °F) - lit.
Boiling point	-13.4 °C (7.9 °F) - lit.
Flash point	-61.0 °C (-77.8 °F) - closed cup
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	3.6 %(V)
Upper explosion limit	33 %(V)
Vapour pressure	no data available
Density	0.911 g/cm3 at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid
Chemically active metals, Copper

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

Contains the following stabiliser(s):
Hydroquinone (>=0 - <=0.0001 %)
Phenol (>=0 - <=0.01 %)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
LC50 Inhalation - rat - 0.3 h - 180000 ppm
Remarks: Behavioral:Tremor. Behavioral:Convulsions or effect on seizure threshold. Respiratory disorder

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity

no data available

Carcinogenicity

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Human carcinogen.

IARC:	1 - Group 1: Carcinogenic to humans (Vinyl chloride)
	1 - Group 1: Carcinogenic to humans (Vinyl chloride)
NTP:	Known to be human carcinogen (Vinyl chloride)

Reproductive toxicity

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: KU9625000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1086 Class: 2.1
Proper shipping name: Vinyl chloride, stabilized
Reportable Quantity (RQ): 1 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1086 Class: 2.1 EMS-No: F-D, S-U
Proper shipping name: VINYL CHLORIDE, STABILIZED
Marine pollutant: No

IATA
UN number: 1086 Class: 2.1
Proper shipping name: Vinyl chloride, stabilized
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards
Flammable gas, Compressed Gas, Carcinogen, Toxic by ingestion

SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No.	Revision Date
Phenol	108-95-2	2007-07-01
Hydroquinone	123-31-9	2007-07-01

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Vinyl chloride	75-01-4	2007-07-01

SARA 311/312 Hazards
Fire Hazard, Sudden Release of Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Vinyl chloride	75-01-4	2007-07-01
Phenol	108-95-2	2007-07-01
Hydroquinone	123-31-9	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Vinyl chloride	75-01-4	2007-07-01
Phenol	108-95-2	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Vinyl chloride	75-01-4	2007-07-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Vinyl chloride	75-01-4	1990-06-15

16. OTHER INFORMATION

Further information
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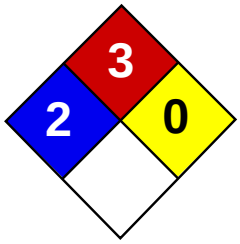
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.



Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Xylenes MSDS

Section 1: Chemical Product and Company Identification

Product Name: Xylenes

Catalog Codes: SLX1075, SLX1129, SLX1042, SLX1096

CAS#: 1330-20-7

RTECS: ZE2100000

TSCA: TSCA 8(b) inventory: Xylenes

CI#: Not available.

Synonym: Xylenes; Dimethylbenzene; xylol; methyltoluene

Chemical Name: Xylenes (o-, m-, p- isomers)

Chemical Formula: C6H4(CH3)2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Xylenes	1330-20-7	100

Toxicological Data on Ingredients: Xylenes: ORAL (LD50): Acute: 4300 mg/kg [Rat]. 2119 mg/kg [Mouse]. DERMAL (LD50): Acute: >1700 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 464°C (867.2°F)

Flash Points: CLOSED CUP: 24°C (75.2°F). (Tagliabue.) OPEN CUP: 37.8°C (100°F).

Flammable Limits: LOWER: 1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Vapors may travel to source of ignition and flash back.

Special Remarks on Explosion Hazards:
Vapors may form explosive mixtures with air. Containers may explode when heated. May polymerize explosively when heated. An attempt to chlorinate xylene with 1,3-Dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin) caused a violent explosion

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined

areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 (ppm) [Canada] TWA: 435 (mg/m3) [Canada] TWA: 434 STEL: 651 (mg/m3) from ACGIH (TLV) [United States] TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 138.5°C (281.3°F)

Melting Point: -47.4°C (-53.3°F)

Critical Temperature: Not available.

Specific Gravity: 0.864 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 1 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water. Miscible with absolute alcohol, ether, and many other organic liquids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Store away from acetic acid, nitric acid, chlorine, bromine, and fluorine.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 2119 mg/kg [Mouse]. Acute dermal toxicity (LD50): >1700 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 5000 4 hours [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:
Lowest Lethal Dose: LDL [Human] - Route: Oral; Dose: 50 mg/kg LCL [Man] - Route: Oral; Dose: 10000 ppm/6H

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in animal. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects (male and femael fertility (spontaneous abortion and fetotoxicity)) and birth defects based animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. Can be absorbed through skin. Eyes: Causes eye irritation. Inhalation: Vapor causes respiratory tract and mucous membrane irritation. May affect central nervous system and behavior (General anesthetic/CNS depressant with effects including headache, weakness, memory loss, irritability, dizziness, giddiness, loss of coordination and judgement, respiratory depression/arrest or difficulty breathing, loss of appetite, nausea, vomiting, shivering, and possible coma and death). May also affects blood, sense organs, liver, and peripheral nerves. Ingestion: May cause gastrointestinal irritation including abdominal pain, vomiting, and nausea. May also affect liver and urinary system/ kidneys. May cause effects similar to those of acute inhalation. Chronic Potential Health Effects: Chronic inhalation may affect the urinary system (kidneys) blood (anemia), bone marrow (hyperplasia of bone marrow) brain/behavior/Central Nervous system. Chronic inhalation may alsocause mucosal bleeding. Chronic ingestion may affect the liver and metabolism (loss of appetite) and may affect urinary system (kidney damage)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Xylenes UNNA: 1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Xylenes Illinois chemical safety act: Xylenes New York acutely hazardous substances: Xylenes Rhode Island RTK hazardous substances: Xylenes Pennsylvania RTK: Xylenes Minnesota: Xylenes Michigan critical material: Xylenes Massachusetts RTK: Xylenes Massachusetts spill list: Xylenes New Jersey: Xylenes New Jersey spill list: Xylenes Louisiana spill reporting: Xylenes California Director's List of Hazardous Substances: Xylenes TSCA 8(b) inventory: Xylenes SARA 302/304/311/312 hazardous chemicals: Xylenes SARA 313 toxic chemical notification and release reporting: Xylenes CERCLA: Hazardous substances.: Xylenes: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R10- Flammable. R21- Harmful in contact with skin. R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/11/2005 12:54 PM

Last Updated: 11/01/2010 12:00 PM

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Material Safety Data Sheets

Division of Facilities Services

DOD Hazardous Material Information (ANSI Format)
For Cornell University Convenience Only

351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Section 1 - Product and Company Identification	Section 9 - Physical & Chemical Properties
Section 2 - Compositon/Information on Ingredients	Section 10 - Stability & Reactivity Data
Section 3 - Hazards Identification Including Emergency Overview	Section 11 - Toxicological Information
Section 4 - First Aid Measures	Section 12 - Ecological Information
Section 5 - Fire Fighting Measures	Section 13 - Disposal Considerations
Section 6 - Accidental Release Measures	Section 14 - MSDS Transport Information
Section 7 - Handling and Storage	Section 15 - Regulatory Information
Section 8 - Exposure Controls & Personal Protection	Section 16 - Other Information

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Section 1 - Product and Company Identification
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Product Identification: 351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER
Date of MSDS: 01/01/1987 **Technical Review Date:** 10/28/1986
FSC: 8010 **NIIN:** 00-145-0189
Submitter: N EN
Status Code: C
MFN: 02
Article: N
Kit Part: Y

Manufacturer's Information

Manufacturer's Name: PORTER PAINT
Manufacturer's Address1:
Manufacturer's Address2: N/P, NK 00000
Manufacturer's Country: NK
General Information Telephone:
Emergency Telephone: 502-588-9200
Emergency Telephone: 502-588-9200
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: Y
Published: Y
CAGE: KO267
Special Project Code: N

Item Description

Item Name: PRIMER COATING
Item Manager: GSA
Specification Number: N/K
Type/Grade/Class: NK
Unit of Issue: KT
Unit of Issue Quantity: 0
Type of Container: N/K

Contractor Information

Contractor's Name: COURTAULDS COATINGS
Contractor's Address1: 400 S 13TH STREET
Contractor's Address2: LOUISVILLE, KY 40203
Contractor's Telephone: 502-588-9200/800-854-6813
Contractor's CAGE: 50411

Contractor Information

Contractor's Name: PORTER PAINT
Contractor's Address1: UNKNOWN
Contractor's Address2: UNKNOWN, NK 00000
Contractor's Telephone: UNKNOWN
Contractor's CAGE: KO267

Section 2 - Compositon/Information on Ingredients
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Ingredient Name: LEAD CAS# 7439-92-1
Ingredient CAS Number: Ingredient CAS Code: X
RTECS Number: RTECS Code: X
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:

<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: 0.07
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: N/P **OSHA PEL Code:**
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 150 UG/CUM **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical:

Ingredient Name: ZINC (SARA III)
Ingredient CAS Number: 7440-66-6 **Ingredient CAS Code:** M
RTECS Number: ZG8600000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: 97
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: 10 MG ZNO/M3 **OSHA PEL Code:** M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 10 MG ZNO/M3; 9192 **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity: 1000 LBS
DOT Reporting Quantity: 1000 LBS
Ozone Depleting Chemical: N

Ingredient Name: ZINC OXIDE
Ingredient CAS Number: 1314-13-2 **Ingredient CAS Code:** M
RTECS Number: ZH4810000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:

% High Volume: % High Volume Code:
% Text: 3
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: 15MG/M3 TDUST/5 FUME **OSHA PEL Code:** M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 10MG/M3 TDUST; 9293 **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical: N

Section 3 - Hazards Identification, Including Emergency Overview
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Health Hazards Acute & Chronic: N/P

Signs & Symptoms of Overexposure:
INHAL:IRRIT RESP TRACT OR ACUTE NERVOUS SYSTEM CAUSING HDCH,DIZZ OR NAUS.EYE,SKIN:PRIMARY IRRITATION

Medical Conditions Aggravated by Exposure:
N/P

LD50 LC50 Mixture: N/P

Route of Entry Indicators:
- **Inhalation:** N/P
- **Skin:** N/P
- **Ingestion:** N/P

Carcenogenicity Indicators
- **NTP:** N/P
- **IARC:** N/P
- **OSHA:** N/P

Carcinogenicity Explanation: N/P

Section 4 - First Aid Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

First Aid:
INHAL:REMOVE FROM EXPOS.KEEP WARM AND QUIET.CALL MD.EYES:FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.TAKE TO PHYSICIAN FOR MEDICAL TREATMENT.SKIN:WASH AFFECTED AREAS WITH LAR GE AMOUNTS OF WATER.REMOVE CONTAM CLOTHING.

Section 5 - Fire Fighting Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Fire Fighting Procedures:

KEEP CONTNR TIGHT CLOSED.ISOL FROM IGNIT SOURCE.WEAR SCBA.
Unusual Fire or Explosion Hazard:
CLOSED CONTNR MAY EXPLO.AVOID EXPOS TO DECOMP.IF NO ELECTRICITY,WATER SPRAY W/ FOG NOZ USED TO COOL.
Extinguishing Media:
FOAM,DRY CHEMICAL,CO*2
Flash Point: Flash Point Text: N/R(PER MFR)

Autoignition Temperature:
Autoignition Temperature Text: N/K
Lower Limit(s): N/R
Upper Limit(s): N/R

Section 6 - Accidental Release Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Spill Release Procedures:
REMOVE ALL SOURCES OF IGNITION(FLAMES,HOT SURFACES & ELECTRICAL,STATIC OR FRICTION SPARKS).AVOID BREATHING VAPORS,WEAR APPROVED(NIOSH OR MSHA) RESPIRATOR AND VENTILATE AREA.REMOVE WITH INERT ABSORBENT SUCH AS SAND,KITTY LITER,ETC & USE NON-SPARK TOOL

Section 7 - Handling and Storage
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Repiratory Protection:
NIOSH/MSHA APPRVD EQUIP,ONLY IN CONFINED AREA,AIR-LINE RESP,HOOD.SUP
Ventilation:
GEN DILUT OR LOCAL EXHST TO KEEP
Protective Gloves:
RUBBER,NEOPRENE
Eye Protection: SAFE GOG W/ SPLASH GUARDS
Other Protective Equipment: AS NEEDED-USE BODY PROTECTION,SUCH AS RUBBER APRON,ETC.
Work Hygenic Practices: N/P
Supplemental Health & Safety Information: MSDS PREP:85329.RESPIR:OPEN AREAS:USE MECH FLTER RESPIR TO REMOVE SOLID PARTICLES.RESTRICT AREAS:MECH FILTER RESPIR TO REMOVE PARTICLES, GAS AND VAPORS.PROD IS PART B OF 2-PART KIT.KEY1:N1.

Section 9 - Physical & Chemical Properties
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

HCC: F3
NRC/State License Number: N/R

Net Property Weight for Ammo: N/R
Boiling Point: Boiling Point Text: N/K
Melting/Freezing Point: Melting/Freezing Text: N/A
Decomposition Point: Decomposition Text: N/A
Vapor Pressure: N/R **Vapor Density:** N/R
Percent Volatile Organic Content:
Specific Gravity: 7.06
Volatile Organic Content Pounds per Gallon:
pH: N/P
Volatile Organic Content Grams per Liter:
Viscosity: N/A
Evaporation Weight and Reference: N/R
Solubility in Water: NEGLIGIBLE
Appearance and Odor: GREY POWDER
Percent Volatiles by Volume: N/R
Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Stability Indicator: YES
Materials to Avoid:
NONE(PER MFR)
Stability Condition to Avoid:
CONTACT WITH ALUMINUM IN CLOSED SYSTEM MAY CAUSE VIOLENT RXN
Hazardous Decomposition Products:
WHEN HEATED TO DECOMP AS IN WELDING,MAY PRODUCE CO,ZNO,CO*2.
Hazardous Polymerization Indicator: NO
Conditions to Avoid Polymerization:
N/R

Section 11 - Toxicological Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Toxicological Information:
N/P

Section 12 - Ecological Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Ecological Information:
N/P

Section 13 - Disposal Considerations
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Waste Disposal Methods:
DISPOSE OF IN A SAFE MANNER IN ACCORDANCE WITH LOCAL,STATE AND FEDERAL REGULATIONS THAT APPLY TO INCINERATION OR SECURE LANDFILL.

Section 14 - MSDS Transport Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Transport Information:
N/P

Section 15 - Regulatory Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

SARA Title III Information:
N/P
Federal Regulatory Information:
N/P
State Regulatory Information:
N/P

Section 16 - Other Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Other Information:
N/P

HMIS Transportation Information

Product Identification: 351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER
Transporation ID Number: 50647
Responsible Party CAGE: KO267
Date MSDS Prepared: 01/01/1987
Date MSDS Reviewed: 03/03/1987
MFN: 03/03/1987
Submitter: N TN
Status Code: C

Container Information
- **Unit of Issue:** KT
- **Container Quantity:** 0
- **Type of Container:** N/K
- **Net Unit Weight:** 11 LB

Article without MSDS: N
Technical Entry NOS Shipping Number:
Radioactivity: N/A
Form:
Net Explosive Weight: N/A
Coast Guard Ammunition Code: N/A
Magnetism: N/P
AF MMAC Code:
DOD Exemption Number: N/K
Limited Quantity Indicator:
Multiple Kit Number: 0
Kit Indicator: N
Kit Part Indicator: Y
Review Indicator: Y
Additional Data:
NOT REGULATED FOR SHIPPING.PART B OF 2 PART KIT.

Department of Transportation Information

DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
DOT PSN Code: ZZZ
Symbols: N/R
DOT PSN Modifier:
Hazard Class: N/R
UN ID Number: N/R
DOT Packaging Group: N/R
Label: N/R
Special Provision(s): N/R
Packaging Exception: N/R
Non Bulk Packaging: N/R
Bulk Packaging: N/R
Maximum Quanity in Passenger Area: N/R
Maximum Quanity in Cargo Area: N/R
Stow in Vessel Requirements: N/R
Requirements Water/Sp/Other: N/R

IMO Detail Information

IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION
IMO PSN Code: ZZZ
IMO PSN Modifier:
IMDG Page Number: N/R
UN Number: N/R
UN Hazard Class: N/R
IMO Packaging Group: N/R
Subsidiary Risk Label: N/R
EMS Number: N/R
Medical First Aid Guide Number: N/R

IATA Detail Information

IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
IATA PSN Code: ZZZ
IATA PSN Modifier:
IATA UN Id Number: N/R
IATA UN Class: N/R
Subsidiary Risk Class: N/R
UN Packaging Group: N/R
IATA Label: N/R
Packaging Note for Passengers: N/R
Maximum Quantity for Passengers: N/R
Packaging Note for Cargo: N/R
Maximum Quantity for Cargo: N/R
Exceptions: N/R

AFI Detail Information

AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
AFI Symbols:
AFI PSN Code: ZZZ
AFI PSN Modifier:
AFI UN Id Number: N/R
AFI Hazard Class: N/R
AFI Packing Group: N/R
AFI Label: N/R

Special Provisions: N/A
Back Pack Reference: N/A

HAZCOM Label Information

Product Identification: 351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER
CAGE: KO267
Assigned Individual: Y
Company Name: PORTER PAINT
Company PO Box:
Company Street Address1: UNKNOWN
Company Street Address2: UNKNOWN, NK 00000 NK
Health Emergency Telephone: 502-588-9200
Label Required Indicator: Y
Date Label Reviewed: 12/16/1998
Status Code: C
Manufacturer's Label Number:
Date of Label: 12/16/1998
Year Procured: N/K
Organization Code: G
Chronic Hazard Indicator: N/P
Eye Protection Indicator: N/P
Skin Protection Indicator: N/P
Respiratory Protection Indicator: N/P
Signal Word: N/P
Health Hazard:
Contact Hazard:
Fire Hazard:
Reactivity Hazard:

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ATTACHMENT D

Standard Safe Work Practices

1) Eating, drinking, chewing tobacco, smoking and carrying matches or lighters is prohibited in a contaminated or potentially contaminated area or where the possibility for the transfer of contamination exists.

2) Avoid contact with potentially contaminated substances. Do not walk through puddles, pools, mud, etc. Avoid, whenever possible, kneeling on the ground, leaning or sitting on equipment or ground. Do not place monitoring equipment on potentially contaminated surfaces (i.e., ground, etc.).

3) All field crew members should make use of their senses to alert them to potentially dangerous situations in which they should not become involved; i.e., presence of strong and irritating or nauseating odors.

4) Prevent, to the extent possible, spills. In the event that a spillage occurs, contain liquid if possible.

5) Field crew members shall be familiar with the physical characteristics of investigations, including:
    - Wind direction
    - Accessibility to associates, equipment, vehicles
    - Communication
    - Hot zone (areas of known or suspected contamination)
    - Site access
    - Nearest water sources

6) All wastes generated during activities on-site should be disposed of as directed by the project manager or his on-site representative.

7) Protective equipment as specified in the section on personnel protection will be utilized by workers during the initial site reconnaissance, and other activities.

Employees shall follow procedures to avoid at-risk behaviors that could result in an incident.

Manufacturer's Name: PORTER PAINT
Manufacturer's Address1:
Manufacturer's Address2: N/P, NK 00000
Manufacturer's Country: NK
General Information Telephone:
Emergency Telephone: 502-588-9200
Emergency Telephone: 502-588-9200
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: Y
Published: Y
CAGE: KO267
Special Project Code: N

Item Description

Item Name: PRIMER COATING
Item Manager: GSA
Specification Number: N/K
Type/Grade/Class: NK
Unit of Issue: KT
Unit of Issue Quantity: 0
Type of Container: N/K

Contractor Information

Contractor's Name: COURTAULDS COATINGS
Contractor's Address1: 400 S 13TH STREET
Contractor's Address2: LOUISVILLE, KY 40203
Contractor's Telephone: 502-588-9200/800-854-6813
Contractor's CAGE: 50411

Contractor Information

Contractor's Name: PORTER PAINT
Contractor's Address1: UNKNOWN
Contractor's Address2: UNKNOWN, NK 00000
Contractor's Telephone: UNKNOWN
Contractor's CAGE: KO267

Section 2 - Compositon/Information on Ingredients
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Ingredient Name: LEAD CAS# 7439-92-1
Ingredient CAS Number: Ingredient CAS Code: X
RTECS Number: RTECS Code: X
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:

<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: 0.07
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: N/P **OSHA PEL Code:**
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 150 UG/CUM **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical:

Ingredient Name: ZINC (SARA III)
Ingredient CAS Number: 7440-66-6 **Ingredient CAS Code:** M
RTECS Number: ZG8600000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: 97
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: 10 MG ZNO/M3 **OSHA PEL Code:** M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 10 MG ZNO/M3; 9192 **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity: 1000 LBS
DOT Reporting Quantity: 1000 LBS
Ozone Depleting Chemical: N

Ingredient Name: ZINC OXIDE
Ingredient CAS Number: 1314-13-2 **Ingredient CAS Code:** M
RTECS Number: ZH4810000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:

% High Volume: % High Volume Code:
% Text: 3
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: 15MG/M3 TDUST/5 FUME **OSHA PEL Code:** M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 10MG/M3 TDUST; 9293 **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical: N

Section 3 - Hazards Identification, Including Emergency Overview
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Health Hazards Acute & Chronic: N/P

Signs & Symptoms of Overexposure:
INHAL:IRRIT RESP TRACT OR ACUTE NERVOUS SYSTEM CAUSING HDCH,DIZZ OR NAUS.EYE,SKIN:PRIMARY IRRITATION

Medical Conditions Aggravated by Exposure:
N/P

LD50 LC50 Mixture: N/P

Route of Entry Indicators:
- **Inhalation:** N/P
- **Skin:** N/P
- **Ingestion:** N/P

Carcenogenicity Indicators
- **NTP:** N/P
- **IARC:** N/P
- **OSHA:** N/P

Carcinogenicity Explanation: N/P

Section 4 - First Aid Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

First Aid:
INHAL:REMOVE FROM EXPOS.KEEP WARM AND QUIET.CALL MD.EYES:FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.TAKE TO PHYSICIAN FOR MEDICAL TREATMENT.SKIN:WASH AFFECTED AREAS WITH LAR GE AMOUNTS OF WATER.REMOVE CONTAM CLOTHING.

Section 5 - Fire Fighting Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Fire Fighting Procedures:

KEEP CONTNR TIGHT CLOSED.ISOL FROM IGNIT SOURCE.WEAR SCBA.
Unusual Fire or Explosion Hazard:
CLOSED CONTNR MAY EXPLO.AVOID EXPOS TO DECOMP.IF NO ELECTRICITY,WATER SPRAY W/ FOG NOZ USED TO COOL.
Extinguishing Media:
FOAM,DRY CHEMICAL,CO*2
Flash Point: Flash Point Text: N/R(PER MFR)

Autoignition Temperature:
Autoignition Temperature Text: N/K
Lower Limit(s): N/R
Upper Limit(s): N/R

Section 6 - Accidental Release Measures
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Spill Release Procedures:
REMOVE ALL SOURCES OF IGNITION(FLAMES,HOT SURFACES & ELECTRICAL,STATIC OR FRICTION SPARKS).AVOID BREATHING VAPORS,WEAR APPROVED(NIOSH OR MSHA) RESPIRATOR AND VENTILATE AREA.REMOVE WITH INERT ABSORBENT SUCH AS SAND,KITTY LITER,ETC & USE NON-SPARK TOOL

Section 7 - Handling and Storage
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Repiratory Protection:
NIOSH/MSHA APPRVD EQUIP,ONLY IN CONFINED AREA,AIR-LINE RESP,HOOD.SUP
Ventilation:
GEN DILUT OR LOCAL EXHST TO KEEP
Protective Gloves:
RUBBER,NEOPRENE
Eye Protection: SAFE GOG W/ SPLASH GUARDS
Other Protective Equipment: AS NEEDED-USE BODY PROTECTION,SUCH AS RUBBER APRON,ETC.
Work Hygenic Practices: N/P
Supplemental Health & Safety Information: MSDS PREP:85329.RESPIR:OPEN AREAS:USE MECH FLTER RESPIR TO REMOVE SOLID PARTICLES.RESTRICT AREAS:MECH FILTER RESPIR TO REMOVE PARTICLES, GAS AND VAPORS.PROD IS PART B OF 2-PART KIT.KEY1:N1.

Section 9 - Physical & Chemical Properties
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

HCC: F3
NRC/State License Number: N/R

Net Property Weight for Ammo: N/R
Boiling Point: Boiling Point Text: N/K
Melting/Freezing Point: Melting/Freezing Text: N/A
Decomposition Point: Decomposition Text: N/A
Vapor Pressure: N/R **Vapor Density:** N/R
Percent Volatile Organic Content:
Specific Gravity: 7.06
Volatile Organic Content Pounds per Gallon:
pH: N/P
Volatile Organic Content Grams per Liter:
Viscosity: N/A
Evaporation Weight and Reference: N/R
Solubility in Water: NEGLIGIBLE
Appearance and Odor: GREY POWDER
Percent Volatiles by Volume: N/R
Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Stability Indicator: YES
Materials to Avoid:
NONE(PER MFR)
Stability Condition to Avoid:
CONTACT WITH ALUMINUM IN CLOSED SYSTEM MAY CAUSE VIOLENT RXN
Hazardous Decomposition Products:
WHEN HEATED TO DECOMP AS IN WELDING,MAY PRODUCE CO,ZNO,CO*2.
Hazardous Polymerization Indicator: NO
Conditions to Avoid Polymerization:
N/R

Section 11 - Toxicological Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Toxicological Information:
N/P

Section 12 - Ecological Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Ecological Information:
N/P

Section 13 - Disposal Considerations
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Waste Disposal Methods:
DISPOSE OF IN A SAFE MANNER IN ACCORDANCE WITH LOCAL,STATE AND FEDERAL REGULATIONS THAT APPLY TO INCINERATION OR SECURE LANDFILL.

Section 14 - MSDS Transport Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Transport Information:
N/P

Section 15 - Regulatory Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

SARA Title III Information:
N/P
Federal Regulatory Information:
N/P
State Regulatory Information:
N/P

Section 16 - Other Information
351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER

Other Information:
N/P

HMIS Transportation Information

Product Identification: 351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER
Transporation ID Number: 50647
Responsible Party CAGE: KO267
Date MSDS Prepared: 01/01/1987
Date MSDS Reviewed: 03/03/1987
MFN: 03/03/1987
Submitter: N TN
Status Code: C

Container Information
- **Unit of Issue:** KT
- **Container Quantity:** 0
- **Type of Container:** N/K
- **Net Unit Weight:** 11 LB

Article without MSDS: N
Technical Entry NOS Shipping Number:
Radioactivity: N/A
Form:
Net Explosive Weight: N/A
Coast Guard Ammunition Code: N/A
Magnetism: N/P
AF MMAC Code:
DOD Exemption Number: N/K
Limited Quantity Indicator:
Multiple Kit Number: 0
Kit Indicator: N
Kit Part Indicator: Y
Review Indicator: Y
Additional Data:
NOT REGULATED FOR SHIPPING.PART B OF 2 PART KIT.

Department of Transportation Information

DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
DOT PSN Code: ZZZ
Symbols: N/R
DOT PSN Modifier:
Hazard Class: N/R
UN ID Number: N/R
DOT Packaging Group: N/R
Label: N/R
Special Provision(s): N/R
Packaging Exception: N/R
Non Bulk Packaging: N/R
Bulk Packaging: N/R
Maximum Quanity in Passenger Area: N/R
Maximum Quanity in Cargo Area: N/R
Stow in Vessel Requirements: N/R
Requirements Water/Sp/Other: N/R

IMO Detail Information

IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION
IMO PSN Code: ZZZ
IMO PSN Modifier:
IMDG Page Number: N/R
UN Number: N/R
UN Hazard Class: N/R
IMO Packaging Group: N/R
Subsidiary Risk Label: N/R
EMS Number: N/R
Medical First Aid Guide Number: N/R

IATA Detail Information

IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
IATA PSN Code: ZZZ
IATA PSN Modifier:
IATA UN Id Number: N/R
IATA UN Class: N/R
Subsidiary Risk Class: N/R
UN Packaging Group: N/R
IATA Label: N/R
Packaging Note for Passengers: N/R
Maximum Quantity for Passengers: N/R
Packaging Note for Cargo: N/R
Maximum Quantity for Cargo: N/R
Exceptions: N/R

AFI Detail Information

AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
AFI Symbols:
AFI PSN Code: ZZZ
AFI PSN Modifier:
AFI UN Id Number: N/R
AFI Hazard Class: N/R
AFI Packing Group: N/R
AFI Label: N/R

Special Provisions: N/A
Back Pack Reference: N/A

HAZCOM Label Information

Product Identification: 351B,ZINC-LOCK INORGANIC ZINC,ZINC POWDER
CAGE: KO267
Assigned Individual: Y
Company Name: PORTER PAINT
Company PO Box:
Company Street Address1: UNKNOWN
Company Street Address2: UNKNOWN, NK 00000 NK
Health Emergency Telephone: 502-588-9200
Label Required Indicator: Y
Date Label Reviewed: 12/16/1998
Status Code: C
Manufacturer's Label Number:
Date of Label: 12/16/1998
Year Procured: N/K
Organization Code: G
Chronic Hazard Indicator: N/P
Eye Protection Indicator: N/P
Skin Protection Indicator: N/P
Respiratory Protection Indicator: N/P
Signal Word: N/P
Health Hazard:
Contact Hazard:
Fire Hazard:
Reactivity Hazard:

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ATTACHMENT D

Standard Safe Work Practices

1) Eating, drinking, chewing tobacco, smoking and carrying matches or lighters is prohibited in a contaminated or potentially contaminated area or where the possibility for the transfer of contamination exists.

2) Avoid contact with potentially contaminated substances. Do not walk through puddles, pools, mud, etc. Avoid, whenever possible, kneeling on the ground, leaning or sitting on equipment or ground. Do not place monitoring equipment on potentially contaminated surfaces (i.e., ground, etc.).

3) All field crew members should make use of their senses to alert them to potentially dangerous situations in which they should not become involved; i.e., presence of strong and irritating or nauseating odors.

4) Prevent, to the extent possible, spills. In the event that a spillage occurs, contain liquid if possible.

5) Field crew members shall be familiar with the physical characteristics of investigations, including:
    - Wind direction
    - Accessibility to associates, equipment, vehicles
    - Communication
    - Hot zone (areas of known or suspected contamination)
    - Site access
    - Nearest water sources

6) All wastes generated during activities on-site should be disposed of as directed by the project manager or his on-site representative.

7) Protective equipment as specified in the section on personnel protection will be utilized by workers during the initial site reconnaissance, and other activities.

Employees shall follow procedures to avoid at-risk behaviors that could result in an incident.

Appendix F

Quality Assurance Project Plan

Quality Assurance Project Plan

For

44-30 Purves Street
Long Island City, New York

Prepared For:

Purves Street Owners LLC
c/o Brause Realty, Inc.
52 Vanderbilt Ave.
New York, New York 10017

Prepared By:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001

July 2014
170282501

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ATTACHMENTS

Attachment A: Sample Nomenclature

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1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

This Quality Assurance Project Plan (QAPP) is for the 27,095 square feet (±0.62 acres) property at 44-30 Purves Street in Long Island City, New York (the Site). The Site entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) by Purves Street Owners LLC (the owner), as a Volunteer on July 1, 2014. BCP Site No. C241162 was assigned to the Site by NYSDEC. Additional Site information and data collected previously by Langan and others is provided in the Remedial Action Work Plan (RAWP).

This QAPP specifies analytical methods to be used to ensure that data from the proposed Remedial Action (RA) at the Site are precise, accurate, representative, comparable, and complete.

1.2 PROJECT OBJECTIVES

The environmental objectives of this RAWP are to achieve a Track 4 cleanup under the New York State Brownfield Cleanup Program which includes the following:

- Excavation (to the extent practical) and off-site disposal of soils exceeding Track 4 site-specific SCOs (Restricted Residential Use SCOs) and grossly-impacted soil, if encountered;
- Due to the planned excavation of two elevator pits into the ground water table, dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system;
- Removal of underground storage tanks (UST), if encountered;
- Collection of documentation soil samples;
- Backfilling of excavated areas to development grade with certified-clean material (meeting the lower of the Protection of Groundwater SCO or the Protection of Public Health SCO for Restricted Residential Use in Part 375-6.7(d)(ii)(b)), recycled concrete aggregate (RCA) or virgin, native crushed stone;
- Installation of a vapor membrane under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion into Site buildings;

- Installation of a submembrane depressurization (SMD) system under portions of the Site building that will not be used as a ventilated parking garage to protect against VOC intrusion;
- Development and execution of plans for the protection of on-site workers, community, and environment during remediation and construction activities;
- Installation of a site cover system consisting of either of the structures such as buildings, pavement, sidewalks comprising the site development or a minimum 2 foot thick clean soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs; and
- Implementation of long-term Institutional Controls in the form of a Site Management Plan (SMP) and an Environmental Easement.

These objectives have been established in order to protect public health and the environment for the anticipated mixed commercial use development at the Site.

1.3 SCOPE OF WORK

Implementation of the Remedial Action will include waste characterization sampling; handling of contaminated soil and groundwater; post excavation documentation sampling; and backfilling. Disturbed soil will be sampled for laboratory analysis per disposal facility requirements, and visually examined, screened, and characterized to determine whether it is suitable for re-use or will be properly disposed at an approved disposal facility. Groundwater, if encountered, may be treated if necessary, and discharged into the city's sewage system, under a NYCDEP permit, as required. Clean material will be imported to the site for use as backfill. A dust, odor, and organic vapor control and monitoring plan will be implemented during ground intrusive activities.

The following activities will be performed as part of the remedial action:

- Waste Characterization Soil Sampling – Soil samples for waste classification and disposal purposes will be collected prior to and/or during the remedial excavation. Soil samples will be collected at a frequency depending on the disposal facility requirements. Laboratory tests for characterization of a waste stream typically include all or a subset of the following list and will be determined by the facility's permit requirements: Total Petroleum Hydrocarbons (TPH); Target Compound List (TCL) volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs); polychlorinated biphenyls (PCBs); Target Analyte List (TAL) metals; pesticides and herbicides; the Resource Conservation and Recovery Act (RCRA) hazardous characteristics

of ignitability, corrosivity, and reactivity; RCRA toxicity characteristic using the Toxic Characteristics Leaching Procedure (TCLP) for VOCs, SVOCs, metals, pesticides, and herbicides; Diesel Range Organics (DRO); and/or Gasoline Range Organics (GRO).

- Documentation Soil Sampling – Soil samples for documentation of removal of contaminated soil exceeding Track 4 site-specific SCOs will be collected from the base and sidewalls of completed excavations. Documentation soil samples will be collected at the required frequency as set forth in DER-10, Technical Guidance for Site Investigation and Remediation. The documentation samples will be analyzed for combined Part 375 and TCL/TAL listed VOCs, SVOCs, metals, pesticides, and PCBs. Documentation samples will be collected strictly for the purpose of documentation of residual contamination at the Site, and will not be used to identify areas for further excavations.
- Backfill - The clean fill would be segregated at a source/facility that is free of environmental contaminants. Qualified environmental personnel would collect representative samples at a frequency consistent with CP-51 / Soil Cleanup Guidance (Table 4). The samples would be analyzed for Part 375 VOCs (EPA Method 8260), SVOCs (EPA Method 8270), pesticides/PCBs (EPA Method 8082/8081) and metals by an NYSDOH ELAP-certified laboratory. Acceptable backfill material would not exceed the lower of the Protection of Groundwater SCO or the Protection of Public Health SCO for Restricted Residential Use in Part 375-6.7(d)(ii)(b)). Recycled concrete aggregate (RCA) and virgin, native crushed stone are acceptable for use as backfill if the meet the requirements stated in the RAWP. Upon meeting these criteria, the certified-clean fill would be transported to the site and segregated from impacted material, as necessary, on plastic sheeting until it is used as backfill.

1.4 DATA QUALITY OBJECTIVES AND PROCESS

The quality assurance and quality control objectives for all measurement data include:

- **Precision** – an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Field sampling precision will be determined by analyzing coded duplicate samples and analytical precision will be determined by analyzing internal QC duplicates and matrix spike duplicates.
- **Accuracy** – a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern. Sampling accuracy will be

determined through the assessment of the analytical results of field blanks and trip blanks for each sample set. Analytical accuracy will be assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), and the percent recoveries of matrix spike compounds added to selected samples and laboratory blanks.

- **Representativeness** – expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness will be determined by assessing a number of investigation procedures, including chain of custody, decontamination, and analysis of field blanks and trip blanks.
- **Completeness** – the percentage of measurements made which are judged to be valid. Completeness will be assessed through data validation. The QC objective for completeness is generation of valid data for at least 90 percent of the analyses requested.
- **Comparability** – expresses the degree of confidence with which one data set can be compared to another. The comparability of all data collected for this project will be ensured using several procedures, including standard methods for sampling and analysis, instrument calibrations, using standard reporting units and reporting formats, and data validation.

  Each of the above objectives are discussed in detail in Section 3.

2.0 PROJECT ORGANIZATION

The execution of the RAWP will be overseen by Langan on behalf of Purves Street Owners LLC. Langan will oversee the excavation and off-site disposal of contaminated soil, implementation of the dewatering control measures (if required), and vapor barrier and SMD system installation. Langan will provide on-site field representatives to perform the soil screening and site characterization soil sample collection. If required, Langan will also oversee the remediation of previously unknown hot spots and/or USTs, and perform the data analysis, evaluation and reporting tasks.

The analytical services will be performed by York Analytical Laboratories, Inc. of Stratford, Conn., NYSDOH ELAP certification number 10854. Data validation services will be performed by Emily Strake; resume attached (Attachment A).

Key contacts for this project are as follows:

Purves Street Owners LLC:	Mr. David Brause Telephone: (212) 697-5454
Langan Project Manager:	Mr. Gerald Nicholls, PE Telephone: (212) 479-5559
Langan Quality Assurance Officer (QAO):	Mrs. Nicole Rice, PE Telephone: (212) 479-5491
Program Quality Assurance Monitor:	Mr. Paul McMahon Telephone: (212) 479-5451
Data Validator:	Ms. Emily Strake Telephone: (215) 491-6526
Laboratory Representatives:	York Analytical Laboratories, Inc. Phil Murphy Telephone: (203) 598-1371

3.0 QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES FOR MEASUREMENT OF DATA

3.1 INTRODUCTION

The quality assurance and quality control objectives for all measurement data include precision, accuracy, representativeness, completeness, and comparability. These objectives are defined in following subsections. They are formulated to meet the requirements of the United States Environmental Protection Agency (USEPA) SW-846. The analytical methods and their Contract Required Quantification Limits (CRQLs) are given in Section 7.

3.2 PRECISION

Precision is an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Specifically, it is a quantitative measurement of the variability of a group of measurements compared to their average value (USEPA, 1987). Precision is usually stated in terms of standard deviation, but other estimates such as the coefficient of variation (relative standard deviation), range (maximum value minus minimum value), relative range, and relative percent difference (RPD) are common.

For this project, field sampling precision will be determined by analyzing coded duplicate samples (labeled so that the laboratory does not recognize them as duplicates) for the same parameters, and then, during data validation (Section 8), calculating the RPD for duplicate sample results.

Analytical precision will be determined by the laboratory by calculating the RPD for the results of the analysis of internal QC duplicates and matrix spike duplicates. The formula for calculating RPD is as follows:

$$RPD = \frac{|V1 - V2|}{(V1 + V2)/2} \times 100$$

where:

RPD	=	Relative Percent Difference.
V1, V2	=	The two values to be compared.
$\|V1 - V2\|$	=	The absolute value of the difference between the two values.
$(V1 + V2)/2$	=	The average of the two values.

The data quality objectives for analytical precision, calculated as the RPD between duplicate analyses, are presented in Tables 3.1 and 3.2.

TABLE 3.1
QUALITY CONTROL LIMITS FOR WATER SAMPLES

			Laboratory Accuracy and Precision				
Analytical Parameters	**Analytical Method (a)**	**Matrix Spike (MS) Compounds**	**MS/MSD (b) % Recovery**	**MS/MSD RPD l**	**LCS (d) % Recovery**	**Surrogate Compounds**	**Surrogate % Recovery**
VOCs (e)	8260	1,1-Dichloroethane	61-145	-	NA	Toluene-d8	88-110
		Trichloroethene	71-120	-	NA	Bromofluorobenzene	86-115
		Benzene	76-127	-	NA	1,2-Dichloroethane-d4	76-114
		Toluene	76-125	-	NA		
		Chlorobenzene	75-130	-	NA		
SVOCs (f)	8270	Phenol	12-110	-	NA	Nitrobenzene-d5	35-114
		2-Chlorophenol	27-123	-	NA	2-Fluorobiphenyl	43-116
		1,4-Dichlorobenzene	36-97	-	NA	Terphenyl-d14	33-141
		N-Nitroso-di-n-propylamine	41-116	-	NA	Phenol-d5	10-110
		1,2,4-Trichlorobenzene	39-98	-	NA	2-Fluorophenol	21-110
		4-Chloro-3-methylphenol	23-97	-	NA	2,4,6-Tribromophenol	10-123
		Acenaphthene	46-118	-	NA	2-Chlorophenol-d4	33-110 (g)
		4-Nitrophenol	10-80	-	NA	1,2-Dichlorobenzene-d4	16-110 (g)
		2,4-Dinitrotoluene	24-96	-	NA		
		Pentachlorophenol	9-103	-	NA		
		Pyrene	26-127	-	NA		
Inorganics (i)	6010,7470/7471 ,7841,9010, OIA-1677	Inorganic Analyte	75-125 (j)	- (k)	80-120	NA	NA

(a) Analytical Methods: USEPA SW-846, 3rd edition, Revision 1, November 1990; any subsequent revisions shall supersede this information
(b) Matrix Spike/Matrix Spike Duplicate
(c) Relative Percent Difference
(d) Laboratory Control Sample
(e) Target Compound List Volatile Organic Compounds plus library search
(f) Target Compound List Semivolatile Organic Compounds plus library search
(g) Limits are advisory only
(h) Polychlorinated Biphenyls
(i) Target Analyte List Inorganics (metals)
(j) Matrix spike only
(k) Laboratory duplicate RPD
NA - Not Applicable

TABLE 3.2
QUALITY CONTROL LIMITS FOR SOIL SAMPLES

Laboratory Accuracy and Precision

Analytical Parameter	Analytical Method (a)	Matrix Spike (MS) Compounds	MS/MSD (b) % Recovery	MS/MSD RPD (c)	LCS (d) % Recovery	Surrogate Compounds	Surrogate % Recovery
VOCs (e)	8260	1,1-Dichloroethane	59-172	22	NA	Toluene-d8	84-138
		Trichloroethene	62-137	24	NA	Bromofluorobenzene	59-113
		Benzene	66-142	21	NA	1,2-Dichloroethane-d4	70-121
		Toluene	59-139	21	NA		
		Chlorobenzene	60-133	21	NA		
SVOCs (f)	8270	Phenol	26-90	35	NA	Nitrobenzene-d5	23-120
		2-Chlorophenol	25-102	50	NA	2-Fluorobiphenyl	30-115
		1,4-Dichlorobenzene	28-104	27	NA	Terphenyl-d14	18-137
		N-Nitroso-di-n-propylamine	41-126	38	NA	Phenol-d5	24-113
		1,2,4-Trichlorobenzene	38-107	23	NA	2-Fluorophenol	25-121
		4-Chloro-3-methylphenol	26-103	33	NA	2,4,6-Tribromophenol	19-122
		Acenaphthene	31-137	19	NA	2-Chlorophenol-d4	20-130 (g)
		4-Nitrophenol	11-114	50	NA	1,2-Dichlorobenzene-d4	20-130 (g)
		2,4-Dinitrotoluene	28-89	47	NA		
		Pentachlorophenol	17-109	47	NA		
		Pyrene	35-142	36	NA		
Inorganics (i)	6010, 7470/7471, 7841, 9010	Inorganic Analyte	75-125 (j)	20 (k)	80-120	NA	NA
PCBs	8082	PCB (Aroclor 1260)	50-128	50	NA	Tetrachlorometaxylene Decachlorobiphenyl	24-154 25-159

(a) Analytical Methods: USEPA SW-846, 3rd edition, Revision 1, November 1990, any subsequent revisions shall supersede this information
(b) Matrix Spike/Matrix Spike Duplicate
(c) Relative Percent Difference
(d) Laboratory Control Sample
(e) Target Compound List Volatile Organic Compounds
(f) Target Compound List Semivolatile Organic Compounds
(g) Limits are advisory only
(h) Polychlorinated Biphenyls
(i) Target Analyte List Inorganics (metals and cyanide)
(j) Matrix spike only
(k) Laboratory duplicate RPD
NA - Not Applicable

3.3 ACCURACY

Accuracy is a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern (Taylor, 1987), or the difference between a measured value and the true or accepted reference value. The accuracy of an analytical procedure is best determined by the analysis of a sample containing a known quantity of material, and is expressed as the percent of the known quantity, which is recovered or measured. The recovery of a given analyte is dependent upon the sample matrix, method of analysis, and the specific compound or element being determined. The concentration of the analyte relative to the detection limit of the analytical method is also a major factor in determining the accuracy of the measurement. Concentrations of analytes, which are close to the detection limits are less accurate because they are more affected by such factors as instrument "noise". Higher concentrations will not be as affected by instrument noise or other variables and thus will be more accurate.

Sampling accuracy may be determined through the assessment of the analytical results of field blanks and trip blanks for each sample set. Analytical accuracy is typically assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), and the percent recoveries of matrix spike compounds added to selected samples and laboratory blanks. Additionally, initial and continuing calibrations must be performed and accomplished within the established method control limits to define the instrument accuracy before analytical accuracy can be determined for any sample set.

Accuracy is normally measured as the percent recovery (%R) of a known amount of analyte, called a spike, added to a sample (matrix spike) or to a blank (blank spike). The %R is calculated as follows:

$$\%R = \frac{SSR - SR}{SA} \times 100$$

where:

%R = Percent recovery.

SSR = Spike sample result: concentration of analyte obtained by analyzing the sample with the spike added.

SR = Sample result: the background value, i.e., the concentration of the analyte obtained by analyzing the sample.

SA = Spiked analyte: concentration of the analyte spike added to the sample.

The acceptance limits for accuracy for each parameter are presented in Tables 3.1 and 3.2.

3.4 REPRESENTATIVENESS

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program (USEPA, 1987). Samples must be representative of the environmental media being sampled. Selection of sample locations and sampling procedures will incorporate consideration of obtaining the most representative sample possible.

Field and laboratory procedures will be performed in such a manner as to ensure, to the degree that is technically possible, that the data derived represents the in-place quality of the material sampled. Every effort will be made to ensure chemical compounds will not be introduced into the sample via sample containers, handling, and analysis. Decontamination of sampling devices and digging equipment will be performed between samples as outlined in the Field Sampling Plan. Analysis of field blanks, trip blanks, and method blanks will also be performed to monitor for potential sample contamination from field and laboratory procedures.

The assessment of representativeness also must consider the degree of heterogeneity in the material from which the samples are collected. Sampling heterogeneity will be evaluated during data validation through the analysis of coded field duplicate samples. The analytical laboratory will also follow acceptable procedures to assure the samples are adequately homogenized prior to taking aliquots for analysis, so the reported results are representative of the sample received.

Chain-of-custody procedures will be followed to document that contamination of samples has not occurred during container preparation, shipment, and sampling. Details of blank, duplicate and Chain-of-custody procedures are presented in Sections 4 and 5.

3.5 COMPLETENESS

Completeness is defined as the percentage of measurements made which are judged to be valid (USEPA, 1987). The QC objective for completeness is generation of valid data for at least 90 percent of the analyses requested. Completeness is defined as follows for all sample measurements:

V

$$\%C = \frac{V}{T} \times 100$$

where:

%C = Percent completeness.

V = Number of measurements judged valid.

T = Total number of measurements.

3.6 COMPARABILITY

Comparability expresses the degree of confidence with which one data set can be compared to another (USEPA, 1987). The comparability of all data collected for this project will be ensured by:

- Using identified standard methods for both sampling and analysis phases of this project;
- Requiring traceability of all analytical standards and/or source materials to the USEPA or National Institute of Standards and Technology (NIST);
- Requiring that all calibrations be verified with an independently prepared standard from a source other than that used for calibration (if applicable);
- Using standard reporting units and reporting formats including the reporting of QC data;
- Performing a complete data validation on a representative fraction of the analytical results, including the use of data qualifiers in all cases where appropriate; and
- Requiring that all validation qualifiers be used any time an analytical result is used for any purpose.

These steps will ensure all future users of either the data or the conclusions drawn from them will be able to judge the comparability of these data and conclusions.

4.0 SAMPLING PROGRAM

4.1 INTRODUCTION

The sampling program for the RAWP will provide data relative to:

- Characterization of soils/waste that must be removed and disposed off-site;
- Documentation of quality of soils that will be left on site; and
- Characterization of backfill to be brought on-site.

This section presents sample nomenclature, sample container preparation procedures, sample preservation procedures, and sample holding times requirements. Sample locations, and the number of environmental and QC samples will be determined per disposal facility requirements. The sampling will be conducted in accordance with the RAWP.

4.2 SAMPLE NOMENCLATURE

The sample nomenclature system has been devised such that the following objectives can be attained:

- Sorting of data by matrix;
- Sorting of data by depth;
- Maintenance of consistency (filed, laboratory, and database sample numbers);
- Accommodation of all project-specific requirements; and
- Accommodation of laboratory sample number length constraints (maximum 20 characters).

Sample nomenclature procedures are provided as Attachment B.

4.3 SAMPLE CONTAINER PREPARATION AND SAMPLE PRESERVATION

Sample containers will be properly washed and decontaminated prior to their use by either the analytical laboratory or the container vendor to the specifications required by the USEPA. Copies of the sample container QC analyses will be provided by the laboratory for each container lot used to obtain samples. The containers will be labeled and the appropriate preservatives will be added. The types of containers are shown in Tables 4.1, 4.2.

Samples shall be preserved according to the preservation techniques given in Tables 4.1 and 4.2. Preservatives will be added to the sample bottles by the laboratory prior to their shipment in sufficient quantities to ensure that proper sample pH is met. Following sample collection, the sample bottles should be placed on ice in the shipping cooler, cooled to 4°C with ice or "blue ice", and delivered to the laboratory within 48 hours of collection. Chain-of-custody procedures are described in Section 7.

4.4 SAMPLE HOLDING TIMES

The sample holding times for organic and inorganic parameters are given in Tables 4.1 and 4.2 and must be in accordance with the NYSDEC ASP requirements. The NYSDEC ASP holding times must be strictly adhered to by the laboratory. Any holding time exceedances must be reported to Langan.

4.5 FIELD QC SAMPLES

To assess field sampling and decontamination performance, two types of "blanks" will be collected and submitted to the laboratory for analyses. In addition, the precision of field sampling procedures will be assessed by collecting coded field duplicates and matrix spike/matrix spike duplicates (MS/MSDs). The blanks will include:

a. Trip Blanks - A trip blank will be prepared before the sample containers are sent by the laboratory. The trip blank will consist of a 40-ml VOA vial containing distilled, deionized water, which accompanies the other water sample bottles into the field and back to the laboratory. A trip blank will be included with each shipment of water samples for Part 375 volatiles analysis. The Trip Blank will be analyzed for volatile organic compounds to assess any contamination from sampling and transport, and internal laboratory procedures.

b. Field Blanks - Field blanks will be taken at a minimum frequency of one per 20 field samples per sample matrix. Field blanks are used to determine the effectiveness of the decontamination procedures for sampling equipment. The field blank will consist of a sample of deionized, distilled water provided by the laboratory that has passed through a decontaminated bailer, tubing or other sampling apparatus. It is usually collected as a last step in the decontamination procedure, prior to taking an environmental sample. The field blank may be analyzed for all or some of the parameters of interest.

The duplicates will include:

a. Coded Field Duplicate - To determine the representativeness of the sampling methods, coded field duplicates will be collected at a minimum frequency of one per 20 field samples. The samples are termed "coded" because they will

be labeled in such a manner that the laboratory will not be able to determine that they are a duplicate sample. This will eliminate any possible bias that could arise.

b. Matrix Spike/Matrix Spike Duplicate (MS/MSD) - MS/MSD samples (MS/MSD for organics; MS and laboratory duplicate for inorganics) will be taken at a frequency of one pair per 20 field samples. These samples are used to assess the effect of the sample matrix on the recovery of target compounds or target analytes. The percent recoveries and RPDs are given in Tables 3.1 and 3.2.

TABLE 4.1
WATER SAMPLE CONTAINERIZATION, PRESERVATION, AND HOLDING TIMES

Analysis	Bottle Type	Preservation [a]	Holding Time [b]
Volatile Organic Compounds (VOCs)	2-40 mL glass vial w/ Teflon septum	Cool to 4°C, HCL pH<2	7 days
Semi-volatile Organics Compounds (SVOCs)	1000 mL glass w/ Teflon lined cap	Cool to 4°C	7 days*
Metals	1000 mL plastic bottle	Nitric Acid to pH < 2 Cool to 4°C	6 months, except mercury (28 days)

(a) All samples to be preserved in ice during collection and transport.

(b) Days from validated time of sample receipt (VTSR).

* Continuous liquid-liquid extraction is the required extraction for water samples for SVOCs. Continuous liquid-liquid extraction and concentration of water samples for SVOCs analysis completed within 7 days of VTSR. Extracts of water samples must be analyzed within 40 days of extraction.

TABLE 4.2
SOIL SAMPLE
CONTAINERIZATION, PRESERVATION AND HOLDING TIMES

Analysis	Bottle Type	Preservation [a]	Holding Time [b]
Volatile Organic Compounds (VOCs)	Wide-mouth glass w/ Teflon lined cap	Cool to 4°C	14 days
Other Organic Compounds [c]	Wide-mouth glass w/ Teflon lined cap	Cool to 4°C	14 days*
Metals	Wide-mouth plastic or glass	Cool to 4°C	6 months, except mercury (28 days)
PCBs	Wide-mouth glass w/ Teflon-lined cap	Cool to 4°C	14 days**

(a) All samples to be preserved in ice during collection and transport.
(b) Days from date of sample collection.
(c) Semi-volatile organic compounds or PCBs.

* Soxhlet or sonication procedures for extraction and concentration of soil/waste samples for SVOCs must be completed within 10 days of VTSR. Extracts of soil samples must be analyzed within 40 days of extraction.

** Procedures for extraction and concentration of soil/waste samples for PCBs must be completed within 14 days of VTSR. Extracts of soil samples must be analyzed within 40 days of extraction.

TABLE 4.3
SOIL VAPOR, INDOOR AIR, AND AMBIENT AIR SAMPLES
CONTAINERIZATION PRESENTATION AND HOLDING TIMES

Analysis	Bottle Type	Preservation	Holding Time [a]
Volatile Organic Compounds (VOCs)	6- Liter Summa Canister	None	30 days

(a) Days from date of sample collection.

* Summa canisters will be batch certified by the laboratory.

5.0 SAMPLE TRACKING AND CUSTODY

5.1 INTRODUCTION

This section presents sample custody procedures for both the field and laboratory. Implementation of proper custody procedures for samples generated in the field is the responsibility of field personnel. Both laboratory and field personnel involved in the Chain-of-custody (COC) and transfer of samples will be trained as to the purpose and procedures prior to implementation.

Evidence of sample traceability and integrity is provided by COC procedures. These procedures document the sample traceability from the selection and preparation of the sample containers by the laboratory, to sample collection, to sample shipment, to laboratory receipt and analysis. The sample custody flowchart is shown in Figure 5.1. A sample is considered to be in a person's custody if the sample is:

- In a person's possession;
- Maintained in view after possession is accepted and documented;
- Locked and tagged with Custody Seals so that no one can tamper with it after having been in physical custody; or
- In a secured area which is restricted to authorized personnel.

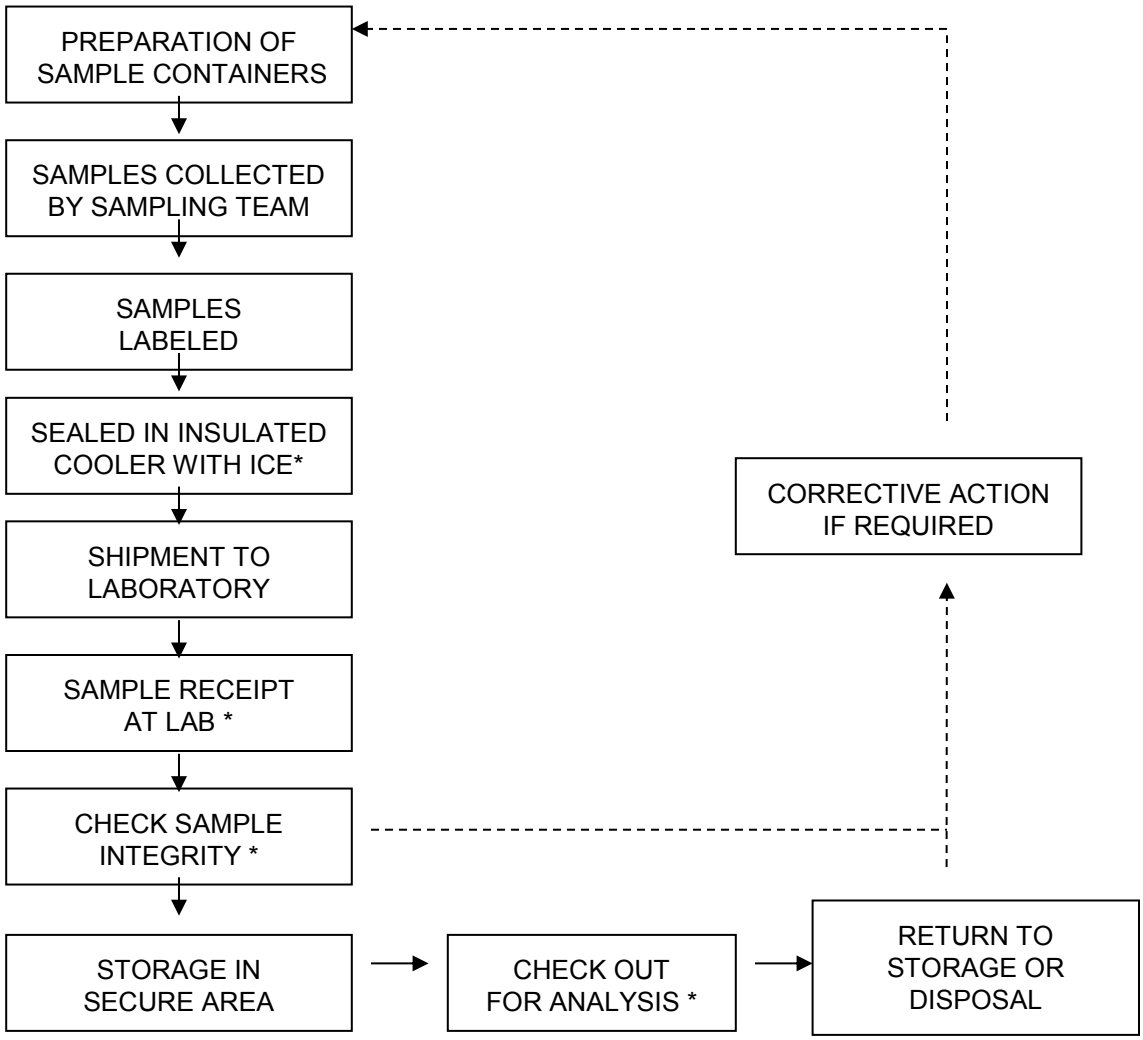
5.2 FIELD SAMPLE CUSTODY

A COC record (Figure 5.2 or similar) accompanies the sample containers from selection and preparation at the laboratory, during shipment to the field for sample containment and preservation, and during return to the laboratory. Triplicate copies of the COC must be completed for each sample set collected.

The COC lists the field personnel responsible for taking samples, the project name and number, the name of the analytical laboratory to which the samples are sent, and the method of sample shipment. The COC also lists a unique description of every sample bottle in the set. If samples are split and sent to different laboratories, a copy of the COC record will be sent with each sample.

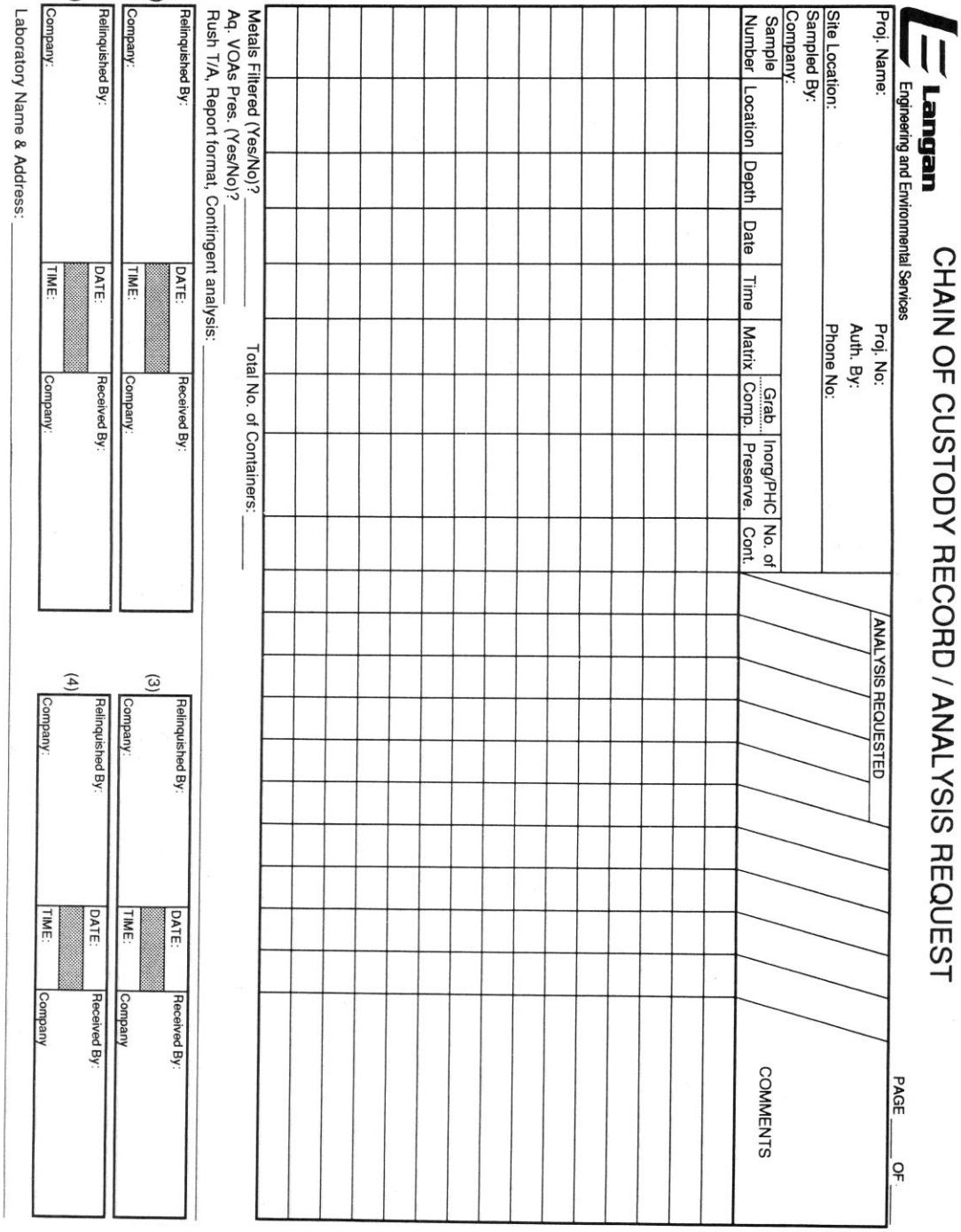
The REMARKS space on the COC is used to indicate if the sample is a matrix spike, matrix spike duplicate, or any other sample information for the laboratory. Since they are not specific to any one sample point, trip and field blanks are indicated on separate rows. Once all bottles are properly accounted for on the form, a sampler will write his or her signature and the date and time on the first RELINQUISHED BY space. The sampler will also write the method of shipment, the shipping cooler identification number, and the shipper airbill number on the top of the COC.

Figure 5.1 Sample Custody



* REQUIRES SIGN-OFF ON CHAIN-OF-CUSTODY FORM

Figure 5.2 Sample Chain-of-Custody Form



Langan
Engineering and Environmental Services

CHAIN OF CUSTODY RECORD / ANALYSIS REQUEST

PAGE ____ OF ____

Proj. Name:
Proj. No:
Auth. By:
Site Location:
Phone No:
Sampled By:
Company:

Sample Number	Location	Depth	Date	Time	Matrix	Grab / Comp.	Inorg/PHC Preserve.	No. of Cont.

ANALYSIS REQUESTED

COMMENTS

Metals Filtered (Yes/No)? _____ Total No. of Containers: ____
Aq. VOAs Pres. (Yes/No)? _____
Rush T/A, Report format, Contingent analysis: _____

(1) Relinquished By: DATE: Received By:
Company: TIME: Company:

(2) Relinquished By: DATE: Received By:
Company: TIME: Company:

(3) Relinquished By: DATE: Received By:
Company: TIME: Company

(4) Relinquished By: DATE: Received By:
Company: TIME: Company

Laboratory Name & Address: _____

Mistakes will be crossed out with a single line in ink and initialed by the author.

One copy of the COC is retained by sampling personnel (notations identifying blind duplicate samples will be added to this copy of the COC but not the others that will go to the laboratory) and the other two copies are put into a sealable plastic bag and taped inside the lid of the shipping cooler. The cooler lid is closed, custody seals provided by the laboratory are affixed to the latch and across the back and front lids of the cooler, and the person relinquishing the samples signs their name across the seal. The seal is taped, and the cooler is wrapped tightly with clear packing tape. It is then relinquished by field personnel to personnel responsible for shipment, typically an overnight carrier. The COC seal must be broken to open the container. Breakage of the seals before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the Project Manager, and the sample will not be analyzed.

5.3 LABORATORY SAMPLE CUSTODY

The Project Manager or Field Team Leader will notify the laboratory of upcoming field sampling activities, and the subsequent shipment of samples to the laboratory. This notification will include information concerning the number and type of samples to be shipped as well as the anticipated date of arrival.

The following laboratory sample custody procedures will be used:

- The laboratory will designate a sample custodian who will be responsible for maintaining custody of the samples, and for maintaining all associated records documenting that custody.
- Upon receipt of the samples, the custodian will check cooler temperature, and check the original COC documents and compare them with the labeled contents of each sample container for correctness and traceability. The sample custodian will sign the COC record and record the date and time received.
- Care will be exercised to annotate any labeling or descriptive errors. In the event of discrepant documentation, the laboratory will immediately contact the Project Manager or Field Team Leader as part of the corrective action process. A qualitative assessment of each sample container will be performed to note any anomalies, such as broken or leaking bottles. This assessment will be recorded as part of the incoming chain-of-custody procedure.
- The samples will be stored in a secured area at a temperature of approximately 4°C until analyses commence.
- A laboratory tracking record will accompany the sample or sample fraction through final analysis for control.

- A copy of the tracking record will accompany the laboratory report and will become a permanent part of the project records.

6.0 CALIBRATION PROCEDURES

6.1 FIELD INSTRUMENTS

All field analytical equipment will be calibrated immediately prior to each day's use. The calibration procedures will conform to manufacturer's standard instructions. This calibration will ensure that the equipment is functioning within the allowable tolerances established by the manufacturer and required by the project. Records of all instrument calibration will be maintained by the Field Team Leader. Copies of all the instrument manuals will be maintained on-site by the Field Team Leader.

Calibration procedures for instruments used for monitoring health and safety hazards (e.g., photoionization detector and explosimeter) are provided in the Health and Safety Plan.

6.2 LABORATORY INSTRUMENTS

The laboratory will follow all calibration procedures and schedules as specified in the sections of the USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods given in Section 7.

7.0 ANALYTICAL PROCEDURES

7.1 INTRODUCTION

Samples will be analyzed according to the USEPA SW-846 "Test Methods for Evaluating Solid Waste," November 1986, 3rd edition and subsequent updates. The methods to be used for the laboratory analysis of water and soil samples are presented in Table 7.1. These methods were selected because they attain the desired quantitation limits, which are compiled on Table 7.1.

TABLE 7.1
PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (mg/L)	MDL(mg/kg)
	Volatile Organics			
1	Methylene Chloride	SW8260B	0.034	0.0028
2	1,1-Dichloroethane	SW8260B	0.0051	0.001
3	Chloroform	SW8260B	0.0051	0.0011
4	Carbon Tetrachloride	SW8260B	0.0034	0.00072
5	1,2-Dichloropropane	SW8260B	0.012	0.00087
6	Dibromochloromethane	SW8260B	0.0034	0.001
7	1,1,2-Trichloroethane	SW8260B	0.0051	0.0013
8	Tetrachloroethene	SW8260B	0.0034	0.001
9	Chlorobenzene	SW8260B	0.0034	0.00064
10	Trichloroflouromethane	SW8260B	0.017	0.0013
11	1,2-Dichloroethane	SW8260B	0.0034	0.00078
12	1,1,1-Trichloroethane	SW8260B	0.0034	0.00092
13	Bromodichloromethane	SW8260B	0.0034	0.0016
14	Trans-1,3-Dichloropropene	SW8260B	0.0034	0.0017
15	Cis-1,3-Dichloropropene	SW8260B	0.0034	0.00082
16	1,1-Dichloropropene	SW8260B	0.017	0.001
17	Bromoform	SW8260B	0.014	0.00083
18	1,1,2,2-Tetrachloroethane	SW8260B	0.0034	0.00076
19	Benzene	SW8260B	0.0034	0.0027
20	Toluene	SW8260B	0.0051	0.0022
21	Ethylbenzene	SW8260B	0.0034	0.0026
f22	Chloromethane	SW8260B	0.017	0.0015
23	Bromomethane	SW8260B	0.0068	0.00089
24	Vinyl Chloride	SW8260B	0.0068	0.0013
25	Chloromethane	SW8260B	0.0068	0.00077
26	1,1-Dichloroethene	SW8260B	0.0034	0.0012
27	Trans-1,2-Dichloroethene	SW8260B	0.0051	0.0014
28	Trichloroethene	SW8260B	0.0034	0.0014
29	1,2-Dichlorobenzene	SW8260B	0.017	0.0017
30	1,3-Dichlorobenzene	SW8260B	0.017	0.0015
31	1,4-Dichlorobenzene	SW8260B	0.017	0.0014
32	Methyl tert butyl ether	SW8260B	0.0068	0.001
33	p/m-Xylene	SW8260B	0.0068	0.0015

TABLE 7.1 (Continued)
PROJECT QUANTITATION LIMITS PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Water (mg/L)	Soil (mg/kg)
	Volatile Organics (cont.)			
34	o-xylene	SW8260B	0.0068	0.0014
35	Cis-1,2-Dichloroethene	SW8260B	0.0034	0.001
36	Dibromomethane	SW8260B	0.034	0.0015
37	Styrene	SW8260B	0.0068	0.0025
38	Dichlorodiflouromethane	SW8260B	0.034	0.0013
39	Acetone	SW8260B	0.034	0.011
40	Carbon disulfide	SW8260B	0.034	0.0013
41	2-Butanone	SW8260B	0.034	0.013
42	Vinyl acetate	SW8260B	0.034	0.0026
43	4-Methyl-2pentanone	SW8260B	0.034	0.0028
44	1,2,3-Trichloropropane	SW8260B	0.034	0.0013
45	2-Hexanone	SW8260B	0.034	0.0014
46	Bromochloromethane	SW8260B	0.017	0.001
47	2,2-Dichloropropane	SW8260B	0.017	0.0027
48	1,2-Dibromoethane	SW8260B	0.014	0.0014
49	1,3-Dichloropropane	SW8260B	0.017	0.0019
50	1,1,1,2-Tetrachloroethane	SW8260B	0.0034	0.0011
51	Bromobenzene	SW8260B	0.017	0.00075
52	n-Butylbenzene	SW8260B	0.0034	0.0011
53	Sec-Butylbenzene	SW8260B	0.0034	0.00094
54	Tert-Butylbenzene	SW8260B	0.017	0.0021
55	0-chlorotoluene	SW8260B	0.017	0.0011
56	p-chlorotoluene	SW8260B	0.017	0.0012
57	1,2-Dibromo-3-chloropropane	SW8260B	0.017	0.0029
58	Hexachlorobutadiene	SW8260B	0.017	0.0016
59	Isopropylbenzene	SW8260B	0.0034	0.00061
60	p-Isopropylbenzene	SW8260B	0.0034	0.00094
61	Naphthalene	SW8260B	0.017	0.0026
62	Acrylonitrile	SW8260B	0.034	0.0013
63	n-Propylbenzene	SW8260B	0.0034	0.00097
64	1,2,3-Trichlorobenzene	SW8260B	0.017	0.0014
65	1,2,4-Trimethylbenzene	SW8260B	0.017	0.0027
66	1,3,5-Trimethylbenzene	SW8260B	0.017	0.0021
67	1,2,4-Trimethylbenzene	SW8260B	0.017	0.002

TABLE 7.1 (Continued)
PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (ug/L)	MDL (ug/kg)
	Volatile Organics (cont.)			
68	1,4-Diethylbenzene	SW8260B	0.014	0.00068
69	4-Ethyltoulene	SW8260B	0.014	0.00033
70	1,2,4,5-Tetramethylbenzene	SW8260B	0.014	0.00062
71	Ethyl ether	SW8260B	0.017	0.0013
72	Trans-1,4-Dichloro-2-butene	SW8260B	0.017	0.0051
	Semivolatile Organics			
1	Acenahpthalene	SW8270C	0.18	0.042
2	1,2,4-Trichlorobenzene	SW8270C	0.22	0.037
3	Hexachlorobenzene	SW8270C	0.14	0.035
4	Bis(2-chloroethyl)ether	SW8270C	0.2	0.043
5	2-Chloronaphthalene	SW8270C	0.22	0.068
6	1,2-Dichlorobenzene	SW8270C	0.22	0.066
7	1,3-Dichlorobenzene	SW8270C	0.22	0.07
8	1,4-Dichlorobenzene	SW8270C	0.22	0.064
9	3,3'-Dichlorobenzidine	SW8270C	0.22	0.081
10	2,4-Dinitrotoluene	SW8270C	0.22	0.06
11	2,6-Dinitrotoluene	SW8270C	0.22	0.074
12	Fluoranthene	SW8270C	0.14	0.029
13	4-Chlorophenyl phenyl ether	SW8270C	0.22	0.031
14	4-Bromophenyl phenyl ether	SW8270C	0.22	0.036
15	Bis(2-chloroisopropyl)ether	SW8270C	0.27	0.072
16	Bis(2-chloroethoxy)methane	SW8270C	0.24	0.051
17	Hexachlorobutadiene	SW8270C	0.22	0.042
18	Hexachlorocyclopentadiene	SW8270C	0.65	0.18
19	Hexachloroethane	SW8270C	0.18	0.032
20	Isophorone	SW8270C	0.2	0.036
21	Naphthalene	SW8270C	0.22	0.072
22	Nitrobenzene	SW8270C	0.2	0.066
23	NitrosoDiPhenylAmine(NDPA/DPA)	SW8270C	0.18	0.056
24	n-Nitrosodi-n-propylamine	SW8270C	0.22	0.063

25	Bis(2-Ethylhexyl)phthalate	SW8270C	0.22	0.047

TABLE 7.1 (Continued)
PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (mg/L)	MDL (mg/kg)
	Semivolatile Organics (cont.)			
26	Butyl benzyl phthalate	SW8270C	0.22	0.063
27	Di-n-butylphthalate	SW8270C	0.22	0.038
28	Di-n-octylphthalate	SW8270C	0.22	0.061
29	Diethyl phthalate	SW8270C	0.22	0.039
30	Dimethyl phthalate	SW8270C	0.22	0.037
31	Benzo(a)anthracene	SW8270C	0.14	0.045
32	Benzo(a)pyrene	SW8270C	0.18	0.054
33	Benzo(b)fluoranthene	SW8270C	0.14	0.036
34	Benzo(k)fluoranthene	SW8270C	0.14	0.035
35	Chrysene	SW8270C	0.14	0.029
36	Acenaphthylene	SW8270C	0.18	0.058
37	Anthracene	SW8270C	0.14	0.03
38	Benzo(ghi)perylene	SW8270C	0.18	0.057
39	Fluorene	SW8270C	0.22	0.041
40	Phananthrene	SW8270C	0.14	0.038
41	Dibenzo(a,h)anthracene	SW8270C	0.14	0.042
42	Indeno(1,2,3-cd)Pyrene	SW8270C	0.18	0.055
43	Pyrene	SW8270C	0.14	0.037
44	Biphenyl	SW8270C	0.51	0.016
45	4-Chloroaniline	SW8270C	0.22	0.024
46	2-Nitroaniline	SW8270C	0.22	0.041
47	3-Nitroaniline	SW8270C	0.22	0.023
48	4-Nitroaniline	SW8270C	0.22	0.051
49	Dibenzofuran	SW8270C	0.22	0.036
50	2-Methylnaphthalene	SW8270C	0.27	0.089
51	1,2,4-Tetrachlorobenzene	SW8270C	0.22	0.066
52	Acetophenone	SW8270C	0.22	0.072
53	2,4,6-Trichlorophenol	SW8270C	0.14	0.041
54	P-chloro-M-Cresol	SW8270C	0.22	0.046
55	2-Chlorophenol	SW8270C	0.22	0.07

TABLE 7.1 (Continued)

PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (mg/L)	MDL (mg/kg)
	Semivolatile Organics (cont.)			
56	2,4-Dinitrophenol	SW8270C	0.2	0.066
57	2,4-Dimethylphenol	SW8270C	0.22	0.034
58	2-Nitrophenol	SW8270C	0.2	0.16
59	4-Nitrophenol	SW8270C	0.49	0.096
60	2,4-Dinitro	SW8270C	0.32	0.35
61	4,6-Dinitro-o-cresol	SW8270C	1.1	0.21
62	Pentachlorophenol	SW8270C	0.59	0.053
63	Phenol	SW8270C	0.18	0.066
64	2-Methylphenol	SW8270C	0.22	0.056
65	3-Methylphenol/4-Methylphenol	SW8270C	0.22	0.097
66	2,4,5-Trichlorophenol	SW8270C	0.32	0.052
67	Benzoic Acid	SW8270C	0.22	0.19
68	Benzyl Alcohol	SW8270C	0.73	0.052
69	Carbazole	SW8270C	0.22	0.032
	PCBs			
1	Aroclor-1016	SW8082	0.0469	0.009
2	Aroclor-1221	SW8082	0.0469	0.014
3	Aroclor-1232	SW8082	0.0469	0.01
4	Aroclor-1242	SW8082	0.0469	0.009
5	Aroclor-1248	SW8082	0.0469	0.006
6	Aroclor-1254	SW8082	0.0469	0.007
7	Aroclor-1260	SW8082	0.0469	0.008
	Metals			
1	Aluminum	SW6010B	10	2.3
2	Antimony	SW6010B	5.2	1
3	Arsenic	SW6010B	1	0.36
4	Barium	SW6010B	1	0.09
5	Beryllium	SW6010B	0.52	0.04
6	Cadmium	SW6010B	1	0.07

TABLE 7.1 (Continued)
PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (mg/L)	MDL (mg/kg)
	Metals (cont.)			
7	Calcium	SW6010B	10	2.3
8	Chromium	SW6010B	1	0.21
9	Cobalt	SW6010B	2.1	0.22
10	Copper	SW6010B	1	1
11	Iron	SW6010B	5.2	1.8
12	Lead	SW6010B	5.2	0.29
13	Magnesium	SW6010B	10	4.7
14	Manganese	SW6010B	1	0.11
15	Mercury	SW7471A	0.1	0.02
16	Nickel	SW6010B	2.6	0.29
17	Potassium	SW6010B	260	84
18	Selenium	SW6010B	2.1	0.34
19	Silver	SW6010B	1	0.17
20	Sodium	SW6010B	210	83
21	Thallium	SW6010B	2.1	0.65
22	Vanadium	SW6010B	1	0.23
23	Zinc	SW6010B	5.2	0.57

TABLE 7.1 (Continued)
PROJECT QUANTITATION LIMITS

	Analysis/Compound	Method	Estimated Quantitation Limits RL (mg/L)	MDL (mg/kg)
	Pesticides			
1	Delta-BHC	SW8081A	0.0029	0.000448
2	Lindane	SW8081A	0.000954	0.000426
3	Alpha-BHC	SW8081A	0.000954	0.000271
4	Beta-BHC	SW8081A	0.00229	0.000868
5	Heptachlor	SW8081A	0.00114	0.000513
6	Aldrin	SW8081A	0.00429	0.000806
7	Heptachlor epoxide	SW8081A	0.00429	0.00129
8	Endrin	SW8081A	0.000954	0.000391
9	Endrin Ketone	SW8081A	0.00229	0.00059
10	Dieldrin	SW8081A	0.00143	0.000715
11	4,4'-DDE	SW8081A	0.00229	0.000529
12	4,4'-DDD	SW8081A	0.00229	0.000816
13	4,4'-DDT	SW8081A	0.0033	0.00184
14	Endosulfan I	SW8081A	0.00229	0.000541
15	Endosulfan II	SW8081A	0.00229	0.000765
16	Endosulfan sulfate	SW8081A	0.000954	0.000436
17	Methoxychlor	SW8081A	0.00429	0.00134
18	Toxaphene	SW8081A	0.0429	0.012
19	Trans-Chlordane	SW8081A	0.00286	0.000756
20	Chlordane	SW8081A	0.0186	0.00758

Notes:

(1) - = No Standard
(2) RL = Reporting Limit
(3) MDL = Minimum Detection Limit
(4) RL and MDL values are taken from representative laboratory reports issued by Alpha Analytical Laboratories
(5) RL and MDL values are estimated and may vary depending on instruments

8.0 DATA REDUCTION, VALIDATION, AND REPORTING

8.1 INTRODUCTION

Data collected during the field investigation will be reduced and reviewed by the laboratory QA personnel, and a report on the findings will be tabulated in a standard format. The criteria used to identify and quantify the analytes will be those specified for the applicable methods in the USEPA SW-846 and subsequent updates. The data package provided by the laboratory will contain all items specified in the USEPA SW-846 appropriate for the analyses to be performed, and be reported in standard format.

The completed copies of the chain-of-custody records (both external and internal) accompanying each sample from time of initial bottle preparation to completion of analysis shall be attached to the analytical reports.

8.2 DATA REDUCTION

The Analytical Services Protocol (ASP) Category B data packages and an electronic data deliverable (EDD) will be provided by the laboratory after receipt of a complete sample delivery group. The Project Manager will immediately arrange for archiving the results and preparation of result tables. These tables will form the database for assessment of the site contamination condition.

Each EDD deliverable must be formatted using a Microsoft Windows operating system and the NYSDEC data deliverable format for EQuIS. To avoid transcription errors, data will be loaded directly into the ASCII format from the laboratory information management system (LIMS). If this cannot be accomplished, the consultant should be notified via letter of transmittal indicating that manual entry of data is required for a particular method of analysis. All EDDs must also undergo a QC check by the laboratory before delivery. The original data, tabulations, and electronic media are stored in a secure and retrievable fashion.

The Project Manager or Task Manager will maintain close contact with the QA reviewer to ensure all non-conformance issues are acted upon prior to data manipulation and assessment routines. Once the QA review has been completed, the Project Manager may direct the Team Leaders or others to initiate and finalize the analytical data assessment.

8.3 DATA VALIDATION

Data validation will be performed in accordance with the USEPA validation guidelines for organic and inorganic data review. Validation will include the following:

- Verification of the QC sample results,
- Verification of the identification of sample results (both positive hits and non-detects),
- Recalculation of 10% of all investigative sample results, and
- Preparation of Data Usability Summary Reports (DUSR).

A DUSR will be prepared and reviewed by the QAO before issuance. The DUSR will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and COC procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. A detailed assessment of each SDG will follow. For each of the organic analytical methods, the following will be assessed:

- Holding times;
- Instrument tuning;
- Instrument calibrations;
- Blank results;
- System monitoring compounds or surrogate recovery compounds (as applicable);
- Internal standard recovery results;
- MS and MSD results;
- Target compound identification;
- Chromatogram quality;
- Pesticide cleanup (if applicable);
- Compound quantitation and reported detection limits;
- System performance; and
- Results verification.

For each of the inorganic compounds, the following will be assessed:

- Holding times;
- Calibrations;
- Blank results;
- Interference check sample;

- Laboratory check samples;
- Duplicates;
- Matrix Spike;
- Furnace atomic absorption analysis QC;
- ICP serial dilutions; and
- Results verification and reported detection limits.

Based on the results of data validation, the validated analytical results reported by the laboratory will be assigned one of the following usability flags:

- "U" - Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank;
- "UJ" - Not detected. Quantitation limit may be inaccurate or imprecise;
- "J" - Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method
- "N" – Tentative identification. Analyte is considered present in the sample;
- "R" – Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample; and
- No Flag - Result accepted without qualification.

9.0 INTERNAL QUALITY CONTROL CHECKS AND FREQUENCY

9.1 QUALITY ASSURANCE BATCHING

Each set of samples will be analyzed concurrently with calibration standards, method blanks, matrix spikes (MS), matrix spike duplicates (MSD) or laboratory duplicates, and QC check samples (if required by the protocol). The MS/MSD samples will be designated by the field personnel. If no MS/MSD samples have been designated, the laboratory will contact the Langan Project Manager for corrective action.

9.2 CALIBRATION STANDARDS AND SURROGATES

All organic standard and surrogate compounds are checked by the method of mass spectrometry for correct identification and gas chromatography for degree of purity and concentration. All standards are traceable to a source of known quality certified by the USEPA or NIST, or other similar program. When the compounds pass the identity and purity tests, they are certified for use in standard and surrogate solutions. Concentrations of the solutions are checked for accuracy before release for laboratory use. Standard solutions are replaced monthly or more frequently, based upon data indicating deterioration.

9.3 ORGANIC BLANKS AND MATRIX SPIKE

Analysis of blank samples verifies that the analytical method does not introduce contaminants or detect "false positives". The blank water can be generated by reverse osmosis and Super-Q filtration systems, or distillation of water containing $KMnO_4$. The matrix spike is generated by addition of surrogate standard to each sample.

9.4 TRIP AND FIELD BLANKS

Trip blanks and field blanks will be utilized in accordance with the specifications in Section 4. These blanks will be analyzed to provide a check on sample bottle preparation and to evaluate the possibility of atmospheric or cross contamination of the samples.

10.0 QUALITY ASSURANCE PERFORMANCE AUDITS AND SYSTEM AUDITS

10.1 INTRODUCTION

Quality assurance audits may be performed by the project quality assurance group under the direction and approval of the QAO. These audits will be implemented to evaluate the capability and performance of project and subcontractor personnel, items, activities, and documentation of the measurement system(s). Functioning as an independent body and reporting directly to corporate quality assurance management, the QAO may plan, schedule, and approve system and performance audits based upon procedures customized to the project requirements. At times, the QAO may request additional personnel with specific expertise from company and/or project groups to assist in conducting performance audits. However, these personnel will not have responsibility for the project work associated with the performance audit.

10.2 SYSTEM AUDITS

System audits may be performed by the QAO or designated auditors, and encompass a qualitative evaluation of measurement system components to ascertain their appropriate selection and application. In addition, field and laboratory quality control procedures and associated documentation may be system audited. These audits may be performed once during the performance of the project. However, if conditions adverse to quality are detected or if the Project Manager requests, additional audits may occur.

10.3 PERFORMANCE AUDITS

The laboratory may be required to conduct an analysis of Performance Evaluation samples or provide proof that Performance Evaluation samples submitted by USEPA or a state agency have been analyzed within the past twelve months.

10.4 FORMAL AUDITS

Formal audits refer to any system or performance audit that is documented and implemented by the QA group. These audits encompass documented activities performed by qualified lead auditors to a written procedure or checklists to objectively verify that quality assurance requirements have been developed, documented, and instituted in accordance with contractual and project criteria. Formal audits may be performed on project and subcontractor work at various locations.

Audit reports will be written by auditors who have performed the site audit after gathering and evaluating all data. Items, activities, and documents determined by lead auditors to be in noncompliance shall be identified at exit interviews conducted with the

involved management. Non-compliances will be logged, and documented through audit findings, which are attached to and are a part of the integral audit report. These audit-finding forms are directed to management to satisfactorily resolve the noncompliance in a specified and timely manner.

The Project Manager has overall responsibility to ensure that all corrective actions necessary to resolve audit findings are acted upon promptly and satisfactorily. Audit reports must be submitted to the Project Manager within fifteen days of completion of the audit. Serious deficiencies will be reported to the Project Manager within 24 hours. All audit checklists, audit reports, audit findings, and acceptable resolutions are approved by the QAO prior to issue. Verification of acceptable resolutions may be determined by re-audit or documented surveillance of the item or activity. Upon verification acceptance, the QAO will close out the audit report and findings.

11.0 PREVENTIVE MAINTENANCE PROCEDURES AND SCHEDULES

11.1 PREVENTIVE MAINTENANCE PROCEDURES

Equipment, instruments, tools, gauges, and other items requiring preventive maintenance will be serviced in accordance with the manufacturer's specified recommendations and written procedure developed by the operators.

A list of critical spare parts will be established by the operator. These spare parts will be available for use in order to reduce the downtime. A service contract for rapid instrument repair or backup instruments may be substituted for the spare part inventory.

11.2 SCHEDULES

Written procedures will establish the schedule for servicing critical items in order to minimize the downtime of the measurement system. The laboratory will adhere to the maintenance schedule, and arrange any necessary and prompt service. Required service will be performed by qualified personnel.

11.3 RECORDS

Logs shall be established to record and control maintenance and service procedures and schedules. All maintenance records will be documented and traceable to the specific equipment, instruments, tools, and gauges. Records produced shall be reviewed, maintained, and filed by the operators at the laboratories. The QAO may audit these records to verify complete adherence to these procedures.

12.0 CORRECTIVE ACTION

12.1 INTRODUCTION

The following procedures have been established to ensure that conditions adverse to quality, such as malfunctions, deficiencies, deviations, and errors, are promptly investigated, documented, evaluated, and corrected.

12.2 PROCEDURE DESCRIPTION

When a significant condition adverse to quality is noted at site, laboratory, or subcontractor location, the cause of the condition will be determined and corrective action will be taken to preclude repetition. Condition identification, cause, reference documents, and corrective action planned to be taken will be documented and reported to the QAO, Project Manager, Field Team Leader and involved contractor management, at a minimum. Implementation of corrective action is verified by documented follow-up action.

All project personnel have the responsibility, as part of the normal work duties, to promptly identify, solicit approved correction, and report conditions adverse to quality. Corrective actions will be initiated as follows:

- When predetermined acceptance standards are not attained;
- When procedure or data compiled are determined to be deficient;
- When equipment or instrumentation is found to be faulty;
- When samples and analytical test results are not clearly traceable;
- When quality assurance requirements have been violated;
- When designated approvals have been circumvented;
- As a result of system and performance audits;
- As a result of a management assessment;
- As a result of laboratory/field comparison studies; and
- As required by USEPA SW-846, and subsequent updates, or by the NYSDEC ASP.

Project management and staff, such as field investigation teams, remedial response planning personnel, and laboratory groups, monitor on-going work performance in the normal course of daily responsibilities. Work may be audited at the sites, laboratories, or contractor locations. Activities, or documents ascertained to be noncompliant with quality assurance requirements will be documented. Corrective actions will be mandated through audit finding sheets attached to the audit report. Audit findings are logged, maintained, and controlled by the Task Manager.

Personnel assigned to quality assurance functions will have the responsibility to issue and control Corrective Action Request (CAR) Forms (Figure 12.1 or similar). The CAR identifies the out-of-compliance condition, reference document(s), and recommended corrective action(s) to be administered. The CAR is issued to the personnel responsible for the affected item or activity. A copy is also submitted to the Project Manager. The individual to whom the CAR is addressed returns the requested response promptly to the QA personnel, affixing his/her signature and date to the corrective action block, after stating the cause of the conditions and corrective action to be taken. The QA personnel maintain the log for status of CARs, confirms the adequacy of the intended corrective action, and verifies its implementation. CARs will be retained in the project file for the records.

Any project personnel may identify noncompliance issues; however, the designated QA personnel are responsible for documenting, numbering, logging, and verifying the close out action. The Project Manager will be responsible for ensuring that all recommended corrective actions are implemented, documented, and approved.

FIGURE 12.1

CORRECTIVE ACTION REQUEST

Number: _____ Date: _____

TO: _____

You are hereby requested to take corrective actions indicated below and as otherwise determined by you to (a) resolve the noted condition and (b) to prevent it from recurring. Your written response is to be returned to the project quality assurance manager by _____

CONDITION:

REFERENCE DOCUMENTS:

RECOMMENDED CORRECTIVE ACTIONS:

_____ _____ _____ _____ _____ _____

Originator Date Approval Date Approval Date

RESPONSE

CAUSE OF CONDITION

CORRECTIVE ACTION

(A) RESOLUTION

(B) PREVENTION

(C) AFFECTED DOCUMENTS

C.A. FOLLOWUP:

CORRECTIVE ACTION VERIFIED BY: _____ DATE:_____

13.0 REFERENCES

USEPA, 1986. SW-846 "Test Method for Evaluating Solid Waste," dated November 1986. U.S. Environmental Protection Agency, Washington, D.C.

Taylor, J. K., 1987. Quality Assurance of Chemical Measurements. Lewis Publishers, Inc., Chelsea, Michigan

USEPA, 1987. Data Quality Objectives for Remedial Response Actions Activities: Development Process, EPA/540/G-87/003, OSWER Directive 9355.0-7- U.S. Environmental Protection Agency, Washington, D.C.

USEPA, 1992a. CLP Organics Data Review and Preliminary Review. SOP No. HW-6, Revision #8, dated January 1992. USEPA Region II.

USEPA, 1992b. Evaluation of Metals Data for the Contract Laboratory Program (CLP) based on SOW 3/90. SOP No. HW-2, Revision XI, dated January 1992. USEPA Region II.

Attachment A

Sample Nomenclature

LANGAN

SAMPLE NOMENCLATURE

The sample nomenclature outlined below provides consistency between sample events and projects but, most importantly, establish unique sample IDs that will avoid confusion months or years after the sample has been collected. Furthermore, unique sample IDs are required for any data submitted to the NYSDEC in EDD format or being uploaded to an EQuIS database.

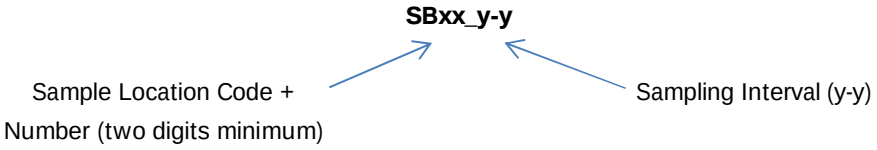
1.0 INVESTIGATION LOCATION CODES

SB	Soil Boring	SV	Soil Vapor Point
WC	Waste Characterization Boring	IA	Indoor Air
TP	Test Pit	AA	Ambient Air
EPSW	Endpoint Location (Sidewall)	SVE	Vapor Extraction Well
EPB	Endpoint Location (Bottom)	DS	Drum
MW	Monitoring Well	IDW	Investigation Derived Waste
TMW	Temporary Monitoring Well	SL	Sludge
SW	Surface Water	FP	Free Product

2.0 SAMPLE NOMENCLATURE

Each sample at a site must have a unique value.

- **Soil/Sediment Samples:**



Sample Type	Sample Location Code	Sampling Depth or Interval (feet bgs or approx. elevation)	Sample Name
Phase II/Remedial Investigation			
Grab Soil Sample	SB01	2 to 4	SB01_2-4
	SB02	4	SB02_4
Waste Characterization			
Grab Soil Sample	WC01	2 to 4	WC01_2-4
	WC02	4	WC02_4
Composite Soil Sample from one or more locations	COMP01 or COMP02 + COMP03	0 to 10 (Fill)	COMP01_0-10

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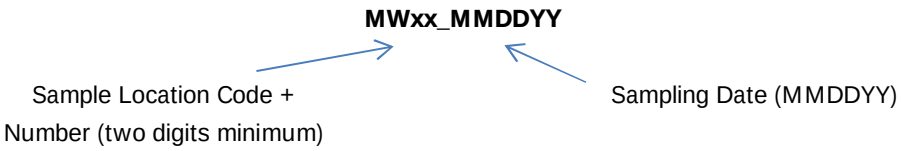
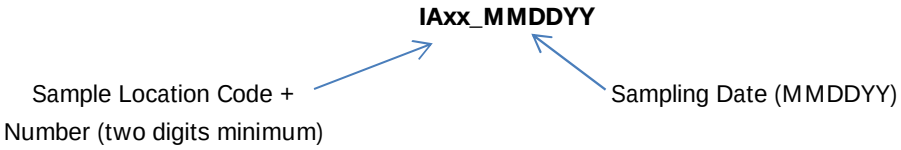
Sample Type	Sample Location Code	Sampling Depth or Interval (feet bgs or approx. elevation)	Sample Name
Endpoint Sampling			
Grab Soil Sample	EPSW01_N	5	EPSW01_N_5
	EPSW01_S	5	EPSW01_S_5
	EPSW01_E	5	EPSW01_E_5
	EPSW01_W	5	EPSW01_W_5
	EPB01	6	EPB01_6

- **Groundwater/Surface Water Samples:**



Sample Type	Sample Location Code	Sampling Date	Sample Name
Groundwater Sample	MW01	02/21/2013	MW01_022113

- **Air/Soil Vapor Samples:**



Sample Type	Sample Location Code	Date	Sample Name
Air Sample	IA01	02/21/2013	IA01_022113
Soil Vapor Sample	SV01	02/21/2013	SV01_022113
Vapor Extraction Well Sample	SVE01 (INLET/MIDPOINT/OUTLET)	02/21/2013	SVE01_IN_022113 SVE01_ MID_022113 SVE01_ OUT_022113

- **QA/QC Samples:**

Sample Matrix Codes

SO	Soil	AS	Air
SE	Sediment	SV	Soil Vapor
GW	Groundwater	SL	Sludge
SW	Surface Water	FP	Free Product

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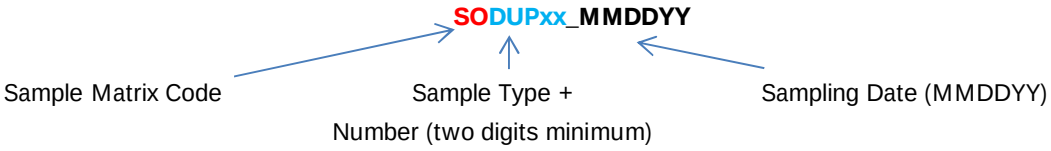
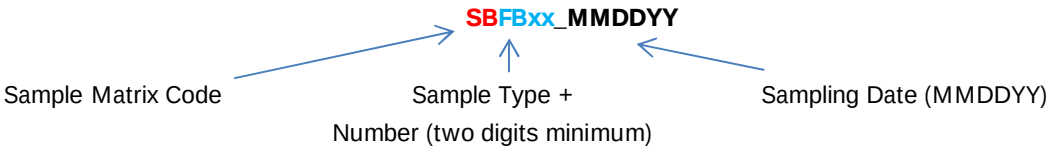
- Duplicates Samples



Sample Type	Parent Sample Code	Date	Sample Name
Groundwater Duplicate Sample (DUP)	MW01_022113	02/21/2013	GWDUP01_022113
Soil boring Duplicate Sample (DUP)	SBP01_022113	02/21/2013	SODUP01_022113
Grab Waste Characterization	WC01	02/21/2013	WCDUP01_022113
Composite Waste Characterization	COMP01	02/21/2013	COMPDUP01_022113

- Field Blanks and Trip Blanks



Sample Type	Date	Sample Name
Groundwater Field Blank (FB)	02/21/2013	GWFB01_022113
Groundwater Trip Blank (TB)	02/21/2013	GWTB01_022113
Soil Field Blank	02/21/2013	SOFB01_022113
Soil Trip Blank	02/21/2013	SOTB01_022113

- Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Parent Sample Name_MS or MSD

Sample Type	Sample Location	Parent Sample Name	Sample Name
Matrix Spike Soil (MS)	SB01	SB01_2-4	SB01_2-4_MS
Matrix Spike Soil Duplicate (MSD)	SB01	SB01_2-4	SB01_2-4_MSD
Matrix Spike GW (MS)	MW01	MW01	MW01_MS
Matrix Spike GW Duplicate (MSD)	MW01	MW01	MW01_MSD

3.0 NOTES

1. The sample location code should not exceed 20 characters and the sample name should not exceed 40 characters.
2. Sample location code (**SB01, MW01, etc.)** is a sequential number (starting with 01) and should be a minimum of two digits.
3. Sample Interval (SB01_**0-5**) is separated from the sample location code with an underscore, and the top and bottom interval with a dash. Soil and sediment sample intervals should always be in

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feet. Soil and sediment sample intervals should contain no "/" or "()" or unit.

4. Sample date (MW01_**022113**) is separated from the sample location code with an underscore and should be provided in MMDDYY format [the date should contain no "/" or "-"].
5. If groundwater samples are collected from multiple intervals within one well, you may assign a letter designation (in lower case) to the well ID to differentiate between intervals (i.e., MW01a_022113, MW01b_022113, and MW01c_022113). The letter "a" would indicate the shallowest interval and "c" the deepest. The actual depth intervals should be documented in the project field book or field sheets and the letter designations should be used consistently between sampling events.
6. According to USEPA's Contract Laboratory Program (CLP) Guidance for Field Samplers (January 2011), field duplicate samples should remain "blind" to the laboratory (i.e., they should have separate CLP Sample numbers). Assign two separate (unique) CLP sample numbers (i.e., one number to the field sample and one to the duplicate). Submit blind to the laboratory. (http://www.epa.gov/superfund/programs/clp/download/sampler/CLPSamp-01-2011.pdf)

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Attachment B
Resumes

Emily G. Strake

Project Chemist/ Risk Assessor
Environmental Engineering

13 years in the industry

Ms. Strake has thirteen years of environmental chemistry, risk assessment, auditing, and quality assurance experience. Most recently, she has focused her efforts on human health risk assessment, and has been the primary author or key contributor of risk assessment reports and screening evaluations for projects governed under RCRA, DNREC, PADEP, NJDEP, DTSC, CERCLA, NYSDEC and MDE. She has experience in site-specific strategy development, which has enabled her to perform assessments to focus areas of investigation and identify risk-based alternatives for reducing remediation costs.

Ms. Strake has over eight years of experience assessing potential adverse health effect to humans from exposure to hazardous contaminants in soil, sediment, groundwater, surface water, ambient and indoor air, and various types of animal, fish, and plant materials. She understands and applies environmental cleanup guidance and policies associated with multiple federal and state agencies. Additionally, she has broad experience in the development of preliminary remediation goals and site-specific action levels. She is proficient with the USEPA and Cal/EPA Johnson and Ettinger Model for Subsurface Vapor Intrusion into Buildings, USEPA's Adult Lead Methodology, DTSC's Leadspread 7 and 8, and statistical evaluation of data using USEPA's ProUCL software. Ms. Strake is a member of the Interstate Technology and Regulatory Council Risk Assessment Team responsible for the development and review of organizational risk assessment guidance documents.

Ms. Strake has extensive experience in environmental data validation, focused on ensuring laboratory deliverables follow specific guidelines as described by regulatory agencies and the analytical methods employed. In addition, she has experience in EQuIS 5.5 chemical database management. She also has a broad range of environmental field experience and maintains current OSHA HAZWOPER certification.

Ms. Strake is experienced in auditing laboratory and field-sampling activities for compliance with Quality Assurance Project Plans (QAPPs), the National Environmental Laboratory Accreditation Conference Standards Quality Systems manual, and applicable USEPA Guidance. Ms. Strake has also audited on-site laboratories in support of groundwater treatment operations and implemented corrective actions. Her responsibilities include writing reports on the value of laboratory work, writing/editing QAPPs for clients and project-specific sites, peer reviewing colleague's work, and mentoring staff within the office. She has also served as the Quality Assurance officer for several long-term projects, responsible for the achievement of all forms of Quality Control/Quality Assurance by onsite personnel relating to sampling, analysis, and data evaluation.

Ms. Strake has several years' experience analyzing investigative samples, writing laboratory Standard Operating Procedures (SOPs), and managing all aspects of procedures and analyses for Optical Emission Spectrometry, X-

Education

MBA
The University of Scranton

B.Sc., Chemistry
Cedar Crest College

Training

40 hr. OSHA HAZWOPER Training/Nov 2002

8 hr. HAZWOPER Supervisor/June 2004

8 hr. OSHA HAZWOPER Refresher/Oct 2012

American Red Cross First Aid & CPR certified

Ray Fluorescence, Ignition analysis, and Atomic Absorption. Her experience also includes operating and performing routine instrument maintenance for GC/MS and IR. Ms. Strake has worked extensively on developing rapid soil characterization programs for PCB and pesticide analyses utilizing enzyme-linked immunosorbent assays, and was also involved in efforts to develop new instrumentation to quantify microbial nitrification of ammonium.

Selected Project Experience

- Completed a human health risk assessment in accordance with NYSDEC guidance for a redevelopment property located in Rye, New York. The objective of the evaluation was to characterize the risks associated with potential future human exposures to soil and groundwater affected by a release from the Site's former No. 2 fuel oil UST. The intended future use of the Site was a playground to be utilized by the general public for open play on commercial recreational equipment.
- Developed a human health risk assessment for a utility-owned former Manufactured Gas Plant (MGP) site in Pennsylvania, under Pennsylvania's Act 2 Program. Used ProUCL 4.0 statistical software to determine upper limits for full data sets and non-detect data. Conducted vapor intrusion modeling (via the Johnson & Ettinger model) and prepared vapor intrusion reports showing that risks to volatile organic compounds in soils and groundwater were not impacting indoor air quality.
- Completed a human health risk evaluation of the potential future risk associated with inhalation of indoor air for the Veteran's Administration. Achieved DTSC approval of the risk assessment approach and conclusions.
- Completed a focused human health risk evaluation of PAH contaminants for under NJDEP's Site Remediation Program. Applied a blended approach of qualitative risk characterization and quantitative risk calculation to propose closure of AOCs following the remedial investigation.
- Performed comprehensive human health risk assessment for a petroleum refinery in Delaware City, Delaware. The risk assessment was the basis for a thorough characterization and assessment of potential risks posed by site-specific conditions. Developed various human exposure scenarios by using both Federal and State-Specific guidance.
- Reviewed and validated data packages for RCRA Facilities Investigation at a Philadelphia-area chemical site; issued data validation reports to project personnel and regulatory agencies. The reviews included evaluation of quarterly groundwater, soil, and soil vapor matrices. Participated in RCRA groundwater sampling, developed and executed the investigation's QAPP, and coordinated with the laboratory to schedule and perform field-sampling events.
- Completed multiple AOC-specific risk assessments utilizing and applying the guidance set forth by the DTSC's Human Health Risk Assessment Note 1 (Default Exposure Factors for Use in Risk Assessment), Note 3 (Recommended Methodology for Use of USEPA Regional Screening Levels, and Note 4 (Screening Level Human Health Risk Assessments).

- Audited multiple accredited laboratories in New Jersey and Pennsylvania on behalf of clients using USEPA Guidance on Technical Audits and Related Assessments for Environmental Data Operations. The audits included full-suite USEPA and SW-846 methodology; and included reviewing staff experience and training records, equipment and facilities, policies, practices, procedures, and documentation for sample receipt, analysis, instrument maintenance, standard preparation, calibration and traceability, control charting, corrective actions, data reduction and review, report generation, and waste disposal.
- Completed Data Usability Summary Reports in accordance with NYSDEC DER-10 guidance for soil, groundwater, sediment surface water, soil gas, ambient air and indoor air analytical results.
- Acted as the Quality Assurance Officer for several long-term projects in Pennsylvania, Maryland, and New Jersey, Delaware, responsible for the achievement of all forms of QA/QC as it related to sampling, analysis, and data evaluation.
- Performed human health risk assessment for contamination resulting from a 3.5 million gallon diesel oil tank collapse along the Monongahela River. Evaluated potential impacts to human health via exposure to soil, groundwater, and surface water. Calculated site-specific standards for soil remediation.
- Calculated Medium Specific Concentrations (MSCs) for unregulated contaminants using the PADEP protocols to assist in the clean-up of a monomer tank explosion in Bristol, Pennsylvania.
- Participated in a CERCLA site investigation; assessed the usability of sample results for numerous matrices including dust, sediment, soils, and various aqueous matrices for a remedial investigation under the Contract Laboratory Program. Implemented an on-site pesticide immunoassay program to delineate soil contamination in real-time.
- Prepared an Act 2 site-specific human health risk assessment for the oldest industrial facility in the United States, located in southeast Philadelphia. The objective of the risk assessment was to determine achievable possible future land-use options under Pennsylvania's Land Recycling Program. The risk assessment included evolution of multiple site-COPCs and constituent suites: VOCs, SVOCs, pesticides, and metals (including lead).
- Worked as a key participant in the human health risk evaluation of mercury associated with legacy contamination of the South River located in Waynesboro, Virginia.
- Conducted vapor intrusion modeling for a dry cleaning facility in the Philadelphia area. Predictive modeling using the Johnson and Ettinger approach indicated that estimated contaminant levels would not adversely affect human receptors.
- EQuIS data manager for database migration of historical groundwater results associated with remediation activities; assisted with natural attenuation data evaluation and gained experience in geochemical trends associated with intrinsic biodegradation.
- Coordinated the collection of fish tissue samples and determined the validity of the analytical results associated with CERCLA and RCRA site characterizations. Assessed duck blood analytical

results for the Connecticut Department of Environmental Protection Bureau of Natural Resources.

Appendix G
Project Personnel Resumes

Jason J. Hayes, PE, LEED AP

Associate
Environmental Engineering & Project Management

13 years in the industry

Mr. Hayes has 13 years of experience in New York, New Jersey, California, Washington, Oregon and Alaska. His experience includes Environmental Protection Agency (EPA), New York State (NYS) Brownfield's application, investigation, and remediation; New York City Department of Environmental Protection (NYCDEP) and New York City Office of Environmental Remediation (OER) E-designated site application, investigation, and remediation; Phase I and II Environmental Site Assessments; contaminated building cleanup and demolition; Underground Storage Tank (UST) permitting, removal specifications, and closure reporting; soil vapor intrusion investigation and mitigation system design (sub-slab depressurization systems, etc.); development of screening-level groundwater contaminant (volatile organic compounds - VOCs) plume migration models; environmental analysis; and oversight, design and specification generation for remediation operations with contaminants of concern to include polychlorinated biphenyls (PCBs), solvents, mercury, arsenic, petroleum products, asbestos, mold and lead.

Selected Projects

New York Police Academy, Queens, NY
Gateway at Bronx Terminal Market, Bronx, NY
Jacob Javits Convention Center, New York, NY
Yankee Stadium Development, Bronx, NY
Bushwick Inlet Park, Brooklyn, NY
Silvercup West, Queens, NY
29 Flatbush, Brooklyn, NY
Gowanus Village I, Brooklyn, NY
Sullivan Street Hotel, New York, New York
Riker's Island, Co-Generation Plant, Bronx, NY
The Shops at Atlas Park, Glendale, NY
Memorial Sloan-Kettering Cancer Center, New York, NY
Element West 59th Street, New York, NY
Teterboro Airport, Teterboro, NJ
Proposed New York JETS Stadium, New York, NY
Former Con Edison Manufactured Gas Plant (MGP) Sites, New York, NY
7 World Trade Center, New York, NY
Peter Cooper Village, New York, NY

Selected Publications, Reports, and Presentations

NYC Mayor's Office of Environmental Remediation – Big Apple Brownfield Workshop – Presented on Soil Vapor Intrusion Remedies (e.g., SSD Systems, Vapor Barriers, Modified HVAC)

Education

M.S., Environmental Engineering
Columbia University

B.Sc., Chemistry, Environmental Toxicology
Humboldt State University

Business Administration (minor)
Humboldt State University

Professional Registration

Professional Engineer (PE) in NY

LEED Accredited Professional (LEED AP)

OSHA 40-Hour HAZWOPER

OSHA HAZWOPER Site Supervisor

Affiliations

US Green Building Council, NYC Chapter (USGBC)

Urban Land Institute (ULI)

NAIOP

National Brownfield Partnership

LANGAN

Gerald F. Nicholls, PE, CHMM

Project Engineer

Environmental Engineering & Hazardous Materials Management

10 years in the industry

Mr. Nicholls has ten years of experience in environmental engineering and project management. His expertise includes management of remediation and site investigations, industrial hygiene, air monitoring and environmental health and safety projects including data collection, inspection and reporting for projects throughout New York and New Jersey. Mr. Nicholls has relevant work experience serving Department of Defense, state, commercial, industrial, and municipal clients.

Selected Projects

170 Amsterdam Avenue, New York, NY
Urban Health Plan, 1095 Southern Boulevard, Bronx, NY
Whitehead Realty, Acme Sites, Brooklyn, NY
Second Avenue Subway, New York, NY
West 17th Street Development Project, New York, NY
New York University (NYU) Spill Sites 4 WSV, 7-13 WSN and 251 Mercer Street, New York, NY
Dormitory Authority of New York (DASNY), City College of New York, Fuel Protection and Leak Detection System Repair and Upgrades, New York, NY
Surfactant Remediation Project, Margate City, NJ
400 Trumbull Street Site Investigation, Elizabeth, NJ
Koppers Site, Trans-Hudson Express Project, Kearny, NJ
Former Cornell Manufacturing Site, Orangeburg, NY
DC034 Horse Pasture Site, Robins Air Force Base, GA
Williams Air Force Base, Thermal Enhanced Extraction, Mesa, AZ
NJ Transit 32nd Street Station Stop (former Hicor Site), Bayonne, NJ
Nikolski Radio Relay Station, Umnak Island, AK
Middletown Post Office, Middletown, NY
Oliktok LRRS and Sterling Landing Tatalina LRRS, AK
Lower Manhattan Construction Command Center (LMCCC) Environmental Services Contract, New York, NY
Da Nang International Airport, Da Nang, Vietnam
22nd to 8th Street Station Light Rail Extension, Bayonne, NJ
69th Street Grade Separation Project, North Bergen, NJ
Hurricane Katrina Support, New Orleans, LA
Dukes Parkway Landfill, Hillsboro/Manville, NJ

Selected Publications, Reports, and Presentations

"Biodegradation Pathways and End Products of Sodium Dioctyl Sulfosuccinate/Sodium Hexadecyl Diphenyl Oxide Disulfonate Surfactant Solution." Florida Remediation Conference, Orlando, Florida, November

Education

M.S., Environmental Engineering
New Jersey Institute of Technology

B.S., Chemistry and Environmental Studies (Double Major)
Ursinus College

Professional Registration

Professional Engineer (PE) in NY

Certified Hazardous Materials Manager (CHMM)

Affiliations

City of Jersey City Environmental Commission, Vice Chair

Alliance of Hazardous Materials Professionals (AHMP)

Academy of Hazardous Materials Managers (ACHMM), NJ Chapter

American Chemical Society

Association of NJ Environmental Commissions (ANJEC)

LANGAN

2005.

Michael D. Burke, CHMM, LEED AP

Associate

Environmental Engineering and Remediation

16 years in the industry

Mr. Burke is a geologist/environmental scientist whose practice involves site investigation and remediation, environmental site assessments, in-situ remedial technology, sub-slab depressurization system design, emergency response, environmental and geotechnical site investigations, and health and safety monitoring. He has experience with projects in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup, Voluntary Cleanup and Spill Programs and New York City Department of Environmental Protection (NYCDEP) "E" Designated and New York City Brownfield Cleanup Program sites. He has extensive experience in soil and groundwater investigation and remediation, design of in-situ chemical oxidation and enhanced bioremediation strategies, Phase I Site Assessments, Phase II site investigations, UST Closures, NYSDEC spill closure, remedial excavation oversight and excavation and off-site treatment and/or disposal of contaminated soils.

Selected Projects

Meeker Avenue Plume Trackdown Site (Whitehead Realty), Inactive Hazardous Waste Disposal Site, Brooklyn, NY
23-10 42nd Road, NYS Brownfield Cleanup Program, Long Island City, NY
Urban Health Plan (1095 Southern Boulevard), NYS Brownfield Cleanup Program Bronx, NY
West 17th Street Development Project, NYS Brownfield Cleanup Program, New York, NY
Gowanus Village I, NYS Brownfield Cleanup Program, Brooklyn, NY
100 West 125th Street, NYC Voluntary Cleanup Program, New York, NY
42-46 10th Avenue, NYC Voluntary Cleanup Program, New York, NY
Maple Court Housing Development, NYC Voluntary Cleanup Program, New York, NY
Korean Community Center, NYC Voluntary Cleanup Program, New York, NY
Habitat for Humanity, NYC Voluntary Cleanup Program, Brooklyn, NY
170 Amsterdam Avenue, NYC Voluntary Cleanup Program, New York, NY
185 Plymouth Street, E-Designation Services, Brooklyn, NY
55 Pearl Street, E Designation Services, Brooklyn, NY
Fed Ex Development Site, Solid Waste Management/Spill Remediation, North Chili, NY
FedEx Development Site, WA State Voluntary Cleanup Program, Redmond, WA
Pier 57, Emergency Response/Spill Remediation, New York, NY
322 West 57th Street, Emergency Response/Spill Remediation, New York, NY
FedEx Development Site, Due Diligence, Bohemia, NY
Borden Avenue Distribution Facility, Superfund Due Diligence, Queens, NY
Peter Cooper Village/Stuyvesant Town, Due Diligence, New York, NY

Education

M.S., Environmental Geology
Rutgers University

B.S., Geological Sciences
Rutgers University

B.S., Environmental Science
Rutgers University

Professional Registration

Certified Hazardous Materials Manager – CHMM No. 15998

OSHA Certification for Hazardous Waste Site Supervisor

OSHA 29 CFR 1910.120 Certification for Hazardous Waste Operations and Emergency Response

NJDEP Certification for Community Noise Enforcement

Troxler Certification for Nuclear Densometer Training

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Bronx Mental Health Redevelopment Project, Due Diligence, Bronx, NY
Consolidated Edison of New York, West 17th Street Development Site (Former MGP Site), New York, NY
Consolidated Edison of New York, Governors Island Dielectric Fluid Spill, New York, NY
Montefiore Medical Center, PCB Remediation, Bronx, NY
Trevor Day School, Fuel Oil Investigation/Remediation/Litigation Support, New York, NY
New York University (4 Washington Square Village), Fuel Oil Remediation, New York, NY
Consolidated Edison of New York (East 60th Street Generating Station), Mercury Spill Remediation, New York, NY
Superior Ink, Fuel Oil Remediation, New York, NY
82 Irving Place, Fuel Oil Spill Remediation, New York, NY
1113 York Avenue, Gasoline Spill Remediation, New York, NY
2950 Atlantic Avenue, Comingled Plume Investigation, East New York, Brooklyn, NY
Consolidated Edison of New York (East 74th Street Generating Station), Kerosene Spill Investigation/Remediation, New York, NY
New York City School Construction Authority (NYCSCA), Proposed New York City School Construction Sites, Boroughs of New York City, NY
Consolidated Edison of New York (First Avenue Properties), NYS Brownfield Cleanup Program/Demolition New York, NY
Queens West Development (Stage II), NYS Brownfield Cleanup Program, Long Island City, Queens, NY
Article X Project Experience, Proposed Electrical Generation Sites, Multiple Locations, New York State
Poletti Generating Station, Queens, NY
Arthur Kill Generating Station, Staten Island, New York, NY
K. Hovnanian, New Jersey Development Sites, Multiple Locations, New Jersey

Joel B. Landes, PE

Senior Associate/ Program Director
Environmental Engineering & Project Management

37 years in the industry

Mr. Landes has over thirty-seven years of diversified experience directing environmental engineering and consulting projects for Fortune 500 manufacturing firms, real estate developers and public utilities. His experience includes management of environmental compliance for a major pharmaceutical company and as an environmental affairs consultant for private clients. He has expertise redeveloping former industrial, chemical, petroleum storage and manufactured gas plant sites into residential and commercial use through the New York State Brownfield Cleanup Program. He has lead environmental studies for acquisitions and divestitures of pharmaceutical and industrial facilities; industrial site selection and permitting.

He currently oversees all Langan environmental services in the New York City Metropolitan area including Phase I and II Environmental Site Assessments, remedial investigations, feasibility studies; remedial measure design and implementation.

Selected Projects

BROWNFIELD CLEANUP PROGRAM

The Shops at Atlas Park, Glendale, Queens, NY
Gateway at Bronx Terminal Market, Bronx, NY

INDUSTRIAL

711 Stewart Avenue, Garden City, NY
Acme/Whitehead, Brooklyn, NY
Waterside Generating Plan and Office Building, New York, NY
FSM Partners, New York, NY
Consolidated Edison of New York, Multiple Former MGP Facilities, Various Locations, New York, NY
Sterling Drug, Inc., Rensselaer, NY
Fresh Kills Landfill, New York City Department of Sanitation, Staten Island, NY
Property Investigation for Village of Sleepy Hollow, Tarrytown, NY
Vehicle Service Facility, City of Yonkers, NY
Crane Company, Roseland, NJ
Confidential Industrial Client, Environmental Risk Management, Bound Brook, NJ
Confidential Client, Superfund Site Remediation, Bound Brook, NJ
Elizabethtown Gas Company, Elizabeth, NJ

Education

Graduate Studies in
Business Management
Union College

M.E., Environmental Planning
and Management
The Cooper Union

B.S., Chemical Engineering
Polytechnic Institute of Brooklyn

Professional Registration

Professional Engineer (PE) in NY, NJ

Affiliations

New York Building Congress

NYC Partnerships of Brownfield Professionals

Business Council of New York State

Environmental Business Association

National Brownfield Association – NYS Chapter

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Ethicon, Somerville, NJ
Indiana General, Keasbey, NJ
Sumitomo Machinery, Teterboro, NJ
Schmid Labs, West Patterson, NJ
L&F Products, ISRA/ECRA Cleanup, Belle Mead, NJ
CPC International, Various Locations, NY and IL
Pnemo Abex, Cleveland, OH
NL Chemicals, Various Locations, NJ and MI
Copper Processing Plant, Sofia, Bulgaria
Steel Processing Plant, Environmental Assessment, Pernik, Bulgaria
American Home Products, Mexico
Confidential Pharmaceutical Acquisition, Europe, Caribbean, and Africa
Colgate-Palmolive, Paris, France, Mexico City, Mexico, Brazil, Argentina and South America
Pfizer Pharmaceutical Company, PA and Europe
Riverwood Capital, US, Mexico, Central and South America
Sterling Drug, Puerto Rico
Laport, Ltd., Chile, South America

POWER

Sithe Energy, Kenilworth, NJ
Confidential Independent Power Producer Siting Analysis, Midwest, Mid-Atlantic and Southern, United States
Confidential IPP, Various Locations, VA
Florida Power and Light (FPL), Miami, FL
TXU Energy, Dallas, TX
Confidential Independent Power Producer, Midwest, Mid-Atlantic and Southern United States

AIRPORTS

American Airlines Terminals, Environmental Assessments, Queens, NY
JFK International Airport, International Arrivals Building, Jamaica, Queens, NY
Nippon Cargo, Jamaica, Queens, NY
JFK International Airport, Eastern Airlines Hangar, Jamaica, Queens, NY
First Aviation Services Hangar and Terminal at Teterboro Airport, Teterboro, NJ

TRANSPORTATION

New Jersey Turnpike Authority, East Brunswick, NJ

HOSPITAL

Memorial Sloan-Kettering Cancer Center, New York, NY
Memorial Sloan-Kettering Cancer Center, 1133 York Avenue, New York, NY
Memorial Sloan-Kettering Cancer Center, 64th Street, New York, NY
Memorial Sloan-Kettering Cancer Center, 74th Street, New York, NY
Memorial Sloan-Kettering Cancer Center, West Harrison, NY

COMMERCIAL

Jacob K. Javits Convention Center Expansion, New York, NY
7 World Trade Center, New York, NY

Atlantic Avenue Service Center, Brooklyn, NY
Yamato Transport, Tuckahoe, NY and Leonia, NJ
Mutual Oil Company, RI

HIGHER EDUCATION

Columbia University, Manhattanville Development Project, New York, NY
Columbia University Real Estate Group, 220 East 138th Street, Bronx, NY
Columbia University Real Estate Group, 1734 Bathgate Avenue, Bronx, NY
Columbia University Real Estate Group, 1745 Bathgate Avenue, Bronx, NY
Columbia University, The Studebaker Building Renovation, New York, NY
City University of New York (CUNY) John Jay College Expansion,
New York, NY

K-12 EDUCATION

PS 192, New York, NY

RESIDENTIAL AND MIXED-USE

Sullivan Street Residential, New York, NY
475 Ninth Avenue, New York, NY
River Place I and II, New York, NY
10 Chelsea, New York, NY
Silvercup West, Long Island City, NY
Superior Ink, New York, NY
Peter Cooper Village/Stuyvesant Town, MGP Consultations, New York, NY
Duane Street Condominium, New York, NY
Archstone Clinton, New York, NY

PARKS AND RECREATION

Highline Park, New York, NY
Yankee Stadium Redevelopment Project, Bronx, NY
Proposed New York Jets Stadium, New York, NY
AMF Bowling Centers, Phase I ESA's, 285 Locations, United States

EXPERT WITNESS

Confidential Client, Expert Affidavit, New York, NY
Confidential Client, Four New York Properties, New York, NY
Confidential Client, Expert Review and Remediation, Yonkers, NY
Confidential Client, Senior Environmental Consulting, Brooklyn, NY
Expert Affidavit, Confidential Client, New York, NY
Underground Storage Tank Removals, New York, NY

Paul McMahon, EIT

Staff Engineer
Environmental Engineering

3 years in the industry

Mr. McMahon is an environmental engineer with 3 years' experience in water quality modeling and process engineering. He has experience with site investigations, environmental remediation, regulatory compliance, emergency spill response and environmental risk assessment.

Selected Projects

322 West 57th Street, Sheffield Building Emergency Spill Response, New York, NY – Staff Engineer. Provided spill response oversight and reporting during 24/7 emergency spill response activities.

Hudson Yards Terra Firma and Hudson Yards Platform, New York, NY – Staff Engineer. Performed remediation oversight and reporting and implemented Community Air Monitoring for site along High Line Park.

Columbia University Manhattanville Development Project, New York, NY – Staff Engineer. Provided oversight, daily, weekly, and monthly reporting, and implementation of community air monitoring.

536 West 41st Street, Brownfield Cleanup Program (BCP) Site, New York, NY – Staff Engineer. Performed a Phase II Environmental Site Investigation and a Remedial Investigation for an New York State Department of Environmental Conservation (NYSDEC) Brownfield site.

Kings Plaza Mall, Brooklyn, NY – Staff Engineer. Performed quarterly groundwater sampling and fuel oil recovery for this chlorinated solvent and petroleum spill remediation site.

44-30 Purves Street, Long Island City, NY – Staff Engineer. Implemented a Phase II Environmental Site Investigation and Remedial Investigation and provided BCP consulting services.

Greenpoint Waterfront Development, Brooklyn, NY – Staff Engineer. Implemented a Phase II Environmental Site Investigation and provided BCP consulting services.

60 West Street, Brooklyn, NY – Staff Engineer. Implemented a Phase II Environmental Site Investigation and performed an Indoor Air Quality Analysis study.

Kingsbridge Ice Center, Bronx, NY – Staff Engineer. Implemented a Phase II Environmental Site Investigation.

23-10 42nd Road, Long Island City, Queens, NY – Staff Engineer. Provided BCP consulting services for this site redevelopment project that was accepted into the NYSDEC BCP.

Pier 57, New York, NY – Staff Engineer. Provided spill response oversight and reporting during 24/7 emergency spill response activities resulting from damage from Hurricane Sandy.

Education

M.E., Environmental Engineering
Manhattan College

B.S., Civil Engineering
Washington University in St. Louis

Professional Registration

Engineer-in-Training (EIT)

Affiliations

New York Water and Environment Association

LANGAN

Nicole C. Rochna, PE

Senior Staff Engineer
Environmental Engineering

7 years in the industry

Ms. Rochna has over seven years of professional experience as an engineer in the environmental field. Ms. Rochna has conducted environmental sampling, prepared erosion and sediment control plans, stormwater management plans, and environmental permit reports, each of which required regulatory interaction and were submitted for regulatory review. She has performed annual air emissions calculations for several municipal solid waste (MSW) landfills. Ms. Rochna has worked on environmental remediation designs from development through construction oversight. Ms. Rochna has also operated and maintained several groundwater pump-and-treat systems for gasoline service stations. Her most recent experience is with developing Phase I environmental assessments, sampling and analysis plans, site Inspections, environmental baseline surveys, remedial investigations, feasibility studies, engineering evaluations and cost analysis, proposed plans and decision documents.

Education

B.S., Civil Engineering
Pennsylvania State University

Professional Registration

Professional Engineer in PA

Selected Projects

170 Amsterdam Avenue, Waste Characterization and Earthwork Oversight, New York, NY
1095 Southern Boulevard, Remedial Investigation Report, Urban Health Plan, Bronx, NY
Pittsburgh International Airport, Contaminant Delineation, Wetland Delineation and Riparian Assessment, Pittsburgh, PA
United States Coast Guard, Environmental Baseline Survey,
Various Sites at Naval Station, Sample and Analysis Plan, Site Inspection, and Remedial Investigation, Great Lakes, IL
Department of the Navy, NAVFAC, Mid-Atlantic (CLEAN)/Naval Air Station Brunswick, Data Evaluation Report, Brunswick, ME
United States Coast Guard Baltimore Yard, Remedial Investigation/ Feasibility Study/Remedial Action, Baltimore, MD
Naval Air Station Pensacola, Feasibility Study, Pensacola, FL
Charleston Zone J Naval Complex, RCRA Facility Investigation, Charleston SC
Naval Base Kitsap (NBK), Small Arms Range, Remedial Investigation and Feasibility Study for EO 300, Bangor, WA
Former NAS, NAVFAC Northeast Feasibility Study, South Weymouth, MA
Naval Activity Puerto Rico (NAPR); U.S. Navy CLEAN Mid-Atlantic Division, RCRA Facility Investigations, Ceiba, Puerto Rico
Naval Weapons Station Charleston, South Annex Hardstand Area and Ammunition Renovation Shop, United States Navy Southern Division, RCRA Facility Investigations, Charleston, SC
John F. Kennedy Space Center, Corrective Measures Implementation Work Plan and Operations and Maintenance Plan, NASA, FL

Crossley Farm Superfund Site, EPA Region 3, Basis of Design Report for Operable Unit, Berks County, PA
Confidential Client, Petroleum-Related Remediation, MD, MI, OH, and PA
Department of the Navy, Naval Air Station Cecil Field, Sites 58 and 59, Natural Attenuation and Groundwater Monitoring Reports, Jacksonville, FL
United States Coast Guard, Environmental Records Management, Baltimore, MD
Naval Air Warfare Center Indianapolis, Five-Year Review, Indianapolis, IN
Confidential Client, Annual Air Emissions and Plan of Approval, Western, PA

Albert G. Tashji

Senior Staff Engineer
Environmental Engineering

3 years in the industry

Mr. Tashji is an environmental engineer with over three years of experience that includes conducting Phase I Environmental Site Assessments (ESA), Phase II Environmental Site Investigations (ESI), and oversight of remedial activities. Mr. Tashji also has experience in closure activities for aboveground storage tanks (AST) and underground storage tanks (UST). While Mr. Tashji's work has been primarily in the field, his experience at Langan also includes the compilation and analysis of data, drafting project drawings and report preparation.

Education

M.E., Environmental Engineering
Manhattan College

B.E., Environmental Engineering
Manhattan College

Selected Projects

McCarren Park Pool, Brooklyn, NY
Studio City/Gotham, New York, NY
Private School Development, 177 Harrison Avenue, Brooklyn, NY
4 Washington Square Village, New York University, New York, NY
Hastings on Hudson Tank Pull, Westchester, NY
River Side Park, West 42nd Street, NY
Brooklyn College, Brooklyn, NY
Remsen Avenue, Brooklyn, NY
Pier 57, West 15th Street, New York, NY
Con Edison, 2950 Atlantic Avenue, Brooklyn, NY
2148 Broadway, Residential Building, New York, NY
New York University (NYU) Housing, New York, NY
South Street, Elizabeth, NJ
627 Smith Street, Brooklyn, NY
Abraham Joshua Heschel School, New York, NY

Appendix H
Citizen Participation Plan

New York State Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan

for

44-30 Purves Street

44-30 Purves Street
Long Island City
Queens County, New York

July 2014

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Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's cleanup process.

Applicant: **Purves Street Owners, LLC ("Volunteer")**
Site Name: **44-30 Purves Street ("Site")**
Site Address: **44-30 Purves Street**
Site County: **Queens**
Site Number: **C241162**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants that conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at: http://www.dec.ny.gov/chemical/8450.html .

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment

- Improving public access to, and understanding of, issues and information related to a particular site and that site's investigation and cleanup process

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list as both a list and in tabular (MS Excel) format. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The site contact list includes, at a minimum:

- chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;
- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which services the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility;
- local news media from which the community typically obtains information;
- location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information. This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the site, as described in Section 5.

If the site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the site.

For more information about TAGs, go online at http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repositories	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement:	
• Prepare Citizen Participation (CP) Plan	Within 20 days of the Agreement being executed.
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about RIR and proposed RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that summarizes the Final Engineering Report • Distribute fact sheet to site contact list announcing issuance of Certificate of Completion (COC)	At the time NYSDEC approves Final Engineering Report. These two fact sheets are combined if possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the site. Additional major issues of public concern may be identified during the course of the site's cleanup process.

The following major issues of public concern were identified: air quality, health of workers and community, nuisance odors, noise, and construction-related traffic. These issues are of the most concern to adjacent property businesses and residents. These issues will be addressed in the Remedial Action Work Plan (RAWP), a Community Air Monitoring Program (CAMP) and/or a site-specific Health and Safety Plan (HASP) for the project to be approved by the NYSDEC prior to work.

Based on previous investigations, historic uses of the property have included: a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard. Historic maps dated 1947 and 1950 indicate the presence of two underground storage tanks (USTs) in the central part of the property. Contaminants of concern include chlorinated and petroleum-related volatile organic compounds (VOC), semivolatile organic compounds (SVOC), pesticides, and metals. Contaminants are discussed in further detail in Section 4 below. The identified contaminants will be remediated to support the redevelopment of the site for residential use in accordance with an NYSDEC-approved work plan.

Information regarding the site is available through Project Contacts mentioned in Section 2 and Appendix A. The BCP Application, which includes the previous investigations at the site and future reports prepared for the NYSDEC, are (or will) be available in the document repository discussed above in Section 2 and in Appendix A. The RAWP will include schedules for the planned work.

To make Citizen Participation Plans (CPPs) as consistent as possible with DER's CP Handbook, Region 2 Public Affairs asks that the Handbook's "Scoping Sheet for Major Issues of Public Concern" be used by applicants/responsible parties to inform their completion of this section of the plan. Because of the high percentage of Environmental Justice Areas in New York City, the Scoping Sheet is a particularly valuable tool in this region. The information that is gained by using a Scoping Sheet may be helpful in determining if future fact sheets need to be translated into other languages. The NYSDEC Scoping Sheet for Major Issues of Public Concern was used to complete this section and is included as Appendix D.

4. Site Information

Site Description

The site is located at 44-30 Purves Street in Long Island City, Queens County, New York. The property occupies Tax Block 268, Lots 1, 24, 25, and 26. The site is an irregularly-shaped parcel and occupies an area of approximately 26,900 square feet (0.618 acres). The Site has been a vacant lot for nearly 10 years, since circa 2006, and was previously improved with multiple buildings and used for various manufacturing and industrial purposes. A Site Location Map is included as Appendix C.

The site is situated at an elevation of approximately 11 feet, with respect to the North American Vertical Datum of 1988 (NAVD88), which is 1.095 feet above Mean Sea Level at Sandy Hook, New Jersey, 1929 U.S. Geological Survey National Geodetic Vertical Datum (NGVD29). The surrounding regional topography generally slopes west towards the East River, which is located approximately 4,000 feet to the west of the site, and south to the Dutch Kills, which is located approximately 1,200 feet south of the site. Properties east of the site are generally at a higher elevation (up-gradient).

According to the New York City Planning Commission Zoning Map 9b, the site is located in a M1-5/R9 manufacturing district.

History of Site Use, Investigation, and Cleanup

The site and surrounding area are located in an urban setting historically characterized by industrial and commercial development, and has recently undergone residential and commercial development due to rezoning. Historic uses of the property have included: a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard.

Prior to entry into the NYSDEC BCP, the site was the subject of three known previous environmental investigations, which are documented in the following reports:

- *Phase I Environmental Site Assessment (ESA) Report*, dated April 27, 2006, prepared by Middleton Environmental, Inc.;
- *Phase II Environmental Site Investigation (ESI) Report*, dated November 5, 2006, prepared by Environmental Business Consultants; and
- *Phase I ESA Report*, dated December 9, 2011, prepared by IVI Assessment Services, Inc.

Below is a summary of each report:

Phase I ESA, Middleton Environmental, Inc., April 27, 2006

The Phase I ESA provides an evaluation of potential environmental concerns relating to hazardous materials and wastes at the site and surrounding properties. The Phase I ESA was conducted in accordance with the ASTM Standard (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process). The Phase I ESA included a review of historical sources, a site and vicinity reconnaissance, a review of available regulatory agency databases, and a review of local environmental records. The initial Phase I ESA, issued April 26, 2006, included Lots 24, 25, and 26. A Phase I ESA update on April 27, 2006 included Lot 1.

The site was improved with two vacant buildings at the time of the Phase I ESA, which were most recently used as automobile repair and carpet storage. The site was previously used by a chemical laboratory, a filter cleaner company, a hardware warehouse, a paper embossing company, a taxi repair facility, a controller manufacturing company, a pine chemical company, and an air freight company. A review of the 1950 Sanborn Fire Insurance Map indicated the presence of two USTs at the site. At the time of this Phase I ESA, no oil fill ports or fuel vents were observed at the site.

Adjoining property uses were reported to include industrial and manufacturing properties including a welding company, an automobile repair facility, a construction site, and vacant industrial buildings.

The Phase I ESA identified no recognized environmental conditions (RECs) associated with the site.

Phase II ESI, Environmental Business Consultants, November 5, 2006

The Phase II ESI was completed to evaluate potential impacts to soil and groundwater on the subject site. The Phase II ESI included the installation of three soil borings and three groundwater monitoring wells, and collection of six grab soil samples and three groundwater samples. Soil and groundwater samples were analyzed for the NYSDEC Spill Technology and Remediation Series (STARS)-listed VOCs and SVOCs. Analytical results of the soil samples were compared to the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCO), which have subsequently been superseded by Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375.

Phase II ESI observations found that the site is underlain by historic fill material with concrete and brick fragments to depths ranging from 2 to 9 feet below ground surface (bgs). Native sand, silt, and peat underlie the fill material. Bedrock was not encountered at the maximum soil boring depth of 20 feet bgs.

The following findings and conclusions were provided in the Phase II ESI:

- Potential Underground Storage Tanks – The Phase II ESI concluded that the continued presence of the two USTs shown on the 1950 Sanborn Fire Insurance Map was "unlikely".

- Fill/Soil
  - *Petroleum-Impacted Soil* – The Phase II ESI identified no petroleum-impacted soil in any of the three soil borings, based on lack of photoionization detector (PID) response or visual evidence of contamination.
  - *Historic Fill* - A layer of historic fill extending to approximately 2 to 9 feet bgs was identified throughout the site and contained one SVOC, pyrene, at a concentration below its TAGM 4046 RSCO. Under Title 6 NYCRR Part 375, this pyrene concentration would still be below the corresponding Unrestricted Use Soil Cleanup Objective (SCO).
- Groundwater – No STARS-listed VOCs or SVOCs were detected in groundwater samples.

Phase I ESA, IVI Assessment Services, Inc., December 9, 2011

At the time of this Phase I ESA, the site consisted of four adjoining vacant parcels.

The Phase I ESA identified the following recognized environmental conditions (RECs) associated with the site:

- Historical site uses included a chemical laboratory, automobile repair, controller manufacturing, fine chemicals manufacturing, storage, paper embossing, machine manufacturing, automobile radiator servicing, and a contractor's yard. Two gasoline USTs were identified on the 1947 and 1950 Sanborn maps and may be still present. The historic site usage may have negatively impacted soil and/or groundwater at the site.

- Properties adjacent to and surrounding the site were previously used for chromium plating, auto body/repair shops, a photochemical warehouse and textile printing ink manufacturing. The 1936 Sanborn map shows a UST in a garage on an adjacent property, and gasoline tanks in manufacturing buildings to the east of the site across Purves Street. The adjacent usage may have negatively impacted soil and/or groundwater at the site.

5. Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant is not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination on-site, and must conduct a qualitative exposure assessment, a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for residential purposes.

To achieve this goal, the Applicant will conduct investigation and cleanup activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the site.

Investigation

The Applicant conducted an investigation of the site officially called a "remedial investigation" (RI) prior to the BCA in February and April of 2014.

The site investigation had several goals:

1) define the nature and extent of contamination in soil, surface water, groundwater, soil vapor, and any other parts of the environment that may be affected;
2) identify the source(s) of the contamination;
3) assess the impact of the contamination on public health and the environment; and
4) provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant is currently preparing a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the site poses a significant threat to public health or the environment. If the site is a "significant threat," it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would

proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a "Certificate of Completion" (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a "Remedial Work Plan". The Remedial Work Plan describes the Applicant's proposed remedy for addressing contamination related to the site.

When the Applicant submits a proposed Remedial Work Plan for approval, NYSDEC would announce the availability of the proposed plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a final engineering report that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the site, it will approve the final engineering report. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management may be conducted by the Applicant under NYSDEC oversight, if

contamination will remain in place. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An institutional control is a non-physical restriction on use of the site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that is pumping and treating groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A
Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Manfred Magloire
Project Manager
NYSDEC
Division of Environmental Remediation
One Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101
(718) 482-4900
mxmagloi@gw.dec.state.ny.us

Jessica Steinberg-Albin, Esq.
NYSDEC
Office of General Counsel
One Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101
(718) 482-4900
jaalbin@gw.dec.state.ny.us
(correspondence only)

New York State Department of Health (NYSDOH):

Krista Anders, Ph.D.
Acting Director
NYSDOH
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower, Room 1787
Albany, NY 12237
(800) 458-1158 ext. 27860

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Queens Library – Court Square Branch
25-01 Jackson Avenue
Long Island City, NY 11101
(718) 937-2790

NYSDEC – Division of Environmental Remediation
Attn: Kevin Sarnowicz
625 Broadway
Albany, NY 12233-7016
(518) 402-9768
(call for appointment)

Appendix B
Site Contact List

Chief Executive Officer
Mayor Bill de Blasio
City Hall
260 Broadway
New York, NY 10007

New York City Comptroller
Scott M. Stringer
1 Centre Street
New York, NY 10007

Public Advocate
Letitia James
1 Centre Street, 15th Floor
New York, NY 10007

U.S. Senator
Charles Schumer
780 Third Avenue, Suite 2301
New York, NY 10017

U.S. Senator
Kirsten Gillibrand
780 Third Avenue, Suite 2601
New York, NY 10017

New York City Planning Commission
Carl Weisbrod, Chair
Department of City Planning
22 Reade Street
New York, NY 10007-1216

Queens Borough President
Melinda Katz
120-55 Queens Blvd.
New York, NY 11415

Commissioner, New York City Department of Transportation
Polly Trottenberg
55 Water Street, 9th Floor
New York, NY 10041

Commissioner, NYC Department of Environmental Protection
Emily Lloyd
59-17 Junction Boulevard
Flushing, NY 11373

Local news media from which the community typically obtains information:

New York Daily News
4 New York Plaza
New York, NY 10004

New York Post
1211 Avenue of the Americas
New York, NY 10036-8790

The public water supply that services the area where the site is located:

Water to the site is provided by the City of New York and the water is derived from watersheds in the Catskills in upstate New York. Contact information for the water supplier is:

New York City Department of Environmental Protection
1250 Broadway – 8th Floor
New York, NY 10001

New York City Municipal Water Finance Authority
255 Greenwich Street, 6th Floor
New York, NY 10007

New York City Water Board
Department of Environmental Protection
59-17 Junction Boulevard, 8th Floor
Flushing, NY 11373

Any person who has requested to be placed in the site contact list:

We are unaware of any requests for inclusion on the contact list.

The administrator of any school or day care facility located on or near the site:

There are no schools or day care facilities located on the site. The following are schools or day care facilities located within ½-mile of the site:

High School of Applied Communication (approximately 0.2 miles southeast of site)
Daniel Korb
30-20 Thompson Avenue
Long Island City, NY 11101

Academy of Finance and Enterprise (approximately 0.2 miles southeast of site)
Victoria Armano
30-20 Thomson Avenue
Long Island City, NY 11101

Bard High School Early College Queens (approximately 0.2 miles southeast of site)
Valeri J. Thomson
30-20 Thomson Avenue
Long Island City, NY 11101

LaGuardia Community College (approximately 0.2 miles southeast of site)
Dr. Gail O. Mellow
31-10 Thompson Avenue
Long Island City, NY 11101

LaGuardia Community College Early Childhood Learning Center (approximately 0.2 miles southeast of site)
Sonya Evariste
31-10 Thomson Avenue
Long Island City, NY 11101

Middle College High School at LaGuardia Community College (approximately 0.2 miles southeast of site)
Linda Siegmund
31-01 Thomson Avenue
Long Island City, NY 11101

The International High School at LaGuardia Community College (approximately 0.3 miles southeast of site)
John Starkey
45-35 Van Dam Street
Long Island City, NY 11101

Robert F. Wagner, Jr. Secondary School for Arts & Technology (approximately 0.3 miles southeast of site)
Peggy-Ann Jayne
47-07 30th Place
Long Island City, NY 11101

Information Technology High School (approximately 0.3 miles northwest of site)
Joseph Reed
21-16 44th Road
Long Island City, NY 11101

Newcomers High School (approximately 0.4 miles northeast of site)
Orlando Sarmiento
28-01 41st Avenue
Long Island City, NY 11101

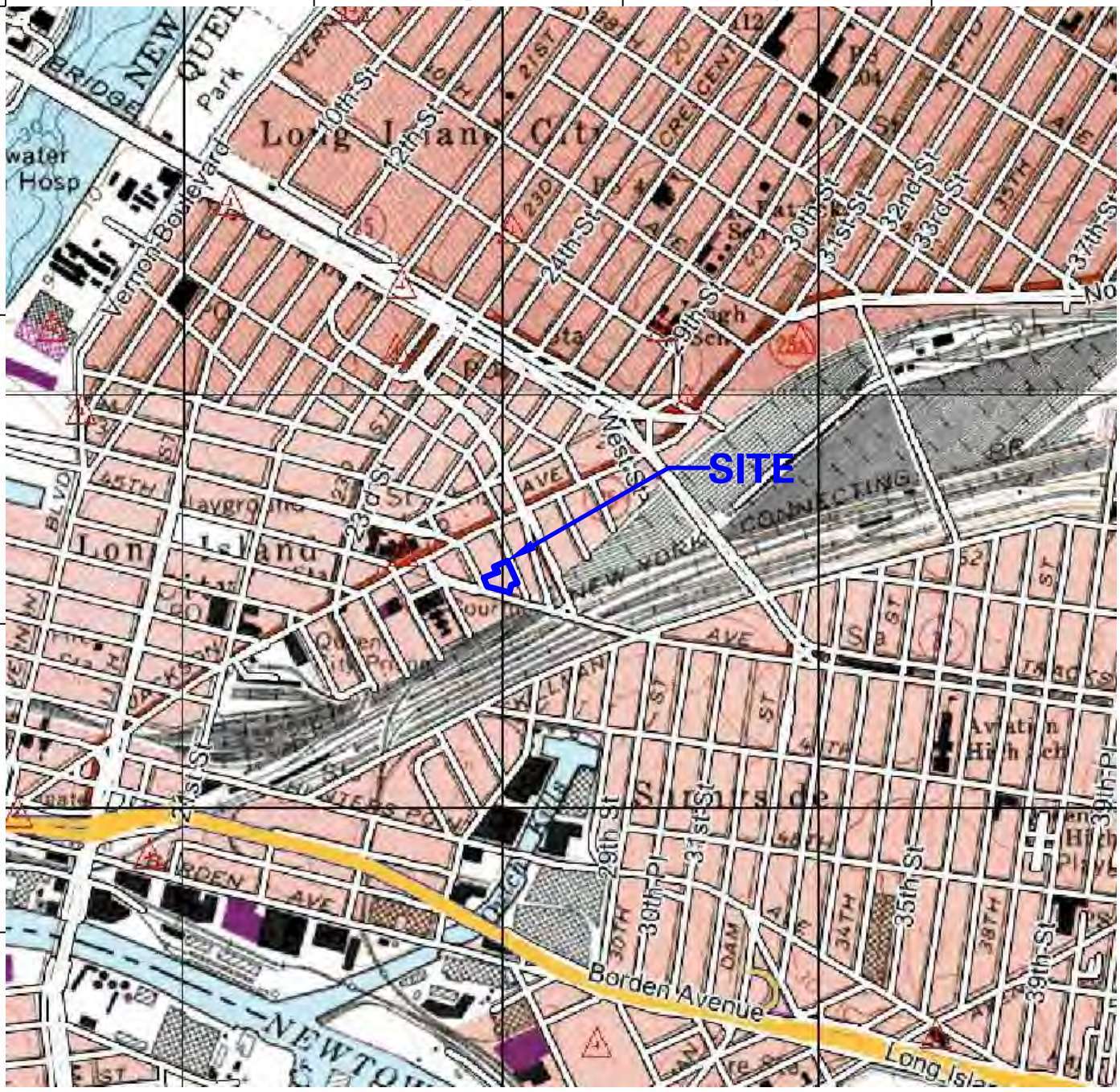
Long Island City YMCA (approximately 0.4 miles east of site)
Jack Lund
32-23 Queens Boulevard
Long Island City, NY 11101

The local community board:

Queens Community Board 2
43-22 50th Street
Woodside, New York 11377
Chair: Joseph Conley
District Manager: Debra Markell Kleinert
(718) 784-5411

	A	B	C	D	E	F	G	H	I	J
1	Appendix B									
2	Site Contact List									
3	Site #: C241162									
4	Site Name: 44-30 Purves Street			List Last Updated: 1 July 2014						
5	Current Occupant	Name, Title	Address 1	Address 2	Address 3	Street Address	City	State	Zip	Site Name (County)
6	Bill de Blasio	Mayor	City Hall				New York	NY	10007	44-30 Purves Street (Queens)
7	Scott M. Stringer	NYC Comptroller	1 Centre Street				New York	NY	10007	44-30 Purves Street (Queens)
8	Letitia James	Public Advocate	1 Centre Street, 15th Floor				New York	NY	10007	44-30 Purves Street (Queens)
9	Charles Schumer	U.S. Senator	780 Third Avenue, Suite 2301				New York	NY	10017	44-30 Purves Street (Queens)
10	Kirsten Gillibrand	U.S. Senator	780 Third Avenue, Suite 2601				New York	NY	10017	44-30 Purves Street (Queens)
11	Carl Weisbrod	Commissioner, NYC Department of City Planning	22 Reade Street				New York	NY	10007	44-30 Purves Street (Queens)
12	Christopher Reo	Acting Director, NYC Office of Environmental Coordination	100 Gold Street, 2nd Floor				New York	NY	10038	44-30 Purves Street (Queens)
13		Office of Environmental Planning & Assessment	96-05 Horace Harding Expressway				Flushing	NY	11373	44-30 Purves Street (Queens)
14	Joseph Conley	Chair, Queens Community Board 2	43-22 50th Street				Woodside	NY	11377	44-30 Purves Street (Queens)
15	Debra Markell Kleinert	District Manager, Queens Community Board 2	43-22 50th Street				Woodside	NY	11377	44-30 Purves Street (Queens)
16		NYC Dept. of City Planning - Queens Borough Office	120-55 Queens Blvd., Room 201				Kew Gardens	NY	11424	44-30 Purves Street (Queens)
17	Melinda Katz	Queens Borough President	120-55 Queens Blvd., Room 201				Kew Gardens	NY	11424	44-30 Purves Street (Queens)
18	Polly Trottenberg	New York City Department of Transportation	55 Water Street, 9th Floor				New York	NY	10041	44-30 Purves Street (Queens)
19	Catherine Nolan	New York State Assemblymember (37th Assembly District)	41-02 Queens Blvd., Suite 2B				Sunnyside	NY	11104	44-30 Purves Street (Queens)
20	Michael Gianaris	New York State Senator (District 12)	31-19 Newtown Avenue				Astoria	NY	11102	44-30 Purves Street (Queens)
21	Carolyn Maloney	U.S. House of Representatives (12th Congressional District)	31-19 Newtown Avenue, Suite 402				Astoria	NY	11102	44-30 Purves Street (Queens)
22	Jimmy Van Bramer	NYC Councilmember	47-01 Queens Blvd., Suite 205				Sunnyside	NY	11104	44-30 Purves Street (Queens)
23	Emily Lloyd	Commissioner, NYC Department of Environmental Protection	59-17 Junction Boulevard				Flushing	NY	11373	44-30 Purves Street (Queens)
24		New York Post	1211 Avenue of the Americas				New York	NY	10036	44-30 Purves Street (Queens)
25		New York Daily News	4 New York Plaza				New York	NY	10004	44-30 Purves Street (Queens)
26		Queens Library - Court Square Branch (Repository)	25-01 Jackson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
27		New York City Department of Environmental Protection	1250 Broadway, 8th Floor				New York	NY	10001	44-30 Purves Street (Queens)
28		New York City Municipal Water Finance Authority	255 Greenwich Street, 6th Floor				New York	NY	10007	44-30 Purves Street (Queens)
29		New York City Water Board - Department of Environmental Protection	59-17 Junction Boulevard, 8th Floor				Flushing	NY	11373	44-30 Purves Street (Queens)
30	Daniel Korb	High School of Applied Communication (approximately 0.2 miles southeast of site)	30-20 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
31	Victoria Armano	Academy of Finance and Enterprise (approximately 0.2 miles southeast of site)	30-20 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
32	Valeri J. Thomson	Bard High School Early College Queens (approximately 0.2 miles southeast of site)	30-20 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
33	Dr. Gail O. Mellow	LaGuardia Community College (approximately 0.2 miles southeast of site)	31-10 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
34	Sonya Evariste	LaGuardia Community College Early Childhood Learning Center (approximately 0.2 miles southeast of site)	31-10 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
35	Linda Siegmund	Middle College High School at LaGuardia Community College (approximately 0.2 miles southeast of site)	31-01 Thomson Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
36	John Starkey	The International High School at LaGuardia Community College (approximately 0.3 miles southeast of site)	45-35 Van Dam Street				Long Island City	NY	11101	44-30 Purves Street (Queens)
37	Peggy-Ann Jayne	Robert F. Wagner, Jr. Secondary School for Arts & Technology (approximately 0.3 miles southeast of site)	47-07 30th Place				Long Island City	NY	11101	44-30 Purves Street (Queens)
38	Joseph Reed	Information Technology High School (approximately 0.3 miles northwest of site)	21-16 44th Road				Long Island City	NY	11101	44-30 Purves Street (Queens)
39	Orlando Sarmiento	Newcomers High School (approximately 0.4 miles northeast of site)	28-01 41st Avenue				Long Island City	NY	11101	44-30 Purves Street (Queens)
40	Jack Lund	Long Island City YMCA (approximately 0.4 miles east of site)	32-23 Queens Boulevard				Long Island City	NY	11101	44-30 Purves Street (Queens)
41		SculptureCenter	44-19 Purves Street				Long Island City	NY	11101	44-30 Purves Street (Queens)
42		Approved Fire Prevention Corporation	44-16 Purves Street				Long Island City	NY	11101	44-30 Purves Street (Queens)
43		Corcoran Group Relal Estate	44-27 Purves Street				Long Island City	NY	11101	44-30 Purves Street (Queens)
44		LDNY	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
45		Yoga Studio 6 LIC	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
46		Arris Lofts	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
47		MTP - Arris Loft Garage	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
48		Zandl Group	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
49		Middle College National Consortium	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
50		Enterprise CarShare	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
51		Young Naturists and Nudists America	27-28 Thomson Ave				Long Island City	NY	11101	44-30 Purves Street (Queens)
52		Andalex Group	45-31 Court Square				Long Island City	NY	11101	44-30 Purves Street (Queens)
53		Queens Plaza Automotive Warehouse	27-19 44th Drive				Long Island City	NY	11101	44-30 Purves Street (Queens)

Appendix C
Site Location Map



LEGEND:

SITE BOUNDARY

NOTES:

1. BASE MAP TAKEN FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 1927 NORTH AMERICAN DATUM, REVISED IN 1979.

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan International LLC
Collectively known as Langan

Project	44-30 PURVES STREET BLOCK No. 268, LOT Nos. 1, 24, 25, 26 LONG ISLAND CITY QUEENS NEW YORK
Drawing Title	SITE LOCATION MAP
Project No.	170282501
Date	2/24/2014
Scale	NTS
Drawn By	PM
Submission Date	–
Figure No.	1
Sheet	1 of 5

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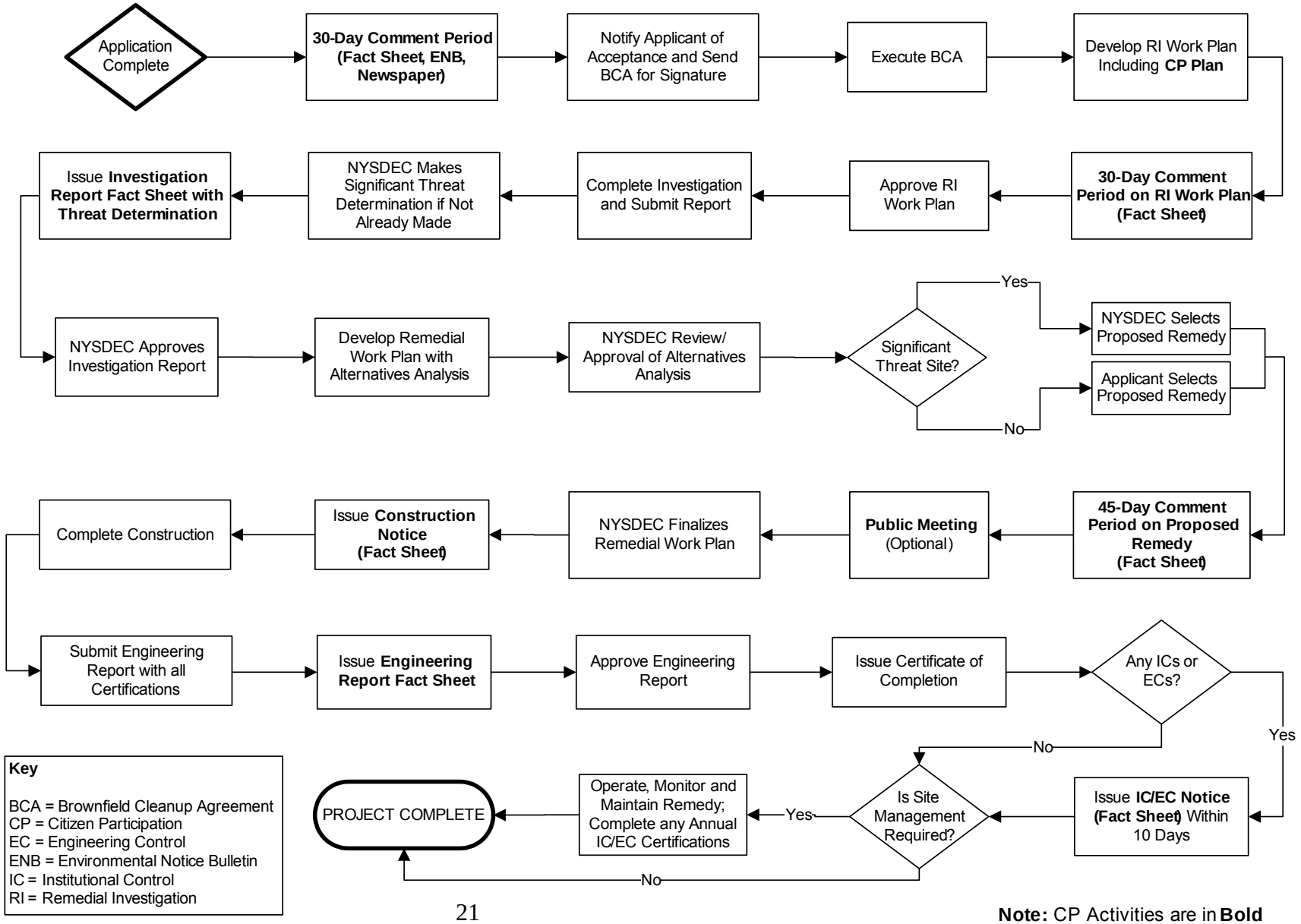
Filename: \\langan.com\data\NY\data5\170282501\Cadd Data - 170282501\SheetFiles\Environmental\RI FIGURES\Figure 1 - Site Location Map.dwg Date: 5/16/2014 Time: 08:33 User: ebourbon Style Table: Langan.stb Layout: ANSIA-BP

Appendix D– Brownfield Cleanup Program Process



Note: CP Activities are in **Bold**

Remedial Programs

Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses: major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public, if applicable.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Include the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g. Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g. Can our children play outside? Can we garden? Must we avoid certain areas? Can we continue to recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g. who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?
- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby properties, natural resources, etc.?

- Are there activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Do the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated <u>to</u> the Community.

- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - e. Obtain information from local officials, property owners and residents, site reports, site visits, "windshield surveys," other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.

- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.

- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public. Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial stages, or may only be interested in particular issues. It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help in the selection and conduct of appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage
- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups

New York State Department of Environmental Conservation
Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern (see instructions)

Remedial Party: Purves Street Owners, LLC

Site Name: 44-30 Purves Street

Site Number: C241162

Site County: Queens County

Note: For Parts 1. – 3., the individuals, groups, organizations, businesses, and units of government identified should be added to the site contact list as appropriate.

Part 1. List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses, and/or units of government related to the issue(s) and/or information. **Use this information as an aid to prepare or update the Major Issues of Public Concern section of the site Citizen Participation Plan.**
Remediation of soil and groundwater contamination may have odor and air quality impacts. NYSDEC is overseeing the project to ensure air and odor issues are monitored and mitigated.

How were these issues and/or information identified?
Previous investigation reports identified contaminated soil and groundwater. Potential impacts are typical for remediation projects.

Part 2. List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses, and/or units of government related to the needed information.
No additional information is required from the community at this time.

How were these information needs identified?
Not Applicable

Part 3. List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.
Information will be communicated to the public as outlined in the Citizen Participation Plan. NYSDEC contacts will be provided. A repository will exist for the public to review documentation.

How were these issues and/or information identified?
Issue identification is the same as Part 1 response. Information communication was established by NYSDEC as part of the NYS Brownfield Cleanup Program remediation.

Part 4. Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):

a. Land use/zoning around site:
☒ **Residential** ☐ **Agricultural** ☐ **Recreational** ☒ **Commercial** ☒ **Industrial**

b. Residential type around site:
☒ **Urban** ☐ **Suburban** ☐ **Rural**

c. Population density around site:

☒ **High** ☐ **Medium** ☐ **Low**

d. Community economic status:

☐ **High** ☒ **Medium** ☐ **Low**

☐ **Yes** ☒ **No** **e.** Water supply of nearby residences:

☒ **Public** ☐ **Private Wells** ☐ **Mixed**

f. Other environmental issues significantly impacting affected community?

Provide details if appropriate:
Not Applicable

g. Special considerations:

☐ **Language** ☐ **Age** ☐ **Transportation** ☐ **Other**

Explain marked categories in **g.**:
Not Applicable

Part 5. The site contact list must include, at a minimum, the individuals, groups, and organizations identified in the instructions for **Part 5.** Are other individuals, groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)

☒ **Non-Adjacent Residents/Property Owners:** Please see Contact List

☒ **Local Officials:** Please see Contact List

☒ **Media:** Please see Contact List

☒ **Business/Commercial Interests:** Please see Contact List

☒ **Labor Group(s)/Employees:** Please see Contact List

☐ **Indian Nation:** Click here to enter text.

☒ **Citizens/Community Group(s):** Please see Contact List

☒ **Environmental Justice Group(s):** Please see Contact List

☒ **Environmental Group(s):** Please see Contact List

☒ **Civic Group(s):** Please see Contact List

☒ **Recreational Group(s):** Please see Contact List

☒ **Other(s):** Please see Contact List

Date Completed: June 30, 2014

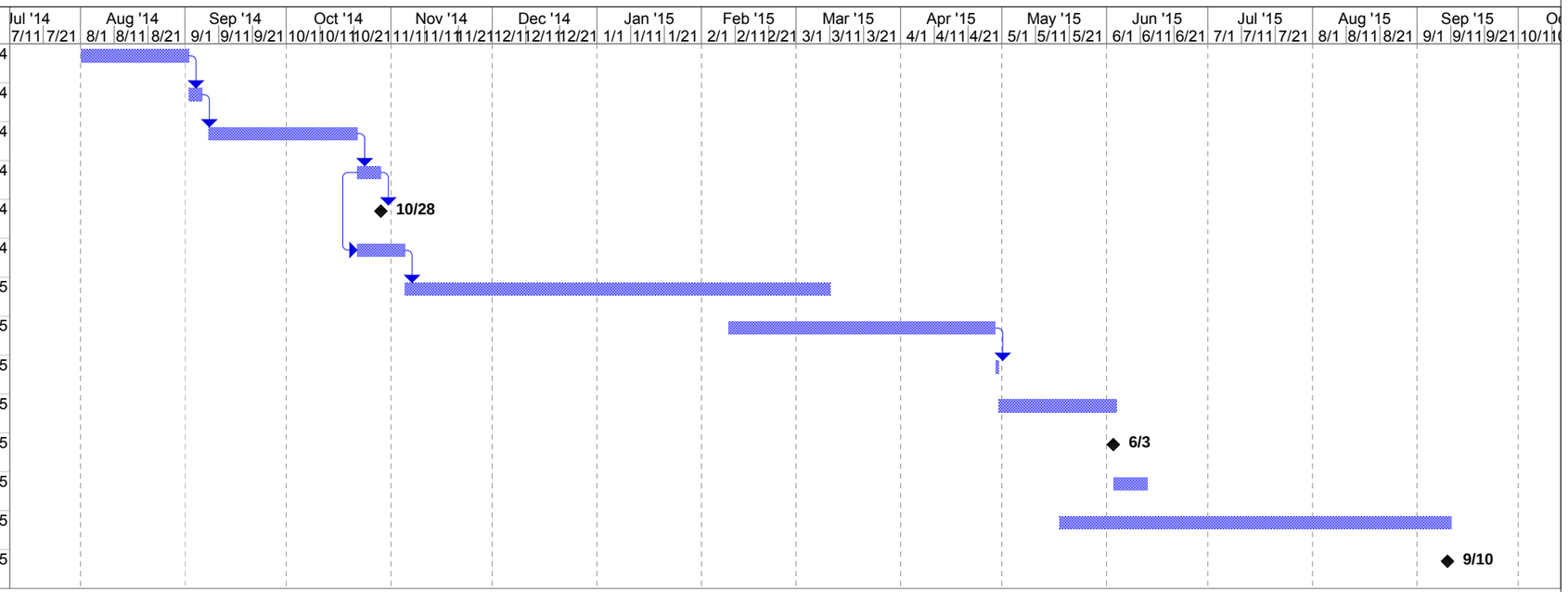
Prepared By: Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

Reviewed By: Click here to enter text.

Appendix I
Remediation Schedule

44-30 Purves Street - Estimated Remediation Schedule

ID	Task Name	Start	Finish
1	NYSDEC Initial Review of RAWP	Fri 8/1/14	Mon 9/1/14
2	Revise RAWP per Iinitial DEC Comments	Tue 9/2/14	Fri 9/5/14
3	45-day Public Comment Period for RAWP	Mon 9/8/14	Tue 10/21/14
4	DEC Finalizes RAWP	Wed 10/22/14	Tue 10/28/14
5	Construction Notice Fact Sheet	Tue 10/28/14	Tue 10/28/14
6	Obtain Permits	Wed 10/22/14	Tue 11/4/14
7	RAWP Implementation	Wed 11/5/14	Tue 3/10/15
8	Final Engineering Report (FER) & Site Management Plan (SMP)	Mon 2/9/15	Tue 4/28/15
9	FER Fact Sheet	Wed 4/29/15	Wed 4/29/15
10	DEC Review and Approval of FER and SMP	Thu 4/30/15	Wed 6/3/15
11	Certificate of Completion	Wed 6/3/15	Wed 6/3/15
12	IC/EC Notice Fact Sheet (within 10 days of Notice)	Wed 6/3/15	Fri 6/12/15
13	Environmental Easment Development/Filing	Mon 5/18/15	Thu 9/10/15
14	Implement SMP (Operations, Maintainence and Annual Inspections)	Thu 9/10/15	Thu 9/10/15



Project: 44-30 Purves Street

Task		Rolled Up Progress		Inactive Task		Duration-only		Progress	
Milestone	◆	Split		Inactive Task		Manual Summary Rollup		Deadline	⇩
Summary		External Tasks		Inactive Milestone	◇	Manual Summary			
Rolled Up Task		Project Summary		Inactive Summary	▽	Start-only	[		
Rolled Up Milestone	◇	Group By Summary		Manual Task		Finish-only	]		

Appendix J
Site Signage Requirements

Site Signage Requirements

The NYSDEC Department has specific requirements for a 4 foot by 8 foot sign to be posted to inform the public about the RA. The detailed NYSDEC requirements for Site signage are provided below.

Signage Instructions

Signs are required at sites where remedial actions are being performed under one of the following remedial programs: State Superfund, VCP, BCP, and Environmental Restoration Program (ERP). They will not be required during the investigation and design phases. The cost of the sign will be borne by the parties performing the remedial action based on the legal document the activities are being performed under (i.e. volunteers/participants would pay 100% of the cost under the BCP; municipalities would pay 100% and then would be reimbursed for the cost under the ERP).

Sign Requirements

Size:	Horizontal format - 96" wide by 48" high	
Construction Materials:	Aluminum or wood blank sign boards with vinyl sheeting.	
Inserts:	"Site Name", "Site Number", "Name of Party Performing Remedial Activities" and "Municipal Executive". Indicate position, size and topography for specific inserts.	
Color Scheme:	Copy surrounding DEC logo - "NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION"	PMS 355
DEC logo:	PMS 301 Blue, PMS 355 Green	
Text:	Program:	PMS 301
	Brownfield Cleanup Program	
	Site Name, Site Number, Party Performing Remedial Activities	PMS 355
	Names of Governor, Commissioner, Municipal Executive	PMS 301
	Transform the Past…..Build for the Future	PMS 355
Type Specifications:	All type is Caslon 540, with the exception of the logotype. Format is: center each line of copy with small caps and initial caps.	
Production Notes:	96" wide x 48" high aluminum blanks will be covered with vinyl sheeting to achieve background color. Copy and logo will be silk screened on this surface.	

Program Name

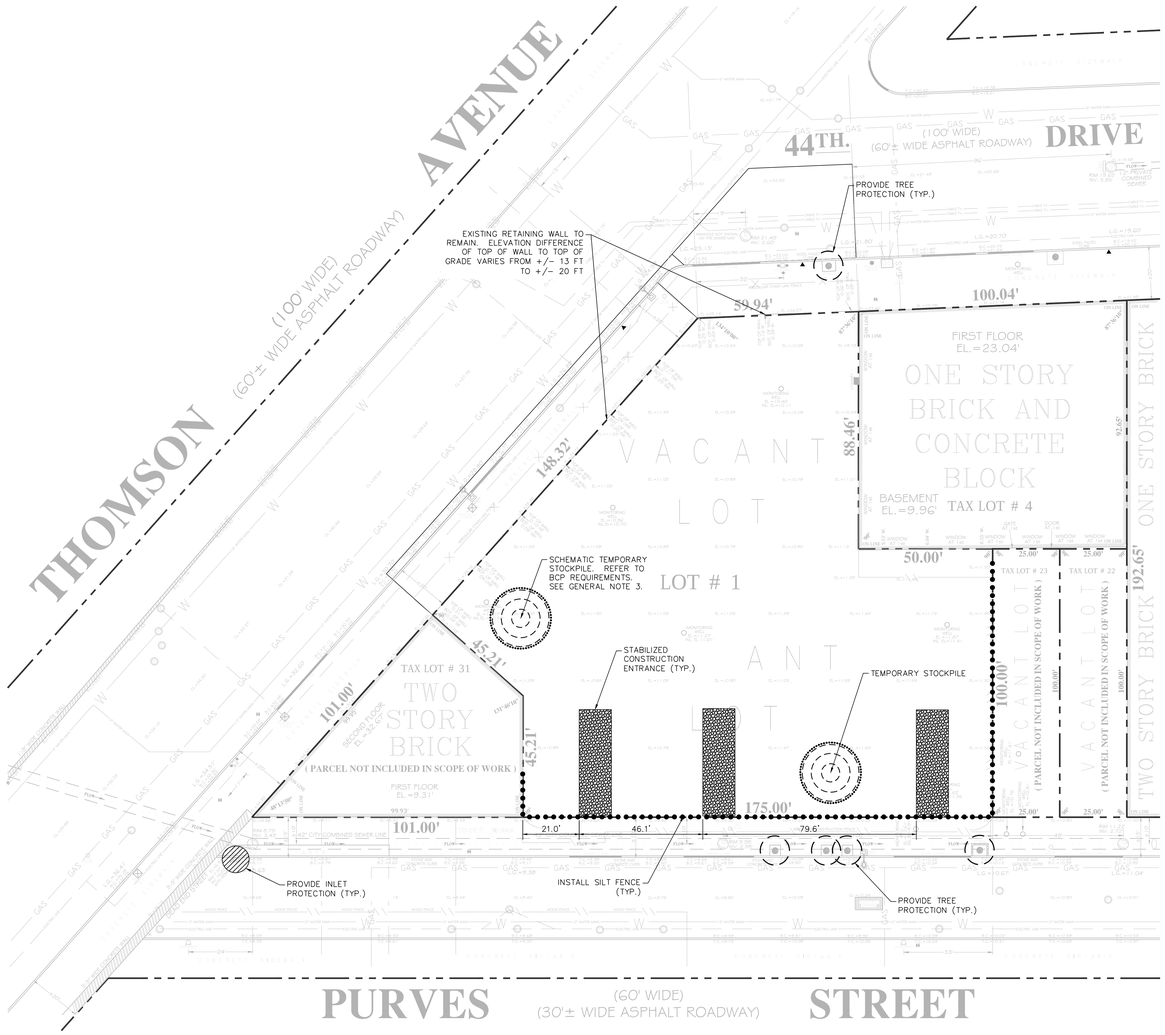
Site Name
Site Number
Name of Party Performing Remedial Activities

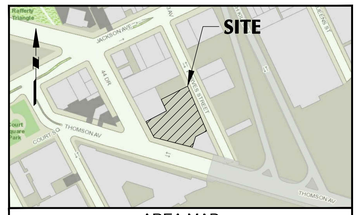
Governor
Commissioner
Municipal Executive

Transform the Past…. Build for the Future

Appendix K

Erosion and Sediment Control Plan





AREA MAP
NOT TO SCALE

SOURCE:
http://maps.nyc.gov/doitt/nycitymap/ as of 05/02/2014

MATERIAL KEYING LEGEND:

LEGEND

- PROPOSED FILTER FABRIC
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED SILT FENCE
- PROPERTY LINE

SURVEY LEGEND

- LIGHT POST
- UTILITY POLE
- CATCH BASIN
- WATER VALVE
- GAS VALVE
- PARKING METER
- TRAFFIC SIGN
- HYDRANT
- ELECTRIC BOX
- TREE PIT
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- D.W.S WATER

GENERAL NOTES:

1. EXISTING INFORMATION HAS BEEN OBTAINED FROM THE TOPOGRAPHIC AND BOUNDARY SURVEY TAKEN BY APPLE SURVEYING, DATED 04/11/2014.
2. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST NYS DEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL AND MEET EPA 832 REGULATIONS.
3. SITE IS REGULATED BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION UNDER THE NEW YORK STATE BROWNFIELD CLEANUP PROGRAM (SITE NO. C241162); CONTRACTOR MUST REVIEW AND COMPLY WITH THE ENVIRONMENTAL CONTRACT DOCUMENTS AND DRAWINGS.

PLANNED EROSION AND SEDIMENT CONTROL PRACTICES:

1. SILT FENCE: SILT FENCE SHALL BE INSTALLED ALONG THE PROPOSED LIMIT OF DISTURBANCE AREAS AND AROUND THE PROPOSED TOPSOIL STOCKPILE, AS SHOWN.
2. STABILIZED CONSTRUCTION ENTRANCE: A STABILIZED CONSTRUCTION ENTRANCE WILL BE INSTALLED AND MAINTAINED AT THE ENTRANCE OF THE SITE.
3. DUST CONTROL: DUST SHALL BE CONTROLLED AT ALL TIMES BY ALTERING CONSTRUCTION ACTIVITIES, WETTING DUST-GENERATED AREAS, AND/OR BY APPLYING CHEMICAL DUST SUPPRESSANTS.
4. DEWATERING: DEP AND DEC APPROVED DEWATERING PRACTICES SHALL BE USED TO PREVENT PONDING OF WATER DURING CONSTRUCTION.

CONSTRUCTION SCHEDULE:

1. OBTAIN LOCAL AND STATE APPROVALS PRIOR TO COMMENCING EARTHWORK.
2. FLAG THE WORK LIMITS AND ITEMS TO BE PROTECTED (I.E. TREES)
3. HOLD PRECONSTRUCTION CONFERENCE WITH CONTRACTOR, PROJECT ARCHITECT, PROJECT ENGINEER, LOCAL OFFICIALS, AND NY STATE DEC AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
4. INSTALL SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE.
5. COMMENCE SITE DEMOLITION AND PROPOSED SITE IMPROVEMENTS.
6. ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSPECTED WEEKLY, AND AFTER RAINFALL EVENTS. NEEDED REPAIRS WILL BE MADE IMMEDIATELY.
7. REMOVE EROSION CONTROL ITEMS WHEN EARTHWORK IS COMPLETE AND ALL PERMANENT SURFACES ARE IN PLACE AND ESTABLISHED.
8. KEEP AREAS BEYOND SITE IN CLEAN, CLEAR CONDITION DURING COURSE OF WORK.

MAINTENANCE PROGRAM:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS TO ACHIEVE SITE STABILIZATION AS PER THE CONTRACT DOCUMENTS.
2. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PERMANENT CONTROL MEASURES.
3. SOIL SEDIMENT REMOVED FROM ANY TEMPORARY CONTROL MEASURE DURING REGULAR MAINTENANCE MAY BE INCORPORATED BACK INTO THE EARTHWORK AS FILL ON THE SITE. SOIL SEDIMENT MATERIAL SHALL BE DISTRIBUTED ON-SITE WITHOUT CHANGING DRAINAGE PATTERNS DURING A SPECIFIC CONSTRUCTION PHASE.

MAINTENANCE NOTES:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE A WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES DURING A SPECIFIC CONSTRUCTION STAGE.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT REACHES 0.5 FEET DEEP AT THE BASE OF THE FENCE, OR WHEN BULGES DEVELOP IN THE FENCE. THE SILT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
3. THE STABILIZED CONSTRUCTION ENTRANCE THICKNESS SHALL BE MAINTAINED BY ADDING ROCK AS NECESSARY. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC SIDEWALKS AND ROADWAYS, SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.
4. CONTRACTOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS POSSIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE NO MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAD TEMPORARILY OR PERMANENTLY CEASED.

20 0 5 10 20
SCALE IN FEET

NO.	REVISIONS | SUBMISSIONS	DATE
	DOB FILING SET	06.27.2014
	DESIGN DEVELOPMENT	05.30.2014
	SCHEMATIC DESIGN	03.14.2014

FXFOWLE

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LANGAN ENGINEERING & ENVIRONMENTAL SERVICE
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, NY 10001 212.479.5400

VAN DEUSEN & ASSOCIATES
5 Regent Street, Livingston, NJ 07039 973.994.9220

LIC PURVES STREET DEVELOPMENT

27-27 44TH DRIVE, QUEENS, NY
44-26 PURVES STREET, QUEENS, NY

DRAWING TITLE:

SOIL EROSION & SEDIMENT CONTROL PLAN

Seal:

Drawn:	ADR
Checked:	TW
Reviewed:	Reviewer
Date:	05/30/14
Scale:	
Project No.:	13072.L00
Cad File:	
Drawing No.:	C-300

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Filename: \\langan.com\data\NY\data\170282501\SheetFiles\C-300 E&S Plan.dwg Date: 7/18/2014 Time: 14:43 User: pmcmahon Style Table: Langan.stb Layout: ARCHD-SL

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Appendix L

Vapor Barrier Manufacturer Details

BITUTHENE® 3000 AND BITUTHENE LOW TEMPERATURE

Self-adhesive, rubberized asphalt/polyethylene waterproofing membranes for basements and sub-structures

Description

Bituthene® 3000 and Bituthene Low Temperature are self-adhesive, rubberized asphalt/polyethylene waterproofing membranes used in basements and sub-structures.

Advantages

- **Waterproof**—high hydrostatic head resistance
- **Cross laminated film**—provides dimensional stability, high tear strength, puncture and impact resistance
- **Cold applied**—no flame hazard; self-adhesive overlaps ensure continuity
- **Chemically resistant**—provides effective external protection against aggressive soils and ground water
- **Flexible**—accommodates minor settlement and shrinkage movement
- **Controlled thickness**—factory made sheet ensures constant, non-variable site application
- **Wide application window**—
  - — **Bituthene Low Temperature** surface and ambient temperatures between 25°F (-4°C) and 60°F (16°C)
  - — **Bituthene 3000** surface and ambient temperatures at 40°F (5°C) or above
- **Ripcord® split release on demand**—faster application in the straight-aways, ease of membrane positioning in detailed areas

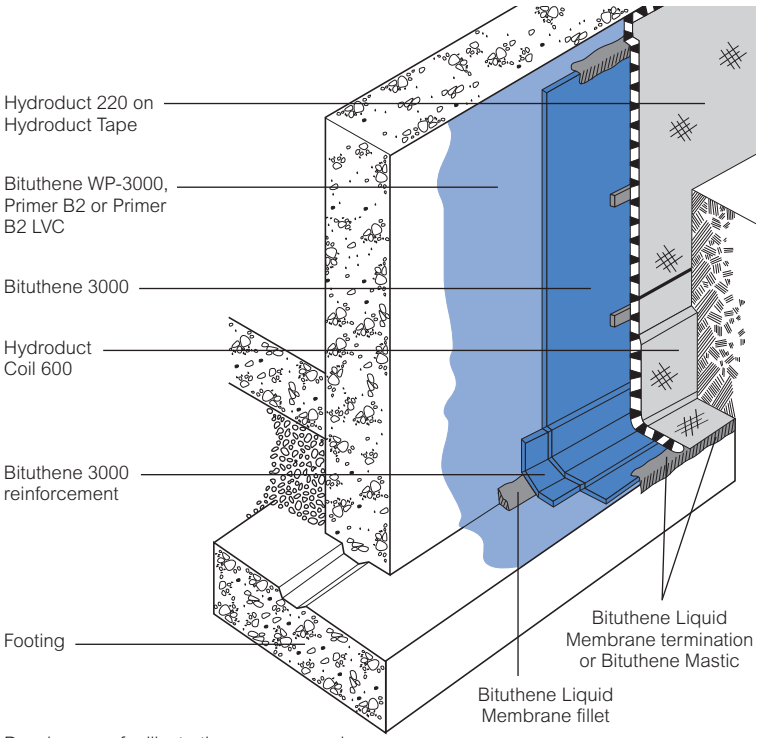
Use

Bituthene is ideal for waterproofing concrete, masonry and wood surfaces where in-service temperatures will not exceed 130°F (54°C). It can be applied to foundation walls, tunnels, earth sheltered structures and split slab construction, both above and below grade. (For above grade applications, see *Above Grade Waterproofing Bituthene 3000 and Bituthene Low Temperature*.)

Bituthene is 1/16 in. (1.5 mm) thick, 3 ft (0.9 m) wide and 66.7 ft (20 m) long and is supplied in rolls. It is unrolled sticky side down onto concrete slabs or applied onto vertical concrete faces primed with Bituthene Primer WP-3000, Primer B2 or Primer B2 LVC. Continuity is achieved by overlapping a minimum 2 in. (50 mm) and firmly rolling the joint.

Product Advantages

- Waterproof
- Cross laminated film
- Cold applied
- Chemically resistant
- Flexible
- Controlled thickness
- Wide application window
- Ripcord split release on demand



Drawings are for illustration purposes only.
Please refer to graceconstruction.com for specific application details.

Bituthene is extremely flexible. It is capable of bridging shrinkage cracks in the concrete and will accommodate minor differential movement throughout the service life of the structure.

Application Procedures

Safety, Storage and Handling Information

Bituthene products must be handled properly. Vapors from solvent-based primers and mastic are harmful and flammable. For these products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. Material Safety Data Sheets (MSDS) are available at graceconstruction.com and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the MSDS before use.

Surface Preparation

Surfaces should be structurally sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Concrete must be properly dried (minimum 7 days for normal structural concrete and 14 days for lightweight structural concrete).

If time is critical, Bituthene Primer B2 or Bituthene Primer B2 LVC may be used to allow priming and installation of membrane on damp surfaces or green concrete. Priming may begin in this case as soon as the concrete will maintain structural integrity. Use form release agents which will not transfer to the concrete. Remove forms as soon as possible from below horizontal slabs to prevent entrapment of excess moisture. Excess moisture may lead to blistering of the membrane. Cure concrete with clear, resin-based curing compounds which do not contain oil, wax or pigment. Except with Primer B2 or Primer B2 LVC, allow concrete to thoroughly dry following rain. Do not apply any products to frozen concrete.

Repair defects such as spalled or poorly consolidated areas. Remove sharp protrusions and form match lines. On masonry surfaces, apply a parge coat to rough concrete block and brick walls or trowel cut mortar joints flush to the face of the concrete blocks.

Temperature

- Apply Bituthene 3000 Membrane only in dry weather and at air and surface temperatures of 40°F (5°C) and above.
- Apply Bituthene Low Temperature Membrane only in dry weather and when air and surface temperatures are between 25°F (-4°C) and 60°F (16°C).
- Apply Bituthene Primer WP-3000 in dry weather above 40°F (5°C).
- Apply Bituthene Primer B2 in dry weather above 25°F (-4°C). (See separate product information sheet.)

Priming

- Apply Bituthene Primer WP-3000 by spray or roller at a coverage rate of 500–600 ft^2/gal (12–15 m^2/L). Allow to dry one hour or until concrete returns to original color.
- Apply Bituthene Primer B2 by a lamb's wool roller at a coverage rate of 250–350 ft^2/gal (6–8 m^2/L). Allow primer to dry one hour or until tack-free.
- Apply Bituthene Primer B2 LVC by a lamb's wool roller at a coverage rate of 325–425 ft^2/gal (7.5–10 m^2/L). Allow primer to dry one hour or until tack free.
- Dry time may be longer in cold temperatures. Reprime areas if contaminated by dust. If the work area is dusty, apply membrane as soon as the primer is dry.
- **Do not apply any primer to Bituthene membrane.**

Corner Details

The treatment of corners varies depending on the location of the corner. For detailed information on Bituthene Liquid Membrane, see separate product information sheet.

- At wall to footing inside corners—
  Option 1: Apply membrane to within 1 in. (25 mm) of base of wall. Treat the inside corner by installing a ¾ in. (20 mm) fillet of Bituthene Liquid Membrane. Extend Bituthene Liquid Membrane at least 2½ in. (65 mm) onto footing, and 2½ in. (65 mm) onto wall membrane.

  Option 2: Treat the inside corner by installing a ¾ in. (20 mm) fillet of Bituthene Liquid Membrane. Apply 12 in. (300 mm) wide strip of sheet membrane centered over fillet. Apply wall membrane over inside corner and extend 6 in. (150 mm) onto footing. Apply 1 in. (25 mm) wide troweling of Bituthene Liquid Membrane over all terminations and seams within 12 in. (300 mm) of corner.
- At footings where the elevation of the floor slab is 6 in. (150 mm) or more above the footing, treat the inside corner either by the above two methods or terminate the membrane at the base of the wall. Seal the termination with Bituthene Liquid Membrane.

Joints

Properly seal all joints with waterstop, joint filler and sealant as required. Bituthene membranes are not intended to function as the primary joint seal. Allow sealants to fully cure. Pre-strip all slab and wall cracks over 1/16 in. (1.5 mm) wide and all construction and control joints with 9 in. (230 mm) wide sheet membrane strip.

Application on Horizontal Surfaces

(Note: Preprufe® pre-applied membranes are strongly recommended for below slab or for any application where the membrane is applied before concreting. See Preprufe product information sheets.)

Apply membrane from the low point to the high point so that laps shed water. Overlap all seams at least 2 in. (50 mm). Stagger all end laps. Roll the entire membrane firmly and completely as soon as possible. Use a linoleum roller or standard water-filled garden roller less than 30 in. (760 mm) wide, weighing a minimum of 75 lbs (34 kg) when filled. Cover the face of the roller with a resilient material such as a ½ in. (13 mm) plastic foam or two wraps of indoor-outdoor carpet to allow the membrane to fully contact the primed substrate. Seal all T-joints and membrane terminations with Bituthene Liquid Membrane at the end of the day.

Protrusions and Drains

Apply membrane to within 1 in. (25 mm) of the base of the protrusion. Apply Bituthene Liquid Membrane 0.1 in. (2.5 mm) thick around protrusion. Bituthene Liquid Membrane should extend over the membrane a minimum of 2½ in. (65 mm) and up the penetration to just below the finished height of the wearing course.

Vertical Surfaces

Apply membrane in lengths up to 8 ft (2.5 m). Overlap all seams at least 2 in. (50 mm).
On higher walls apply membrane in two or more sections with the upper overlapping the lower by at least 2 in. (50 mm). Roll all membrane with a hand roller.

Terminate the membrane at grade level. Press the membrane firmly to the wall with the butt end of a hardwood tool such as a hammer handle or secure into a reglet. Failure to use heavy pressure at terminations can result in a poor seal. A termination bar may be used to ensure a tight seal. Terminate the membrane at the base of the wall if the bottom of the interior floor slab is at least 6 in. (150 mm) above the footing. Otherwise, use appropriate inside corner detail where the wall and footing meet.

Membrane Repairs

Patch tears and inadequately lapped seams with membrane. Clean membrane with a damp cloth and dry. Slit fishmouths and repair with a patch extending 6 in. (150 mm) in all directions from the slit and seal edges of the patch with Bituthene Liquid Membrane. Inspect the membrane thoroughly before covering and make any repairs.

Drainage

Hydroduct® drainage composites are recommended for both active drainage and protection of the membrane. See Hydroduct product information sheets.

Protection of Membrane

Protect Bituthene membranes to avoid damage from other trades, construction materials or backfill. Place protection immediately in temperatures above 77°F (25°C) to avoid potential for blisters.

- On vertical applications, use Hydroduct 220 Drainage Composite. Adhere Hydroduct 220 Drainage Composite to membrane with Hydroduct Tape. Alternative methods of protection are to use ¼ in. (6 mm) asphalt impregnated board or 1 in. (25 mm) extruded polystyrene. Such alternatives do not provide positive drainage to the system. Adhere protection board with an adhesive or Hydroduct Tape.
- In mud slab waterproofing, or other applications where positive drainage is not desired and where reinforced concrete slabs are placed over the membrane, the use of ¼ in. (6 mm) hardboard or 2 layers of ⅛ in. (3 mm) hardboard is recommended.

Insulation

Always apply Bituthene membrane directly to primed or conditioned structural substrates. Insulation, if used, must be applied over the membrane. Do not apply Bituthene membranes over lightweight insulating concrete.

Backfill

Place backfill as soon as possible. Use care during backfill operation to avoid damage to the waterproofing system. Follow generally accepted practices for backfilling and compaction. Backfill should be added and compacted in 6 in. (150 mm) to 12 in. (300 mm) lifts.

For areas which cannot be fully compacted, a termination bar is recommended across the top termination of the membrane.

Placing Steel

When placing steel over properly protected membrane, use concrete bar supports (dobies) or chairs with plastic tips or rolled feet to prevent damage from sharp edges. Use special care when using wire mesh, especially if the mesh is curled.

Approvals

- City of Los Angeles Research Report RR 24386
- U.S. Department of Housing and Urban Development (HUD) HUD Materials Release 628E

Warranty

Five year material warranties covering Bituthene and Hydroduct products are available upon request. Contact your Grace sales representative for details.

Technical Services

Support is provided by full time, technically trained Grace representatives and technical service personnel, backed by a central research and development staff.

Supply

Bituthene 3000 or Bituthene Low Temperature	3 ft x 66.7 ft roll (200 ft²) [0.9 m x 20 m (18.6 m²)]
Roll weight	83 lbs (38 kg) gross
Palletization	25 rolls per pallet
Storage	Store upright in dry conditions below 95°F (+35°C).
Ancillary Products	
Bituthene WP-3000	5 gal (18.9 L) pail/24 pails per pallet
Bituthene Primer B2	5 gal (18.9 L) pail/48 pails per pallet
Bituthene Primer B2 LVC	5 gal (18.9 L) pail/48 pails per pallet
Bituthene Liquid Membrane	1.5 gal (5.7 L) pail/100 pails per pallet or 4 gal (15.1 L) pail/24 pails per pallet
Hydroduct Tape	1 in. x 200 ft (2.5 cm x 61.0 m) roll/6 rolls per carton
Bituthene Mastic	Twelve 30 oz (0.9 L) tubes/carton or 5 gal (18.9 L) pail/36 pails per pallet

Equipment by others: Soft broom, utility knife, brush or roller for priming

Physical Properties for Bituthene Membrane

Property	Typical Value	Test Method
Color	Dark gray-black	
Thickness	1/16 in. (1.5 mm) nominal	ASTM D3767—method A
Flexibility, 180° bend over 1 in. (25 mm) mandrel at -25°F (-32°C)	Unaffected	ASTM D1970
Tensile strength, membrane, die C	325 lbs/in.² (2240 kPa) minimum	ASTM D412 modified[1]
Tensile strength, film	5,000 lbs/in.² (34.5 MPa) minimum	ASTM D882 modified[1]
Elongation, ultimate failure of rubberized asphalt	300% minimum	ASTM D412 modified[1]
Crack cycling at -25°F (-32°C), 100 cycles	Unaffected	ASTM C836
Lap adhesion at minimum application temperature	3000: 4 lbs/in. (700 N/m) Low Temp: 5 lbs/in. (880 N/m)	ASTM D1876 modified[2]
Peel strength	9 lbs/in. (1576 N/m)	ASTM D903 modified[3]
Puncture resistance, membrane	50 lbs (222 N) minimum	ASTM E154
Resistance to hydrostatic head	200 ft (60 m) of water	ASTM D5385
Permeance	0.05 perms (2.9 ng/m²sPa) maximum	ASTM E96, section 12—water method
Water absorption	0.1% maximum	ASTM D570

Footnotes:
1. The test is run at a rate of 2 in. (50 mm) per minute.
2. The test is conducted 15 minutes after the lap is formed and run at a rate of 2 in. (50 mm) per minute at 40°F (5°C).
3. The 180° peel strength is run at a rate of 12 in. (300 mm) per minute.

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For technical assistance call toll free at 866-333-3SBM (3726)

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CI/SfB 9 Ln2
Ref. WA10HC 05/06

Bituthene® 4000

Self-adhesive HDPE waterproofing membrane with enhanced bonding characteristics for use with B2 moisture tolerant primer.

Advantages

- **Cold applied** - simple application to substrates especially at low temperatures.
- **Suitable for application to "green" concrete** - reduces programme schedules
- **Moisture tolerant primer system** - allows application in damp or marginal weather conditions.
- **Wide application temperature range** - excellent bond to self and substrate from -10°C to +35°C.
- **Overlap security** - enhanced-bond provides additional security.
- **Cross laminated high density polyethylene carrier film** - provides high tear strength, puncture and impact resistance.
- **Flexible** - accommodates concrete shrinkage cracks.
- **Gas resistant** - methane, carbon dioxide and radon gas protection in excess of the standard membrane requirements in BRE Reports 211 (radon) and 212 (methane and carbon dioxide).

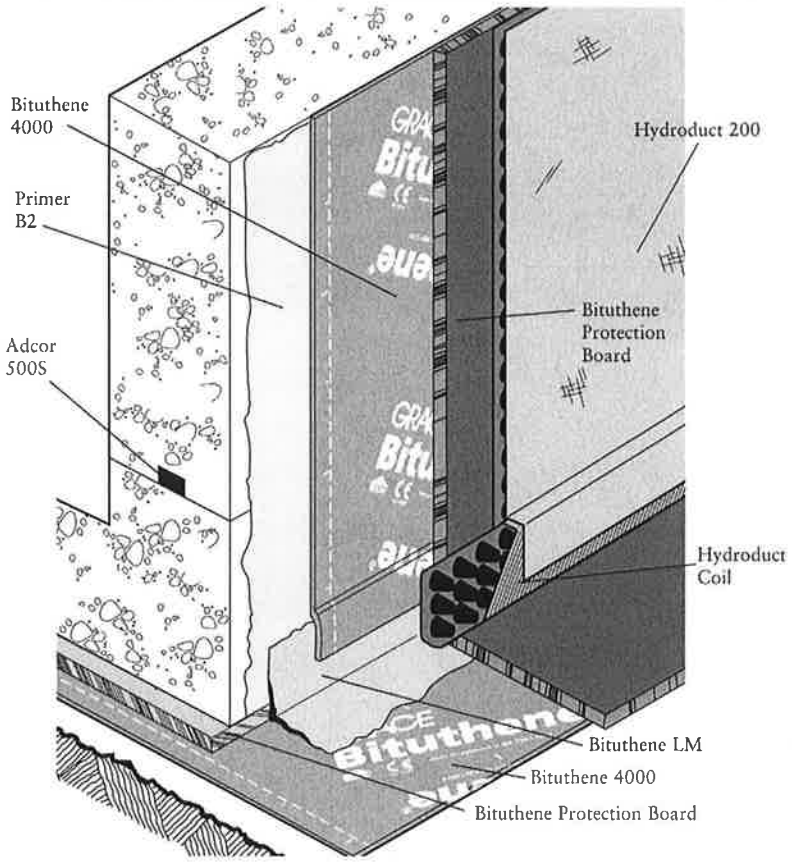
Description

Bituthene® 4000 is a flexible preformed waterproof membrane combining a high performance cross laminated, HDPE carrier film with a unique super sticky self-adhesive rubber bitumen compound.

Ancillary Products

Primer B2

Primer B2 is used to prepare vertical and sloping surfaces and suspended slabs. It is moisture tolerant and can be used on "green" concrete or damp to touch substrates.



Bituthene® LM

Waterproof continuity at angles and at penetrations is provided by Bituthene LM two component chemically curing liquid applied waterproof membrane.

Bituthene® Protection Boards

Damage from following trades and backfill is prevented by Bituthene® Protection Boards. Located with Bitustik™ 4000 double sided tape.

Details shown are typical illustrations only and not working drawings. For assistance with working drawings and additional technical advice please contact Grace Technical Services

BSI REGISTERED · BBA BRITISH BOARD OF AGREMENT CERTIFICATE No. 07/3325 · BUREAU VERITAS 7828 · NBS Plus · CE EN 13967

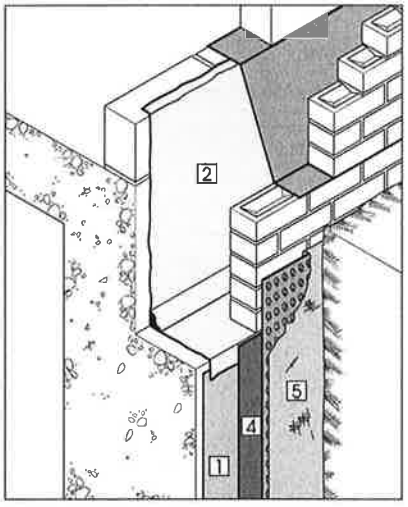
GRACE Construction Products

Supply

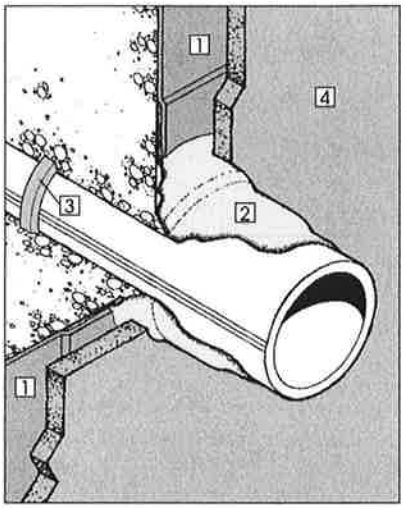
Bituthene® 4000	1 m x 20 m roll (20 sq m) Weight 32 kg
Palletisation	15 rolls per pallet
Storage	Store upright in dry conditions below +30°C
Primer B2	5, 25 litre drums
Coverage	10 - 12 sq m per litre depending upon method of application, surface porosity and ambient temperature
Ancillary Products	
Bituthene® LM	5.7 litre packs
Bituthene® Protection Boards	3 mm x 1 m x 2 m
Adcor® 500S	6 x 5 m rolls
Hydroduct®	In lieu of drainage stone
Waterstops	See separate data sheet for details
Bitustik™ 4000 Lap Roller	150 mm x 12 m roll Unit

Physical Properties

Property	Typical Results	Test Method
Elongation at max load	Long 244% Trans 185%	BS 2782 320 A
Tear Resistance	Long 77N Trans 92N	MOAT 27:5.4.1
Peel Strength	76.5 N/mm²	MOAT 27:5.1.3
Tensile Strength of joints	117N	MOAT 27:5.2.2
Moisture Vapour Permeability	0.31 g/m²/24 hours	BS 3177: 1959 (75% RH/25°C)
Puncture Resistance	220 N 65mm	ASTM E154
Water Resistance (6m head)	No penetration	MOAT 27:5.1.4
Environmental Resistance	Conforms	ASTM D543



Typical ground level termination detail



Pipe through wall detail

Installation

At air temperatures below +4°C measures should be taken to ensure that all surfaces are free from ice or frost. All surfaces except those below ground bearing slabs and Preprufe® R membranes should be primed with one coat of Primer B2 applied at a rate of approx. 10m² per litre.

Bituthene 4000 shall be laid by peeling back the protective release paper and applying the adhesive face onto the prepared surface, free from ice, frost, condensation or any contaminants which could adversely effect adhesion.

Bituthene LM to be applied at all internal and external corners, penetrations etc. prior to applying the overall membrane.

Bituthene 4000 should be brushed onto the surface to ensure good initial bond and exclude air. Adjacent rolls are aligned and overlapped 50mm minimum at side and ends and well rolled with a firm pressure, using a lap roller to ensure complete adhesion and continuity between the layers. On high walls it may be necessary to batten fix the membrane to prevent slippage.

Repairs

Damaged areas to be repaired by patching with an oversize patch applied to a clean dry surface and firmly rolled.

Performance

Bituthene 4000 complies with the relevant section of the following national standards:

BS 8102:1990, Building Regulations (England and Wales) 1991 (amended 1994) clause C4. Building Regulations (Northern Ireland) 1994 (amended 1995) clause B2. Building Standard (Scotland) Regulations 1990, Regulation B2.1, G2.6.

Health and Safety

There is no legal requirement for a Material Safety Data Sheet for Bituthene 4000, Bituthene Protection Boards, Bitustik, Lap Roller, Hydroduct or waterstops. For health and safety questions on these products please contact Grace Construction Products Limited.

For Primer B2, and Bituthene LM read the product label and Material Safety Data Sheet (MSDS) before use. Users must comply with all risk and safety phrases. MSDS's can be obtained from Grace Construction Products or from our web site at www.graceconstruction.com.

Key to diagrams:

1. Bituthene 4000 on Primer B2
2. Bituthene LM
3. Adcor 500S
4. Bituthene Protection Board
5. Hydroduct 220

NBS Specification Clause

Refer to Clause 180 and 190.

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GRACE Construction Products

Florprufe™ 120

Integrally bonded vapor protection for slabs on grade

Description

Florprufe™ 120 is a high performance vapor barrier with Grace's Advanced Bond Technology™ that forms a unique seal to the underside of concrete floor slabs.

Comprising a highly durable polyolefin sheet and a specially developed, non-tacky adhesive coating, Florprufe 120 seals to liquid concrete to provide integrally bonded vapor protection.

Florprufe exceeds ASTM E1745 Class A rating.

Advantages

- Forms a powerful integral seal to the underside of concrete slabs
- Protects valuable floor finishes such as wood, tiles, carpet and resilient flooring from damage by vapor transmission
- Direct contact with the slab complies with the latest industry recommendations
- Remains sealed to the slab even in cases of ground settlement
- Ultra low vapor permeability
- Durable, chemical resistant polyolefin sheet
- Lightweight, easy to apply, kick out rolls
- Simple lap forming with mechanical fixings or tape

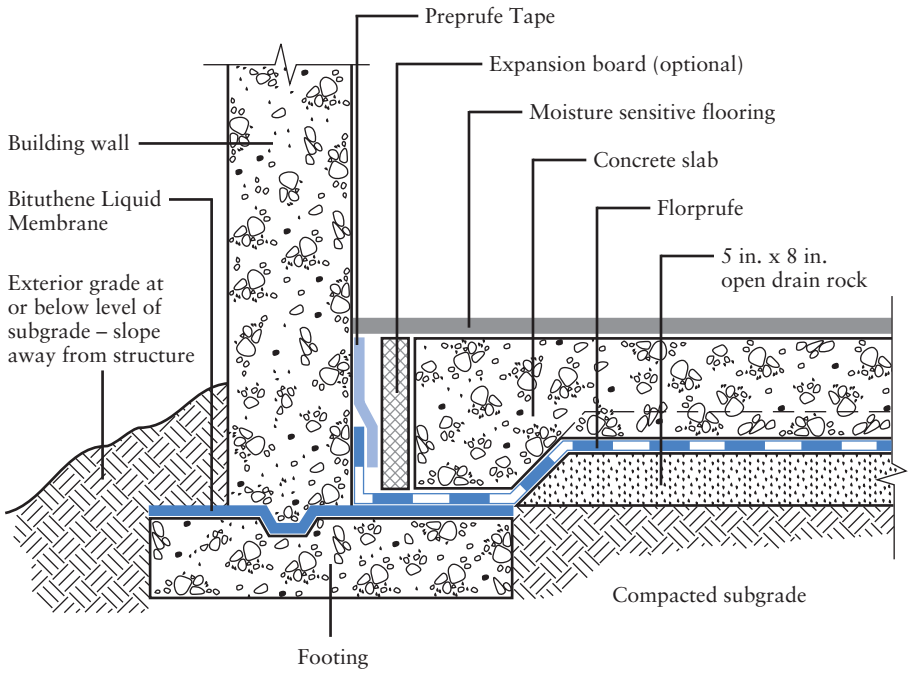
Use

Florprufe 120 is engineered for use below slabs on grade with moisture-impermeable or moisture-sensitive floor finishes that require the highest level of vapor protection.

Florprufe complies with the latest recommendations of ACI Committees 302 and 360, i.e. for slabs with vapor sensitive coverings, the location of the vapor barrier should always be in direct contact with the slab[1].

The membrane is loose laid onto the prepared sub-base, forming overlaps that can be either mechanically secured or taped. The unique bond of Florprufe to concrete provides continuity of vapor protection at laps. Alternatively, if a taped system is preferred, self-adhered Preprufe® Tape can be used to overband the laps.

Slab reinforcement and concrete can be placed immediately. Once the concrete is poured, an integral bond develops between the concrete and membrane.



Typical Assembly

[1] ACI 302.1R-96 Addendum

GRACE
Construction Products

Supply

Florprufe 120

Supplied in rolls	1.2 m x 35 m (4 ft x 115 ft)
Roll area	42 m^2 (460 ft^2)
Roll weight	37 kg (81 lbs) approx.

Ancillary Products

Preprufe Tape is packaged in cartons containing 4 rolls that are 100 mm x 15 m (4 in. x 49 ft).
Bituthene Liquid Membrane is supplied in 5.7 L (1.5 gal) pails.

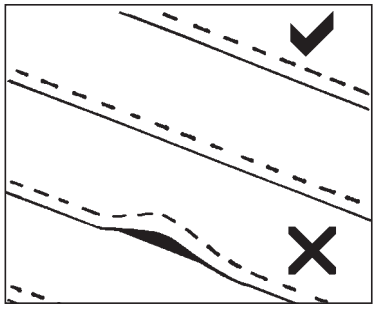


Figure 1

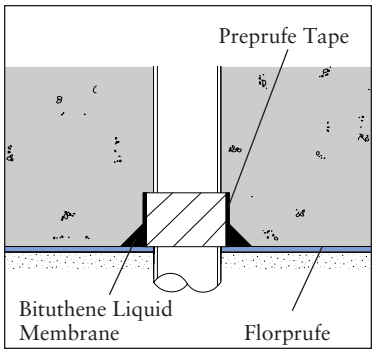


Figure 2

Physical Properties: Exceeds ASTM E1745 Class A rating

Property	Typical Value	Test Method
Color	White	
Thickness (nominal)	0.5 mm (0.021 in.)	ASTM D3767 – Method A
Water Vapor Permeance	0.03 perms	ASTM E96 – Method B[1]
Tensile Strength	68 lbs/in.	ASTM E154[1]
Elongation	300%	ASTM D412
Puncture Resistance	3300 gms	ASTM D1709[1]
Peel Adhesion to Concrete	>4 lbs/in.	ASTM D903

1. Test methods that comprise ASTM E1745 standard for vapor retarders

Installation

Health & Safety

Refer to relevant Material Safety Data Sheet. Complete rolls should be handled by 2 persons.

Florprufe 120 can be applied at temperatures of -4°C (25°F) or above. Membrane installation is unaffected by wet weather. Installation and detailing of Florprufe 120 are generally in accordance with ASTM E1643-98.

Prepare substrate in accordance with ACI 302.1R Section 4.1. Install Florprufe 120 over the leveled and compacted base. Place the membrane with the smooth side down and the plastic liner side up facing towards the concrete slab. Remove and discard plastic liner. End laps should be staggered to avoid a build up of layers.

Succeeding sheets should be accurately positioned to overlap the previous sheet 50 mm (2 in.) along the marked lap line.

Laps

1. **Mechanical fastening method –** To prevent the membrane from moving and gaps opening, the laps should be fastened together at 1.0 m (39 in.) maximum centers. Fix through the center of the lap area using 12 mm (0.5 in.) long washer-head, self-tapping, galvanized screws (or similar) and allowing the head of the screw to bed into the adhesive compound to self-seal. It is not necessary to fix the membrane to the substrate, only to itself. **Ensure the membrane lays flat and no openings occur.** (See Figure 1.) Additional fastening may be required at corners, details, etc. Continuity is achieved once the slab is poured and the bond to concrete develops.

   OR

2. **Taped lap method –** For additional security use Grace Preprufe Tape to secure and seal the overlaps. Overband the lap with the 100 mm (4 in.) wide Preprufe Tape, using the lap line for alignment. Remove plastic release liner to ensure bond to concrete.

Penetrations

Mix and apply Bituthene Liquid Membrane detailing compound to seal around penetrations such as drainage pipes, etc. (See Figure 2 and refer to the Bituthene Liquid Membrane data sheet, BIT-230.)

Concrete Placement

Place concrete within 30 days. Inspect membrane and repair any damage with patches of Preprufe Tape. Ensure all liner is removed from membrane and tape before concreting.

For Technical Assistance call toll free at 866-333-3SBM (3726).

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GRACE Construction Products

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PREPRUFE® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites

Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe bond to concrete prevents ingress or migration of water around the structure.

The Preprufe R System includes:

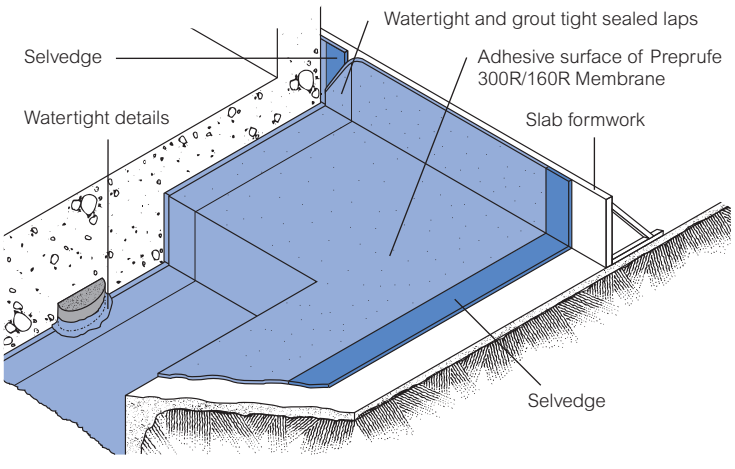
- **Preprufe 300R**—heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R**—thinner grade for blindside, zero property line applications against soil retention systems.
- **Preprufe Tape LT**—for covering cut edges, roll ends, penetrations and detailing (temperatures between 25°F (-4°C) and 86°F (+30°C)).
- **Preprufe Tape HC**—as above for use in Hot Climates (minimum 50°F (10°C)).
- **Bituthene® Liquid Membrane**—for sealing around penetrations, etc.
- **Adcor™ ES**—waterstop for joints in concrete walls and floors
- **Preprufe Tieback Covers**—preformed cover for soil retention wall tieback heads
- **Preprufe Preformed Corners**—preformed inside and outside corners

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete, carton forms or well rolled and compacted earth or crushed stone substrate; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.

Advantages

- **Forms a unique continuous adhesive bond to concrete poured against it**—prevents water migration and makes it unaffected by ground settlement beneath slabs
- **Fully-adhered watertight laps** and detailing
- **Provides a barrier to water, moisture and gas**—physically isolates the structure from the surrounding ground
- **BBA Certified** for basement Grades 2, 3, & 4 to BS 8102:1990
- **Zero permeance** to moisture
- **Solar reflective**—reduced temperature gain
- **Simple and quick to install**—requiring no priming or fillets
- **Can be applied to permanent formwork**—allows maximum use of confined sites
- **Self protecting**—can be trafficked immediately after application and ready for immediate placing of reinforcement
- **Unaffected by wet conditions**—cannot activate prematurely
- **Inherently waterproof, non-reactive system:**
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- **Chemical resistant**—effective in most types of soils and waters, protects structure from salt or sulphate attack



Drawings are for illustration purposes only.
Please refer to graceconstruction.com for specific application details.

BBA BRITISH BOARD OF AGREMENT CERTIFICATE No. 97/3325

Installation

The most current application instructions, detail drawings and technical letters can be viewed at graceconstruction.com. For other technical information contact your local Grace representative.

Preprufe 300R & 160R membranes are supplied in rolls 4 ft (1.2 m) wide, with a selvedge on one side to provide self-adhered laps for continuity between rolls. The rolls of Preprufe Membrane and Preprufe Tape are interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.

Substrate Preparation

All surfaces—It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability (see Figure 1).

Horizontal—The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. When installing over earth or crushed stone, ensure substrate is well compacted to avoid displacement of substrate due to traffic or concrete pour. The surface does not need to be dry, but standing water must be removed.

Vertical—Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment.

Membrane Installation

Preprufe can be applied at temperatures of 25°F (-4°C) or above. When installing Preprufe in cold or marginal weather conditions 55°F (<13°C) the use of Preprufe Tape LT is recommended at all laps and detailing. Preprufe Tape LT should be applied to clean, dry surfaces and the release liner must be removed immediately after application. Alternatively, Preprufe Low Temperature (LT) is available for low temperature condition applications. Refer to Preprufe LT data sheet for more information.

Horizontal substrates—Place the membrane HDPE film side to the substrate with the clear plastic release liner facing towards the concrete pour. End laps should be staggered to avoid a build up of layers. Leave plastic release liner in position until overlap procedure is completed (see Figure 2).

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Refer to Grace Tech Letter 15 for information on suitable rebar chairs for Preprufe.

Vertical substrates—Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the the clear plastic release liner facing towards the concrete pour. The membrane may be installed in any convenient length. Fastening can be made through the selvedge using a small and low profile head fastener so that the membrane lays flat and allows firmly rolled overlaps. Immediately remove the plastic release liner.

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

Roll ends and cut edges—Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe Tape LT (or HC in hot climates) centered over the lap edges and roll firmly (see Figure 3). Immediately remove printed plastic release liner from the tape.

Details

Refer to Preprufe Field Application Manual, Section V Application Instructions or visit graceconstruction.com. This manual gives comprehensive guidance and standard details.

Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by power washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and allow to dry. Repair small punctures (0.5 in. (12 mm) or less) and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 6 in. (150 mm) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly. Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic release liner from tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh Preprufe Tape, rolling firmly. Alternatively, use a hot air gun or similar to activate adhesive and firmly roll lap to achieve continuity.

Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe membrane and tape.

It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Following proper ACI guidelines, concrete must be placed carefully and consolidated properly to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

Preprufe membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

Refer to Grace Tech Letter 17 for information on removal of formwork for Preprufe.

Figure 1

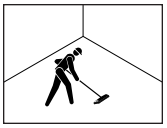


Figure 2

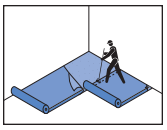
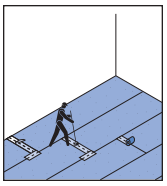
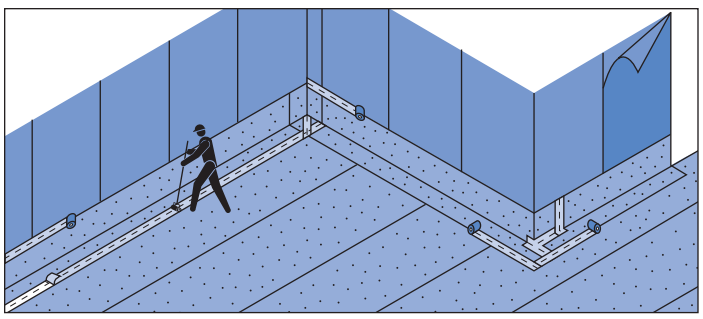


Figure 3

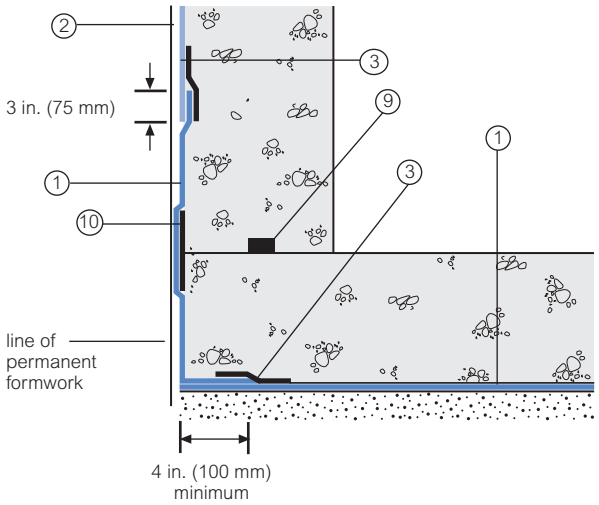




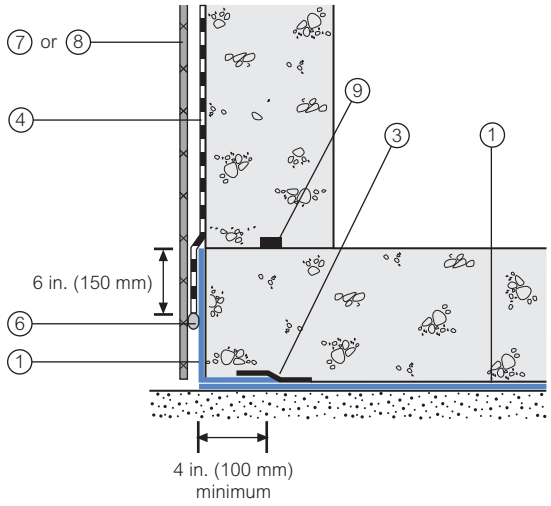
Detail Drawings

Details shown are typical illustrations and not working details. For a list of the most current details, visit us at graceconstruction.com. For technical assistance with detailing and problem solving please call toll free at 866-333-3SBM (3726).

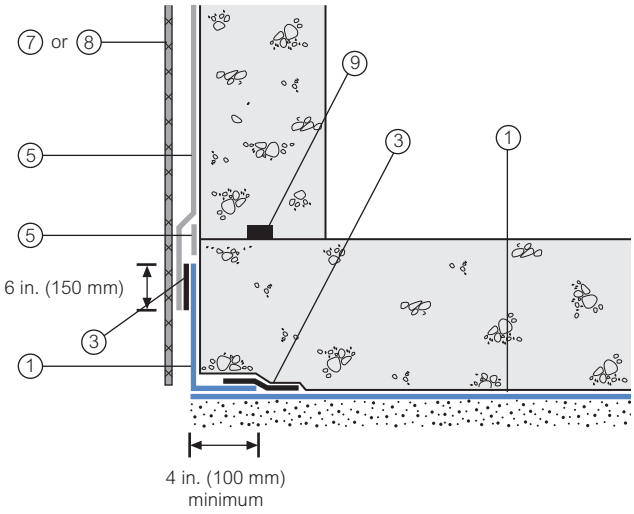
Wall base detail against permanent shutter



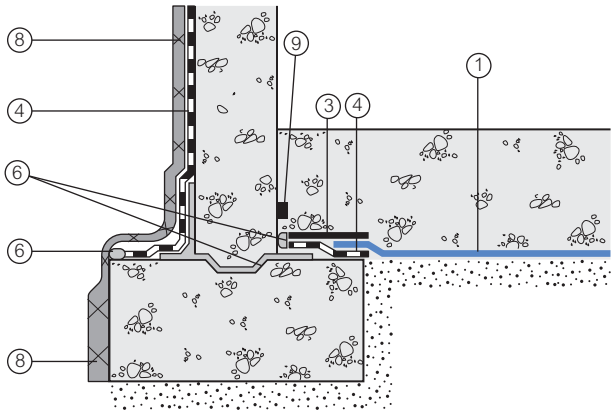
Bituthene wall base detail (Option 1)



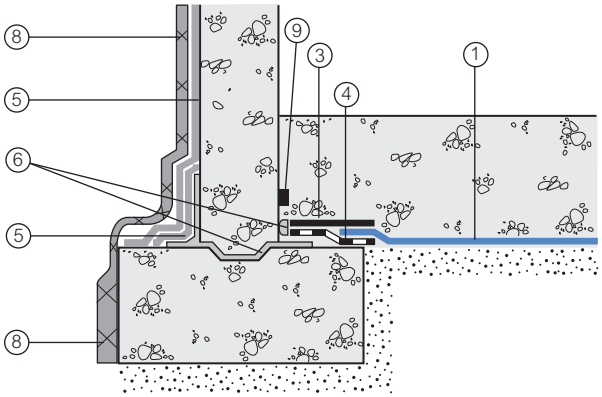
Procor wall base detail (Option 1)



Bituthene wall base detail (Option 2)



Procor wall base detail (Option 2)



1 Preprufe 300R
2 Preprufe 160R
3 Preprufe Tape
4 Bituthene
5 Procor
6 Bituthene Liquid Membrane
7 Protection
8 Hydroduct®
9 Adcor ES
10 Preprufe CJ Tape

Supply

Dimensions (Nominal)	Preprufe 300R Membrane	Preprufe 160R Membrane	Preprufe Tape (LT or HC*)
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	
Roll size	4 ft x 98 ft (1.2 m x 30 m)	4 ft x 115 ft (1.2 m x 35 m)	4 in. x 49 ft (100 mm x 15 m)
Roll area	392 ft² (36 m²)	460 ft² (42 m²)	
Roll weight	108 lbs (50 kg)	92 lbs (42 kg)	4.3 lbs (2 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)	3 in. (75 mm)
* LT denotes Low Temperature (between 25°F (-4°C) and 86°F (+30°C)) HC denotes Hot Climate (50°F (>+10°C))			
Ancillary Products			
Bituthene Liquid Membrane—1.5 US gal (5.7 liter) or 4 US gal (15.1 liter)			

Physical Properties

Property	Typical Value 300R	Typical Value 160R	Test Method
Color	white	white	
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	ASTM D3767
Lateral Water Migration Resistance	Pass at 231 ft (71 m) of hydrostatic head pressure	Pass at 231 ft (71 m) of hydrostatic head pressure	ASTM D5385, modified[1]
Low temperature flexibility	Unaffected at -20°F (-29°C)	Unaffected at -20°F (-29°C)	ASTM D1970
Resistance to hydrostatic head	231 ft (71 m)	231 ft (71 m)	ASTM D5385, modified[2]
Elongation	660%	580%	ASTM D412, modified[3]
Tensile strength	4000 psi (27.6 MPa)	4000 psi (27.6 MPa)	ASTM D412
Crack cycling at -9.4°F (-23°C), 100 cycles	Unaffected, Pass	Unaffected, Pass	ASTM C836
Puncture resistance	221 lbs (990 N)	100 lbs (445 N)	ASTM E154
Peel adhesion to concrete	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D903, modified[4]
Lap peel adhesion	5 lbs/in. (880 N/m)	5 lbs/in. (880 N/m)	ASTM D1876, modified[5]
Permeance to water vapor transmission	0.01 perms (0.6 ng/(Pa x s x m²))	0.01 perms (0.6 ng/(Pa x s x m²))	ASTM E96, method B
Water absorption	0.5%	0.5%	ASTM D570

Footnotes:

1. Lateral water migration resistance is tested by casting concrete against membrane with a hole and subjecting the membrane to hydrostatic head pressure with water. The test measures the resistance of lateral water migration between the concrete and the membrane.
2. Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 0.125 in. (3 mm) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.
3. Elongation of membrane is run at a rate of 2 in. (50 mm) per minute.
4. Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.
5. The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 2 in. (50 mm) per minute.

Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions. Specimen performance and formatted clauses are also available.

NOTE: Use Preprufe Tape to tie-in Procor with Preprufe.

Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

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We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

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GRACE

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GRACE
Construction Products

1. Product Name

Preprufe® 300R and 160R Waterproofing Systems

2. Manufacturer

Grace Construction Products
62 Whittemore Avenue
Cambridge, MA 02140
(866) 333-3SBM (3726)
Fax: (617) 498-4311
www.graceconstruction.com

3. Product Description

BASIC USE

Preprufe® 300R and Preprufe 160R membranes are used in blind side waterproofing applications where positive side waterproofing is desired but the positive side of the structure is not accessible once the concrete is poured.

Preprufe 300R Membrane is used primarily in under slab and below-grade split slab applications. Preprufe 300R Membrane is applied over properly prepared earth, stone or concrete. Concrete is cast against the adhesive side of the membrane. Preprufe 300R Membrane incorporates an exceptionally tough HDPE film and is designed to allow foot traffic directly on the membrane during construction.

Preprufe 160R Membrane is used in vertical applications. It is applied to properly prepared soil retention systems and concrete is cast against the membrane.

COMPOSITION & MATERIALS

Preprufe 300R and Preprufe 160R membranes are multilayered composite sheets consisting of an exceptionally tough HDPE film, a specially formulated synthetic pressure sensitive adhesive and a protective coating.

ACCESSORY COMPONENTS

- Preprufe Tape
- Preprufe Tieback Cover
- Bituthene® Liquid Membrane
- Preprufe CJ Tape

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM C836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
- ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
- ASTM D570 Standard Test Method for Water Absorption of Plastics
- ASTM D882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting
- ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
- ASTM D1876 Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)
- ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
- ASTM D3767 Standard Practice for Rubber-Measurement of Dimensions
- ASTM D5385 Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes
- ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- ASTM E154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover

PHYSICAL PROPERTIES

For detailed information on the physical properties of Preprufe 300R and Preprufe 160R Membranes, see Table 1.

5. Installation

Apply membranes when ambient temperatures are 25 degrees F (-4 degrees C) or above. Substrates must be smooth and sound with no gaps or voids in excess of 1/2" (13 mm).

FORMING SYSTEMS

It is very important to specify a forming system that is compatible with the Preprufe system. One-sided wall forming systems are clearly the best choice since there are no form ties used in this system. Therefore, there are no penetrations to the waterproofing layer. Other compatible systems include gang forms with load gathering form ties. These systems minimize the number of penetrations.

Hand set forming systems or, more specifically, use of form ties with ultimate load capabilities of less than 10,000 lb (44,500 N) per tie are not recommended. These systems have many form ties that penetrate the waterproofing.

Formwork

On vertical applications, use one-sided wall forming systems to minimize punctures in the membrane after the membrane is installed. Review Technical Letter "Forming Systems for use with Preprufe 160R Membrane."

APPLICATION

Vertical Applications

Apply the membrane with the thick white HDPE film side facing the prepared substrate and the protective coating side facing the concrete to be poured. The membrane may be installed in any convenient length vertically. For lengths of membrane greater than 8' (2.4 m), mechanically fasten the membrane at 2' (0.6 m) intervals centered in the self-adhesive selvedge prior to making the side lap, using small head nails or staples.

Using the lap line as a guide, apply subsequent sheets overlapping the in-place sheet 3" (75 mm) along the self-adhesive selvedge of the membrane. Avoid overlapping membrane beyond the guideline to prevent fishmouths. Should they occur, apply Preprufe Tape centered over the fishmouth, roll firmly to form a tight seal and remove release liner.

It is important that all nail heads be covered with the overlapping sheets of membrane. Side laps must be immediately rolled firmly to ensure a tight seal. A metal seam roller is recommended. To maximize adhesion in colder temperatures or in damp conditions, apply gentle heat to the lap area using a hot air gun (see Technical Letters). Overlap the ends of the membrane a minimum of 3" (75 mm). Remove and discard the release liner from both sheets. Apply Preprufe Tape centered over the end lap and edges of membrane not sealed by selvedge. Roll firmly to form a tight seal. Remove release liner from tape and discard.

For additional protection, Hydroduct® Tape may be applied between the sheets in the end lap area prior to application of the Preprufe Tape. Secure the top termination of the membrane with a termination bar and fasteners.

If the top termination is to be covered by the concrete pour, a strip of Preprufe CJ Tape must be placed over the termination bar and fasteners. Place the termination bar 2" (50 mm)

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below the top edge of the membrane. If the membrane will tie into subsequent sheets of Preprufe, Bituthene Membrane or other waterproofing, leave an additional 12" (300 mm) length of Preprufe 160R membrane. Protect this length from damage and do not remove the release liner. This length of clean membrane will be used to complete the appropriate waterproofing details after the concrete or lift is poured.

Horizontal Applications

Roll out the membrane with the thick white HDPE film side facing the prepared substrate and the protective coating side facing the concrete to be poured. Remove the clear release liner at the time of installation. Using the lap line as a guide, align and roll out subsequent sheets overlapping the in-place sheet 3" (75 mm) along the self-adhesive selvedge of the membrane. Side laps must be immediately rolled firmly to ensure a tight seal. A heavy metal seam roller is recommended.

Avoid overlapping membrane beyond the guideline to prevent fishmouths. Should this occur, apply Preprufe Tape centered over the fishmouth, roll firmly to form a tight seal and remove release liner. To maximize adhesion in cooler temperatures or in damp conditions, apply gentle heat to the lap area using a hot air gun (see Technical Letters section of website). The membrane may be installed in any convenient length. Overlap the ends of the membrane 3" (75 mm) and remove and discard the release liner from both sheets. Apply Preprufe Tape centered over the end lap and edges of membrane not sealed by selvedge. Roll firmly to form a tight seal. Remove release liner from tape and discard.

For additional protection, Hydroduct Tape may be applied between the sheets in the end lap area prior to application of the Preprufe Tape.

Internal & External Corners

Install the Preprufe Membrane according to standard application instructions detailed for vertical and horizontal applications above. Internal and external corners should be formed as shown in the Detail Drawings returning the membrane a minimum of 4" (100 mm).

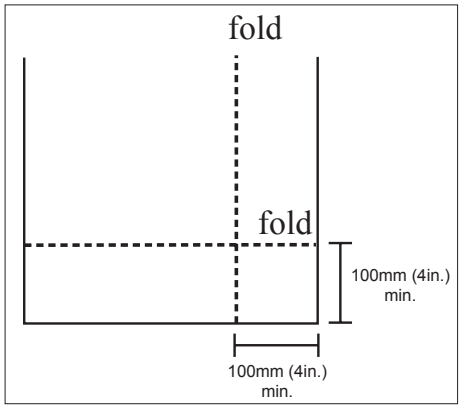

Figure 1

Internal Corners

Fold the membrane as indicated in Figure 1. Crease the fold with nominal hand pressure to ensure a close fit to the substrate profile and avoid hollows. With the white coating facing toward the concrete, ensure that the apex of the corner is covered and sealed with Preprufe Tape. Remove release liner and roll firmly.

External Corners

Fold the membrane as indicated in Figure 1. Crease the fold with nominal hand pressure to

TABLE 1 PHYSICAL PROPERTIES OF PREPRUFE 160R AND PREPRUFE 300R MEMBRANES

	Typical values	
Property & test method	Preprufe 160R Membrane	Preprufe 300R Membrane
Color	White	White
Thickness, ASTM D3767, Method A	0.032" (0.8 mm) nominal	0.046" (1.2 mm) nominal
Low temperature flexibility, ASTM D1970	Unaffected at -10°F (-23°C)	Unaffected at -10°F (-23°C)
Resistance to hydrostatic head, minimum, ASTM D5385, Modified [1]	231' (70 m)	231' (70 m)
Elongation, minimum, ASTM D412, Modified [2]	300%	300%
Tensile strength, film, minimum, ASTM D882	4000 psi (27.6 MPa)	4000 psi (27.6 MPa)
Crack cycling, at -10°F (-23°C), 100 cycles, ASTM C836	Unaffected	Unaffected
Puncture resistance, minimum, ASTM E154	100 lb (445 N)	221 lb (990 N)
Peel adhesion to concrete, minimum, ASTM D903, Modified [3]	5.0 lb/in width (880 N/m)	5.0 lb/in width (880 N/m)
Lap peel adhesion, ASTM D1876, Modified [4]	2.5 lb/in width (440 N/m)	2.5 lb/in width (440 N/m)
Permeance to water vapor transmission, maximum, ASTM D96, Method B	0.01 perms (0.6 ng/(Pa x s x m^2))	0.01 perms (0.6 ng/(Pa x s x m^2))
Water absorption, maximum, ASTM D570	0.5%	0.5%

[1] Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 0.125" (3 mm) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.

[2] Elongation of membrane is run at a rate of 2" (51 mm) per minute.

[3] Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 2" (51 mm) per minute at room temperature.

[4] The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 2" (51 mm) per minute at 25°F (-4°C).

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ensure a close fit to the substrate profile and avoid hollows. Cut the Preprufe membrane in order to wrap around corner. With the white coating facing toward the concrete, ensure that the apex of the corner is covered and sealed with Preprufe Tape. Remove release liner and roll firmly.

Round Penetrations

For Service Pipes, Lighting Conduit, Piles, etc. - Follow these steps to seal around penetrations:

1. All penetrations must be firmly secured and stable. Grout around all penetrations that are not stable. Clean loose dust or dirt from the penetration surface using a clean, dry cloth or brush. Remove rust, if applicable, with a wire brush and wipe clean.
2. Cut the field membrane tight to the penetration and remove release liner. If membrane is not within 1/2" (12 mm) of penetration and not more than 2" (50 mm) from penetration, apply Preprufe Tape to cover the gap. Roll firmly into place and remove release liner. If the membrane is greater than 2" (51 mm) from penetration, install more Preprufe Membrane to cover the gap, repeating these instructions until Preprufe Membrane/Tape is within 1/2" (12 mm).
3. Mix and apply Bituthene Liquid Membrane around the penetration. Liquid Membrane should be placed to form a minimum 1" (25.4 mm) continuous fillet between the Preprufe Membrane/Tape and the base of the penetration.
4. Cut a patch of Preprufe Membrane that is a minimum of 12" (300 mm) larger than the diameter or width of the penetration so that the patch extends 6" (150 mm) beyond the penetration in all directions. Remove the release liner and center the patch over penetration and trace/draw the penetration profile onto the patch. Using sheers or a utility knife, make relief cuts through the membrane. Triangles formed by making a relief cut are not to exceed 2" (50 mm) in height when placed over penetration. In other words, penetration diameters greater than 4" (100 mm) need to be trimmed. Remove and discard release liner.
5. Slide the patch over penetration and press into the partially cured Liquid Membrane. Ensure that the patch is pressed firmly into the Liquid Membrane and is positioned directly onto the Preprufe Field Membrane/Tape below. Using a trowel, smooth out any Liquid Membrane that has flowed out of the relief cut.
6. Apply Preprufe Tape centered over the edges of the patch and roll firmly to form a tight seal. Remove release liner from tape and discard.
7. Wrap the penetration with Preprufe Tape, positioning the tape at the base of the patch. Remove enough release liner to overlap Tape onto itself and roll/press firmly into place. Remove remaining release liner and discard.

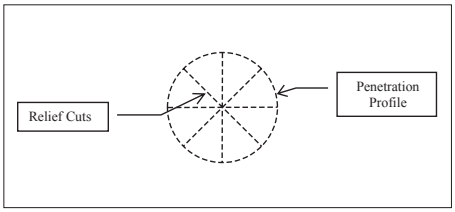

Figure 2

Straight Edge Penetrations

For square piles, steel columns, walers, rakers, etc. - Follow these steps to seal around

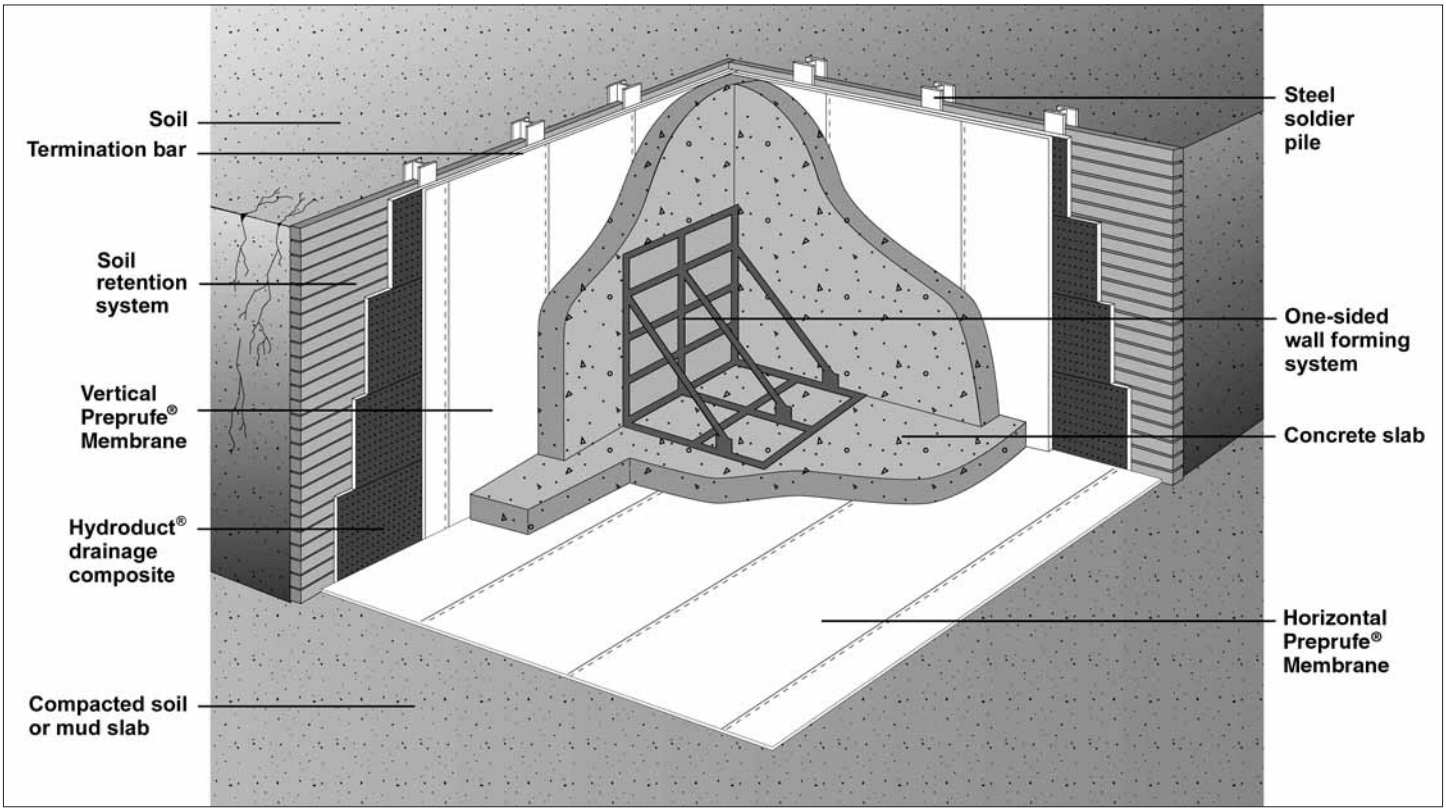

Figure 3 Preprufe® Waterproofing Systems

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penetrations:

1. All penetrations must be firmly secured and stable. Grout around all penetrations that are not stable. Clean loose dust or dirt from the penetration surface using a clean, dry cloth or brush. Remove rust, if applicable, with a wire brush and wipe clean.
2. Cut the field membrane tight to the penetration and remove release liner. If membrane is not within 1/2" (12 mm) of penetration and not more than 2" (51 mm) from penetration, apply Preprufe Tape to cover the gap. Roll firmly into place and remove release liner. If the membrane is greater than 2" (51 mm) from penetration, install more Preprufe Membrane to cover the gap repeating these instructions until Preprufe Membrane/Tape is within 1/2" (12 mm).
3. Mix and apply Bituthene Liquid Membrane around the penetration. Liquid Membrane should be placed to form a minimum 1" (25.4 mm) continuous fillet between the Preprufe Membrane/Tape and the base of the penetration. Apply a 90 mil (2.2 mm) continuous coating overlapping a minimum of 3" (75 mm) onto the surface of the Preprufe Membrane and the penetration.
4. Install a minimum 12" (300 mm) strip of Bituthene Membrane centered over the Preprufe Membrane and the penetration intersection.
5. Install Preprufe Tape to cover the strip of Bituthene Membrane by overlapping a minimum of 1" (25.4 mm) until a minimum of 2" (51 mm) overlap onto the Preprufe Membrane is achieved.
6. Terminate the top edge of the strip of Bituthene Membrane and Preprufe Tape along the penetration with a bead of Bituthene Liquid Membrane.

Wall Penetrations

For Rebar, All-Thread, Metal Dowels, etc. - Follow these steps to seal around penetrations:

1. Clean loose dust or dirt from the penetration and the surrounding substrate surface using a clean, dry cloth or brush. Remove rust, if applicable, with a wire brush and wipe clean.
2. Mix and apply Bituthene Liquid Membrane around the penetration. Liquid Membrane should be placed to form a minimum 1" (25.4 mm) continuous fillet between the substrate and the base of the penetration.
3. Cut the field membrane tight to the penetration and remove release liner. If membrane is not within 1/2" (12 mm) of penetration and not more than 2" (51 mm) from penetration, apply Preprufe Tape to cover the gap. Roll firmly into place and remove release. If the membrane is greater than 2" (51 mm) from penetration, install more Preprufe Membrane to cover the gap repeating these instructions until Preprufe Membrane/Tape is within 1/2" (12 mm).
4. Position the field membrane snug to the penetration so that it is a maximum of 1/2" (12 mm) from the base of the penetration and press firmly into the partially cured Liquid Membrane.
5. Apply Liquid Membrane to form a minimum 1" (25.4 mm) continuous fillet between the Preprufe Membrane and the base of the penetration. Extend a 90 mil (2.2 mm) continuous coating of Liquid Membrane overlapping a minimum of 3" (75 mm) onto the surface of the Preprufe Membrane and 6" (150 mm) onto the penetration.
6. Wrap the penetration with Preprufe Tape, positioning the tape at the base of the penetration. Remove enough release liner to overlap tape onto itself and roll/press firmly into place. Remove remaining release liner and discard.

Tiebacks

The Preprufe Tieback Cover is a specially designed, two-part cover used to maintain waterproofing integrity at soil retention tieback heads. The Preprufe Tieback Cover consists of a rigid ABS plastic base and prefabricated Preprufe membrane cover.

1. Install Preprufe Membrane within 2" of tieback as per standard installation instructions.
2. Center the base over tieback head and secure base to soil retention system using appropriate fasteners. Fasteners should have a low profile head.
3. Apply Preprufe Tape centered over the edge of the base flange and roll firmly to form a tight seal. Remove release liner and discard.
4. Position the membrane cover over the base taking care to ensure the cover flange sits flat onto the Preprufe Membrane.
5. Apply Preprufe Tape centered over the edge of the cover flange and roll firmly to form a tight seal. Remove release liner and discard.

Note: All Preprufe Tape should overlap onto surfaces of tape, membrane, base, cover, etc., a minimum of 50 mm (2").

Columns

There are 2 common methods to create a waterproof seal under columns.

- Column Option 1 - Preprufe Membrane is placed over the column footing and directly under the column. Tie-in penetrations such as rebar and threaded rod that penetrate the membrane should be sealed with Bituthene Liquid Membrane. Cut the membrane tight to the penetration. If membrane is not within 1/2" (12 mm) of penetration, apply Preprufe Tape to cover the gap. Mix and apply Bituthene Liquid Membrane around the penetration. Bituthene Liquid Membrane should be placed to form a minimum 1" (25.4 mm) continuous fillet around the penetration at the point of penetration. Bituthene Liquid Membrane should be applied as a 90 mil (2.2 mm) continuous coating overlapping a minimum of 3" (75 mm) onto the surface of the Preprufe membrane.
- Column Option 2 - Preprufe Membrane is placed below the column footing before it is poured. The membrane is installed following the vertical and horizontal application instructions described earlier in this section. When placing the membrane, it is important to leave sufficient length of Preprufe 300R beyond the footing to allow for tie-in to the Preprufe Membrane that will be laid to waterproof the general slab area. The release liner must not be removed from this extra length, and it should be protected from damage until the tie-in details are completed.

Grade Beam Pile Caps

The preferred methods to waterproof pile caps are to either "tank" or "cover" the pile cap.

- Pile Cap Option 1 (Tanking Option) - Install Preprufe Membrane over the prepared substrate as instructed in horizontal applications above. Preprufe Membrane is placed in the area formed for the pile cap before the concrete is poured. When placing the membrane, it is important to leave sufficient length of Preprufe beyond the pile cap area to allow for tie-in to the Preprufe Membrane that will be laid to waterproof the general slab area. Cut membrane tight to each pile and complete detail around each pile as instructed earlier in this section for a Penetration Detail.
- Pile Cap Option 2 (Covering Option) - For mud slabs, clean loose dust or dirt from the

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pile cap and mud slab surface using a clean, dry cloth or brush. Apply a continuous 90 mil (2.2 mm) coating of Bituthene Liquid Membrane or Procor over the top of the pile cap. Place a 1" (25.4 mm) bead of Liquid Membrane or Procor around all penetrations at the point of penetration through the pile cap. Prime along the edge of the mud slab a minimum of 6" (150 mm) from the edge of pile cap with a Bituthene Primer and allow to dry. Align a 9" (225 mm) strip of Bituthene Membrane centered over the edge of the pile cap. Remove release liner and roll firmly onto the Liquid Membrane and primed mud slab. Install Preprufe Membrane over the prepared substrate and terminate it 2" (51 mm) onto the pile cap. Apply Preprufe Tape centered over the Preprufe Membrane termination. Remove the release liner and roll firmly. Seal Bituthene Membrane and Preprufe Tape edge with a termination bead of Liquid Membrane.

Pile Cap Option 2 for Compacted Earth

Apply a continuous 90 mil (2.2 mm) coating of Bituthene Liquid Membrane or Procor over the top of the pile cap. Place a 1" (25.4 mm) bead of Liquid Membrane or Procor around all penetrations at the point of penetration through the pile cap. Remove compacted earth away from the sides of pile cap. Clean loose dust or dirt from the pile cap surface using a clean, dry cloth or brush.

Prime the sides of the pile cap a minimum of 6" (150 mm) from the top of pile cap with a Bituthene Primer and allow to dry. Align a 9" (225 mm) strip of Bituthene Membrane centered over the outside edge (outside corner) of the pile cap. Remove release liner and roll firmly onto the Liquid Membrane and primed sides of pile cap. Align a 12" (300 mm) strip of Bituthene Membrane centered over the outside edge (outside corner) of the pile cap. Remove half of release liner by scoring release liner along the center of the strip.

Roll firmly onto the sides of pile cap with the 9" (225 mm) strip of Bituthene Membrane and the remaining primed pile cap. Leave the other half of the 12" (300 mm) strip with the release liner still intact in order to receive the Preprufe Membrane. Replace earth/fill and compact per standard back-filling instructions being careful not to damage the Bituthene strip including the non-bonded portion. Invert the Bituthene strip, and remove the remaining release liner to expose the adhesive portion of the Bituthene.

Install Preprufe Membrane over the prepared substrate and terminate it 2" (51 mm) onto the pile cap. Roll firmly onto the inverted Bituthene strip. Apply Preprufe Tape centered over the Preprufe Membrane termination. Remove the release liner and roll firmly. Seal Bituthene Membrane and Preprufe Tape edge with a termination bead of Liquid Membrane.

Pile Cap Option 2 for Non-Continuous Covering

If the Structural Engineer or the design does not allow for the waterproofing to "cover" the pile cap, there must be a minimum 6" (150 mm) continuous shoulder along the perimeter of the pile cap to allow for a proper termination. Apply a continuous 90 mil (2.2 mm) coating of Bituthene Liquid Membrane or Procor onto the top of the pile cap along the outside edge.

Apply a 6" (150 mm) strip of Bituthene Membrane onto the Bituthene Liquid Membrane or Procor along the edge of the pile cap. Install Preprufe Membrane over the prepared substrate and terminate it 2" (51 mm) onto the pile cap. Apply Preprufe Tape centered over the Preprufe Membrane termination. Remove the release liner and roll firmly. Seal Bituthene Membrane and Preprufe Tape edge with a termination bead of Liquid Membrane.

Construction Joints

Install the Preprufe membrane according to standard horizontal and vertical application instructions detailed above. Preprufe CJ Tape should be applied to the surface of the Preprufe membrane and centered along the line of all concrete joints. Remove release liner and roll firmly.

Tie-Ins

Preprufe 160R to Preprufe 300R Sub Slab Waterproofing - Install Preprufe 300R Membrane over the prepared substrate as detailed in horizontal and vertical applications above. Continue onto the vertical surface of the prepared soil retention system a minimum of 18" (450 mm) above the finished elevation of the structural floor slab.

Secure the top of the membrane to temporarily hold it in place on the vertical substrate. Care should be taken to prevent damage to this exposed membrane from concrete back-splash as well as slag from rebar welding in wall forms. The exposed membrane on the vertical surface can be protected with protection board, plywood or other materials.

Following the vertical application instructions detailed above, install Preprufe 160R Membrane over the prepared vertical soil retention system. Unfasten the vertical length of the Preprufe 300R Membrane and tuck the Preprufe 160R behind the 18" (450 mm) length of Preprufe 300R, ensuring a minimum 3" (75 mm) lap. Complete the detail by installing Preprufe Tape centered over the lap being careful to seal any holes from fasteners. Roll firmly and remove the release liner.

Preprufe 300R to Post-Applied Wall Waterproofing - There are 2 options available to tie Preprufe 300R Membrane into wall waterproofing. In Option 1, the Preprufe 300R Membrane is installed under the concrete slab and the footing. Option 2 is intended for applications where the Preprufe 300R Membrane and wall waterproofing are connected through the wall and footing junction.

- Option 1 - Install Preprufe 300R Membrane over the prepared horizontal substrate and extend it up the vertical surface of the slab formwork. Terminate the membrane 6" (150 mm) above the top elevation of the structural floor slab or wall footing. Once the slab or footing is poured and cured for 7 days, remove the forms and trim the excess membrane above the slab (see Technical Letters). Install the wall membrane according to standard application procedures of the post-applied waterproofing manufacturer. Ensure that the wall membrane overlaps onto the surface of the Preprufe 300R by a minimum of 6" (150 mm).
- Option 2 - Prior to the pouring of the wall, apply a 90 mil (2.2 mm) coating of Bituthene Liquid Membrane on top of the footing area using standard application procedures. Extend the Bituthene Liquid Membrane 3" (75 mm) beyond the proposed wall width in each direction. Install the wall membrane according to standard application procedures of the post-applied waterproofing manufacturer. Ensure that the wall membrane overlaps onto the surface of the Preprufe 300R by a minimum of 6" (150 mm). On the inside of the wall, install a minimum 9" (225 mm) strip of Bituthene sheet membrane over the Bituthene Liquid Membrane that extends beyond the footing area. Install Bituthene Membrane by removing the release liner and firmly rolling the product in place. Install Preprufe 300R Membrane over the prepared substrate and terminate it at the center of the Bituthene sheet membrane strip. Apply Preprufe CJ Tape centered over the Preprufe

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300R Membrane termination. Remove the release liner and roll firmly.

Preprufe 160R to Plaza Deck Waterproofing - Install Preprufe 160R over the prepared vertical surface following the standard vertical application instructions above. Terminate the Preprufe 160R Membrane 6" (150 mm) above the proposed height of the finished wall. Once the wall is poured and properly cured, remove temporary forming and trim the excess Preprufe 160R remaining above the wall. Install the plaza deck waterproofing according to the manufacturer's standard installation procedures. Ensure that the plaza deck waterproofing overlaps the 160R membrane a minimum of 9" (225 mm) and terminate it onto the Preprufe 160R using a bead of Bituthene Liquid Membrane.

Preprufe 160R to Post-Applied Wall Waterproofing - Install Preprufe 160R over the prepared vertical surface following the standard vertical application instructions above. Extend the Preprufe 160R Membrane 12" (300 mm) beyond the end of the blind-side wall. As the foundation wall formwork is installed, fold the 12" (300 mm) piece of Preprufe 160R Membrane to form a sharp corner. Secure it to the inside face of the exterior form panel. Once the wall is poured and cured for seven days, remove the formwork and install the post-applied waterproofing according to the manufacturer's standard installation procedures.

Preprufe 300R Membrane Wall Termination

- Option 1 (Liquid Membrane Detail) - Install Preprufe 300R Membrane over a mud slab as detailed in horizontal applications above. For compacted earth, contact a local Grace representative. Install Preprufe 300R Membrane tight to all vertical and horizontal intersections. At the termination of the membrane, place a 1" (25.4 mm) fillet of Bituthene liquid membrane and trowel a 90 mil (2.2 mm) coating a minimum of 3" (75 mm) onto vertical and horizontal surfaces. Remove the release liner and install a minimum 12" (300 mm) strip of Bituthene Membrane centered over the horizontal termination. Install Preprufe Tape to cover the strip of Bituthene Membrane by overlapping a minimum of 1" (25.4 mm) until a minimum of 2" (51 mm) overlap onto the Preprufe Membrane is achieved. Terminate the top edge of the strip of Bituthene Membrane and Preprufe Tape along the wall with a bead of Bituthene Liquid Membrane.
- Option 2 (Sheet Membrane Detail) - Install Preprufe 300R Membrane over the prepared substrate as detailed in horizontal applications above. Install Preprufe 300R Membrane tight to all vertical and horizontal intersections. Install a minimum 6" (150 mm) strip of Bituthene Membrane on the vertical surface along the joint. Mix and apply Bituthene Liquid Membrane to form a minimum 1" (25.4 mm) continuous fillet between the Preprufe Membrane and the wall. Install Preprufe CJ Tape 6" (150 mm) from the edge of the wall onto the Preprufe Membrane and terminate 2" (51 mm) onto the strip of Bituthene Membrane. Install Preprufe CJ Tape onto the strip of Bituthene Membrane and overlap onto the previous Preprufe CJ Tape a minimum of 2" (51 mm). Terminate the top edge of the strip of Bituthene Membrane and Preprufe Tape along the wall with a bead of Bituthene Liquid Membrane.

Membrane Repair

Inspect the membrane for damage before placement of reinforcing steel, formwork and concrete. Repair small punctures 1/2" (12 mm), or less, and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 6" (150 mm) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly.

CONCRETE PLACEMENT

Lightly soiled membrane should be cleaned with air blower and heavily soiled membrane should be cleaned with a power-washer. Cast concrete within 56 days (42 days in hot climates) of application of the membrane. Concrete must be placed carefully to avoid damage to the membrane. Never use a sharp object to consolidate concrete.

REMOVAL OF FORMWORK

Preprufe Membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured, the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe Membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe Membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of 6000 psi (40 N/mm^2) will typically require a cure time of approximately 6 days at an average ambient temperature of 25 degrees F (-4 degrees C) or 2 days at 70 degrees F (21 degrees C).

6. Availability & Cost

AVAILABILITY

A network of distributors carries Preprufe and Bituthene products for prompt delivery to project sites.

COST

For specific information, contact a local distributor or a Grace Construction Products representative.

7. Warranty

A 5 year material warranty for Preprufe and Bituthene membrane products is available from the manufacturer upon request.

8. Maintenance

Preprufe 300R and Preprufe 160R membranes will not require maintenance when installed in accordance with Grace's recommendations.

9. Technical Services

Support is provided by full-time, technically trained Grace field sales representatives and technical service personnel, backed by a central research and development staff.

10. Filing Systems

- Reed First Source
- Additional product information is available from the manufacturer.

W. R. Grace & Co. -Conn. hopes the information here will be helpful. It is based upon data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co. -Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, W. R. Grace & Co. Canada, Ltd., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

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This product may be covered by patents or patents pending.

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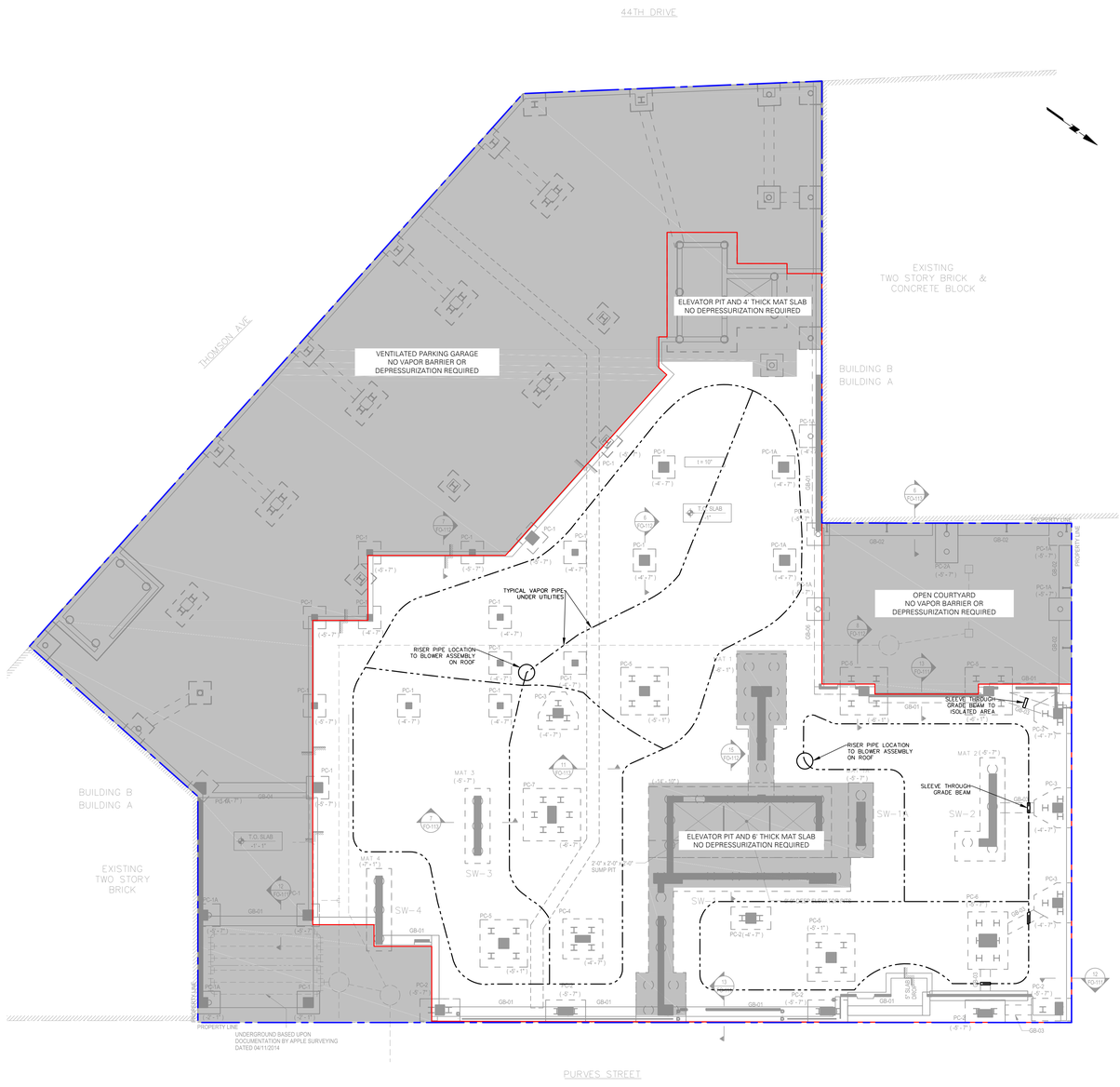
Appendix M

Submembrane Depressurization System Design Details



KEY:

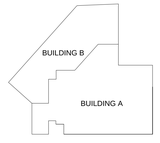
LEGEND:

- PROPERTY BOUNDARY
- VAPOR BARRIER EXTENTS AND DEPRESSURIZED AREA
- SMD VAPOR COLLECTION PIPING
- SLEEVE THROUGH GRADE BEAM FOR VAPOR COLLECTION PIPE
- APPROXIMATE RISER PIPE LOCATION

GENERAL NOTES:

1. BASE MAP TAKEN FROM FXFOWLE, "FOUNDATION PLAN, FO-101.00", DATED JULY 16, 2014.
2. VAPOR BARRIER EXTENDS BELOW THE FOOTPRINT AND ALONG THE VERTICAL WALLS OF DEPRESSED FOUNDATION MAT AND SLABS, AS NOTED IN THE DRAWING. VAPOR BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
3. VAPOR COLLECTION PIPE RUNS ARE APPROXIMATE. PIPE LOCATIONS ARE SUBJECT TO CHANGE PER FIELD CONDITIONS.
4. RISER PIPE STUB LOCATION IS APPROXIMATE. RISER PIPE RUNS AND ROOF-TOP BLOWER AND EXHAUST POINT LOCATIONS TO BE DESIGNED BY OTHERS. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
5. THE DEEP ELEVATOR PIT AND SHEAR WALL PILE CAP WILL NOT BE DEPRESSURIZED BECAUSE IT IS A 6-FOOT THICK CONCRETE MAT AND WILL BE WATERPROOFED IN ACCORDANCE WITH THE FOUNDATION DRAWINGS AND SPECIFICATIONS.
6. THE WATERPROOFING BENEATH THE SHEAR WALL PILE CAP, DEEP ELEVATOR PIT, AND ANY OTHER WATERPROOFED FOUNDATION ELEMENT, WILL BE MARRIED TO THE VAPOR BARRIER MEMBRANE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
7. SLEEVES THROUGH GRADE BEAMS TO BE DESIGNED BY OTHERS. SEE STRUCTURAL DRAWINGS.

KEY PLAN:



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	ISSUED FOR CONSTRUCTION	10/31/2014
	ISSUED FOR BIDDING	08/15/2014
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	SCHEMATIC DESIGN	03/14/2014

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BUILDING A & BUILDING B
44-26 PURVES STREET, QUEENS, NY
27-27 44TH DRIVE, QUEENS, NY

DRAWING TITLE:

SUBMEMBRANE DEPRESSURIZATION SYSTEM AND VAPOR BARRIER LAYOUT PLAN

Seal:

Drawn: ADR	Project No.: 13072.L00
Checked: TW	Cad File:
Reviewed: Reviewer	Drawing No.:
Date: 05/30/14	N-101
Scale: 1" = 10'	

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SCALE IN FEET

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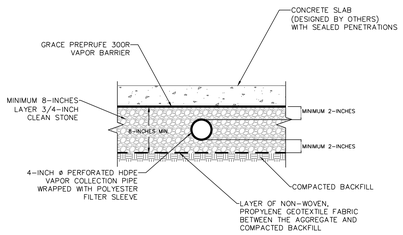
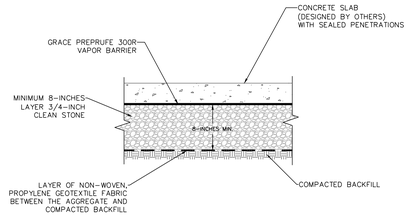


DETAIL 1: TYPICAL SECTION FOR VAPOR COLLECTION PIPE AND VAPOR BARRIER

NOT TO SCALE



DETAIL 2: TYPICAL SECTION THROUGH SUB-SLAB

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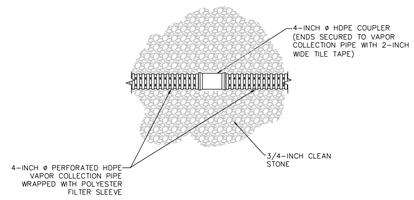

DETAIL 3: TYPICAL COUPLER CONNECTION FOR VAPOR COLLECTION PIPE (PLAN VIEW)

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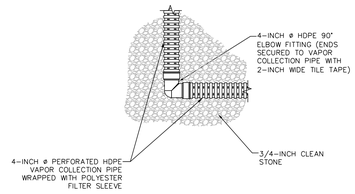

DETAIL 4: TYPICAL 90° ELBOW FITTING CONNECTION FOR VAPOR COLLECTION PIPE (PLAN VIEW)

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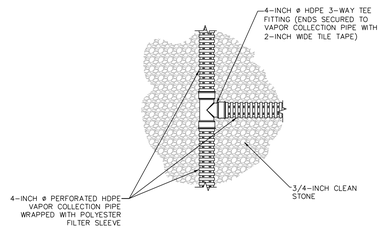

DETAIL 5: TYPICAL 3-WAY TEE FITTING CONNECTION FOR VAPOR COLLECTION PIPE (PLAN VIEW)

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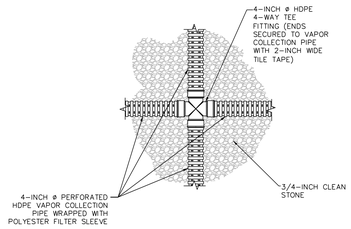
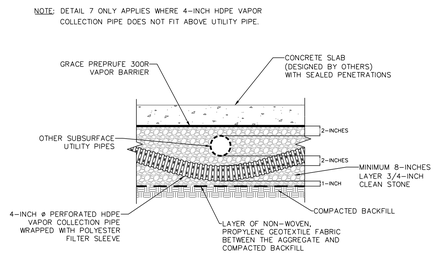


DETAIL 6: TYPICAL 4-WAY TEE FITTING CONNECTION FOR VAPOR COLLECTION PIPE (PLAN VIEW)

NOT TO SCALE



DETAIL 7: TYPICAL DETAIL AT LOCATIONS OTHER SUBMEMBRANE UTILITY PIPE OVERLIES PERFORATED SUBSLAB PIPE

NOT TO SCALE

GENERAL NOTES:

1. DESIGN DETAILS AND DRAWINGS ARE ADAPTED FROM EPA DOCUMENT EPA/625/R-92/016.
2. INSTALLATION OF THE SUBMEMBRANE COMPONENTS AND RISER PIPE MUST BE COORDINATED WITH THE INSTALLATION OF OTHER UTILITIES AND STRUCTURAL COMPONENTS.
3. SOLID-SUBMEMBRANE PIPE SHALL BE 4-INCH ø FLEXIBLE, CORRUGATED, SMOOTH INTERIOR, HIGH DENSITY POLYETHYLENE (HDPE) PIPE WITH A MINIMUM PIPE STIFFNESS OF 35 POUNDS PER SQUARE INCH (PSI) AT 5% DEFLECTION.
4. SOLID-SUBMEMBRANE PIPE SHALL MAINTAIN A MINIMUM SLOPE OF 1/8" PER LINEAR FOOT SLOPING DOWN FROM THE RISER PIPE LOCATION.
5. PERFORATED VAPOR COLLECTION PIPE SHALL BE 4-INCH ø FLEXIBLE, CORRUGATED, SMOOTH INTERIOR, PERFORATED, HIGH DENSITY POLYETHYLENE (HDPE) PIPE WITH A MINIMUM PIPE STIFFNESS OF 35 POUNDS PER SQUARE INCH (PSI) AT 5% DEFLECTION. PERFORATIONS SHALL BE SLOT-TYPE. THERE SHALL BE, AT A MINIMUM, THREE EQUALLY SPACED PERFORATIONS PER GROOVE (I.E. DEPRESSED SECTION OF THE PIPE) OF THE CORRUGATED PIPE. PERFORATIONS ON ALTERNATING GROOVES SHALL BE OFF-SET.
6. TOP OF PERFORATED VAPOR COLLECTION PIPE SHALL BE 2 INCHES FROM THE BOTTOM OF SLAB. WHEN NECESSARY, PERFORATED VAPOR COLLECTION PIPE MAY BE ROUTED UNDERNEATH OTHER UTILITIES AND PIPING IN THE SUBSURFACE; TOP OF PERFORATED VAPOR COLLECTION PIPE SHOULD NOT EXCEED 12 INCHES FROM THE BOTTOM OF THE SLAB.
7. ALL FITTINGS AND CONNECTIONS FOR THE VAPOR COLLECTION PIPE SHALL BE 4-INCH ø HDPE FITTINGS, MADE BY THE SAME MANUFACTURER AS THE 4-INCH ø PIPE, AND OF THE TYPE RECOMMENDED BY THE MANUFACTURER FOR USE WITH THE 4-INCH ø PIPE. SECURE ALL FITTINGS AND CONNECTIONS WITH 2-INCH WIDE TILE TAPE.
8. POLYESTER FILTER SLEEVES SHALL HAVE A MINIMUM AIR PERMEABILITY OF 70 CUBIC FEET/SQUARE FEET/MINUTE.
9. RISER PIPE (DESIGNED BY OTHERS) SHALL BE 4-INCH ø METAL PIPE OR OTHER MATERIAL THAT COMPLIES WITH APPLICABLE BUILDING CODE.
10. RISER PIPE (DESIGNED BY OTHERS) SHALL BE EXTENDED TO THE ROOF WITH MINIMAL CHANGES IN DIRECTION AS SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS.
11. ALL PIPE AND CONDUIT PENETRATIONS THROUGH THE SLAB (INCLUDING MECHANICAL, ELECTRICAL, PLUMBING, OR OTHER) SHALL BE SEALED WITH A HIGH ADHESIVE SEALANT, UNLESS OTHERWISE SPECIFIED. PENETRATIONS SHALL BE AIR-TIGHT.
12. RISER PIPE MUST BE CLEARLY LABELED "CAUTION: DO NOT ALTER SUBSLAB VAPOR VENT PIPE" IN EACH ACCESSIBLE AREA (A MINIMUM OF EVERY 10 LINEAR FEET OF RISER PIPE RUN).
13. SYSTEM INSTALLATION SHALL ADHERE TO: FINAL GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK PREPARED BY NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH), DATED OCTOBER 2006 AND 2008 NEW YORK CITY MECHANICAL CODE, CHAPTER 5, SECTION MC 512-SUBSLAB EXHAUST SYSTEMS. POINT OF EXHAUST (DESIGNED BY OTHERS) SHALL BE:
    - ABOVE THE EAVE OF THE ROOF (PREFERABLY, ABOVE THE HIGHEST EAVE OF THE BUILDING AND AT LEAST 12-INCHES ABOVE THE SURFACE OF THE ROOF);
    - AT LEAST 10 FEET ABOVE GROUND LEVEL,
    - AT LEAST 10 FEET AWAY FROM ANY OPENING THAT IS LESS THAN 2 FEET BELOW THE EXHAUST POINT, AND
    - 10 FEET FROM ANY ADJOINING OR ADJACENT BUILDINGS, OR HVAC INTAKES OR SUPPLY REGISTERS.
14. ALL EXTERNAL PIPES SHALL BE PAINTED WITH A CORROSION RESISTANT COATING, DEPENDING ON PIPE MATERIAL.
15. 3/4-INCH CLEAN STONE = IN-PLACE STONE SHALL BE CLEAN, COARSE, NATURAL, ANGULAR, WASHED 3/4-INCH AGGREGATE WITH THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 1/2-INCH	100
1-INCH	90-100
1/2-INCH	0-5
#200	<1

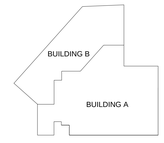
16. CLEAN STONE LAYER ON TOP OF PIPE SHALL NOT BE COMPACTED AND SHALL EXTEND CONTINUOUSLY ACROSS THE DEPRESSURIZED AREA.
17. CONTRACTOR SHALL PROVIDE CERTIFIED AS-BUILT DRAWINGS OF COMPLETE SMD SYSTEM TO REMEDIATION ENGINEERING FOLLOWING INSTALLATION.

VAPOR BARRIER NOTES:

1. VAPOR BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MANUFACTURER GUIDELINES AND DETAILS.
2. VAPOR BARRIER SHALL BE INSTALLED BY A MANUFACTURER-CERTIFIED INSTALLER.
3. VAPOR BARRIER SHALL BE INSPECTED IMMEDIATELY BEFORE CONCRETE IS PLACED. ALL PENETRATIONS, HOLES, OR TEARS SHALL BE SEALED BEFORE CONCRETE IS PLACED.
4. CONTRACTOR SHALL PROVIDE CERTIFIED AS-BUILT DRAWINGS OF COMPLETED VAPOR BARRIER EXTENTS TO REMEDIATION ENGINEER FOLLOWING INSTALLATION.

KEY:

KEY PLAN:



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	ISSUED FOR CONSTRUCTION		10/31/2014
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BUILDING A & BUILDING B
44-26 PURVES STREET, QUEENS, NY
27-27 44TH DRIVE, QUEENS, NY

DRAWING TITLE:

SUBMEMBRANE DEPRESSURIZATION SYSTEM AND VAPOR BARRIER DETAILS

Seal:

Drawn: ADR
Checked: TW
Reviewed: Reviewer
Date: 05/30/14
Scale: N.T.S.
Project No.: 13072.L00
Cad File:
Drawing No.:

N-102

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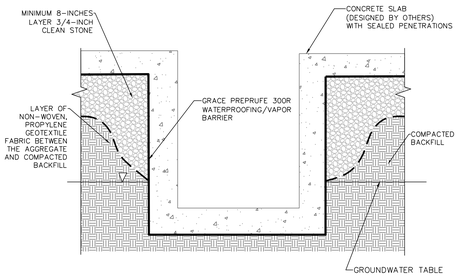
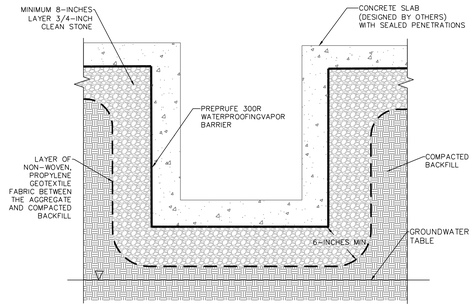


DETAIL 8: TYPICAL ELEVATOR/EJECTOR PIT SECTION (BELOW GROUNDWATER)
NOT TO SCALE



DETAIL 9: TYPICAL ELEVATOR/EJECTOR PIT SECTION (ABOVE GROUNDWATER)
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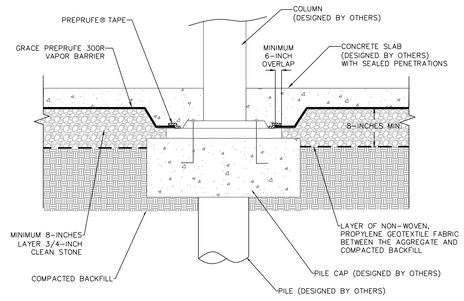

DETAIL 10: TYPICAL DETAIL FOR INTERIOR PILE CAP
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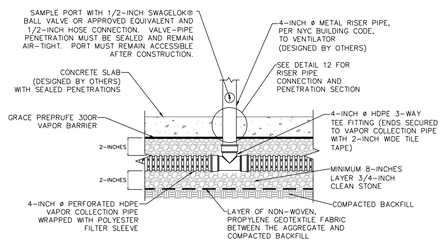

DETAIL 11: TYPICAL SECTION AT SOLID RISER PIPE
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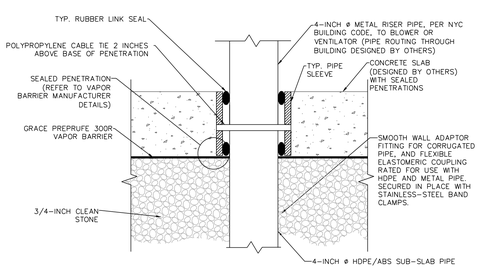
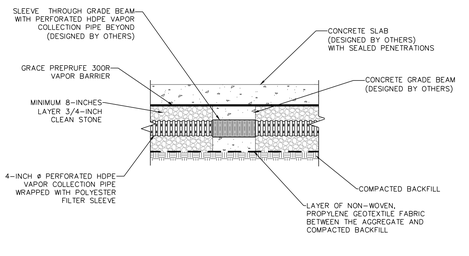


DETAIL 12: RISER PIPE CONNECTION
NOT TO SCALE



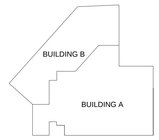
DETAIL 13: TYPICAL SECTION FOR SLEEVE THROUGH GRADE BEAM
NOT TO SCALE

NOTES:

1. REFER TO DRAWING N-102 FOR GENERAL NOTES.

KEY:

KEY PLAN:



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BUILDING A & BUILDING B
44-26 PURVES STREET, QUEENS, NY
27-27 44TH DRIVE, QUEENS, NY

DRAWING TITLE:

SUBMEMBRANE DEPRESSURIZATION SYSTEM AND VAPOR BARRIER DETAILS

Seal:

Drawn: ADR
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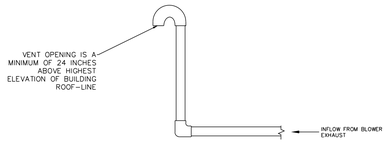
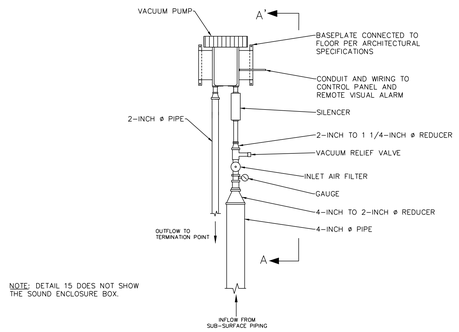
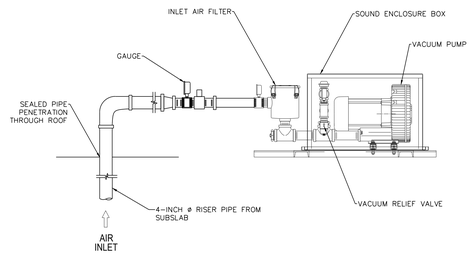


DETAIL 14: VENT TERMINATION POINT SECTION VIEW
NOT TO SCALE



NOTE: DETAIL 15 DOES NOT SHOW THE SOUND ENCLOSURE BOX.

DETAIL 15: VACUUM BLOWER PLAN VIEW
NOT TO SCALE



DETAIL 16: VACUUM BLOWER SECTION VIEW (A-A')
NOT TO SCALE

BLOWER NOTES:

1. THE COMPLETE BLOWER ASSEMBLY INCLUDING BLOWER, MOTOR, BASEPLATE, CONTROL PANEL, REMOTE VISUAL ALARM, VALVES, GAUGES, FILTER, AND FLEXIBLE HOSE SHALL BE PROVIDED BY THE MANUFACTURER.

2. BLOWER ASSEMBLY TO BE INSTALLED SHALL PROVIDE AT CONTINUOUS OPERATION:

   - NORTH BLOWER: MINIMUM OF 30 CUBIC FEET PER MINUTE (CFM) FLOW RATE AT 30 INCHES OF WATER COLUMN (INCHES WC) VACUUM AT BLOWER; AND
   - SOUTH BLOWER: MINIMUM OF 72 CFM FLOW RATE AT 30 INCHES OF WATER COLUMN (INCHES WC) VACUUM AT BLOWER.

3. BLOWERS TO BE INSTALLED SHALL BE:

   - NORTH BLOWER: AIRTECH 3BA1300-7AT16 OR APPROVED ALTERNATIVE; AND
   - SOUTH BLOWER: AIRTECH 3BA1400-7AT16 OR APPROVED ALTERNATIVE.

   - THE BLOWER SCHEMATICS ARE SHOWN TO ILLUSTRATE THE REQUIRED COMPONENTS AND THE GENERAL LOCATIONS IN THE PIPE RUN AND SHALL NOT BE CONSIDERED TO BE ACCURATE. THE ACTUAL CONFIGURATION AND DIMENSIONS OF THE BLOWER ASSEMBLY WILL VARY BASED ON MANUFACTURING METHODS AND FIELD CONDITIONS. FINAL DESIGN AND BLOWER SYSTEM SELECTED ARE SUBJECT TO APPROVAL BY THE ENGINEER. PROVIDE ALL BLOWER SPECIFICATIONS AND CUT SHEETS FOR COMMISSION AND/OR CONSTRUCTION MANAGER'S APPROVAL PRIOR TO INSTALLATION.

   - THE BLOWERS SHALL BE HOUSED IN A SD-4 METAL SOUND ENCLOSURE RATED AS EXPLOSION PROOF. THE BLOWERS SHALL BE INSTALLED WITHIN THE ENCLOSURE BY THE BLOWER MANUFACTURER.

   - THE ELECTRICAL PANEL FOR EACH BLOWER SHALL INCLUDE AN AUXILIARY CONTACT FOR THE REMOTE ALARM AND WILL BE MOUNTED ON THE EXTERIOR OF THE ENCLOSURE. THE ELECTRICAL PANEL SHALL BE HOUSED IN NEMA 7 ENCLOSURE. THE REMOTE ALARM SHALL BE LOCATED WITHIN A BUILDING MANAGERS OFFICE. THE ALARM SHALL CONSIST OF A WARNING LIGHT, NEMA 12 ENCLOSURE, AND ASSOCIATED RELAYS. THE REMOTE ALARM AND BLOWER CONTROL PANEL SHALL BE CONFIGURED SUCH THAT IF THE BLOWER STOPS OPERATING, THE REMOTE ALARM WILL BE ACTIVATED. A 120 VOLT ELECTRICAL SUPPLY SHALL BE PROVIDED TO THE REMOTE PANEL.

   - THE REMOTE VISUAL ALARM SHALL BE LABELED AS FOLLOWS:
   - SUBSLAB VAPOR VENTING SYSTEM ALARM
   - BLOWER MALFUNCTION IF LIT
   - SERVICE BLOWER IMMEDIATELY

8. SUPPLY POWER TO BLOWER ASSEMBLY, INCLUDING BLOWER, CONTROL PANEL, AND REMOTE ALARM, IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

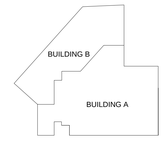
9. BLOWER ASSEMBLY SHALL BE LOCATED ON ROOF, AS SHOWN ON MEP DRAWINGS.

10. RISER PIPE RUN WITHIN THE BUILDING IS LOCATED AS SHOWN ON MEP DRAWINGS.

11. BLOWER WILL REQUIRE A THREE-PHASE, 60 HZ, 220 TO 250 VOLT POWER SUPPLY.

KEY:

KEY PLAN:



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