FPM group — Engineering and Environmental Science

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VIA OVERNIGHT COURIER

July 30, 2013

Ms. Alicia Barraza
NYSDEC
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7016

Re: **Remedial Investigation/Alternatives Analysis Work Plan - Revised**
Cinderella 248, LLC Site #C224160
248 Flatbush Avenue, Brooklyn, New York
FPM File No. 1104g-13-01

Dear Ms. Barraza:

Enclosed please find one hard copy and one electronic copy on CD of the revised Remedial Investigation/Alternatives Analysis (RI/AA) Work Plan for the above-referenced site. An electronic copy via email has also been transmitted to Krista Anders at the New York State Department of Health.

This work plan has been revised to address your June 27, 2013 comments, as modified in further emails on July 11 and 16, 2013. The following summarizes how each of the comments was addressed:

<u>Section 1.1 – Site Location and Description</u>: the current zoning for the Site has been added to the first paragraph.

<u>Section 1.2 – Site Environmental Setting</u>: the requested information has been added to the third paragraph.

<u>Section 2.0 – Summary of Previous Investigations:</u> Figures 2.1, 2.2 and 2.3 have been modified as requested.

<u>Section 3.0 – Scope of Remedial Investigation:</u> This section has been modified to provide for additional investigation to characterize the nature and extent of contamination in all media. We have also modified the Health and Safety Plan, the Community Air Monitoring Plan, and the Quality Assurance Project Plan in accordance with these changes and have updated the schedule. Please note that Figure 3.1.1, which shows the proposed sampling locations, has been modified to include the added scope. We have also modified this figure to show the locations of the former dry cleaning machine (on the first floor, above the basement level) and the sewer connection, and to better depict the relationship between the Site boundary (property line) and the building envelope (they are the same). The changes in scope are as follows:

- Additional soil borings have been added so as to provide for sampling across the entire Site floor area (total of 8 borings in the 2,310-square-foot Site). All soil samples will be tested for Target Compound List (TCL) volatile organic compounds (VOCs) as these are understood to be of concern for the Site. As per your email, we have proposed a reduced number of samples to also be tested for TCL semivolatile organic compounds (SVOCs), Target Analyte List (TAL) metals, polychlorinated biphenyls (PCBs), and pesticides. These samples will be selected to focus on the potential areas of concern, including in proximity to the former AST, in the former boiler room, in proximity to the sewer connection, and beneath the former location of the dry cleaning machine on the first floor of the building, and will be collected from the shallow soil at these locations as this is where any impacts are most likely to be present.

- Three groundwater monitoring wells will be installed at the Site. Although your July 16, 2013 email was intended to be helpful by allowing for the monitoring wells to be installed outside of the Site building, this installation presents even greater problems than within the building as all of these locations are offsite, which would require that access be obtained. Furthermore, one of the locations is within a fenced portion of the below-grade courtyard equipped with a wooden deck for which rig access would be difficult and the other location is within an air shaft, for which rig access is not envisioned. Therefore, we plan to install the wells within the Site building and have added procedures to address anticipated installation difficulties. The wells will be sampled once for the full suite of analytes, as shown in the revised work plan.

- Two offsite soil vapor samples will be collected in the unpaved courtyard to the west of the building, provided that access is obtained from the owner(s) of the courtyard. Please note that the Site is fully occupied by the Site building and, therefore, of necessity any sampling conducted outside of the building footprint will require obtaining access from others.

- Resampling of the sediment (soil) in the sewer trap to assess its current condition is proposed as the building has been vacant and the sewer connection inactive for an extended period of time. We understand that this sewer connection will be replaced during the planned redevelopment of the building and, therefore, a video inspection to confirm its integrity for reuse is not proposed.

- The vacuum radius of influence (ROI) testing remains included in the RI scope of work as this testing is necessary to gather data to mitigate soil vapors.

- Information concerning the reasonably anticipated future land use and groundwater use at the Site has been added to the Exposure Assessment text.

<u>Section 4.2 – Standards, Criteria and Guidance</u> – The requested additions have been made to the text.

<u>Section 5.0 – Alternatives Analysis Work Plan</u> – We understand that the RI must be completed before the AA can be completed – as suggested on the schedule in Section 3, the RI work will be completed and the data available prior to initiating work on the AA. We understand that, depending on the outcome of the RI, the goals may change or the NYSDEC may require additional items or may drop items from the AA. We anticipate that by keeping you informed of progress on the RI, via the monthly progress reports and periodic discussions, that we can

reach concurrence on any changes to the scope of the AA. It is our objective to complete the RI and reach a determination on the necessary remedial activities in a timely manner – inclusion of the AA scope of work in this work plan will facilitate this objective.

We anticipate that these revisions address your concerns and that this work plan is now approvable. Please let me know if you have any questions.

Very truly yours,

Stephanie O. Davis, C.P.G.
Senior Hydrogeologist
Department Manager

SOD:tac
Enclosures

cc: Krista Anders, NYSDOH via email
Michael Pintchik, via email
James Rigano, Esq. via email

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REMEDIAL INVESTIGATION/ ALTERNATIVES ANALYSIS WORK PLAN

PREPARED FOR

CINDERELLA 248, LLC SITE
248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

NYSDEC BCP SITE NO. C224160

PREPARED BY

FPM group™

909 MARCONI AVENUE
RONKONKOMA, NY 11779

JULY 2013

REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS WORK PLAN

Prepared for

Facility: Cinderella 248 LLC Site
Brooklyn, New York

FPM File No: 1104g-13-01

I, Stephanie O. Davis, CPG, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation/Alternatives Analysis Work Plan was prepared in accordance with all applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Stephanie O. Davis, CPG	[signature]
Name	Signature

Prepared by

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(Tel) 631-737-6200
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SECTION 1.0
INTRODUCTION AND PURPOSE

This Remedial Investigation (RI)/Alternatives Analysis (AA) Work Plan has been prepared by FPM Group (FPM) for the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site #C224160, identified as Cinderella 248, LLC located at 248 Flatbush Avenue, Kings County (Brooklyn), New York (Site). This work plan describes the procedures to further evaluate the nature and extent of contamination present on and in proximity to the Site associated with former onsite dry cleaning activities. This work plan also includes procedures to identify and evaluate remedial alternative(s) for the Site pursuant to guidance provided in NYSDEC DER-10 and 6 NYCRR Subpart 375. This work plan has been developed in accordance with the procedures outlined in the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010).

1.1 Site Location and Description

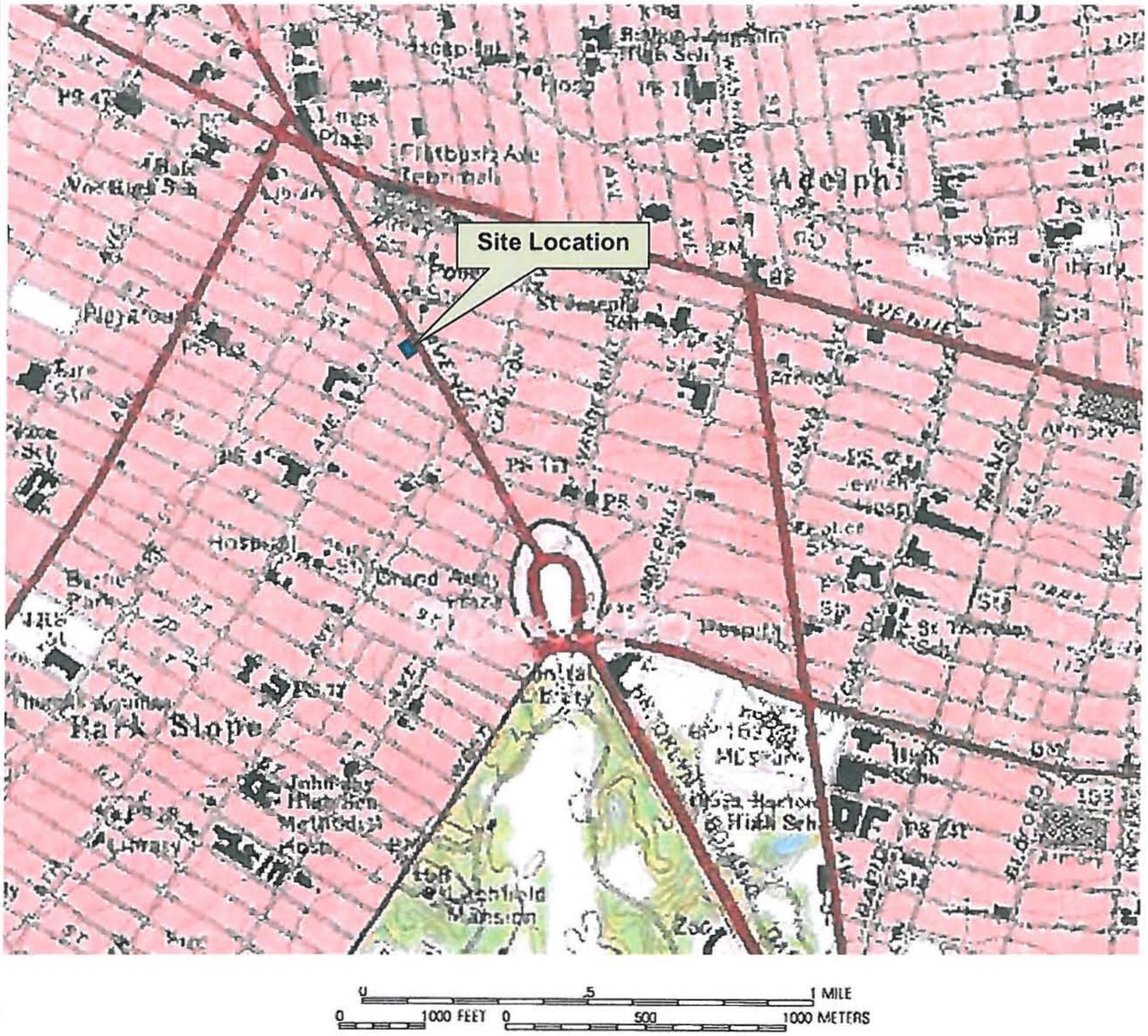
The subject Site is identified as 248 Cinderella, LLC, is located in Brooklyn, New York, and is owned by David and Gila Aronowicz. The Site occupies approximately 2,310 square feet and is identified by the New York City Tax Map as Borough of Kings, Block 936, and Lot 12. The Site is located in an R7A residential zone with a C2-4 commercial overlay; this zoning permits both residential and commercial uses. The general location of the Site is presented in Figure 1.1.1. A plan of the Site and surrounding properties is included as Figure 1.1.2.

The Site is fully developed with one-story masonry building and associated basement. The building is presently vacant and most recently was occupied by Cinderella Cleaners, a dry cleaners and shoe repair facility. The building was constructed between 1888 and 1906. Cinderella Cleaners operated at the Site from at least 1985 to 2005. Other prior uses have reportedly included office space, retail stores, and a woodworker.

The building is serviced by municipal water and sewer provided by the City of New York. The sewer connection is present in the southeast corner of the basement. The building was formerly heated via fuel oil-fired heating equipment located in the boiler room of the basement. The heating equipment and associated aboveground storage tank (AST) have been disconnected and the heating equipment has been removed from the boiler room and basement. The 275-gallon fuel oil AST remains present; no significant staining or other indications of potential releases were noted on the concrete floor beneath this AST. No indications of any additional tanks were noted during a recent site visit. Electric is provided to the Site by Con Edison of New York. The Site's solid waste is removed by the New York City Department of Sanitation.

1.2 Site Environmental Setting

The surface topography of the Site and surrounding vicinity was obtained from the USGS Brooklyn, New York Quadrangle (1967, photorevised 1995). The topographic elevation of the Site vicinity is approximately 70 feet above mean sea level (MSL), as shown in Figure 1.1.1. It should be noted that the ground surface elevation in the rear (west) of the building is approximately 10 feet lower than at the front, along Flatbush Avenue, and a below-grade open courtyard adjoins the west side of the Site at the basement level.



NORTH

Source: US Geological Survey 7.5-Minute
Brooklyn Quadrangle

FPM GROUP		
FIGURE 1.1.1 SITE LOCATION MAP CINDERELLA 248 LLC 248 FLATBUSH AVENUE, BROOKLYN, NEW YORK		
Drawn by: BC	Checked By: SOD	Date: 4/26/13

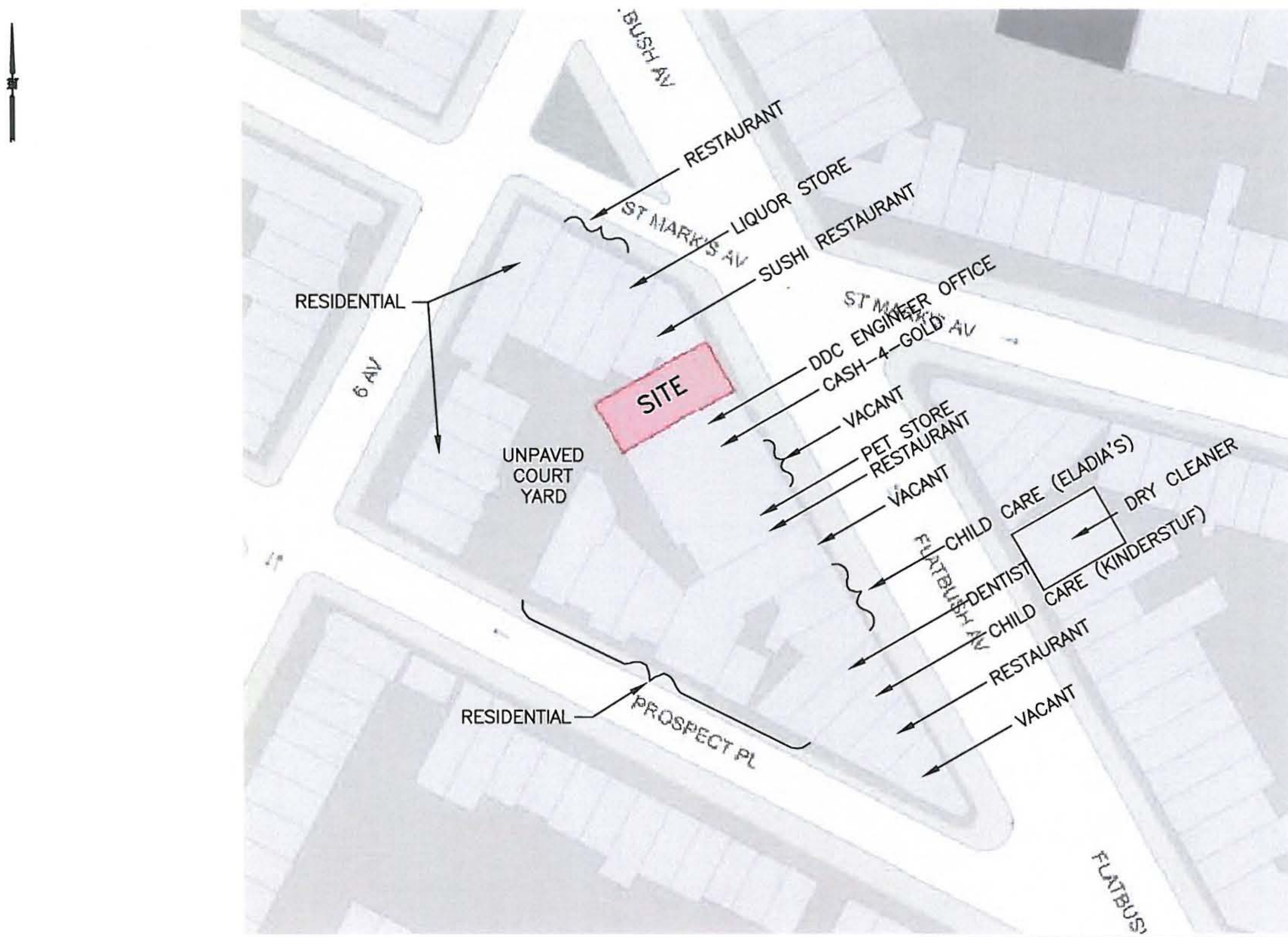


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FIGURE 1.1.2
SITE AND VICINITY PLAN
248 FLATBUSH AVENUE
BROOKLYN, NY

Drawn By: H.C.	Checked By: B.C.	Date: 5/2/13

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Previous subsurface investigations (discussed in Section 2.0) document that the Site is generally underlain by variable materials, including brown silty fine sand with cobbles, gray to tan cobbles, and silty fine sand with gravel. Minor amounts of brick and concrete fragments were noted in a few borings, but no debris, ash, or other indications suggestive of historic fill were noted.

The depth to groundwater beneath the Site is approximately 60 feet below the basement floor, based on information obtained during previous investigations performed at the Site. The groundwater flow direction is generally to the northwest based upon USGS water table maps for the Site vicinity. The closest surface water body is the Gowanus Canal, which is located approximately 0.67 miles west-northwest of the Site. The Gowanus Canal is a federal National Priorities List (NPL, or Superfund) site and has been impacted by discharges from the surrounding industrial activities, as well as the New York City sewer system. Based on the documented levels of contaminants in the Site groundwater, as discussed in Section 2, and the distance from the Site to the Gowanus Canal, it is highly unlikely that there are potential impacts to the Gowanus Canal from the Site.

The NYSDEC's databases of public water supply wells and Long Island wells were searched and no public water or other supply wells were identified within one-half mile of the Site. Based on the urban nature of the surrounding area and the availability of public water via the New York City water supply system, water supply wells are not anticipated in the Site vicinity.

1.3 Site History

Based on available historic records, the Site was developed in its current configuration between 1888 and 1906. Uses since this time were noted to be commercial and included a dry goods store in 1928, a book store from at least 1940 to mid-1960s, a closet/wardrobe business and a woodworker in the 1960s, and a dry cleaning and tailor business from most recently back to the 1980s.

Subsurface investigations were performed on the Site in 2005, 2007, and 2011 and are discussed in further detail in Section 2.0

The scope of investigation included herein is intended to provide additional information concerning the nature and extent of volatile organic compounds (VOCs) present onsite and in proximity to the Site that resulted from former onsite dry cleaning operations. Information will also be obtained for use in evaluating potential remedial measures.

1.4 Property Usage Immediately Adjacent to Site

The Site is bounded to the south by a one-story commercial building with several units; the unit adjoining the Site is occupied by the Eastern Parkway Project's Resident Engineer's Field Office (250 Flatbush Avenue), beyond which are retail stores and a vacant unit. This building has basements; the basement adjoining the Site is vacant.

The Site is bounded to the west by an open unpaved courtyard at the basement level that is utilized by the neighboring properties for outdoor purposes. The portion of the courtyard immediately to the northwest is used as an outdoor dining area. Further to the west, adjoining Prospect Place and 6th Avenue, are residential buildings.

The Site is bounded to the north by Taro Sushi, a liquor store, and the Flatbush Farm restaurant at 80 St. Marks Avenue, all of which appear to occupy the first floors and basements of these buildings. Residential apartments appear to occupy the floors above these businesses. Beyond these buildings is St. Marks Avenue.

The Site is bounded to the east by Flatbush Avenue. Multi-story buildings that appear to be occupied by businesses on the first floor and residential apartments above are present on the east side of Flatbush Avenue. A building to the southeast (upgradient) at 287 Flatbush Avenue is occupied by a dry cleaner.

SECTION 2.0
SUMMARY OF PREVIOUS INVESTIGATIONS

The Site was initially investigated in 2005 during an environmental site assessment. Additional investigations and remedial actions were performed at the Site in 2005, 2007, and 2011 to further evaluate Site conditions and to address contamination resulting from past dry cleaning operations; these investigations and remedial activities are summarized below. Summaries of previous soil, groundwater, soil vapor, and indoor air data are shown on Figures 2.1 through 2.3, respectively. Pertinent data from the previous investigations are included in Appendix A.

2.1 2005 Environmental Activities

The Site was initially investigated in 2005 by Advanced Cleanup Technologies, Inc. (ACT); this investigation included an environmental site assessment (ESA), a limited subsurface investigation, and remedial activities. This work is documented in a Phase I ESA Report, pertinent portions of which are included in Appendix A.

The ESA identified an abandoned 1,000-gallon fuel oil AST and a historic dry cleaning machine coolant leak as issues of environmental concern. The ESA included a State and Federal environmental database search of the National Priorities List, the Comprehensive Environmental Responsibility Compensation Liability Information System database, the Solid Waste Landfill Facility database, the Resource Conservation and Recovery Information System database, the Emergency Response Notification database, the NYSDEC spills database, the NYSDEC Leaking UST database, the NYSDEC Hazardous Substance and Inactive Hazardous Waste Disposal Sites databases, and the NYSDEC Petroleum Bulk Storage database. The Site was not identified on any of the databases.

The dry cleaning machine coolant leak was investigated in April 2005 and soils impacted by tetrachloroethylene (PCE) were reported to be present beneath the former boiler room to a depth of approximately nine feet below the basement level; the data from this sampling event are not available. Groundwater sampling was also performed in July 2005 below the former boiler (sample location SB-01A) and PCE was detected at a concentration of 285 micrograms per liter (ug/l), which was above the NYSDEC Class GA Ambient Water Quality Standard (Standard) for PCE. These groundwater data are depicted on Figure 2.2.

In September 2005 the impacted soils were excavated to a depth of five feet below the basement floor under the direction of ACT. Following excavation, end-point sampling was conducted on the four sidewalls and floor of the excavation (sample locations EP-01 through EP-05). PCE was not detected in any of the end-point samples, as noted on Figure 2.1. ACT concluded that no further remedial action was necessary. The AST was emptied, cleaned, and properly abandoned in October 2005 by Action Remediation, Inc., as documented in a November 29, 2005 Closure Report by ACT. This abandoned fuel oil AST remains present in the basement

2.2 2007 Soil Vapor Data

Soil vapor investigations were performed at the Site by ACT and Leggett, Brashears and Graham, Inc. (LBG); the results of these investigations were documented by ACT in a March 2007 drawing. The ACT data shown on the drawing (sample locations SV-1 through SV-12, as

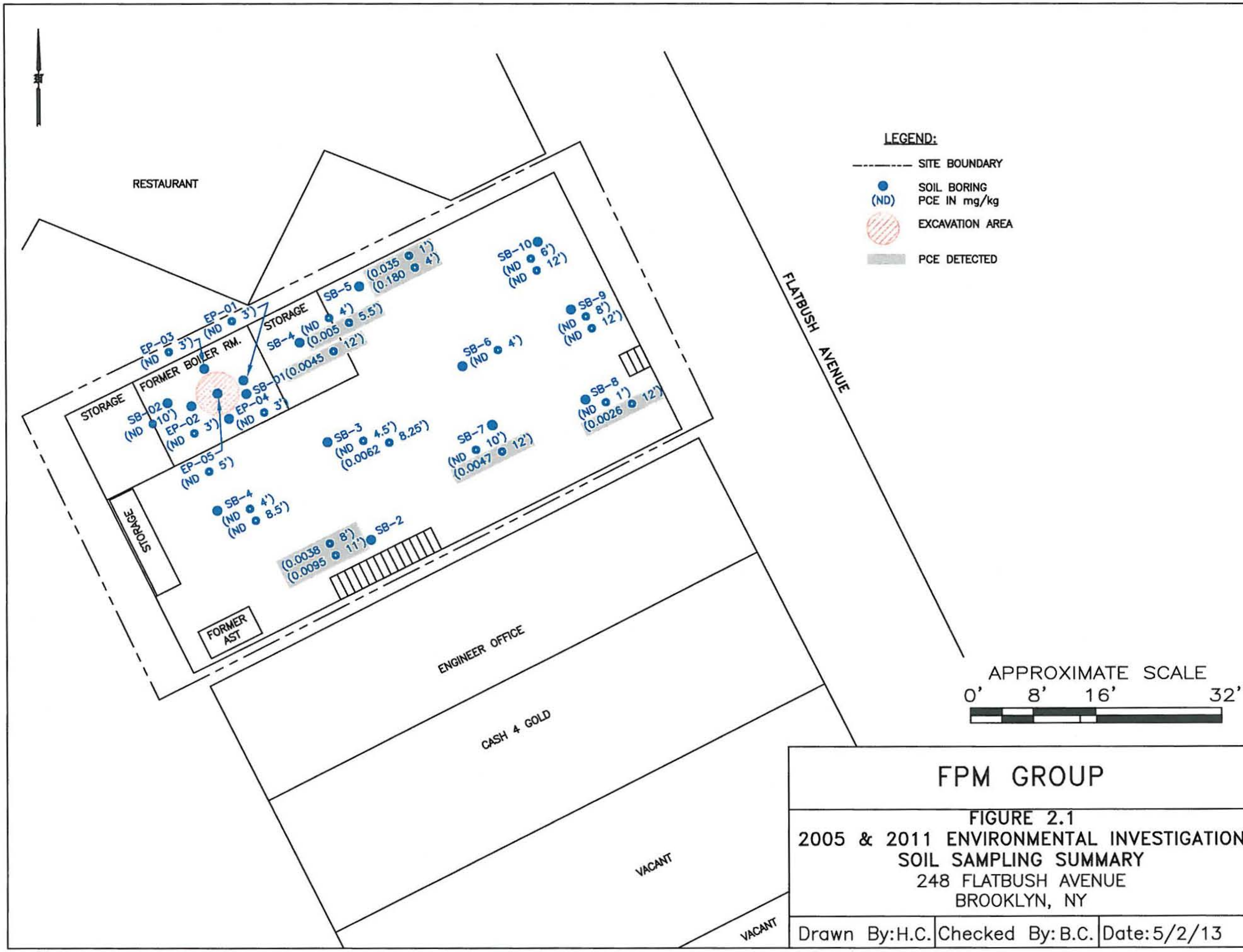

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FIGURE 2.1
2005 & 2011 ENVIRONMENTAL INVESTIGATION
SOIL SAMPLING SUMMARY
248 FLATBUSH AVENUE
BROOKLYN, NY

Drawn By:H.C.	Checked By: B.C.	Date:5/2/13

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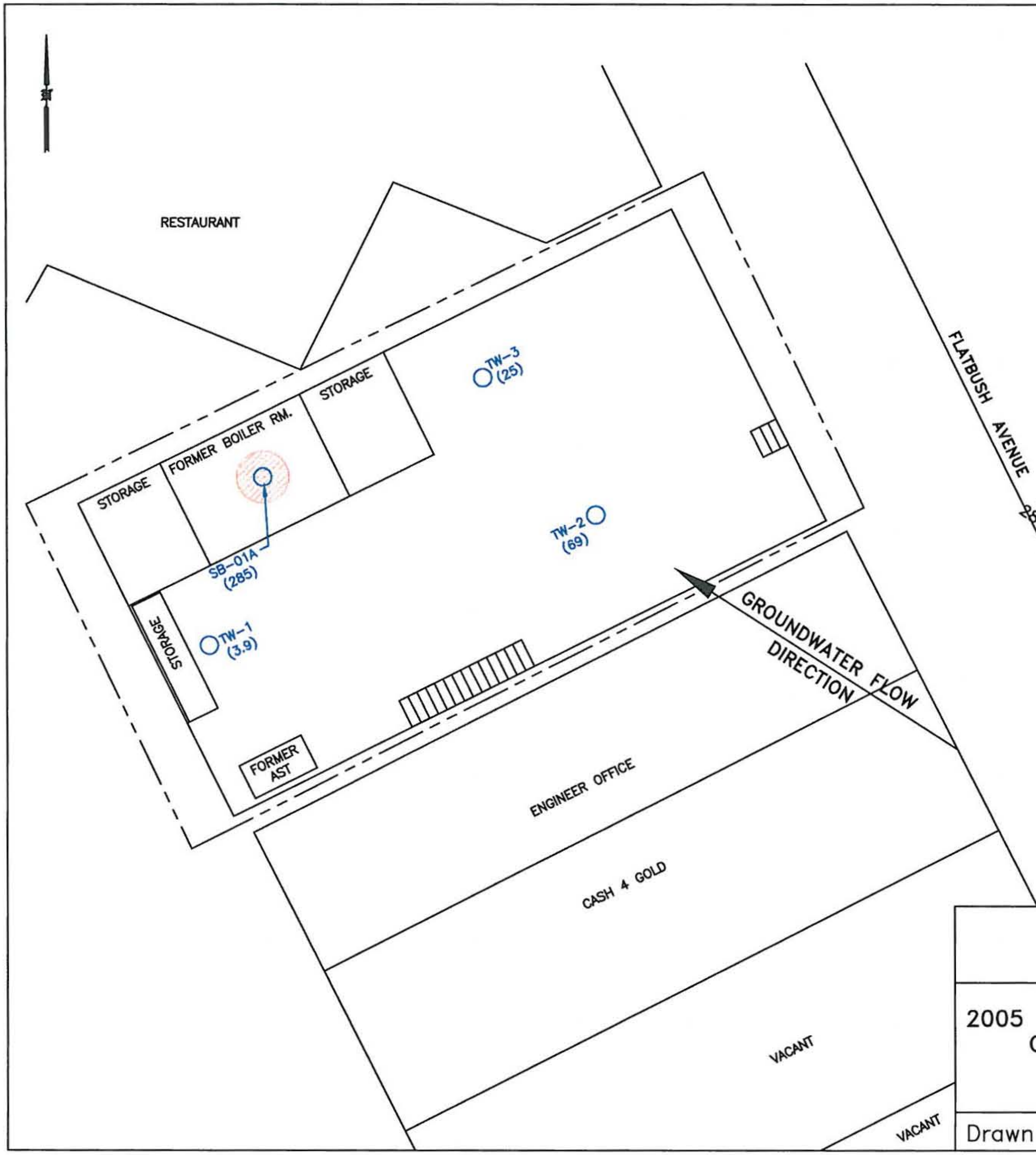

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FIGURE 2.2
2005 & 2011 ENVIRONMENTAL INVESTIGATION
GROUNDWATER SAMPLING SUMMARY
248 FLATBUSH AVENUE
BROOKLYN, NY

Drawn By:H.C.	Checked By: B.C.	Date:5/2/13

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FIGURE 2.3
2007 & 2011 ENVIRONMENTAL INVESTIGATION
SOIL VAPOR AND INDOOR AIR SUMMARY
248 FLATBUSH AVENUE
BROOKLYN, NY

Drawn By: H.C.	Checked By: B.C.	Date: 5/2/13

depicted on Figure 2.3) indicate that PCE was present in 2007 in soil vapor beneath the basement slab in close proximity to supports situated beneath the former location of the dry cleaning machine, which was formerly located on the first floor. The LBG sample location (VP-2, see Appendix A), was located next to ACT's SV-6 location and had similar results.

2.3 2011 Environmental Activities

In 2011 Arcadis US, Inc. (Arcadis) conducted an environmental investigation that included an ESA, a limited subsurface soil and groundwater investigation, and a vapor intrusion investigation. The ESA identified the historic use of dry cleaning solvents onsite and an offsite dry cleaner as issues of environmental concern.

Soil sampling was conducted at ten locations beneath the basement (SB-01 through SB-10, as shown on Figure 2.1) and included an area of stained floor in proximity to the supports beneath the former location of the dry cleaning machine, the former boiler room, a storage area, and much of the basement. Soil screening was performed and photoionization (PID) responses of up to 5,000 parts per million (ppm) were noted. PCE was detected in soil from five of the borings, as shown on Figure 2.1. None of the detections exceeded the 6 NYCRR Part 375-6 Soil Cleanup Objectives for unrestricted use. No other VOCs were detected in any of the soil samples.

Groundwater sampling was performed at three locations beneath the basement floor (locations TW-1 through TW-3, shown on Figure 2.2) PCE was detected at all three sampling locations, but was noted to exceed its NYSDEC Standard only at the TW-2 location (the most upgradient location) and the TW-3 location (beneath the former dry cleaning equipment location). The upgradient PCE detection was 69 ug/l and the PCE level beneath the former dry cleaning equipment location was 25 ug/l. Both of these detections were one order of magnitude lower than the PCE detection in 2005. The PCE level at TW-1, the closest location to the former boiler room, was 3.9 ug/l, which is below the NYSDEC Standard. Several other VOCs, including acetone, chloroform, and 2-butanone, were detected at low estimated concentrations; none of these detections exceeded the NYSDEC Standards.

A vapor intrusion investigation was conducted in August 2011 at the Site and on adjoining properties situated at 80 St. Marks Avenue and 250 and 252 Flatbush Avenue and included sub-slab soil vapor and indoor/outdoor air sampling. The sample locations and associated data are noted on Figure 2.3 (SS- and IA- locations). PCE was detected in sub-slab soil vapor at concentrations ranging from 4,010 to 20,800 micrograms per cubic meter (ug/m^3) at the Site, 454 to 1,480 ug/m^3 at 250 Flatbush Avenue, 3,810 to 20,400 ug/m^3 at 80 St. Mark's Avenue, and 185 to 450 ug/m^3 at 252 Flatbush Avenue. PCE was noted in indoor air at 12.1 ug/m^3 at 250 Flatbush Avenue, 2.67 ug/m^3 at 252 Flatbush Avenue, and 30.3 ug/m^3 at 80 St. Mark's Avenue, which are all below the New York State Department of Health (NYSDOH) Air Guideline Value of 100 ug/m^3 for PCE. Based upon Decision Matrix 2 of the NYSDOH Soil Vapor Intrusion Guidance Document, a "Mitigation" response was noted for the Site and the two directly adjoining properties situated at 250 Flatbush Avenue and 80 St. Mark's Avenue. A "Monitoring" response was noted for 252 Flatbush Avenue.

SECTION 3.0
SCOPE OF REMEDIAL INVESTIGATION

The scope of RI work presented below has been developed to evaluate the nature and extent of contamination in all media at this Site, including further evaluation of VOC contamination associated with former onsite dry cleaning activities. Investigation will be performed both onsite and in proximity to the Site. This work plan also includes procedures to identify and evaluate the most appropriate remedial alternative(s) for the Site. This scope of work has been developed in accordance with the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010) and includes soil, soil vapor, indoor/outdoor air, and groundwater sampling and an assessment of the vacuum radius of influence (ROI) that may be induced beneath the Site.

FPM will conduct the RI on behalf of the Volunteer, Cinderella 248 LLC. All RI work will be overseen by a Qualified Environmental Professional (QEP). Contact information for the principal personnel for this project and the Site owner is provided in Table 3.1. Resumes of the principal technical personnel for this project are included in Appendix B.

TABLE 3.1
PROJECT PERSONNEL
CINDERELA 248, LLC SITE
BROOKLYN, NEW YORK

Role	Name	Phone Numbers		Email
		Office	Cell	
Senior Manager	Stephanie Davis. C.P.G.	631-737-6200 ext. 228	516-381-3400	s.davis@fpm-group.com
Project Manager	Ben Cancemi, C.P.G.	631-737-6200 ext. 209	516-383-7106	b.cancemi@fpm-group.com
Volunteer Contact	Michael Pintchik	718-857-1300	-	mbpintchik@aol.com

All field work will be performed using a site-specific Health and Safety Plan (HASP), a copy of which is included in Appendix C. Please note that the HASP includes a Community Air Monitoring Plan (CAMP) prepared in accordance with DER-10, Appendix 1A. FPM will implement the CAMP during all intrusive activities at the Site.

A Citizen Participation Plan (CPP) has been approved for this Site. A copy of the approved CPP is located at the document repository.

3.1 RI Scope of Work

The RI sampling activities have been developed based, in part, on an evaluation of the existing Site data presented in Section 2. The sampling locations were selected for the purpose of investigating and characterizing the nature and extent of contamination that may be present at the Site, including further evaluating previously-identified onsite soil and groundwater conditions and potential offsite soil vapor and indoor air impacts. Testing to evaluate the potential vacuum ROI for mitigation of onsite soil vapor conditions will also be performed.

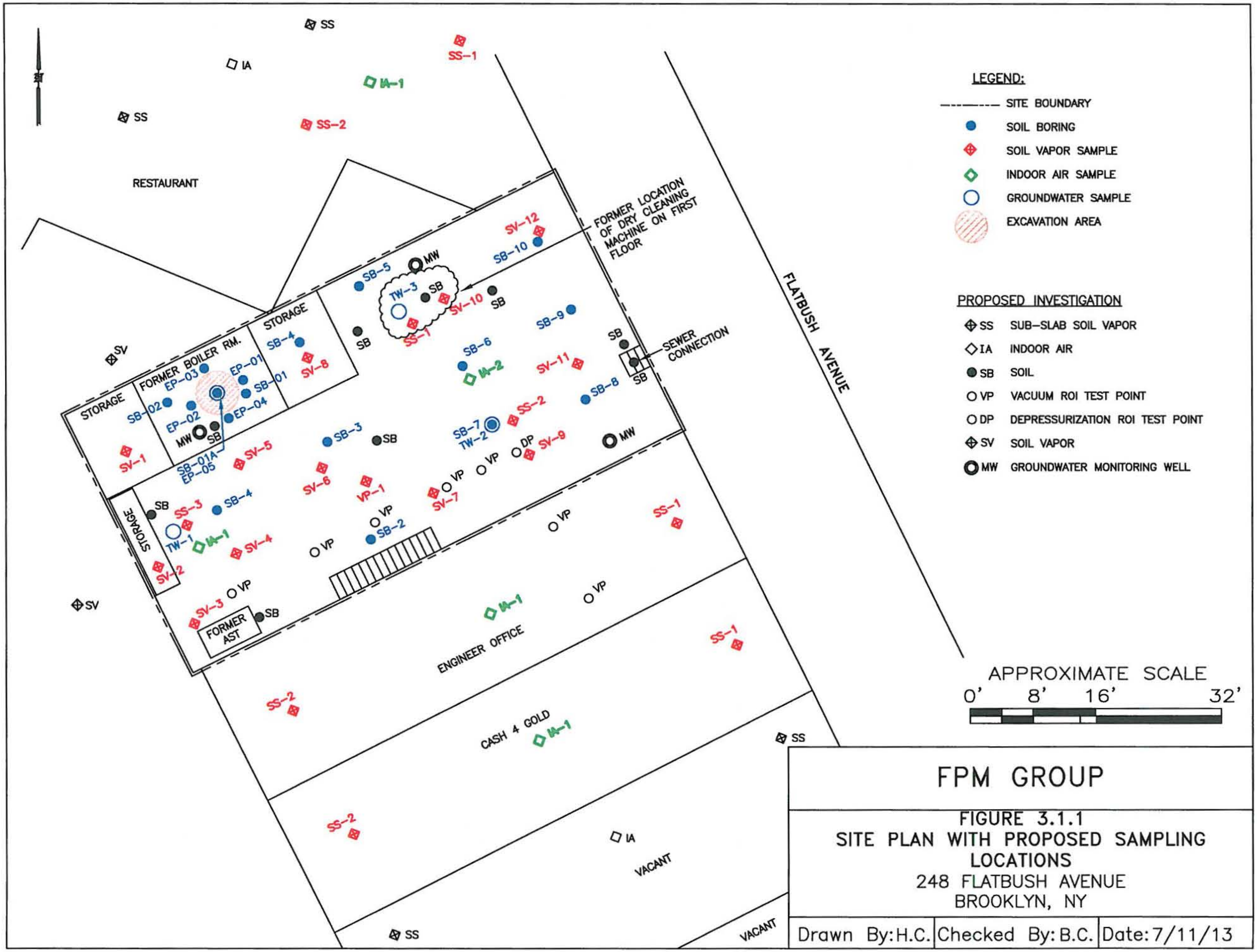

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FIGURE 3.1.1
SITE PLAN WITH PROPOSED SAMPLING LOCATIONS
248 FLATBUSH AVENUE
BROOKLYN, NY

Drawn By:H.C.	Checked By:B.C.	Date:7/11/13

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Although previous groundwater sampling data showed only low levels of impact by PCE, the significant depth to groundwater beneath the Site precludes potential exposures during reasonable construction scenarios, and the absence of groundwater use in the Site vicinity - precludes exposure via direct contact, additional groundwater investigation will be performed during the RI to evaluate groundwater conditions beneath the Site.

The proposed RI sampling locations are shown on Figure 3.1.1, together with the previous sampling locations. The scope of work includes the following components:

- Soil sampling will be conducted at eight onsite locations (SB locations on Figure 3.1.1). The soil samples will be tested to characterize the nature and extent of contamination that may be present in Site soil, including further evaluating soil conditions in proximity to the location of the former dry cleaning machine and in proximity to the sewer connection;

- Sediments (soil) in the sewer trap were previously determined to contain PCE. As the building has been vacant and sewer connection has been inactive for an extended period of time, the sewer trap soil will be resampled to characterize its current condition. We understand that it is intended to redevelop the building and that the existing sewer connection will be replaced at that time;

- Two sub-slab soil vapor sampling points (SS locations) will be installed and sampled and one co-located indoor air sample (IA location) will be collected from each of the vacant unit of the offsite property located to the southeast (256 Flatbush Avenue) and the offsite building to the northwest of the restaurant (80 St. Mark's Avenue). In addition, two offsite soil vapor samples will be collected from beneath the courtyard to the west and northwest of the building, as access permits. This sampling will be performed to further delineate offsite vapor impacts;

- Three groundwater monitoring wells will be installed onsite (MW locations on Figure 3.1.1) and groundwater sampling will be performed to further evaluate onsite groundwater conditions. Site-specific groundwater flow direction information will also be obtained to confirm the groundwater flow direction;

- Vacuum ROI testing will be performed at the Site and adjoining property to the southeast (VP locations) to obtain vacuum and flow rate data needed for design of mitigation measures; and

- A Qualitative Human Health Exposure Assessment will be performed, as described in DER-10, to identify the areas and chemicals of concern, actual or potential exposure pathways, potentially exposed receptors, and how any unacceptable exposures might be eliminated/mitigated.

No additional onsite sub-slab soil vapor or indoor air sampling is planned as the 2007 and 2011 data document the existence of onsite soil vapor impacts for which mitigation is indicated.

No soil vapor intrusion testing is planned to the east of the Site (across Flatbush Avenue) as the closest building is approximately 150 upgradient of the Site and an active dry cleaner is present in the area.

as Although an unpaved courtyard is present at the basement level to the west of the Site and is expected to limit the potential for migration of soil vapor in this direction, soil vapor sampling will be performed at two locations, as access permits, to evaluate potential soil vapor migration. We note that as the Site building fully occupies its lot, these locations are offsite and will require permission for access.

3.2 Sampling Procedures

A site plan showing the proposed RI sampling locations is presented in Figure 3.1.1. The procedures for each type of sampling are described below. Quality assurance/quality control (QA/QC) procedures are presented in Section 4.

➢ Soil Sampling

Soil borings will be performed at eight onsite locations utilizing direct-push sampling equipment. The soil borings will be performed to an approximate depth of 10 feet below grade. The samples will be obtained continuously, visually examined, screened by an environmental professional with a calibrated PID, and classified using the Unified Soil Classification System (USCS). The soil sample locations will be identified using a GPS.

Samples will be collected from each boring and submitted for laboratory analysis. A soil sample will also be obtained for the sewer trap, which is accessible at the basement floor level. The samples retained for VOC analysis will be collected using Method 5035A preservation procedures and at depths so as to characterize potential VOC impacts and their vertical extent. In general, it is anticipated that one sample from each boring will be collected from the two-foot interval just below the basement slab and one sample shall be collected from a deeper interval. Additional samples may be collected if necessary to vertically delineate any visible contamination or if intervals of significant visible contamination are noted. All samples retained for analysis shall be tested for TCL VOCs plus 10 tentatively-identified compounds (TICs). In addition, the shallow samples from four borings located in potential areas of concern (in proximity to the former AST, in the former boiler room, in proximity to the sewer connection, and beneath the former location of the dry cleaning equipment on the first floor of the building) shall also be tested for TCL semivolatile organic compounds (SVOCs) plus 25 TICs, polychlorinated biphenyls (PCBss0, pesticides, and Target Analyte List (TAL) metals. Upon completion of sampling, the sample containers shall be sealed, labeled, managed, transported, and tracked as described in Section 3.3. The borings shall be backfilled with soil cuttings and clean virgin sand and the penetrations through the basement slab shall be re-sealed with concrete.

➢ Soil Vapor and Indoor/Outdoor Sampling

Sub-slab soil vapor sampling and indoor air sampling will be conducted in two offsite buildings and will include two sub-slab sampling locations and one indoor air sample at each building, as shown on Figure 3.1.1. Soil vapor sampling will also be conducted at two offsite locations in the unpaved courtyard to the west of the building, as access permits. These locations are also shown on Figure 3.1.1.

At each sub-slab sampling location a rotary hammer drill will be used to penetrate the concrete slab and a temporary vapor sampling point will be installed to a depth of approximately six inches below the existing basement floor slab. At each soil vapor sampling location in the unpaved courtyard a boring shall be advanced using a hand auger to approximately six feet below grade, as feasible, and a temporary vapor sampling point shall be installed. A bentonite seal will be placed so as to seal each sampling point from the surrounding atmosphere. Following installation, three to five volumes of air shall be purged through the implant and polyethylene tubing using an air pump so as to ensure that a representative sample is obtained. To confirm the integrity of the bentonite seal a helium tracer gas will be confined over the surface seal and the potential presence of helium in the polyethylene tubing will be checked with a helium meter. Following purging and the seal integrity check, the soil vapor sample shall be collected into a laboratory-supplied Summa canister equipped with a calibrated flow controller. Co-located indoor air samples and an ambient (outdoor) air sample will also be collected concurrently with the sub-slab vapor samples over an approximate 8-hour time period. The flow controller for each canister will be set so as not to exceed 0.2 liters per minute. FPM shall observe the flow controllers and shall seal the canisters while some vacuum remains. Upon completion of sampling, each canister shall be sealed, labeled, managed, transported, and tracked as described in Section 3.3. The soil vapor, indoor air, and outdoor air sample locations will be identified using a GPS.

During the sampling event, a building inventory shall be completed for each of the two offsite buildings using the most current NYSDOH inventory form. The information obtained will be used to assess factors that may affect the indoor air sample results.

➢ <u>Groundwater Monitoring Well Installation and Sampling</u>

The proposed monitoring wells will be installed by a licensed well driller at the three locations shown on Figure 3.1.1, as feasible. As the wells must be drilled by a rig placed on the first floor of the building, with the rig rods extended unsupported to the basement level, a conductor pipe will be used to reduce the potential for rod deformation during drilling. Shoring may be used, as necessary, to support the wooden floor upon which the drill rig must be placed. Well locations may be adjusted in the field as necessary to reduce the potential for floor failure and/or avoid obstructions. An FPM environmental professional will observe the well installation and prepare a boring log/well installation diagram to document the subsurface conditions. The monitoring well locations will be identified using a GPS.

It is anticipated that each well will include a one- to two-inch diameter 0.01- to 0.02-inch machine-slotted PVC screen approximately 10 feet long installed to a depth of approximately 50 to 60 feet below the basement floor. The annulus will be backfilled with Morie #1 well gravel, or equivalent, to approximately two feet above the top of the screen with an overlying two-foot bentonite seal, and the balance will be backfilled with bentonite or cement bentonite grout. The top of the well casing will be capped with an expansion-fit locking well cap and the casing will be protected with a bolt-down flush-mounted manhole cover set in concrete.

Following installation, the wells will be developed by pumping and surging until the produced groundwater is clear (turbidity less than 50 NTU) and the parameters pH, temperature, and conductivity vary by less than 10 percent between removals of successive casing volumes of groundwater.

Following well installation, a survey will be performed in which the relative elevation of the top of the PVC casing for each well will be determined to the nearest 0.01 foot. The static water level for each of the Site wells will be measured and used in conjunction with the surveyed well casing relative elevations to calculate the Site-specific groundwater flow direction.

Groundwater sampling shall be performed at least one week after the wells are installed to allow for groundwater conditions in proximity to the wells to stabilize. At each well the depth to the static water level and depth of the well will be measured with an interface probe. The potential presence of non-aqueous-phase liquid (NAPL) will also be assessed. Then a decontaminated submersible pump will be used to purge the well until the turbidity of the produced water is less than 50 NTU or until five well volumes of water have been purged. Following the removal of each well volume, field parameters, including pH, turbidity, specific conductivity, and temperature, will be monitored. When all stability parameters vary by less than 10 percent between the removal of successive well volumes, the well will be sampled. Well sampling forms documenting the well purging and sampling procedures will be completed.

Following purging, sampling will be performed. Samples will be obtained directly from the pump or using dedicated disposable polyethylene bailers suspended from dedicated cotton or polypropylene lines. The retrieved samples will be decanted into laboratory-supplied sample containers. Upon completion of sampling, the sample containers shall be sealed, labeled, managed, transported, and tracked as described in Section 3.3.

3.3 Sample Management and Analyses

Each sample container will be labeled, and the labeled containers containing soil or groundwater samples will be placed in a cooler with ice to depress the sample temperature. The filled labeled Summa canisters shall be secured in shipping containers. A chain of custody form will be completed and kept with each of the coolers and shipping containers to document the sequence of sample possession. At the end of each day, the filled coolers and shipping containers will be transported by FPM or overnight courier to the analytical laboratory.

The anticipated analytical laboratory for soil and groundwater samples is TestAmerica of Edison, New Jersey, which is NYSDOH ELAP-certified for the proposed analyses. All of the soil and groundwater samples will be analyzed for TCL VOCs plus TICs using EPA Method 5035/5035A and 8260B. In addition, four of the soil samples and all of the groundwater samples will also be analyzed for TCL SVOCs plus TICs using Methods 3541 or 3510C/8270C, TAL metals using Methods 3050B or 3010A/6010B, mercury using Methods 7471A or 7470A, PCBs using Methods 3546/8082, and pesticides using Methods 3510C or 3535A and 8141A/8151B/8081/8082. The analytical methods used will be as per NYS Analytical Services Protocol (ASP) with Category B deliverables. Electronic data deliverables (EDDs) will be prepared and uploaded into the NYSDEC's environmental information management system.

The anticipated analytical laboratory for soil vapor and indoor/outdoor samples is Centek Laboratories of Syracuse, New York. Centek Laboratories is a NYSDOH ELAP-certified laboratory. The soil vapor samples will be analyzed for VOCs using Method TO-15. Low-level TO-15 analyses will be performed for the indoor air samples. The analytical methods used will be as per NYS ASP with Category B-equivalent deliverables. EDDs will also be prepared and uploaded into the NYSDEC's environmental information management system.

Additional details concerning sampling, analysis, and QA/QC is provided in the Quality Assurance Project Plan presented in Section 4.

3.4 Management of Investigation-Derived Waste

3.4.1 Soil Cuttings and Groundwater

A limited amount of soil cuttings may be generated during the onsite soil borings. In the event that soil cuttings are generated, they will be managed in accordance with DER-10, Section 3.3(e).

All groundwater generated during well development and purging will be containerized. The containers will be staged onsite in a designated area. The containerized groundwater will be examined by the QEP for visual and olfactory indications of contamination and, if free of indications of potential contamination, will be tested for VOCs. If VOCs are not found at levels in excess of the NYSDEC Standards, the water will be discharged to the municipal sewer system.

If visible contamination is observed or VOC levels are in excess of NYSDEC Standards, the containerized groundwater will be disposed offsite, as described below.

3.4.2 Waste Disposal

Any soil cuttings that are generated and cannot be managed onsite in accordance with DER-10 and that exhibit indications of potential contamination, and any containerized groundwater that cannot be discharged to the municipal sewer system will be transported by a licensed waste transporter and properly disposed offsite at permitted waste disposal facilities. Waste transport and disposal shall be documented with manifests, copies of which shall be included in the RI Report. Dedicated disposable investigation equipment (gloves, etc.) shall be containerized and properly disposed offsite as solid waste.

3.5 Radius of Influence Testing

ROI testing will be performed at the Site to gather data necessary to mitigate soil vapor conditions. The testing will include assessing the applied vacuum(s) and flow rate(s) that may be needed to develop a sufficient ROI for soil vapor mitigation. Monitoring points will be installed through the basement slabs at the VP locations shown on Figure 3.1.1 and a vacuum port will be installed at the DP location. The monitoring points will be installed to a depth of approximately one foot below grade and will consist of six-inch-long soil gas implants connected to grade with polyethylene tubing. The annulus around each implant will be backfilled with well gravel and bentonite will be placed in the annular space from just above the implant to grade. The DP point will be installed to a depth of approximately three feet below the building slab and will be completed with one foot of slotted PVC screen and corresponding riser pipe. If stratigraphic variation is noted during soil boring activities, a deeper screen interval may also be installed at the DP location. Well gravel will be placed around the annulus of the screen and will extend just above its connection with the riser. The remaining annulus will be filled with bentonite to grade. The surface of the basement slab will be examined and any significant cracks or other penetrations will be sealed with concrete, expanding foam sealer, or other appropriate materials to prevent short-circuiting during vacuum testing.

Prior to initiating testing, the ambient pressure will be recorded at each of the monitoring points and the vacuum port. To perform the test, vacuum will be applied to the vacuum port (DP on Figure 3.1.1) in increasing steps anticipated to range from 10 to 30 inches of water column using a one-horse-power (HP) regenerative blower (EG&G Rotron Model EN 404 or equivalent) and the observed vacuum will be recorded at each of the monitoring points. If an additional screen is installed at the DP location, then it shall also be tested in the same step-wise manner. During the tests, the air flow rate at each applied vacuum will be recorded using a flow meter installed in the PVC piping on the pressure side of the system. These data will then be plotted to calculate the ROI at each step such that potential mitigation measures may be evaluated.

Effluent from the blower will be directed through a portable carbon treatment unit and then to the exterior of the building for discharge above the building roofline. VOC concentrations will be monitored during the tests from a sampling port located on the pressure side of the blower and upstream of the carbon filtration unit. VOC concentrations will be evaluated using a calibrated PID and also by obtaining and analyzing air samples in Tedlar bags. These data will be used to evaluate potential VOC concentrations in emissions from a mitigation system for compliance with NYSDEC Division of Air Resources DAR-1 criteria.

3.6 Exposure Assessment

A qualitative human health exposure assessment will be performed during the RI in accordance NYSDEC DER-10 Section 3.3(c)4 to identify the areas and chemicals of concern, actual or potential exposure pathways, potentially exposed receptors, and how any unacceptable exposures might be eliminated/mitigated. This assessment will consider the reasonably anticipated future land use at the Site (commercial and residential) and reasonably anticipated future groundwater use (none). The five exposure pathway elements that will be examined include:

- Descriptions of the contaminants and affected media;
- An explanation of the contaminant release and transport mechanisms to the potentially exposed population;
- Identification of potential exposure points where the potential for human contact with contaminated media may occur;
- A description of routes of exposure (i.e., ingestion , inhalation, dermal contact); and
- A characterization of the receptor population that may be exposed to contaminants at a point of exposure.

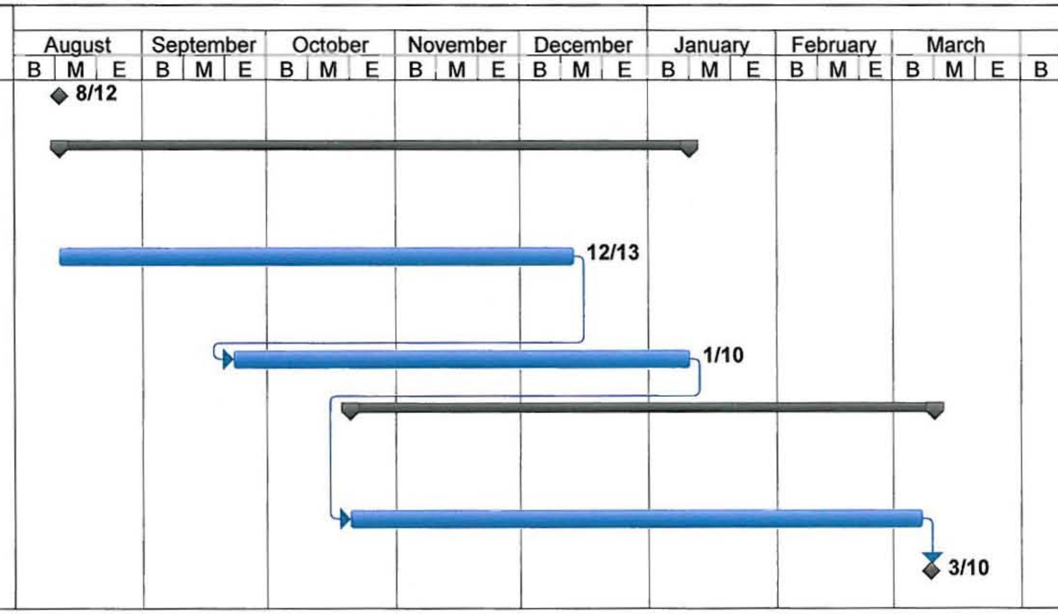
3.7 Reporting and Schedule

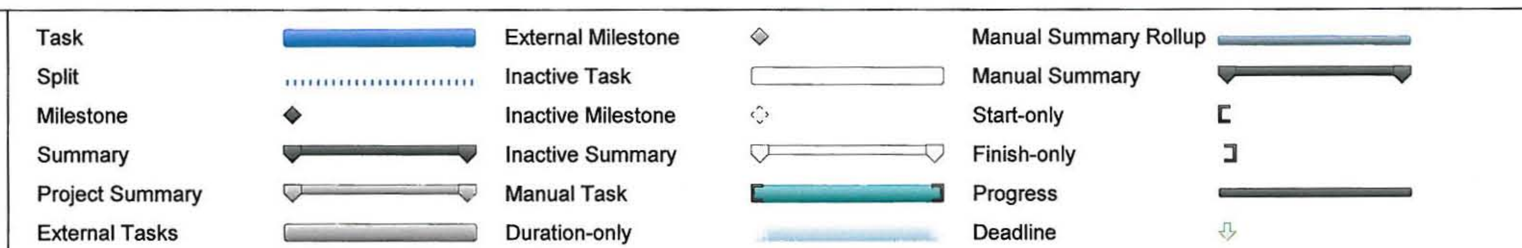
The proposed schedule for the RI and the Alternatives Analysis (AA, discussed in Section 5 herein) is shown in Figure 3.7.1.

Following the completion of the RI sampling activities, the receipt of all sample results, preparation of the qualitative human health exposure assessment, and preparation of the AA, FPM will prepare an RI/AA Report. The RI portion of the RI/AA Report will be prepared in accordance with NYSDEC DER-10 Section 3.14 and will include an updated site plan, a summary of the work performed, the resulting chemical analytical data, an interpretation of the data, the qualitative exposure assessment, and conclusions. Copies of all field logs, the complete laboratory analytical packages, and the Data Usability Summary Reports (DUSRs) will

FIGURE 3.7.1
RI/AA SCHEDULE
CINDERELLA 248 LLC SITE
248 FLATBUSH AVENUE, BROOKLYN, NEW YORK

ID	Task Name
1	NYSDEC approval of RI/AA Work Plan
2	**RI Work**
3	Perform soil borings, well installation and sampling, soil vapor and indoor air sampling, and radius of influence testing.
4	Laboratory analyses and DUSR preparation
5	**RI/AA Report**
6	Prepare RI/AA Report
7	Submit RI/AA Report to NYSDEC





Project: RI Schedule
Date: Fri 7/26/13

Clients\Rigano LLC\Cinderella 248 LLC\RIAA WP\RIscheduleSODrev.mpp be provided separately from the RI Report as an electronic submission, in accordance with DER-10 Section 3.14(b). AA reporting is discussed in Section 5.3 herein.

In accordance with 6 NYCRR Part 375-2, the soil data shall be evaluated with respect to the NYSDEC Objectives for unrestricted use (Table 375-6(a)). However, as the Site is zoned as a commercial property with multi-family residential uses, the soil data shall also be compared to the NYSDEC Objectives for commercial and restricted residential uses (Table 375-6(b)). The soil vapor, indoor air and ambient (outdoor) air data shall be evaluated with respect to NYSDOH soil vapor intrusion guidance. Groundwater results will be compared to the NYSDEC Class GA Ambient Water Quality Standards. A further discussion of standards, criteria and guidance (SCGs) is included in Section 4.

Monthly progress reports will be prepared and submitted to the NYSDEC and NYSDOH during the above-described RI work. The monthly progress reports shall include information regarding activities conducted during the reporting period, activities planned for the next reporting period, a summary of any sampling results and community monitoring results, any changes to the schedule, any problems encountered, and other pertinent project information.

SECTION 4.0
QUALITY ASSURANCE PROJECT PLAN

This Quality Assurance Project Plan (QAPP) is applicable to all RI activities at this Site. The RI work is intended to further assess the current areal and vertical extent of VOCs in soil onsite and to evaluate offsite soil vapor and indoor air conditions. Information concerning the vacuum ROI will also be obtained.

The RI will be performed by FPM on behalf of the Volunteer, 248 Cinderella LLC. The FPM project manager is Ben Cancemi, CPG. Additional project personnel are identified on Table 3.1. Resumes for project personnel are included in Appendix B.

Sampling procedures are presented in Section 3.2 and sample management is presented in Section 3.3 of this RIAA Work Plan. A Site plan showing sample locations is presented on Figure 3.2.1. Table 4.1 presents a summary of the analytical methods and the QA/QC sample program. QA/QC samples are further discussed below.

4.1 Data Quality Objectives

The Data Quality Objectives (DQOs) will be applicable to all data-gathering activities at the Site. DQOs will be incorporated into sampling, analysis, and quality assurance tasks associated with SC activities.

The data users for this project are FPM, the NYSDEC, and the NYSDOH. The Site owner will also be provided with the data. No other data users are anticipated. The collected data are intended to further evaluate the nature and extent of contaminants in onsite soil and groundwater, VOCs in offsite soil vapor and indoor air, and a vacuum ROI.

For this project, field screening will be performed during sampling activities. Field screening includes monitoring for organic vapors in the soil cuttings as they are generated by a direct push rig and in the air in the work zone using a Photovac MicroTIP PID (or equivalent) and visual observations of soil or groundwater characteristics. All readings and observations will be recorded by the FPM QEP in his or her field notebook.

4.2 Standards, Criteria, and Guidance

The following standards, criteria, and guidance (SCGs) have been identified for the Site:

- NYSDEC DER-10;
- The NYSDEC Class GA Ambient Water Quality Standards, which are used to evaluate the groundwater chemical analytical results;
- The 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives, which are used to evaluate soil sample results;
- The 6 NYCRR Parts 370, 371, and 372 regulations for hazardous waste management, which are used to guide hazardous waste characterization and disposal;

TABLE 4.1
REMEDIAL INVESTIGATION SAMPLING MATRIX
248 FLATBUSH AVENUE, BROOKLYN, NEW YORK

Sample Location/ Type	Matrix	Sample Depths (feet below grade)	Number/ Frequency	Preparation and Analysis	Sample Bottles/Preservation	Holding Time
Soil Samples	Soil	Variable, depending on observed conditions. Generally 0 to 2, 8 to 10	17 once	TCL VOCs plus TICs (Methods 5035/5035a and 8260B)	One Glass VOA Vial with MEOH Two Glass VOA vials with water One 2 oz CWM glass	Frozen within 48 hours of collection, 14 days until analysis.
			4 fill/once	BN-TCL SVOCs plus TICs, TAL Metals, pesticides, and PCBs (Methods 3541/ 8270C, 3050B/6010B, 3546/8081/8082A, and 7470A/7241A)	Two 8 oz CWM glass	SVOCs, pesticides and PCBs: 7 days until extraction, 40 days after extraction, Metals: 28 days
Sub-Slab Soil Vapor Samples	Vapor	Six Inches Below Slab	4/once	VOCs (Method TO-15)	One Summa Canister	30 days
Soil Vapor Samples	Vapor	Six Feet Below Surface	2/once	VOCs (Method TO-15)	One Summa Canister	30 days
Indoor/Outdoor Air Samples	Air	3 to 5 feet above grade	3/once	VOCs (Method TO-15, low-level)	One Summa Canister	30 days
Groundwater Samples	Groundwater	50 to 60 feet below basement floor	3/once	TCL VOCs plus TICs (Methods 5030B/ 8260B)	Two 40 ml glass VOA vials with HCL	14 days
				BN-TCL SVOCs plus TICs, pesticides, and PCBs (Methods 3541/ 8270C, and 3546/8081/8082A)	1-liter amber glass	7 days until extraction, 40 days after extraction.
				TAL metals (Methods 3050B/6010B and 7470A/7241A)	500 ml plastic w/HNO3	28 days
Equipment blanks	Lab water	-	One per day during soil or groundwater sampling	TCL VOCs (Methods 5030B/ 8260B)	Two glass VOA vials with HCL	14 days
				BN-TCL SVOCs plus TICs, pesticides, and PCBs (Methods 3541/ 8270C, and 3546/8081/8082A)	1-liter amber glass	7 days until extraction, 40 days after extraction.
				TAL metals (Methods 3050B/6010B and 7470A/7241A)	500 ml plastic w/HNO3	28 days
Trip blanks	Lab water	-	One per cooler	TCL VOCs (Method 8260B)	Two glass VOA vials with HCL	14 days
	Lab Air	-	One per shipment	VOCs (Method TO-15)	One Summa Canister	30 days
Blind duplicates	Soil Vapor/Air	Same as associated primary samples	One per 20 primary	VOCs (Method TO-15)	One Summa Canister	30 days
	Soil		One per 20 primary samples	TCL VOCs (Methods 5035/5035a and 8260B)	One Glass VOA Vial with MEOH Two Glass VOA vials with water One 2 oz CWM glass	Frozen within 48 hours of collection, 14 days until analysis.
				BN-TCL SVOCs plus TICs, TAL Metals, pesticides, and PCBs (Methods 3541/ 8270C, 3050B/6010B, 3546/8081/8082A, and 7470A/7241A)	Two 8 oz CWM glass	SVOCs, pesticides and PCBs: 7 days until extraction, 40 days after extraction, Metals: 28 days
	Groundwater		One per 20 primary samples	TCL VOCs plus TICs (Methods 5030B/ 8260B)	Two 40 ml glass VOA vials with HCL	14 days
				BN-TCL SVOCs plus TICs, pesticides, and PCBs (Methods 3541/ 8270C, and 3546/8081/8082A)	1-liter amber glass	7 days until extraction, 40 days after extraction.
				TAL metals (Methods 3050B/6010B and 7470A/7241A)	500 ml plastic w/HNO3	28 days
				TAL metals	500 ml plastic w/HNO3	
MS/MSD	Soil	Same as associated primary samples	One per 20 primary soil samples	TCL VOCs (Methods 5035/5035a and 8260B)	One Glass VOA Vial with MEOH Two Glass VOA vials with water One 2 oz CWM glass	Frozen within 48 hours of collection, 14 days until analysis.
				BN-TCL SVOCs plus TICs, TAL Metals, pesticides, and PCBs (Methods 3541/ 8270C, 3050B/6010B, 3546/8081/8082A, and 7470A/7241A)	Two 8 oz CWM glass	SVOCs, pesticides and PCBs: 7 days until extraction, 40 days after extraction, Metals: 28 days
	Groundwater		One per 20 primary groundwater samples	TCL VOCs plus TICs (Methods 5030B/ 8260B)	Two 40 ml glass VOA vials with HCL	14 days
				BN-TCL SVOCs plus TICs, pesticides, and PCBs (Methods 3541/ 8270C, and 3546/8081/8082A)	1-liter amber glass	7 days until extraction, 40 days after extraction.
				TAL metals (Methods 3050B/6010B and 7470A/7241A)	500 ml plastic w/HNO3	28 days

Notes:

MS/MSD = Matrix spike/matrix spike duplicate
VOCs = Volatile organic compounds
SVOCs - Semivolatile organic compounds

TAL = Target Analyte List
HCL = hydrochloric acid
CWM = clear wide-mouth

BN = Base-neutral
TICs = tentatively-identified compounds
MEOH = Methanol

TCL = Target Compound List
HNO3 = nitric acid
PCBs = polychlorinated biphenyls

- The NYSDOH *Final Guidance for Evacuating Soil Vapor Intrusion in the State of New York (October 2006); and*

- The NYSDEC Division of Air Resources (DAR-1) *Guidelines for the Control of Toxic Ambient Air Contaminants (November 1997,October 2010)*

4.3 Quality Assurance/Quality Control Procedures

QA/QC procedures will be utilized during the performance of the RI field work to ensure that the resulting chemical analytical data accurately represent subsurface conditions. The following sections include descriptions of the QA/QC procedures to be utilized.

➢ Equipment Decontamination Procedures

All non-disposable downhole equipment (i.e., direct-push rods, submersible pumps) used during sampling activities will be decontaminated by washing in a potable water and Alconox solution and rinsing in potable water prior to use at each location to reduce the potential for cross contamination. All sampling equipment will be either dedicated disposable equipment or will be decontaminated prior to use at each location. The decontamination procedures utilized for all non-disposable sampling equipment will be as follows:

1. The equipment will be scrubbed in a bath of potable water and low-phosphate detergent followed by a potable water rinse;

2. The equipment will be rinsed with distilled water; and

3. The equipment will be allowed to air dry, if feasible, and wrapped in aluminum foil (shiny side out) for storage and transportation.

➢ QA/QC Samples

QA/QC samples will be collected and utilized to evaluate the potential for field or laboratory contamination and to evaluate the laboratory's analytical precision and accuracy. A sampling chart showing the number and types of primary samples, analytical methods, and QA/QC samples was presented on Table 4.1. The specific types of QA/QC samples to be collected are described below.

The decontamination procedures will be evaluated by the use of equipment blank samples. These samples consist of aliquots of laboratory-supplied water that are poured over or through the dedicated or decontaminated sampling equipment and then submitted to the laboratory for analysis. An equipment blank sample will be prepared for each day that soil or groundwater sampling is conducted at the Site and will be analyzed for the same analytes as the primary environmental samples collected that day. The equipment blanks will be labeled in a manner to prevent identification by the analytical laboratory.

Trip blank samples will be utilized to evaluate the potential for VOC cross-contamination between samples in the same cooler or shipping container. Trip blank samples consist of laboratory-provided containers filled with laboratory water or laboratory air that are sealed in sample containers at the laboratory and that are transported to and in the field with the other sample containers. A trip blank will be shipped with each group of soil, groundwater, and soil vapor/indoor air samples and will be managed in the field and analyzed in the laboratory in the same manner as the primary environmental samples.

Blind duplicate samples will be obtained at a frequency of at least one per every 20 environmental samples and will be used to attest to the precision of the laboratory. A blind duplicate consists of a separate aliquot of sample collected at the same time, in the same manner, and analyzed for the same parameters as the primary environmental sample. The blind duplicate samples are labeled in a manner such that they cannot be identified by the laboratory. The sample results are compared to those of the primary environmental sample to evaluate laboratory analytical precision.

Matrix spike/matrix spike duplicate (MS/MSD) samples will be collected at a frequency of one per 20 environmental soil or groundwater samples. The purpose of the MS/MSD samples is to confirm the accuracy and precision of laboratory results based on a particular matrix. The MS/MSD results will be evaluated during the preparation of the DUSRs, as discussed below.

- Chain-of-Custody Procedures

For each day of sampling, chain-of-custody (COC) sheets will be completed and submitted to the laboratory with the samples collected that day. A copy of each COC sheet will be retained by the FPM QEP for sample tracking purposes. Each COC sheet will include the project name, the sampler's signature, the sampling locations and intervals, and the analytical parameters requested.

- Data Usability Summary Reports

All chemical analytical results will be evaluated using the sample data packages, sample data summary packages, and case narratives provided by the analytical laboratory. The data evaluation will be performed to verify that the analytical results are of sufficient quality to be relied upon to assess the potential presence of contaminants in the groundwater, soil vapor, indoor air, and/or soil samples. A DUSR shall be prepared for each data package following the "Guidance for the Development of Data Usability Summary Reports" provided by the NYSDEC (Appendix 2B of DER-10). The resume of the anticipated DUSR preparer, Richard Baldwin, CPG, who is independent from this project is included in Appendix B.

4.4 Sample Analysis

All samples will be submitted to NYSDOH ELAP-certified laboratories. The anticipated analytical laboratory for soil and groundwater samples is TestAmerica of Edison, New Jersey. The anticipated analytical laboratory for soil vapor samples is Centek Laboratories of Syracuse, New York. Analytical data will be provided by the laboratories in electronic format, in accordance with DER-10, Section 1.15.

The soil and groundwater samples will be analyzed for TCL VOCs plus 10 TICs using EPA Method 5035/5035A and 8260B. Four of the soil samples and all of the groundwater samples will also be analyzed for TCL SVOCs plus TICs using Methods 3541 or 3510C/8270C, TAL metals using Methods 3050B or 3010A/6010B, mercury using Methods 7471A or 7470A, PCBs using Methods 3546/8082, and pesticides using Methods 3510C or 3535A and 8141A/8151B/8081/8082. The analytical methods used will be as per NYS ASP with Category B deliverables. EDDs will be prepared and uploaded into the NYSDEC's environmental information management system.

The soil vapor, sub-slab soil vapor and indoor/outdoor air samples will be analyzed for VOCs using Method TO-15. Low-level analyses will be performed for the indoor air samples. The analytical methods used will be as per NYS ASP with Category B-equivalent deliverables. EDDs will also be prepared and uploaded into the NYSDEC's environmental information management system.

4.5 Data Evaluation

The data collected will be assembled, reviewed, and evaluated following each sampling round. The soil and groundwater samples will be used to further assess the nature and extent of contamination in the soil and groundwater at the Site. The soil vapor and indoor air samples will be used to assess the potential for soil vapor intrusion at offsite properties.

4.6 Project Organization

The project manager and field supervisor for this project will be Ben Cancemi, CPG. Mr. Cancemi will also serve as the health and safety officer. The senior project manager and QA/QC officer will be Stephanie Davis, Senior Hydrogeologist. Resumes for project personnel are included in Appendix B. Subcontracted services will include direct-push/drilling services (subcontractor to be determined) and laboratory services (TestAmerica and Centek Laboratories).

SECTION 5.0
ALTERNATIVES ANALYSIS WORK PLAN

The purpose of the Alternatives Analysis (AA) is to identify and evaluate the most appropriate remedial alternative(s) for the Site pursuant to guidance provided in NYSDEC DER-10 and 6 NYCRR Subpart 375.

The remedial goals for remedial alternatives proposed pursuant to this guidance will be the remedial goals established under the New York State Brownfield Cleanup Program (BCP) as defined by ECL, Article 27, Title 14. At a minimum, the alternative(s) will eliminate or mitigate all significant threats to public health and the environment presented by the contaminants at the Site through the proper application of scientific and engineering principles.

We understand that, depending on the outcome of the RI, the remedial goals may change or the NYSDEC may require that certain items be added to or removed from the AA. In these events, the AA Work Plan may require amendment.

5.1 Remedial Action Objectives

Remedial Action Objectives (RAOs) are medium- or operable unit-specific objectives for the protection of public health and the environment and will be developed during the AA based on contaminant-specific standards, criteria, and guidance (SCGs). Prior to proposing alternative(s) at this Site, the RAOs for the Site will first be established by:

- Considering the generic RAOs established by the NYSDEC applicable to the contaminants identified in the RI; or
- By developing Site-specific RAOs where the generic RAOs do not address a verified Site condition.

RAOs are established by:

- Identifying applicable SCGs taking into consideration the current, intended, and reasonably-anticipated future land use for the Site and its surroundings;
- Identifying all contaminants exceeding applicable SCGs, the environmental media impacted by the contaminants, and the extent of impacts to environmental media;
- Identifying all actual or potential public health exposures and/or environmental impacts resulting from the contaminants in environmental media at, or impacted by, the Site; and
- Identifying any proposed site-specific cleanup levels developed as set forth in DER-10.

Remedial alternatives will be developed and an alternative proposed that removes the contamination and/or reduces or eliminates exposure to the contaminants above the SCGs. This will include removal of the source of the contamination, if any, to the extent technically and practically feasible.

Proposed remedial alternatives will be developed based on the following criteria:

- Overall Protectiveness of Public Health and the Environment. This criterion is an evaluation of the ability of each alternative to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced, or controlled through removal, treatment, engineering controls or institutional controls. The alternative's ability to achieve each of the RAOs will be evaluated. This is a threshold criterion and must be satisfied for an alternative to be considered for selection;

- Compliance with Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not an alternative will meet applicable environmental laws, regulations, standards, and guidance. All SCGs for the site will be listed along with a discussion of whether or not the alternative will achieve compliance. For those SCGs that will not be met, a discussion and evaluation of the impacts of each will be provided. This is a threshold criterion and must be satisfied for an alternative to be considered for selection;

- Long-Term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of a remedial alternative after implementation. If contamination remains onsite after the selected alternative has been implemented, the impact of the remaining contamination will be evaluated on the following:

    - Human exposure;

    - Ecological receptors; or

    - Impacts to the environment.

  The evaluation of institutional and/or engineering controls will also be considered as part of this criterion. This and the following criteria are balancing criteria to be used for comparing alternatives, providing the alternatives satisfy the threshold criteria.

- Reduction of Contamination Toxicity, Mobility or Volume through Treatment. The alternative's ability to reduce the toxicity, mobility, and/or volume of site contamination will be evaluated. Preference will be given to alternatives that permanently or significantly reduce the toxicity, mobility, or volume of contamination at the Site;

- Short-Term Impact and Effectiveness. The potential short-term adverse environmental impacts and human exposures during construction and/or implementation of the alternative will be considered. A discussion of how the identified adverse impacts and/or exposures will be controlled and the effectiveness of the controls will be presented. A discussion of engineering controls that will be used to mitigate short-term impacts (i.e. dust control measures) will be provided. The lengths of time needed to implement the alternative and to achieve the remedial objectives will be estimated. Sustainability will also be considered but will not change any of the SCGs;

- Implementability. The technical and administrative feasibility of implementing the alternative will be evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the alternative. For administrative feasibility, the availability of the necessary personnel and material will be evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc. If institutional or engineering controls are necessary for the alternative, their reliability and viability will be evaluated;

- Cost-effectiveness. Capital costs and costs associated with site management, including operation, maintenance, monitoring and reporting costs, will be estimated for each alternative on a net present worth basis. Cost-effectiveness is evaluated by comparing the cost of each alternative to its overall effectiveness (long-term effectiveness, reduction of contamination, and short-term impacts and effectiveness). An assessment will be made as to whether the cost for each alternative is proportional to its overall effectiveness;

- Land Use. The current, intended, and reasonably-anticipated future use of the Site is evaluated when unrestricted use SCGs will not be achieved. This evaluation will include, as applicable, current use, historic and/or recent development patterns, applicable zoning laws and maps, Brownfield opportunity areas, applicable land-use plans formally adopted by the municipality where the Site is located, proximity to residential, commercial, industrial, agricultural, and/or recreational areas, public comments submitted during citizen participation activities, environmental justice concerns, federal or state land-use designations relating to the Site, population growth patterns and projections, accessibility to existing infrastructure, proximity to important cultural and/or natural resources, potential vulnerability of groundwater resources, proximity to floodplains, geology and geography, and current institutional controls applicable to the Site;

- Community Acceptance. This criterion is evaluated after the public review of the remedy selection process as part of the NYSDEC's final selection/approval of a remedy for the Site. Public comments relative to the above criteria will be considered by the NYSDEC after the close of the public comment period. Documentation of public comments received will be consistent with the Citizen Participation Plan for the Site. As such, this criterion will be addressed by the NYSDEC and will not be included in the AA unless public comments relative to the AA are received during the RI or AA processes.

5.2 Development and Evaluation of Alternatives

The following are the main steps in the development and analysis of remedial alternatives to support remedy selection and will be presented in the AA Report:

1. Identify the remedial goals for the Site;

2. Establish RAOs for the Site;

3. Identify general response actions based on the RAOs, including estimates of the volumes/areas of contaminated media. General response actions include non-technology specific categories such as treatment, containment, excavation, extraction, disposal, institutional controls or a combination of these. Where presumptive remedies are available to address the contamination identified, they will be given preference. If

presumptive remedies are applicable to the identified contamination, pursuant to DER-10 the remedy selection process may skip this step (with the exception of estimating volumes/areas of contaminated media) and proceed directly to step 5: assembly of remedial technologies into site-wide alternatives. All applicable general response actions will be developed on a medium-specific basis, similar to the development of RAOs. For each medium addressed, the volumes or areas to be remediated will be identified and characterized with respect to requirements for identified use of the Site, taking into account the chemical and geologic characterization of the Site. Innovative technologies will be considered where available and applicable. During this step, technologies which are not appropriate for the Site due to site-specific factors or constraints will be eliminated from further consideration, with a discussion of the site-specific reasons as appropriate.

4. Identify and Screen Technologies. In this step of the process, technology types (i.e. general categories such as chemical treatment, enhanced biodegradation, thermal destruction, immobilization, capping, dewatering, etc.) appropriate to the site-specific conditions and contamination will be identified for each of the general response actions identified. These technologies will then be screened on a medium-specific basis to identify those that are technically implementable and effective for the Site (can meet the RAOs). Additional information (i.e. site characterization data, pilot tests) may be required to adequately evaluate alternatives and technologies being considered. Those that are not technically implementable will be dropped from further consideration. Technologies that remain will be used in the next step to assemble alternatives.

5. Assemble technologies into Site-wide alternative(s). In this step, the potential technologies will be assembled into media-specific or Site-wide remedial alternatives unless the NYSDEC agrees to limit the number of alternatives to be evaluated. The identified alternatives will be developed and defined to a level of detail that will allow for the estimation of the alternative's cost and for the subsequent detailed analysis of alternatives. Each alternative will be defined with respect to size and configuration of the process options, time for remediation, spatial requirements, options for disposal, substantive technical permit requirements, limitations or other factors necessary to evaluate the alternatives, and beneficial and/or adverse impacts on fish and wildlife resources. At the conclusion of this step remedial alternatives that are not technically implementable or prove not to be cost-effective relative to other alternatives will be eliminated from further consideration.

6. Analyze the alternative(s) pursuant to the criteria in Section 5.1. In this step, each of the identified alternatives will be evaluated against the eight evaluation criteria noted in Section 5.1. Where more than one alternative is developed, a comparative analysis of each alternative to the other alternatives will be prepared using the same eight criteria. The evaluation of engineering and institutional controls, if applicable, will also be considered. The ninth criteria, Community Acceptance, will be evaluated by the NYSDEC after the public comment period.

7. Recommend a remedy for the Site. This final step in the process will identify the recommended remedy and summarize the reasons why, with reference to the criteria in Section 5.1, it is the best alternative for the remediation of the Site.

5.3 AA Report

An AA Report will be prepared to document the development and evaluation of remedial alternatives for the Site. The AA Report will emphasize data analysis and the AA will be performed concurrently and in an interactive fashion with the RI using data gathered during and prior to the RI. The RI data will be used to define the objectives of the remediation, to develop remedial action alternatives, and to undertake an initial screening and detailed analysis of the alternatives.

The AA Report will provide sufficient detail to support the decision-making process for remedy selection at the Site, including the RAOs for the Site, the type and number of alternatives to be evaluated, the recommended remedial alternative's compliance with the criteria identified in Section 5.1, the steps in DER-10 Section 4.3(a) required by the BCP, an evaluation of institutional and engineering controls if applicable, a detailed description of the recommended remedy, and a demonstration that the remedy can achieve the RAOs for the Site, and as detailed above. The AA Report will include the following sections:

- Introduction
- Site description and history
- Summary of RI and exposure assessment
- Remedial goals and RAOs
- Development and analysis of alternatives
    - Assemble technologies into alternatives
    - Evaluation of alternatives with respect to the first eight criteria
    - Evaluation of institutional and engineering controls for the selected remedy, if applicable
- Recommended remedy, including a discussion of why it was recommended.

A Professional Engineer (PE) licensed to practice in New York State will sign and stamp the completed AA Report.

SECTION 6.0
REFERENCES

Advanced Cleanup Technologies. December 1, 2005. *Phase I Environmental Site Assessment, 248 Flatbush Avenue, Brooklyn, New York.*

Advanced Cleanup Technologies. March 16, 2007. *Soil Vapor Contamination (Figure 1), 248 Flatbush Avenue, Brooklyn, New York.*

Arcadis US, Inc. June 16, 2011. *Phase I Environmental Site Assessment, 248 Flatbush Avenue, Brooklyn, New York.*

Arcadis US, Inc. June 16, 2011. *Summary of Phase II Investigation Activities, 248 Flatbush Avenue, Brooklyn, New York.*

New York State Department of Health. October 2006. *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York.*

New York State Department of Environmental Conservation. May 2010. *DER-10 Technical Guidance for Site Investigation and Remediation.*

U.S. Department of the Interior. 1967, Photorevised 1995. Brooklyn, *NY 15' Quadrangle (Map). U.S. Geological Service, National Mapping Division. Reston, VA.*

US Geological Survey. 2001. *Water Table of the Upper Glacial Aquifer on Western Long Island, New York in March-April 2000.*

APPENDIX A

PREVIOUS INVESTIGATION DATA

2005 ACT PHASE I ESA

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

248 Flatbush Avenue
Brooklyn, New York 11217

December 1, 2005

ACT File #: 4071-BKNY

Prepared for:

Mr. David Aronowicz
Cinderella Cleaners & Tailors
248 Flatbush Avenue
Brooklyn, New York 11217

115 Rome Street • Farmingdale, New York 11735 • Tel: 631/293-4992 • Fax: 631/293-4986
1000 7th North Street, Suite B-30 • Liverpool, New York 13088 • Tel: 315/451-9720 • Fax: 315/451-9727
E-mail: advancedcleanuptech.com

CERTIFICATION

Property Location: 248 Flatbush Avenue
Brooklyn, New York 11217

Advanced Cleanup Technologies, Inc. performed a Phase I Environmental Site Assessment on the above-referenced property. The Assessment included a property inspection, research into the historical uses of the property and surrounding land, a review of regulatory agency files pertaining to the property and an interview with the landlord regarding past and present conditions at the property.

The Phase I Assessment was performed to meet the minimum requirements established by ASTM's Standard Practice for Environmental Site Assessments (E 1527-00). The Assessment has also considered other environmental issues such as asbestos, radon and lead which are not covered by the ASTM standard.

The results of the assessment are contained in this report. Based upon this assessment, Advanced Cleanup Technologies, Inc. makes the following conclusions and representations concerning the scope of the assessment and the environmental quality of the property. The Phase I Environmental Site Assessment has revealed the following Recognized Environmental Condition at the subject property

- Suspect asbestos-containing materials located at the subject property (Section 3.2).

We hereby certify that we have no interest, present or contemplated, in the properties inspected and that neither the employment to make the inspection nor the compensation is contingent on the value of the properties. The analyses, opinions and conclusions contained in this report are limited only by any reported assumptions or limiting conditions described herein, and are our personal unbiased professional opinions and conclusions.

We further certify that this inspection was performed in conformity with the ASTM Standard and the scope outlined in this report. This inspection report accurately reflects current federal, state and local guidelines.

Dated: December 1, 2005

x William K. Sisco/p
By: William K. Sisco
Senior Project Manager

x Paul Stewart/p
By: Paul Stewart
President

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FIGURES

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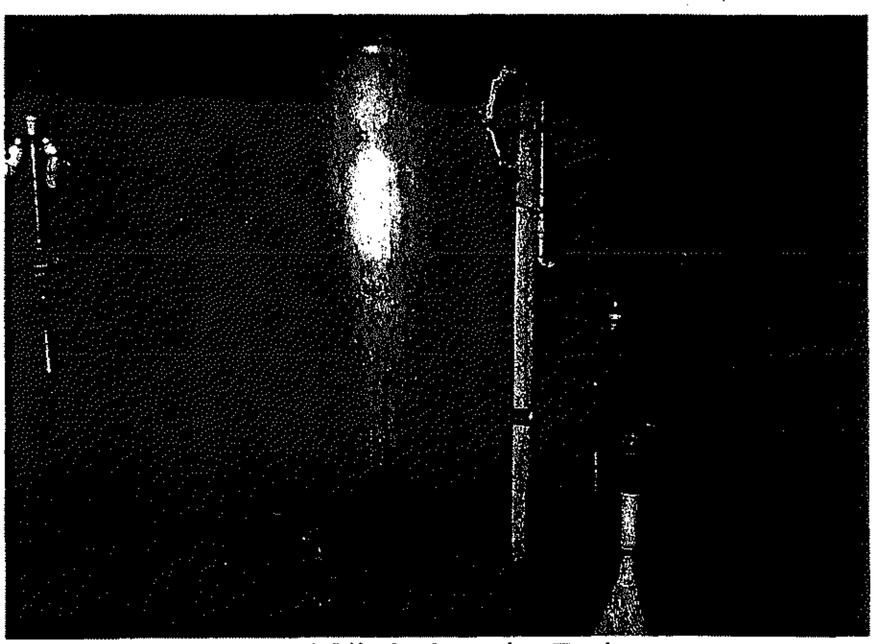
From USGS 7.5 Minute Topographic Map Of
Brooklyn, New York Quadrangle

N

Figure 1	
Locational Diagram	
Job No. 4071-BKNY	Date: 11/29/05
Dwg. No. 4071-01	Scale: 1"=2,000'
Drawn By: Steven Walls	Appr. By: William Sisco
Advanced Cleanup Technologies	

Photograph 1: 248 Flatbush Avenue, Brooklyn, New York



Photograph 2: Inactive Fuel Oil Fired Heating Equipment

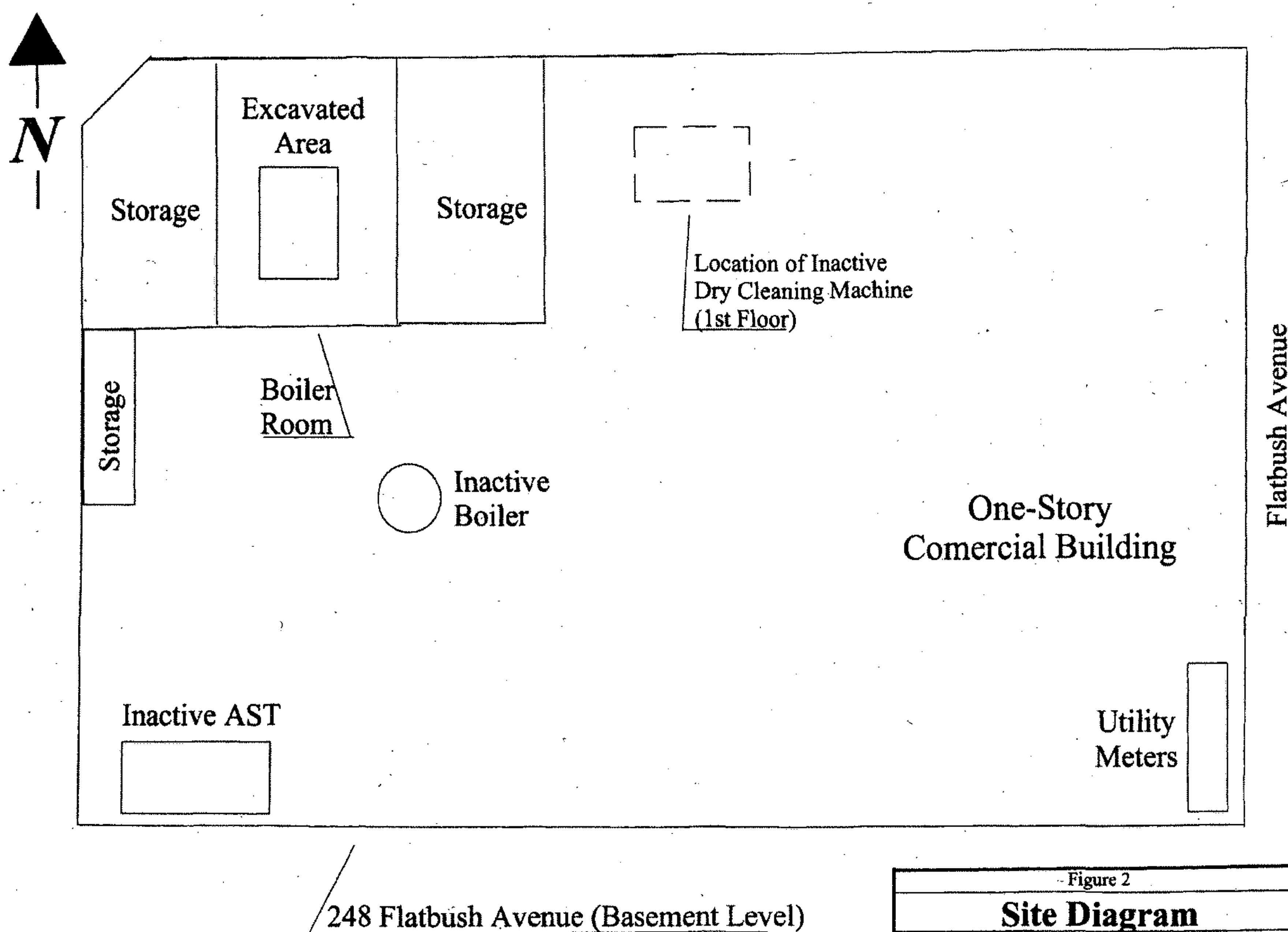


Figure 2

Site Diagram	
Job No. 4071-BKNY	Date: 11/29/05
Drawing No. 4071-02	Scale: NTS
Drawn By: William Sisco	Approved By: Paul Stewart

Advanced Cleanup Technologies, Inc.

1.0 INTRODUCTION AND SCOPE OF ASSESSMENT

Advanced Cleanup Technologies, Inc. (ACT) was retained to perform a Phase I Environmental Site Assessment of the property located at 248 Flatbush Avenue, Brooklyn, New York 11217. The Assessment was performed to meet or surpass the industry standard established by ASTM's Standard Practice for Environmental Site Assessments (E 1527-00). The purpose of the Assessment was to identify any Recognized Environmental Conditions at the property. As defined by the ASTM, a Recognized Environmental Condition is the presence of any hazardous substances or petroleum products on real estate under conditions that indicate an existing release, a past release, or a material threat of a release.[1]

The Assessment consisted of a visual inspection of the premises, interviews with property representatives regarding past and present conditions at the property, research into historical uses of the property and surrounding land and a review of regulatory agency files pertaining to the property. The Assessment also included an overview of the site's hydrogeologic setting and an evaluation of environmental risks associated with asbestos, radon and lead.

A site inspection was performed by Caroline Cadalso of ACT on November 9, 2005. The owner of the property, Mr. David Aronowicz, provided access and information regarding the subject property. Mr. Aronowicz has owned the property for approximately 29 years. The inspection consisted of the following activities:

- A visual examination of the interior and exterior of the premises;
- An evaluation of land usage in the area surrounding the site;
- Photography of the site.

All relevant New York City agencies were contacted for information pertaining to this property, including:

- Department of Buildings;
- Department of Health;
- Department of Environmental Protection;
- Bureau of Fire Prevention.

Databases of environmental information maintained by Federal and State agencies were also searched for known sources of environmental contamination at the site and its vicinity.

1 American Society for Testing and Materials Practice E 1527-00, Sec. 3.3.28.

2.0 PROPERTY DESCRIPTION

2.1 Site Vicinity

The subject property, 248 Flatbush Avenue, is located in a residential and commercial area in the northern portion of the borough of Brooklyn in New York City. A Locational Diagram showing the site and its immediate vicinity is provided as Figure 1. The property is located along the west side of Flatbush Avenue.

Residential apartment buildings and residential apartment buildings with commercial units on the ground floor are located to the north east and west of the subject property. A one-story commercial building is located to the south of the subject property.

The topography of the area is generally level. The vicinity of the subject property is approximately 71 feet above mean sea level[2]. The ground surface in the vicinity of the subject property is covered with asphalt and concrete pavement. The subsurface beneath the subject property consists of unconsolidated sand and gravel layers from the ground surface to bedrock at approximately 400 feet below ground surface (bgs)[3]. The major aquifer system located beneath the site is the Upper Glacial aquifer of the Pleistocene series. The aquifer is separated from the bedrock by the Raritan confining unit. Regional groundwater flow in the vicinity of the site is estimated to be toward the northwest.

2.2 Site Construction Details

The subject property consists of a one-story commercial building which contains one commercial unit, Cinderella Cleaners (Photograph 1). The building contains a full basement. The footprint of the building is approximately 2,310 square feet in area and encompasses the entire property. Site Diagram is provided as Figure 2.

The electrical and water services enter the building along the eastern property boundary. The utility meters are located in the basement of the building. No natural gas service is provided to the property. The property is connected to the New York City municipal sewer system.

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2 USGS 7.5 Minute Series Topographic Map, Brooklyn, New York Quadrangle

3 From Hydrogeologic Framework Of Long Island, New York by Smolensky, D.A., Buxton, H.T., and Shernoff, P.K., 1989.

The building was formerly provided heat via fuel oil fired heating equipment located in the boiler room of the basement (Photograph 2). The heating equipment has been disconnected and removed from the boiler room. According to Mr. Aronowicz, the heating equipment was dismantled in April of 2005. No active heating equipment was identified in the building. No stains, odors or evidence of spills was identified in the vicinity of the inactive heating equipment.

2.3 Building Interior

The building contains one commercial unit, Cinderella Cleaners, which utilizes the building for dry cleaning. The interior of the building consists of tile floors and painted plaster and wood paneled walls. Ceilings consist of suspended ceiling tiles.

The interior of the first floor contains clothes storage areas and a check out counter (Photographs 3 and 4). A fourth generation dry cleaning machine is also located on the first floor of the building (Photograph 5). According to Mr. Aronowicz, this machine was installed in 1999 and was disconnected in May of 2005. The current dry cleaning operations consist of drop off service only. No dry cleaning operations are currently performed at the property.

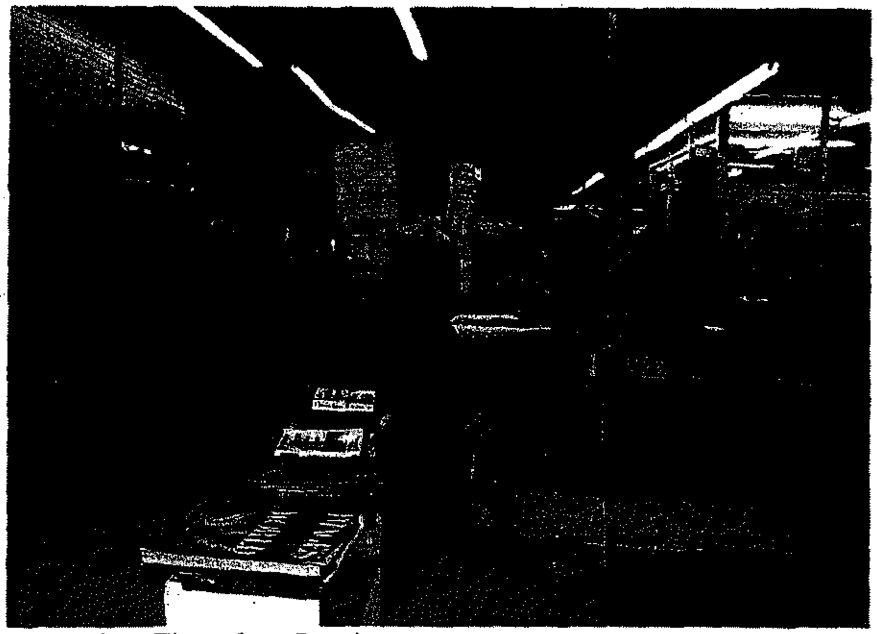
The basement contains the utility meters, inactive heating equipment and storage areas. One floor drain was identified at the bottom the stairwell which accesses the basement from the sidewalk. This drain discharges to the municipal sewer. No stains, odors or evidence of spills were identified in the vicinity of the floor drain.

An excavated area was identified in the boiler room located in the basement (Photograph 6). This excavated area will be further-discussed in Section 3.1 of this report.

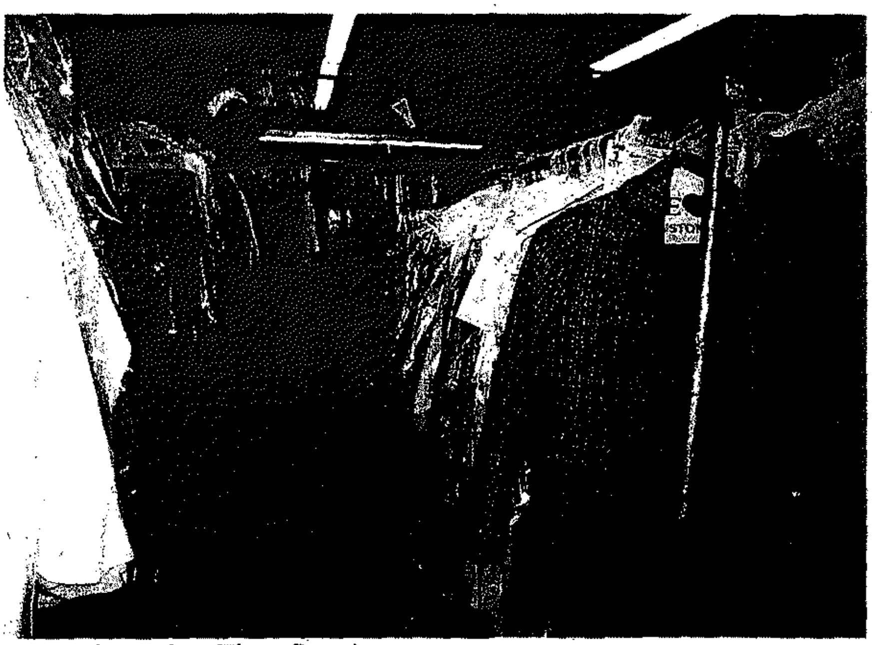
A storage room in the northwest portion of the basement contained three containers which formerly stored filters from the dry cleaning machine. These containers were empty. No stains, odors or evidence of spills were identified in the vicinity of these containers or throughout this storage room. Another basement storage room housed a container of acetic acid, a container of herbicide and a container of boiler treatment chemicals. No stains, odors or evidence of spills were identified in the vicinity of these containers or throughout this storage room.

2.4 Building Exterior

The exterior of the building is constructed of concrete block and brick masonry. The building has a flat, tar roof. The main entrance to the building is located along the eastern exterior wall, facing Flatbush Avenue. A concrete sidewalk separates the building from Flatbush Avenue. No exterior storm drains were identified at the property.



Photograph 3: First Floor Interior



Photograph 4: First Floor Interior

Photograph 5: Inactive Fourth Generation Dry Cleaning Machine

Photograph 6: Excavated Area in the Basement Boiler Room

The building disposes of its solid waste via curbside service provided by the New York City Department of Sanitation. Solid waste is stored in garbage cans along the eastern side of the building. No evidence of hazardous waste was identified in the solid waste. No stains, odors or evidence of spills was observed in the vicinity of the solid waste or throughout the exterior of the building.

3.0 FINDINGS AND RESULTS OF THE ASSESSMENT

3.1 Previous Environmental Reports

ACT conducted a Limited Phase II Environmental Site Assessment of the subject property on April 5, 2005 to determine whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the subject property. Based on the results of the Limited Phase II Environmental Site Assessment, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The vertical limit of the impacted soil appeared to be no more than 9 feet below the basement floor. A copy of the previous environmental report is presented in Appendix A.

On July 8, 2005, ACT installed soil boring/temporary well SB-01A in the boiler room to determine whether ground water beneath the boiler room had been impacted. Ground water was encountered at 52.21 feet below the basement floor. Laboratory analysis of the soil samples from SB-01A did not show any Volatile Organic Compounds (VOCs) above the laboratory method detection limits. Analytical results for the ground water sample indicated that the VOCs Tetrachlorethene ("Perc") and c-1,2-Dichlorothene were detected slightly above regulatory standards.

Since the source area was reportedly located immediately below the former boiler, the most elevated ground water contaminant levels were expected at SB-01A. Due to the slight exceedances of regulatory standards at SB-01A, it was determined that the release was limited in extent. The risk of exposure was also determined to be low due to the dense, silty soils and considerable depth of the ground water beneath the subject property.

On September 13th, 2005, ACT supervised the excavation of contaminated soil from the boiler room by Action Remediation. Upon removal of the brick floor, a vacuum truck was utilized to remove the soil to a depth of 5 feet below the basement floor. ACT screened the soil for organic vapors continuously with a Photoionization Detector (PID). Once the excavation was completed, ACT collected five post-excavation endpoint samples from the sidewalls and bottom of the excavation.

Laboratory analytical results of the endpoint samples indicated traces levels of VOCs considerably below regulatory standards. A total of 4.4 tons of soil was removed from the subject property and transported to Clean Earth of Philadelphia, Inc. Based upon the results of the Limited Phase II Environmental Site Assessment, the Supplemental Investigation, and the Remedial Activities, ACT concluded that no further remedial action was deemed necessary. These results were presented in ACT's November 29, 2005 Closure Report. A copy of this report is presented in Appendix A.

3.2 Asbestos

A visual inspection of the property for asbestos-containing materials (ACM) such as pipe and boiler insulation, ceiling tiles and floor tiles was conducted. Approximately 5,000 square feet of suspect asbestos-containing floor tile and 2,000 square feet of suspect asbestos-containing ceiling tile were identified throughout the first floor of the building. No additional suspect asbestos-containing materials were identified at the property.

The suspect asbestos-containing floor tile and ceiling tile were identified in good condition and have a low potential for disturbance. Therefore, the suspect asbestos-containing materials have a low potential for discharge in their current state. These findings comprise only a preliminary inspection of the subject property for ACM and should not be interpreted as a formal asbestos survey. All Federal, State and local regulations should be followed with respect to asbestos-containing materials if renovations or demolition are to be performed at the property.

3.3 Hazardous Materials

A visual inspection of the property was conducted for evidence of potential hazardous material contamination. No areas of stained or discolored ground, stressed vegetation or excavated areas were observed anywhere on the property. No indication of previous environmental investigations, such as groundwater monitoring wells, was observed at the property or any adjoining properties. No pits, ponds, or lagoons indicative of hazardous waste disposal were identified at the property. No 55 gallon drums were identified at the subject property.

3.4 Storage Tanks

An abandoned aboveground storage tank is located in the southern portion of the basement (Photograph 7). The tank formerly provided fuel oil for the now inactive heating equipment. The aboveground tank was abandoned at the property by Action Remediation Inc. (Action) on October 12, 2005. The tank abandonment documents are provided in Appendix B.

Photograph 7: Abandoned Aboveground Fuel Oil Storage Tank

The tank abandonment documents include an affidavit from Action to the New York City Fire Department dated October 14, 2005. The affidavit indicates that a 1,000 gallon aboveground #2 oil storage tank was abandoned at the property. The tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules and regulations. A waste manifest included in the documents indicates that 40 gallons of oil/water tank bottom was removed from the property.

No stains, odors or evidence of spills was identified in the vicinity of the abandoned aboveground storage tank. No floor drains were identified in the vicinity of the abandoned aboveground storage tank.

The fill pipe associated with the abandoned aboveground storage tank was identified in the sidewalk to the west of the building and is filled with cement. The former vent pipe associated with the abandoned aboveground storage tank has been removed from the property. No stains, odors or evidence of spills was identified in the vicinity of the fill pipe.

This abandoned aboveground storage tank has been abandoned in accordance with New York City rules and regulations and does not appear to be impacting the environmental quality of the subject property.

No additional aboveground storage tanks were identified at the property. No evidence of underground storage tanks was identified at the property. No evidence of former underground storage tanks, such as asphalt or concrete patches, was identified at the property.

The New York City Bureau of Fire Prevention (NYCBFP) tank and violation information has not been received at the time of this report. This information will be forwarded as soon as it has been received and evaluated.

3.5 Radon

The New York State Department of Health maintains records of average radon levels for New York State based upon county. The average level for the county of the Brooklyn is 1.9 picoCuries per Liter (pCi/L). This level is considered to be within the normal background range. The United States Environmental Protection Agency (USEPA) standard for radon is 4.0 pCi/L.[4]

[4] New York State Department of Health Basement Radon Screening Data, March 1999.

3.6 Lead In Paint

An inspection of the property for chipped, peeling or cracking paint was performed. No areas of chipped, peeling or deteriorating paint were identified at the property. Therefore, a paint sample was not obtained.

The building at the subject property was constructed prior to 1978. Lead content in paints manufactured and distributed prior to 1978 were not Federally regulated. Therefore, paints applied to the building surfaces prior to 1978 were probably lead based. As previously-mentioned, the painted surfaces at the building were identified in good condition.

These findings comprise only a preliminary inspection for lead-based paint at the subject property and should not be interpreted as a formal lead-based paint inspection. All Federal, State and local regulations should be followed with respect to lead-based paint if renovations or demolition activities affecting painted surfaces are to be performed.

3.7 Drinking Water Quality

The subject property is supplied water by New York City. The city obtains its water supply from reservoirs located to the north and northwest of the city. The quality of this water is monitored by New York City for organics and inorganics, including lead, in accordance with Federal law. New York City must maintain lead concentrations at less than 15 micrograms per liter.[5]

3.8 Polychlorinated Biphenyls (PCB's)

No electrical transformers containing substantial amounts of PCB-contaminated oil or hydraulic fluid were observed at the property. The building does not contain any hydraulic elevators. No equipment which could contain substantial amounts of PCB-contaminated oil was identified at the property.

4.0 PRIOR USE INVESTIGATION

In order to determine the prior uses of the property, all available regulatory agency documents and Fire Insurance Map information regarding the subject property were obtained and reviewed. No historical aerial photographs were readily accessible in the time frame of this assessment. Appendix C contains copies of the regulatory agency documents.

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5. USEPA Safe Drinking Water Act, 42 USC 300, et. seq. (1982).

The New York City Department of Buildings file contains a Property Profile Overview (PPO) of the subject property. The PPO indicates the building was constructed during 1921. The PPO indicates the property address is 248, 248A and B Flatbush Avenue. The property contains 15 actions and 5 boiler and construction violations. These actions and violations should not impact the environmental quality of the subject property.

The Tax Map number for the property is Block 936, Lot 12. The building is classified as a K1-Store Building with no landmark status. The Environmental Control Board (ECB) reports 3 open construction and boiler violations for the subject property. These violations should not impact the environmental quality of the subject property.

The New York City Department of Health and the Department of Environmental Protection have not responded to our search requests at the time of this report. This information will be forwarded as soon as it has been received and evaluated.

Fire Insurance Maps for the years 1926, 1951, 1982 and 1988 were obtained and reviewed by ACT at Cornell University Library, Ithaca, New York. Appendix D contains copies of the Fire Insurance Maps.

The 1926 Map indicates the subject property as containing the current one-story commercial building. The property address is 248 A and B Flatbush Avenue. The adjacent properties to the north, east and west contain residential and commercial buildings. The property to the south contains a commercial building. The surrounding areas contain residential and commercial buildings.

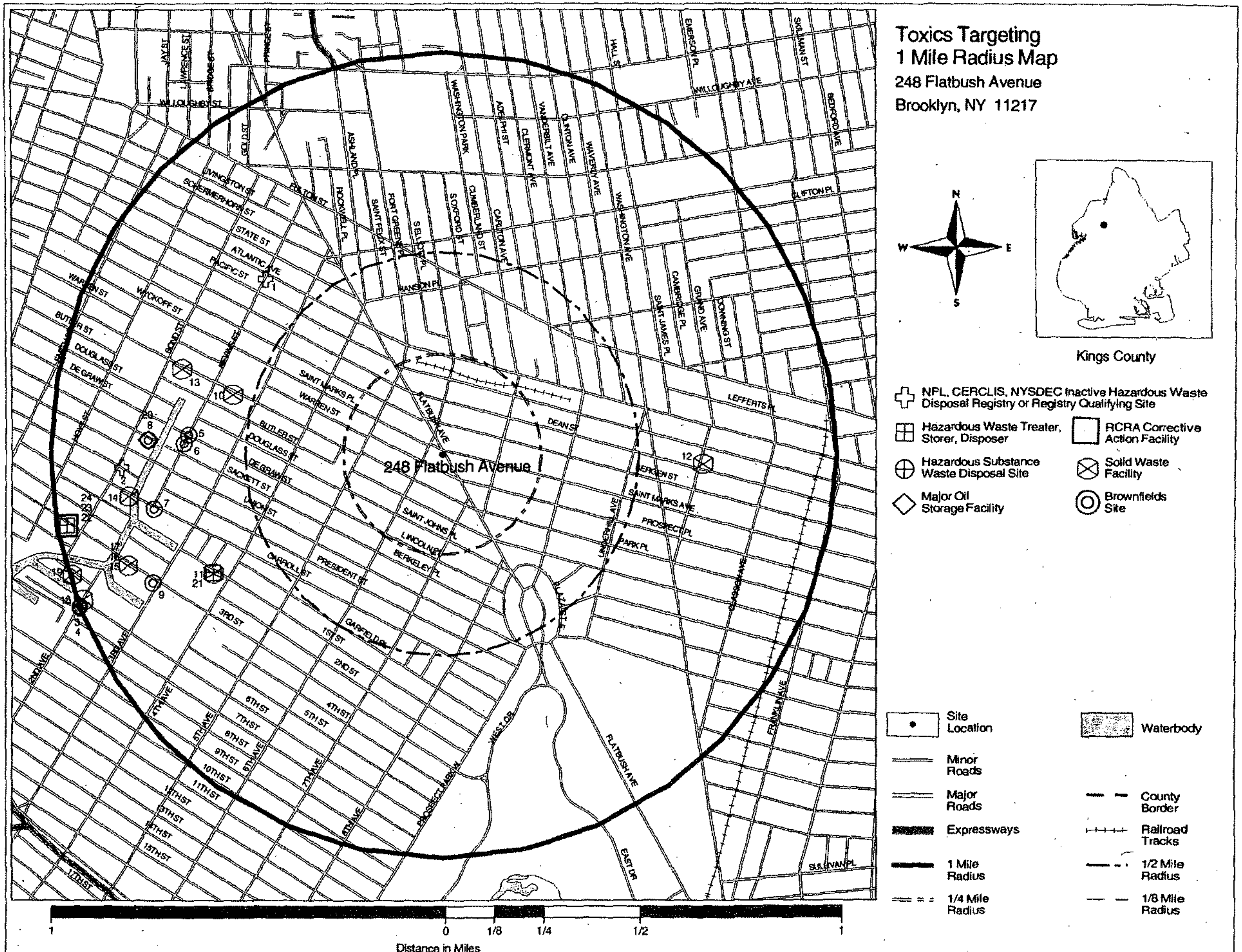
The 1951, 1982 and 1988 Maps indicate the subject property, adjacent properties and surrounding areas as unchanged from the 1926 Map.

The review of the regulatory agency documents and Fire Insurance Maps indicate that the current commercial building at the property was constructed during 1921. The property has been utilized for commercial purposes since development. No evidence of hazardous material usage, storage or disposal at the subject property is present in these records.

5.0 NEIGHBORHOOD HAZARDOUS WASTE ACTIVITY REVIEW

In an effort to determine the potential impact from hazardous waste activities at the subject property and neighboring properties, a review of information on waste sites within one mile of the subject property was conducted. Figures 3 and 4 provide locations of plotted sites. Appendix E contains the results of the database searches. The review included a search of the following Federal data sources:

Figure 3


Toxics Targeting
1 Mile Radius Map
248 Flatbush Avenue
Brooklyn, NY 11217
N
S
W
E
Kings County
248 Flatbush Avenue
NPL, CERCLIS, NYSDEC Inactive Hazardous Waste Disposal Registry or Registry Qualifying Site
Hazardous Waste Treater, Storer, Disposer
RCRA Corrective Action Facility
Hazardous Substance Waste Disposal Site
Solid Waste Facility
Major Oil Storage Facility
Brownfields Site
Site Location
Waterbody
Minor Roads
Major Roads
County Border
Expressways
Railroad Tracks
1 Mile Radius
1/2 Mile Radius
1/4 Mile Radius
1/8 Mile Radius
1
0
1/8
1/4
1/2
1
Distance in Miles

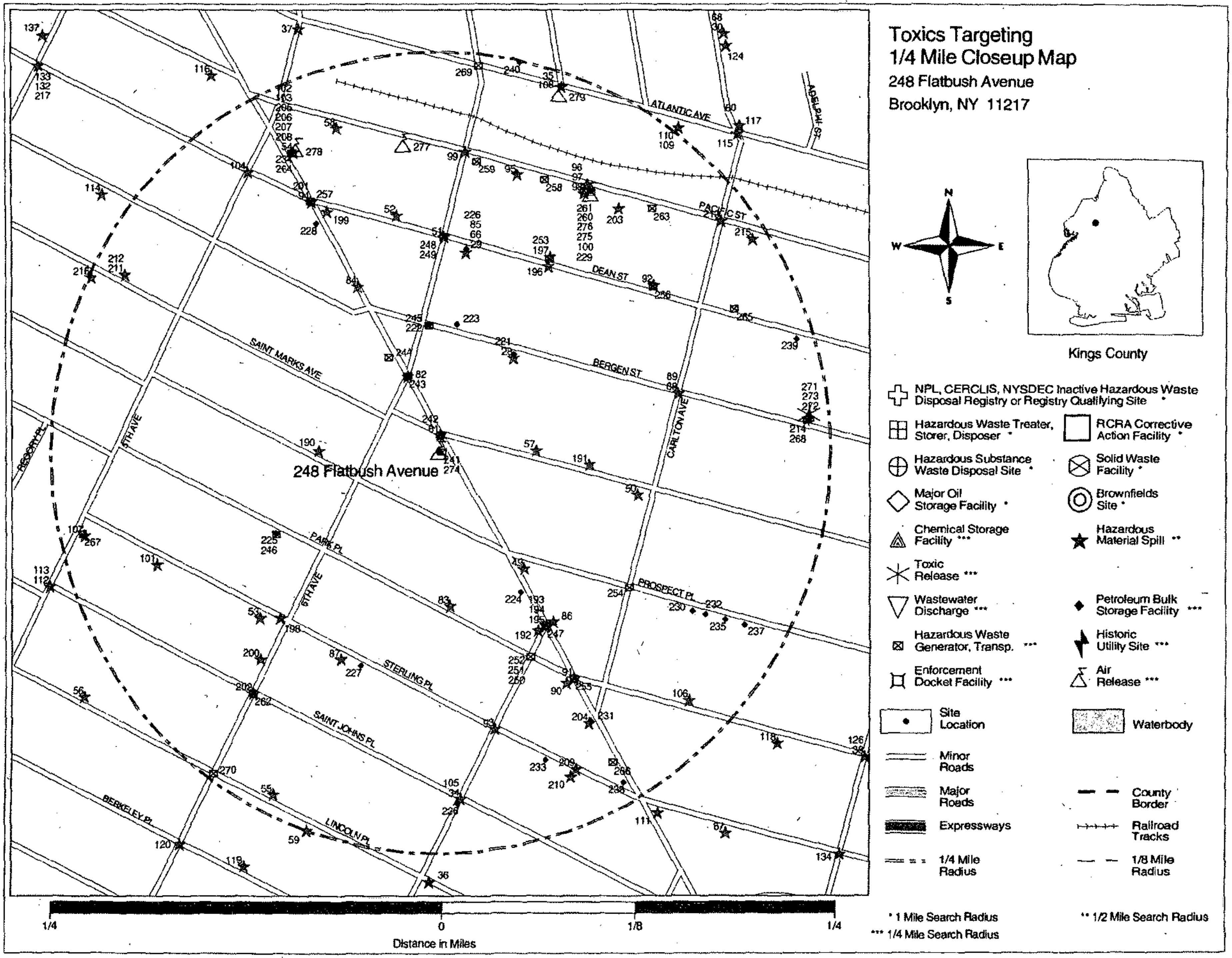

Toxics Targeting
1/4 Mile Closeup Map
248 Flatbush Avenue
Brooklyn, NY 11217
Kings County
N
S
E
W
248 Flatbush Avenue
ATLANTIC AVE
PACIFIC ST
DEAN ST
BERGEN ST
SAINT MARKS AVE
PARK PL
PROSPECT PL
STERLING PL
SAINT JOHNS PL
LINCOLN PL
BERKELEY PL
5TH AVE
6TH AVE
CARLTON AVE
ADELPHI ST
NPL, CERCLIS, NYSDEC Inactive Hazardous Waste Disposal Registry or Registry Qualifying Site *
Hazardous Waste Treater, Storer, Disposer *
RCRA Corrective Action Facility *
Hazardous Substance Waste Disposal Site *
Solid Waste Facility *
Major Oil Storage Facility *
Brownfields Site *
Chemical Storage Facility ***
Hazardous Material Spill **
Toxic Release ***
Wastewater Discharge ***
Petroleum Bulk Storage Facility ***
Hazardous Waste Generator, Transp. ***
Historic Utility Site ***
Enforcement Docket Facility ***
Air Release ***
Site Location
Waterbody
Minor Roads
Major Roads
Expressways
County Border
Railroad Tracks
1/4 Mile Radius
1/8 Mile Radius
1/4
0
1/8
1/4
Distance in Miles
* 1 Mile Search Radius
** 1/2 Mile Search Radius
*** 1/4 Mile Search Radius

Figure 4

- National Priorities List (NPL);
- Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS);
- Resource Conservation and Recovery Act Information System (RCRIS);
- Emergency Response and Notification System (ERNS);

In addition, the review included a search of the following State data sources:

- New York State Department of Environmental Conservation (NYSDEC) listing of Leaking Underground Storage Tanks and Spills List;
- NYSDEC Solid Waste Management Facilities Database;
- NYSDEC listing of Inactive Hazardous Waste Disposal Sites or State equivalent NPL;
- NYSDEC listing of Inactive Hazardous Waste Disposal Site Study or State equivalent CERCLIS;
- NYSDEC listing of Petroleum Bulk Storage (PBS) Facilities.

The NPL and CERCLIS databases are maintained by the United States Environmental Protection Agency (USEPA) and contain records for each of the hazardous waste facilities nominated or chosen for cleanup under Superfund. The NPL database was searched for sites within a radius of 1 mile from the subject property. The subject property is not identified on the NPL database. No NPL sites are identified within 1 mile of the subject property.

The CERCLIS database was searched for sites within a radius of 1 mile from the subject property. The subject property is not identified on the CERCLIS database. Two CERCLIS sites are identified in the database within 1 mile of the subject property. The closest site is located approximately 4,298 feet west of the subject property. This site and the remaining site should not impact the environmental quality of the subject property.

The NYSDEC Solid Waste Landfill Facility database (SWLF) includes properties which are active solid waste disposal sites. The SWLF database was searched for sites within a radius of 1 mile of the subject property. The subject property is not identified on the SWLF database. A total of 10 SWLF sites are identified in the database within 1 mile of the subject property. The closest site is located approximately 2,911 feet west-northwest of the subject property. This site and the remaining sites should not impact the environmental quality of the subject property.

The RCRIS database includes listings of properties which are considered either Hazardous Waste Treatment, Storage or Disposal (TSD) facilities or Hazardous Waste Generators/Transporters. The subject property is not listed in the RCRIS TSD database. Three RCRIS TSD sites are identified within 1 mile of the subject property. The closest site is located approximately 3,430 feet west-southwest of the subject property. This site and the remaining sites should not impact the environmental quality of the subject property.

The RCRA database includes listings of properties which are under going Corrective Action. The subject property is not listed in the Corrective Action database. One RCRA Corrective Action site is identified within 1 mile of the subject property. This site is located approximately 5,138 feet west of the subject property. This site should not impact the environmental quality of the subject property.

The subject property is listed as an RCRIS Hazardous Waste Generator/Transporter. The subject property, Cinderella Cleaners at 248 Flatbush Avenue, is identified as Site #241. The facility identification number is NYD980789564. The property generated 585 pounds of spent halogenated solvents in 2004. No violations are identified for the subject property.

A total of 29 additional RCRIS Hazardous Waste Generator/Transporter sites are identified within ¼ mile of the subject property. The closest site is located approximately 62 feet north of the subject property. These Hazardous Waste Generator/Transporter sites should not impact upon the environmental quality of the subject property.

The ERNS database is a Federal listing of properties which emergency responses were made to in reference to hazardous waste. The ERNS database was searched for the subject property. The subject property is not listed in the ERNS database.

The NYSDEC Spills and Leaking Underground Storage Tank (LUST) lists were searched for all reported spills within ½ mile of the subject property. The subject property is not listed in the databases as containing a Spill or LUST. A total of 196 Spills or LUSTs have occurred within ½ mile of the property. The closest active site is located approximately 401 feet northeast of the subject property and has impacted the soil. This site and the remaining active sites should not impact upon the environmental quality of the subject property.

The NYSDEC publication of Hazardous Substance Waste Disposal Sites in New York State, dated May 2000, contains a listing of all suspected properties and facilities in New York State that have been identified as possibly containing toxic or hazardous wastes and/or contamination in various forms. The subject property is not identified in the listing. One Hazardous Substance Waste Disposal site is identified in the database within 1 mile of the subject property. This site is located approximately 5,275 feet west-southwest of the subject property. This site should not impact the environmental quality of the subject property.

The NYSDEC publication of Inactive Hazardous Waste Disposal Sites in New York State, dated June 2003, contains a listing of all properties and facilities in New York State that have been identified as containing toxic or hazardous wastes and/or contamination in various forms. The subject property is not identified in the database. One Inactive Hazardous Waste Disposal site is identified in the database within 1 mile of the subject property. This site is located approximately 3,304 feet northwest of the subject property. This site should not impact the environmental quality of the subject property.

The NYSDEC listing of Petroleum Bulk Storage (PBS) facilities was searched for any listings within ¼ mile of the subject property. The subject property is not identified in the PBS database. A total of 20 PBS facilities are identified within ¼ mile of the property. None of these sites should impact upon the environmental quality of the property.

The NYSDEC Air Discharge facility database was searched for any listings within ¼ mile of the subject property. The subject property, Cinderella Cleaners, was identified in the database as an operating facility with a potential uncontrolled emission of less than 100 tons per year of tetrachloroethylene. The property is listed as in compliance. Operations that would discharge air emissions no longer are performed at the subject property. This listing should not impact the environmental quality of the subject property.

A total of 5 additional NYSDEC Air Discharge facilities are identified within ¼ mile of the property. None of these sites should impact upon the environmental quality of the property.

6.0 CONCLUSIONS

The results of the Phase I Environmental Site Assessment are contained in this report. Based upon this assessment, Advanced Cleanup Technologies, Inc. makes the following conclusions and representations concerning the scope of the assessment and the environmental quality of the property. The Phase I Environmental Site Assessment has revealed the following Recognized Environmental Condition at the subject property:

- Suspect asbestos containing materials located at the subject property (Section 3.2).

Except for this issue, no further assessment work is necessary in order to evaluate the environmental condition of the property.

7.0 RECOMMENDATIONS

Advanced Cleanup Technologies makes the following recommendation with respect to the above Recognized Environmental Condition at the property:

Suspect Asbestos-Containing Materials

An operation and maintenance (O & M) program should be instituted at the subject property in order to monitor the suspect asbestos-containing floor tiles and ceiling tiles for any future degradation. This O & M program can be performed by the maintenance staff of the building and can be instituted for approximately $500.00. These findings comprise only a preliminary inspection of the subject property for asbestos-containing materials and should not be interpreted as a formal asbestos survey. All Federal, State and local regulations should be followed with respect to asbestos-containing materials if renovations or demolition are to be performed at the property.

8.0 EXCLUSIONS AND DISCLAIMER

The purpose of this investigation was to assess the potential environmental liabilities at the subject site with respect to data which Advanced Cleanup Technologies, Inc. has accumulated during the Phase I Environmental Site Assessment. The conclusions presented in this report are based solely on the observations of the site at the time of the investigation. Data provided, including information provided by others, was utilized in assessing the site conditions. The accuracy of this report is subject to the accuracy of the information provided. Advanced Cleanup Technologies, Inc. is not responsible for areas not seen or information not collected. This report is given without a warranty or guarantee of any kind, expressed or implied. Advanced Cleanup Technologies, Inc. assumes no responsibility for losses associated with the use of this report.

APPENDIX A

COPY OF CLOSURE REPORT

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS

CLOSURE REPORT

248 Flatbush Avenue
Brooklyn, New York

November 29 2005

ACT File #: 4071-BKNY

Prepared for:

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Cinderella Cleaners & Tailors
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1.0 INTRODUCTION

1.1 Site Description

The subject property, known as 248 Flatbush Avenue, is located in a residential and commercial area in the western portion of the borough of Kings in New York City. The property is located at the west side of Flatbush Avenue. The site is approximately 5,000 square feet in area and is currently occupied by Cinderella Dry Cleaners. A Locational Diagram showing the site and its immediate vicinity is provided as Figure 1.

1.2 Previous Environmental Investigations

ACT completed a Limited Phase II Environmental Site Assessment on April 5, 2005 to determine whether a suspect historical leak in the basement boiler room impacted the environmental quality of the site. The scope of work was based upon a preliminary inspection of the site on February 7, 2005 and interviews with property representatives. Figure 2 shows the locations of the soil borings at the site. A copy of the previous environmental report is found in Appendix A.

Based on the results of the Limited Phase II Assessment, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The vertical limit of the impacted soil appeared to be no more than 9 feet below the basement floor.

On July 8, 2005, ACT installed soil boring/temporary well SB-01A in the boiler room to determine whether ground water was impacted by the identified soil contamination, as indicated in

Figure 2. The soil boring was installed and continuously sampled from the basement floor to a depth of 10 feet using a portable hydraulic unit with a percussion hammer in combination with five foot macro samplers containing acetate liners. Soil consisted of brown, silty fine sand and exhibited no measurable organic vapor readings with a Photoionization Detector (PID). In addition, no visual or olfactory evidence of contamination was noted in the soil.

Soil samples from 0 to 2 feet and 8 to 10 feet below the basement floor were transmitted under chain of custody to Environmental Testing Laboratories, Inc. (ETL, ELAP # 10969) for laboratory analysis of Volatile Organic Compounds (VOCs) by EPA Method 8260. In addition, a composite sample from 0 to 10 feet was submitted for waste classification parameters. The results for the analysis of the discrete soil samples are summarized in Table 1. The laboratory reports are contained as Appendix B. Analytical results for the two discrete soil samples indicate the absence of any VOCs in the soil samples above laboratory method detection limits.

A temporary monitoring well was installed to intersect the water table at the location of SB-01A.. Depth to ground water was gauged with an oil/water interface probe extended down the temporary well casing. Ground water was encountered at 52.21 feet below the basement floor. No visual or olfactory evidence of contamination was noted in the ground water. An unfiltered ground water sample was collected from the temporary well after purging it of three well volumes of ambient ground water. The purging and sample collection was conducted through the use of a stainless-steel check valve connected to polyethylene tubing.

The ground water sample from SB-01A was transmitted under chain of custody to ETL for analysis of VOCs via EPA Method 8260. The results for the analysis of the ground water sample are summarized in Table 2. The ground water quality data were compared to NYSDEC Division of Water Technical Operational Guidance Series (TOGS) 1.1.1, June 1998, "Ambient Water Quality Standards and Guidance Values." The laboratory reports are contained in Appendix B.

Analytical results for the ground water sample indicate that the VOCs Tetrachlorethene and c-1,2-Dichlorothene were detected slightly above the regulatory standards. Although Acetone was also detected at an elevated concentration, this VOC is typically associated with laboratory contamination and does not appear to be related to the site.

The highest concentrations of chlorinated VOCs in ground water would be expected at this sampling location since the sample was collected directly below the source area. The low level of chlorinated VOCs at this sampling location is also indicative of a limited release. The risk of exposure is also low due to the dense, silty soils and considerable depth of the ground water beneath the site.

2.0 CLOSURE ACTIVITIES

2.1 Excavation of Contaminated Soil

On September 13th, 2005, ACT principal supervised the excavation of contaminated soil from the boiler room, as indicated in Figure 2. Appendix C provides photographs of the excavation.

The brick floor was first removed by laborers and then a vacuum truck was utilized to remove the soil to a depth of 5 feet below the basement floor and place it into a lined rolloff container on the street. Excavated soil was continuously screened utilizing a hand held PID. All soil samples had background (0.0 ppm) PID readings and appeared visually clean. Once the excavation was completed, ACT personnel proceeded to collect five post-excavation endpoint samples from the sidewalls and bottom of the excavation, as indicated in Figure 2.

Endpoint samples EP-1 through EP-5 were transmitted under chain of custody to ETL for analysis of VOCs by EPA Method 8260. The analytical results were compared to the Recommended Soil Cleanup Objectives (RSCOs) for VOCs provided in the NYSDEC TAGM, HWR-94-4046, revised December 2000. The results for the analysis of the endpoint samples are summarized in Table 3. The laboratory reports are contained as Appendix B.

As indicated in Table 3, traces of Acetone considerably below its RSCO were detected in samples EP-02, EP-3, EP-04, and EP-05. No VOCs were detected in endpoint sample EP-1. As previously discussed, Acetone is a common laboratory contaminant.

A total of 4.4 tons of soil were removed from the site and transported to Clean Earth of Philadelphia, Inc. Copies of the waste manifests are provided in Appendix D.

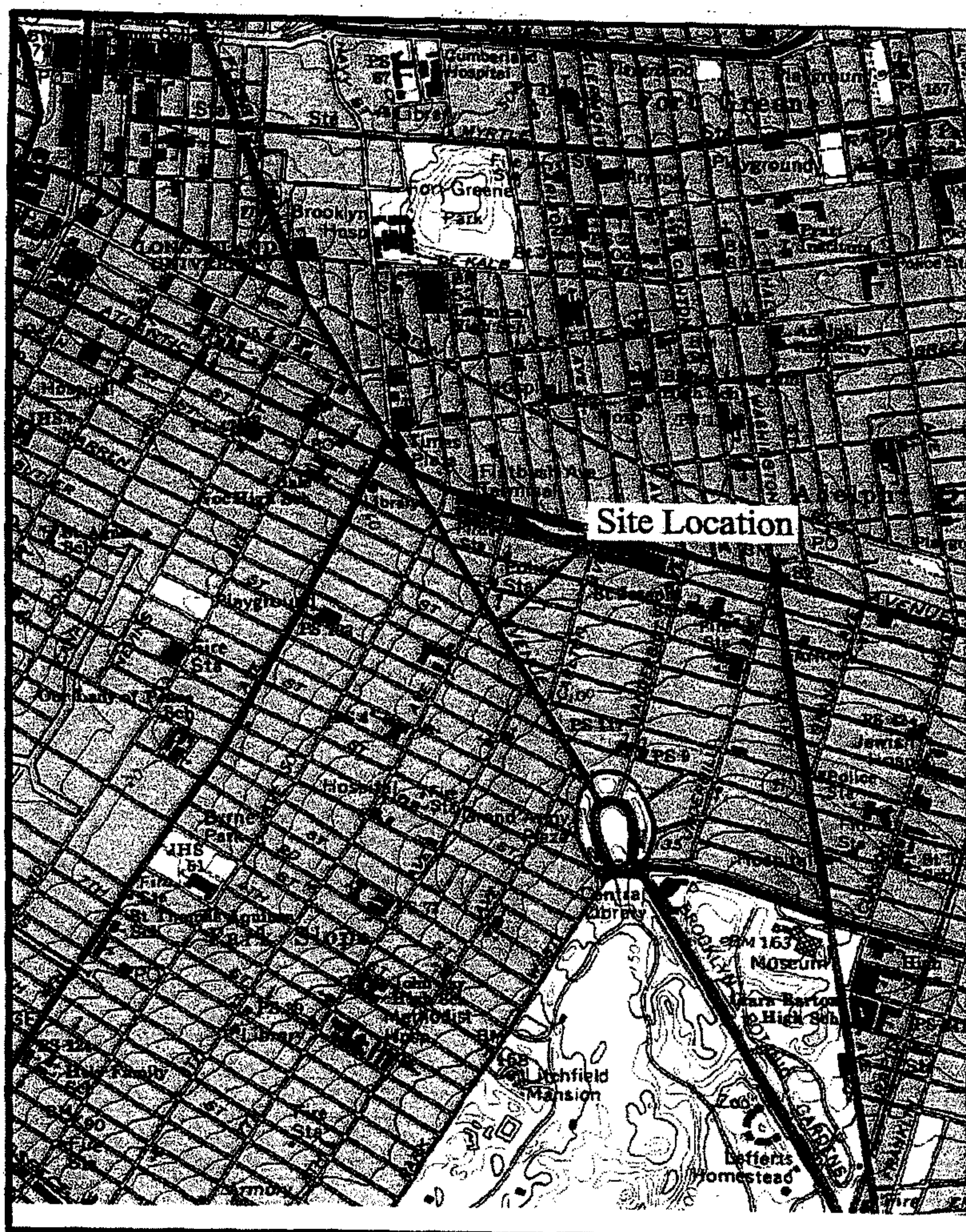
3.0 CONCLUSIONS

The following conclusions can be made based upon previous subsurface investigations and the excavation of contaminated soil conducted under ACT oversight:

- A total of 4.4 tons of contaminated soil was excavated from the site. Analytical results for five post-excavation endpoint samples collected from the excavation indicate no contaminated soil remains.

- Although the ground water directly below the source area has been impacted, the extent of impact is limited and the risk of exposure is low. Therefore, no further remedial action is deemed necessary.

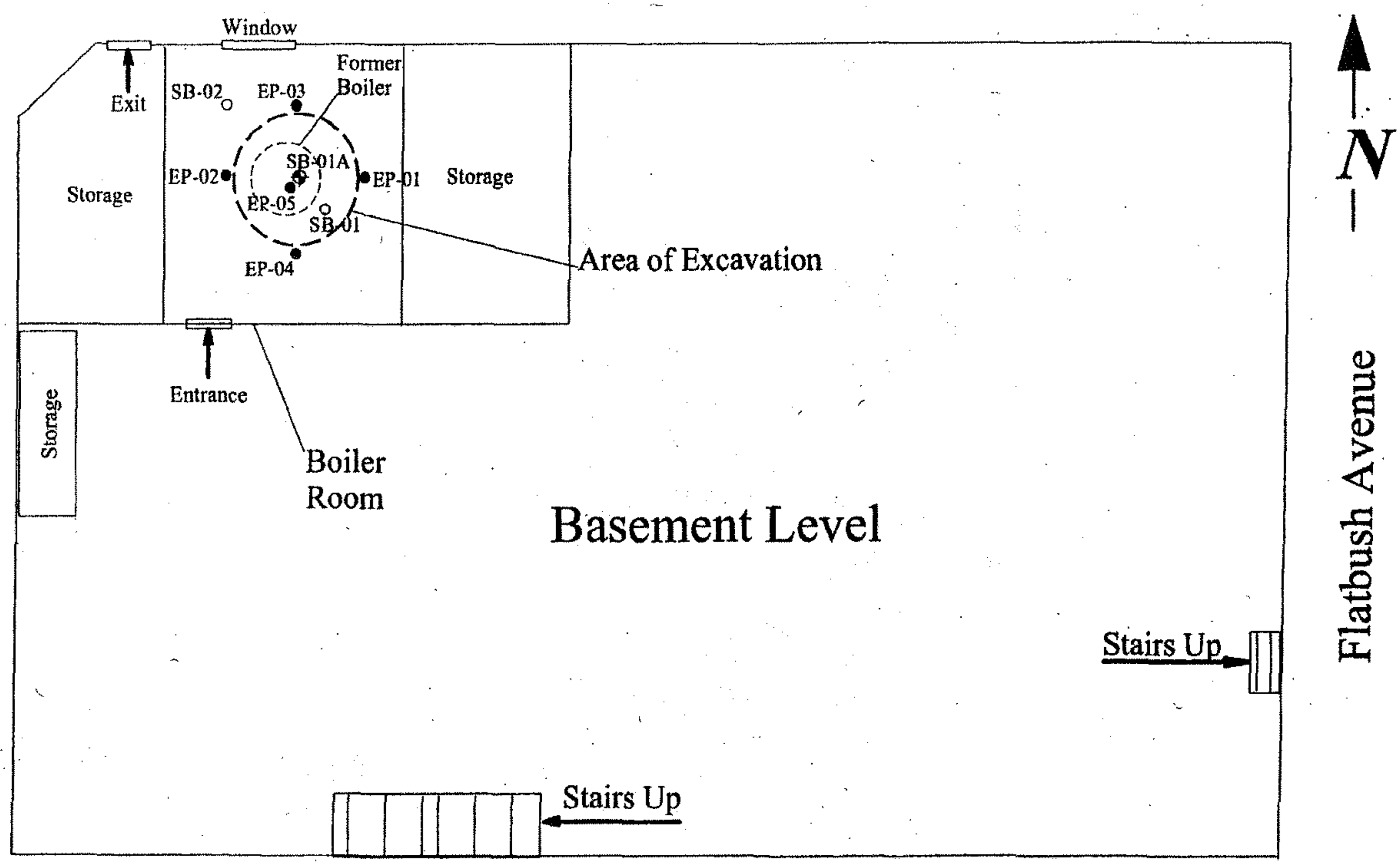
FIGURES



From USGS 7.5 Minute Topographic Map Of Brooklyn, New York Quadrangle

N

Figure 1	
Locational Diagram	
Job No. 4071-BKNY	Date: 10/31/05
Dwg. No. 4071-01	Scale: 1"=2,000'
Drawn By: Caroline Cadalso	Appr. By: Paul Stewart
Advanced Cleanup Technologies	



Legend

○ SB-01 Soil Boring

SB-01A Soil Boring/Temporary Well

● EP-01 Endpoint Soil Sample

Figure 2	
Site Diagram	
Job No. 4071-BKNY	Date: 10/31/05
Drawing No. 4071-03	Scale: 1 in.=10 ft. (Approx.)
Drawn By: Caroline Cadalso	Drawn By: Paul Stewart
Advanced Cleanup Technologies, Inc.	

TABLES

Table 1
Volatile Organic Compounds in Soil (ug/kg)
EPA Method 8260

Chemical	SB-01A (0-2')	SB-01A (8-10')	Standard[1]
Dichlorodifluoromethane	<0.60	<0.59	N/A
Chlorodifluoromethane	<1.09	<1.07	N/A
Chloromethane	<1.84	<1.82	N/A
Vinyl Chloride	<1.09	<1.07	200
Bromomethane	<0.69	<0.68	N/A
Chloroethane	<1.02	<1.01	N/A
Trichlorofluoromethane	<0.93	<0.92	N/A
1,1,2-Trichlorotrifluoroethane	<0.80	<0.79	N/A
1,1-Dichloroethene	<1.29	<1.27	400
Acetone	<12.1	<11.9	200
Carbon disulfide	<0.87	<0.85	N/A
Methylene Chloride	<1.15	<1.14	100
t-1,2-Dichloroethene	<1.13	<1.12	300
Methyl t-butyl ether	<1.84	<1.82	120
1,1-Dichloroethane	<0.91	<0.90	200
2,2-Dichloropropane	<0.75	<0.74	N/A
c-1,2-Dichloroethene	<1.20	<1.18	N/A
2-Butanone	<10.6	<10.4	N/A
Bromochloromethane	<1.27	<1.25	N/A
Chloroform	<0.80	<0.79	300
1,1,1-Trichloroethane	<1.07	<1.05	800
Carbon Tetrachloride	<1.22	<1.20	600
1,1-Dichloropropene	<1.13	<1.12	N/A
Benzene	<1.09	<1.07	60 or MDL
1,2-Dichloroethane	<1.00	<0.99	100
Trichloroethene	<1.04	<1.03	700
1,2-Dichloropropane	<0.87	<0.85	N/A
Dibromomethane	<1.49	<1.47	N/A
Bromodichloromethane	<0.91	<0.90	N/A
2-Chloroethylvinylether	<4.80	<4.73	N/A
c-1,3-Dichloropropene	<0.98	<0.96	N/A
4-Methyl-2-pentanone	<10.3	<10.1	N/A
Toluene	<1.04	<1.03	1,500
t-1,3-Dichloropropene	<0.93	<0.92	N/A
1,1,2-Trichloroethane	<0.95	<0.94	N/A
Tetrachloroethene	<1.98	<1.95	1,400

Table 1 (Continued)
Volatile Organic Compounds in Soil (ug/kg)
EPA Method 8260

Chemical	SB-01A (0-2')	SB-01A (8-10')	Standard[1]
1,3-Dichloropropane	<1.35	<1.34	300
2-Hexanone	<9.90	<9.77	N/A
Dibromochloromethane	<1.18	<1.16	N/A
1,2-Dibromoethane	<0.95	<0.94	N/A
Chlorobenzene	<0.93	<0.92	1,700
1,1,1,2-Tetrachloroethane	<0.98	<0.96	N/A
Ethylbenzene	<0.53	<0.53	5,500
m,p-Xylenes	<1.84	<1.82	1,200
o-Xylenes	<0.93	<0.92	1,200
Styrene	<0.95	<0.94	N/A
Bromoform	<1.53	<1.51	N/A
Isopropylbenzene	<0.75	<0.74	2,300
Bromobenzene	<0.53	<0.53	N/A
1,1,2,2-Tetrachloroethane	<1.38	<1.36	600
n-Propylbenzene	<0.75	<0.74	3,700
1,2,3-Trichloropropane	<2.97	<2.93	400
p-Ethyltoluene	<0.62	<0.61	N/A
1,3,5-Trimethylbenzene	<1.27	<1.25	3,300
2-Chlorotoluene	<0.75	<0.74	N/A
4-Chlorotoluene	<0.78	<0.77	N/A
tert-Butylbenzene	<0.62	<0.61	10,000
1,2,4-Trimethylbenzene	<1.40	<1.38	10,000
sec-Butylbenzene	<0.71	<0.70	10,000
4-Isopropyltoluene	<0.91	<0.90	N/A
1,3-Dichlorobenzene	<0.78	<0.77	1,600
1,4-Dichlorobenzene	<0.78	<0.77	8,500
1,2-Dichlorobenzene	<0.87	<0.85	7,900
p-Diethylbenzene	<1.24	<1.23	N/A
n-Butylbenzene	<1.44	<1.42	10,000
1,2,4,5-Tetramethylbenzene	<1.47	<1.45	N/A
1,2-Dibromo-3-chloropropane	<2.91	<2.87	N/A
1,2,4-Trichlorobenzene	<1.91	<1.88	3,400
Hexachlorobutadiene	<0.71	<0.70	N/A
Naphthalene	<2.13	<2.10	13,000
1,2,3-Trichlorobenzene	<1.82	<1.80	N/A
TAME	<1.04	<1.03	N/A
Tertiary butyl alcohol	<25.5	<25.2	N/A

[1] NYSDEC TAGM, HWR-94-4046 (Revised December, 2000)
N/A = Not Available
Bolded values signify exceedance of regulatory standard

Table 2
Volatile Organic Compounds in Water (ug/L)
EPA Method 8260

Chemical	SB-01A	Standard[1]
Dichlorodifluoromethane	<0.36	5
Chlorodifluoromethane	<0.43	NS
Chloromethane	<0.57	5
Vinyl Chloride	<0.38	2
Bromomethane	<0.56	5
Chloroethane	<0.55	5
Trichlorofluoromethane	<0.40	5
1,1,2-Trichlorotrifluoroethane	<1.06	5
1,1-Dichloroethene	<0.44	5
Acetone	3210	50
Carbon disulfide	<0.45	50
Methylene Chloride	<0.19	5
t-1,2-Dichloroethene	<0.40	5
Methyl t-butyl ether	<0.41	10
1,1-Dichloroethane	<0.32	5
2,2-Dichloropropane	<0.66	5
c-1,2-Dichloroethene	**5.37**	5
2-Butanone	<0.87	50
Bromochloromethane	<0.35	5
Chloroform	4.44	7
1,1,1-Trichloroethane	<0.40	5
Carbon Tetrachloride	<0.34	5
1,1-Dichloropropene	<0.31	5
Benzene	<0.38	1
1,2-Dichloroethane	<0.20	0.6
Trichloroethene	1.2	5
1,2-Dichloropropane	<0.28	1
Dibromomethane	<0.24	5
Bromodichloromethane	<0.23	50
2-Chloroethylvinylether	<0.27	NS
c-1,3-Dichloropropene	<0.32	0.4
4-Methyl-2-pentanone	<0.74	NS
Toluene	<0.36	5
t-1,3-Dichloropropene	<0.30	0.4
1,1,2-Trichloroethane	<0.28	1
Tetrachloroethene	**285**	5

Table 2 (Continued)
Volatile Organic Compounds in Water (ug/L)
EPA Method 8260

Chemical	SB-01A	Standard[1]
1,3-Dichloropropane	<0.26	5
2-Hexanone	<0.95	50
Dibromochloromethane	<0.26	50
1,2-Dibromoethane	<0.30	50
Chlorobenzene	<0.32	5
1,1,1,2-Tetrachloroethane	<0.31	5
Ethylbenzene	<0.30	5
m,p-xylenes	<0.62	5
o-xylenes	<0.30	5
Styrene	<0.35	5
Bromoform	<0.22	50
Isopropylbenzene	<0.29	5
Bromobenzene	<0.32	5
1,1,2,2-Tetrachloroethane	<0.21	5
n-Propylbenzene	<0.32	5
1,2,3-Trichloropropane	<0.42	0.04
p-Ethyltoluene	<0.33	NS
1,3,5-Trimethylbenzene	<0.42	5
2-Chlorotoluene	<0.41	5
4-Chlorotoluene	<0.34	5
tert-Butylbenzene	<0.32	5
1,2,4-Trimethylbenzene	<0.29	5
sec-Butylbenzene	<0.34	5
4-Isopropyltoluene	<0.24	5
1,3-Dichlorobenzene	<0.25	3
1,4-Dichlorobenzene	<0.30	3
1,2-Dichlorobenzene	<0.28	3
p-Diethylbenzene	<0.31	NS
n-Butylbenzene	<0.29	5
1,2,4,5-Tetramethylbenzene	<0.34	5
1,2-Dibromo-3-chloropropane	<0.42	0.04
1,2,4-Trichlorobenzene	<0.36	5
Hexachlorobutadiene	<0.94	0.5
Naphthalene	<0.28	10
1,2,3-Trichlorobenzene	<0.28	5
TAME	<0.17	NS
Tertiary butyl alcohol	<1.81	NS

[1] NYSDEC TOGS 1.1.1, June, 1998
Bolded values signify exceedance of regulatory standard
NS= No Standard or Guidance Value for the compound is provided in TOGS 1.1.1.

Table 3
Volatile Organic Compounds in Post-Excavation Endpoint Soil (ug/kg)
EPA Method 8260

Chemical	EP-01	EP-02	EP-03	EP-04	EP-05	Standard[1]
Dichlorodifluoromethane	<0.59	<0.60	<0.55	<0.59	<0.59	N/A
Chlorodifluoromethane	<1.07	<1.08	<0.99	<1.07	<1.06	N/A
Chloromethane	<1.81	<1.83	<1.68	<1.82	<1.80	N/A
Vinyl Chloride	<1.07	<1.08	<0.99	<1.07	<1.06	200
Bromomethane	<0.68	<0.69	<0.63	<0.68	<0.67	N/A
Chloroethane	<1.00	<1.02	<0.93	<1.01	<1.00	N/A
Trichlorofluoromethane	<0.92	<0.93	<0.85	<0.92	<0.91	N/A
1,1,2-Trichlorotrifluoroethane	<0.78	<0.80	<0.73	<0.79	<0.78	N/A
1,1-Dichloroethene	<1.26	<1.28	<1.18	<1.27	<1.26	400
Acetone	<11.9	21.6	21.7	18.2	35.7	200
Carbon disulfide	<0.85	<0.86	<0.79	<0.85	<0.85	N/A
Methylene Chloride	<1.13	<1.15	<1.06	<1.14	<1.13	100
t-1,2-Dichloroethene	<1.11	<1.13	<1.04	<1.12	<1.11	300
Methyl t-butyl ether	<1.81	<1.83	<1.68	<1.82	<1.80	120
1,1-Dichloroethane	<0.89	<0.91	<0.83	<0.90	<0.89	200
2,2-Dichloropropane	<0.74	<0.75	<0.69	<0.74	<0.74	N/A
c-1,2-Dichloroethene	<1.18	<1.19	<1.10	<1.18	<1.17	N/A
2-Butanone	<10.4	<10.5	<9.68	<10.4	<10.4	N/A
Bromochloromethane	<1.24	<1.26	<1.16	<1.25	<1.24	N/A
Chloroform	<0.78	<0.80	<0.73	<0.79	<0.78	300
1,1,1-Trichloroethane	<1.05	<1.06	<0.97	<1.05	<1.04	800
Carbon Tetrachloride	<1.20	<1.22	<1.12	<1.20	<1.19	600
1,1-Dichloropropene	<1.11	<1.13	<1.04	<1.12	<1.11	N/A
Benzene	<1.07	<1.08	<0.99	<1.07	<1.06	60 or MDL
1,2-Dichloroethane	<0.98	<0.99	<0.91	<0.99	<0.98	100
Trichloroethene	<1.02	<1.04	<0.95	<1.03	<1.02	700
1,2-Dichloropropane	<0.85	<0.86	<0.79	<0.85	<0.85	N/A
Dibromomethane	<1.46	<1.48	<1.36	<1.47	<1.45	N/A
Bromodichloromethane	<0.89	<0.91	<0.83	<0.90	<0.89	N/A
2-Chloroethylvinylether	<4.71	<4.77	<4.38	<4.73	<4.69	N/A
c-1,3-Dichloropropene	<0.96	<0.97	<0.89	<0.96	<0.95	N/A
4-Methyl-2-pentanone	<10.1	<10.2	<9.40	<10.1	<10.0	N/A
Toluene	<1.02	<1.04	<0.95	<1.03	<1.02	1,500
t-1,3-Dichloropropene	<0.92	<0.93	<0.85	<0.92	<0.91	N/A
1,1,2-Trichloroethane	<0.94	<0.95	<0.87	<0.94	<0.93	N/A
Tetrachloroethene	<1.94	<1.97	<1.81	<1.95	<1.93	1,400

Table 3 (Continued)
Volatile Organic Compounds in Post-Excavation Endpoint Soil (ug/kg)
EPA Method 8260

Chemical	EP-01	EP-02	EP-03	EP-04	EP-05	Standard[1]
1,3-Dichloropropane	<1.33	<1.35	<1.24	<1.34	<1.32	300
2-Hexanone	<9.72	<9.86	<9.05	<9.77	<9.68	N/A
Dibromochloromethane	<1.16	<1.17	<1.08	<1.16	<1.15	N/A
1,2-Dibromoethane	<0.94	<0.95	<0.87	<0.94	<0.93	N/A
Chlorobenzene	<0.92	<0.93	<0.85	<0.92	<0.91	1,700
1,1,1,2-Tetrachloroethane	<0.96	<0.97	<0.89	<0.96	<0.95	N/A
Ethylbenzene	<0.52	<0.53	<0.49	<0.53	<0.52	5,500
m,p-Xylenes	<1.81	<1.83	<1.68	<1.82	<1.80	1,200
o-Xylenes	<0.92	<0.93	<0.85	<0.92	<0.91	1,200
Styrene	<0.94	<0.95	<0.87	<0.94	<0.93	N/A
Bromoform	<1.50	<1.52	<1.40	<1.51	<1.50	N/A
Isopropylbenzene	<0.74	<0.75	<0.69	<0.74	<0.74	2,300
Bromobenzene	<0.52	<0.53	<0.49	<0.53	<0.52	N/A
1,1,2,2-Tetrachloroethane	<1.35	<1.37	<1.26	<1.36	<1.35	600
n-Propylbenzene	<0.74	<0.75	<0.69	<0.74	<0.74	3,700
1,2,3-Trichloropropane	<2.92	<2.96	<2.72	<2.93	<2.91	400
p-Ethyltoluene	<0.61	<0.62	<0.57	<0.61	<0.61	N/A
1,3,5-Trimethylbenzene	<1.24	<1.26	<1.16	<1.25	<1.24	3,300
2-Chlorotoluene	<0.74	<0.75	<0.69	<0.74	<0.74	N/A
4-Chlorotoluene	<0.76	<0.77	<0.71	<0.77	<0.76	N/A
tert-Butylbenzene	<0.61	<0.62	<0.57	<0.61	<0.61	10,000
1,2,4-Trimethylbenzene	<1.37	<1.39	<1.28	<1.38	<1.37	10,000
sec-Butylbenzene	<0.70	<0.71	<0.65	<0.70	<0.69	10,000
4-Isopropyltoluene	<0.89	<0.91	<0.83	<0.90	<0.89	N/A
1,3-Dichlorobenzene	<0.76	<0.77	<0.71	<0.77	<0.76	1,600
1,4-Dichlorobenzene	<0.76	<0.77	<0.71	<0.77	<0.76	8,500
1,2-Dichlorobenzene	<0.85	<0.86	<0.79	<0.85	<0.85	7,900
p-Diethylbenzene	<1.22	<1.24	<1.14	<1.23	<1.22	N/A
n-Butylbenzene	<1.42	<1.44	<1.32	<1.42	<1.41	10,000
1,2,4,5-Tetramethylbenzene	<1.44	<1.46	<1.34	<1.45	<1.43	N/A
1,2-Dibromo-3-chloropropane	<2.86	<2.90	<2.66	<2.87	<2.84	N/A
1,2,4-Trichlorobenzene	<1.87	<1.90	<1.75	<1.88	<1.87	3,400
Hexachlorobutadiene	<0.70	<0.71	<0.65	<0.70	<0.69	N/A
Naphthalene	<2.09	<2.12	<1.95	<2.10	<2.08	13,000
1,2,3-Trichlorobenzene	<1.79	<1.81	<1.66	<1.80	<1.78	N/A
TAME	<1.02	<1.04	<0.95	<1.03	<1.02	N/A
Tertiary butyl alcohol	<25.1	<25.4	<23.3	<25.2	<25.0	N/A
Acrylonitrile	<8.81	<8.93	<8.20	<8.85	<8.77	N/A

[1] NYSDEC TAGM, HWR-94-4046 (Revised December, 2000)
N/A = Not Available
Bolded values signify exceedance of regulatory standard

APPENDIX A

PREVIOUS ENVIRONMENTAL REPORTS

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS

April 5, 2005

Mr. David Aronowicz
Cinderella Cleaners & Tailors
248 Flatbush Avenue
Brooklyn, New York 11217

Re: Limited Phase II Environmental Site Assessment
248 Flatbush Avenue, Brooklyn, NY

Dear Mr. Aronowicz:

On March 4, 2005, Advanced Cleanup Technologies, Inc. (ACT) performed a Limited Phase II Environmental Site Assessment of the above-referenced property (Figure 1, Locational Diagram). The purpose for this assessment was to determine whether historic dry cleaning operations had impacted the environmental quality of the subject property. The scope of work was based upon a preliminary inspection of the subject property on February 7, 2005 and interviews with property representatives.

The scope of the assessment included the installation, sampling and analysis of two soil borings. The scope of work also included in-field screening of soil samples and the laboratory analysis of two soil samples for volatile organic compounds (VOCs) including those associated with dry cleaning. This letter report summarizes the results of the Limited Phase II assessment.

On March 4, 2005, ACT installed two soil borings (SB-01 and SB-02) through the floor of the boiler room located in the northwest corner of the building's basement. The soil borings were installed utilizing a portable hydraulic unit with a hydraulic percussion hammer, in combination with four foot macro samplers containing acetate liners. The soil borings were continuously sampled from below the concrete floor to a maximum depth of 12 feet below the floor. Figure 2 shows the locations of the soil borings.

115 Rome Street Farmingdale, New York 11735 Tel: 631/293-4992 Fax: 631/293-4986
1000 7th North Street, Suite B-30 Liverpool, New York 13088 Tel: 315/451-9720 Fax: 315/451-9727
E-mail: advancedcleanuptech.com

Soil samples were screened for VOCs in the field utilizing a Photoionization Detector (PID). At SB-01, elevated PID readings ranging from 900 parts per million (ppm) at a depth of 0 to 2 feet to 33 ppm at 11 to 12 feet were encountered. These elevated PID readings coincided with a solvent odor encountered from 0 to 12 feet below grade. At SB-02, less significant PID readings ranging from 52 ppm at 2 to 3 feet to 15 ppm at 11 to 12 feet were encountered. No solvent odor was noted in this boring. Soil samples generally consisted of a red-brown silty, fine to medium sand with a trace of angular gravel. No ground water was encountered in these borings.

A temporary monitoring well was also attempted at the location of SB-01 to determine any impacts to ground water beneath the subject property. The temporary well was installed to a depth of 26 feet below ground surface. Unfortunately, no ground water was encountered at that depth. A review of the USGS topographic map for the vicinity of the site indicates that ground water can be expected to be present approximately 50 feet below ground surface, or 40 feet below the basement floor (See Figure 1).

A soil sample from each soil boring at its maximum depth, which also exhibited the lowest PID reading, was transmitted to Environmental Testing Laboratories, Inc. (ETL, ELAP No. 10969). The soil samples were analyzed for VOCs by United States Environmental Protection Agency (EPA) Method 8260. The laboratory results were compared to New York State Department of Environmental Conservation (NYSDEC) TAGM HWR-94-4046, Recommended Soil Cleanup Objectives, revised December, 2000 (NYSDEC TAGM).

No VOCs were detected in soil sample SB-01 (11-12'), with the exception of a low concentration of tetrachloroethene (.004 ppm), which is commonly associated with dry cleaning solvents. This level of tetrachloroethene is below the regulatory standard of 1.4 ppm. No VOCs were detected in soil sample SB-02 (9-10').

The following conclusions can be made from the results of the Limited Phase II Environmental Site Assessment completed to date:

- The soil at sampling locations SB-01 and SB-02 appears to have been impacted by historical dry cleaning operations. However, based on the significant decrease in PID readings at 8 to 12' below the floor and the trace concentration of tetrachloroethene detected in the soil sample from SB-01, it appears that the vertical extent of soil contamination is limited. PID readings at SB-02 were significantly less than those detected at SB-01, which also indicates the horizontal extent is limited.

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS

ACT makes the following recommendations with regards to the above conclusions:

- It is recommended that the impacted soils be excavated from below the boiler room until clean endpoint samples can be obtained or to the maximum extent feasible in light of the physical structures and limitations of that area of the Site. This will require the removal of the existing boiler. It is estimated that 30 tons of contaminated soil will require removal, transportation, and proper disposal. The cost to remediate these soils is estimated to be $15,000.

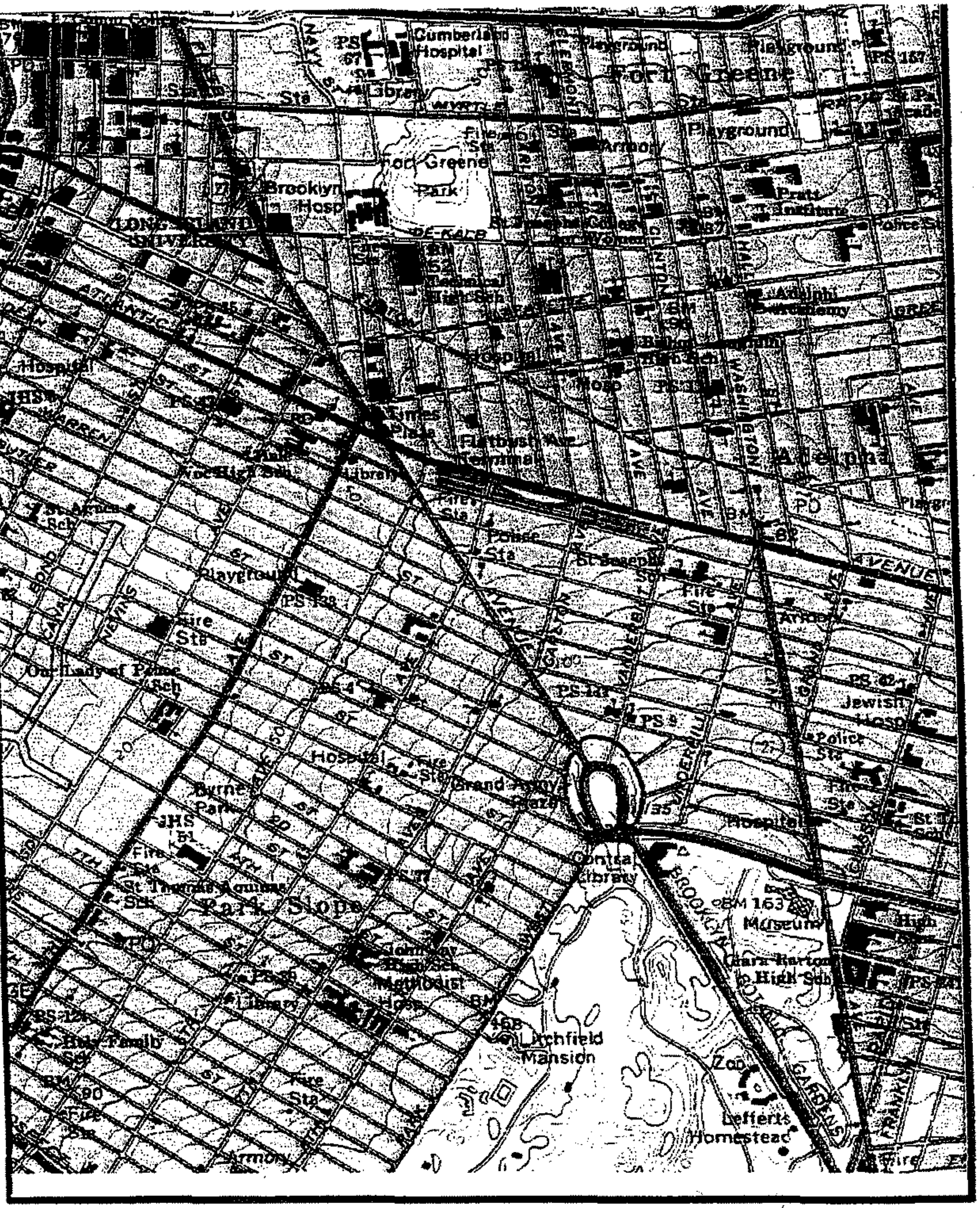
- A supplemental assessment should be performed to verify whether the ground water beneath the Site has been impacted by historic dry cleaning operations. A minimum of three temporary monitoring wells should be installed at the Site. The cost to install, sample and analyze ground water samples from temporary monitoring wells to verify the absence of ground water contamination beneath the property is estimated to be $7,500.

Please feel free to contact the undersigned if you have any questions concerning the above.

Very Truly Yours,

Paul P. Stewart
President

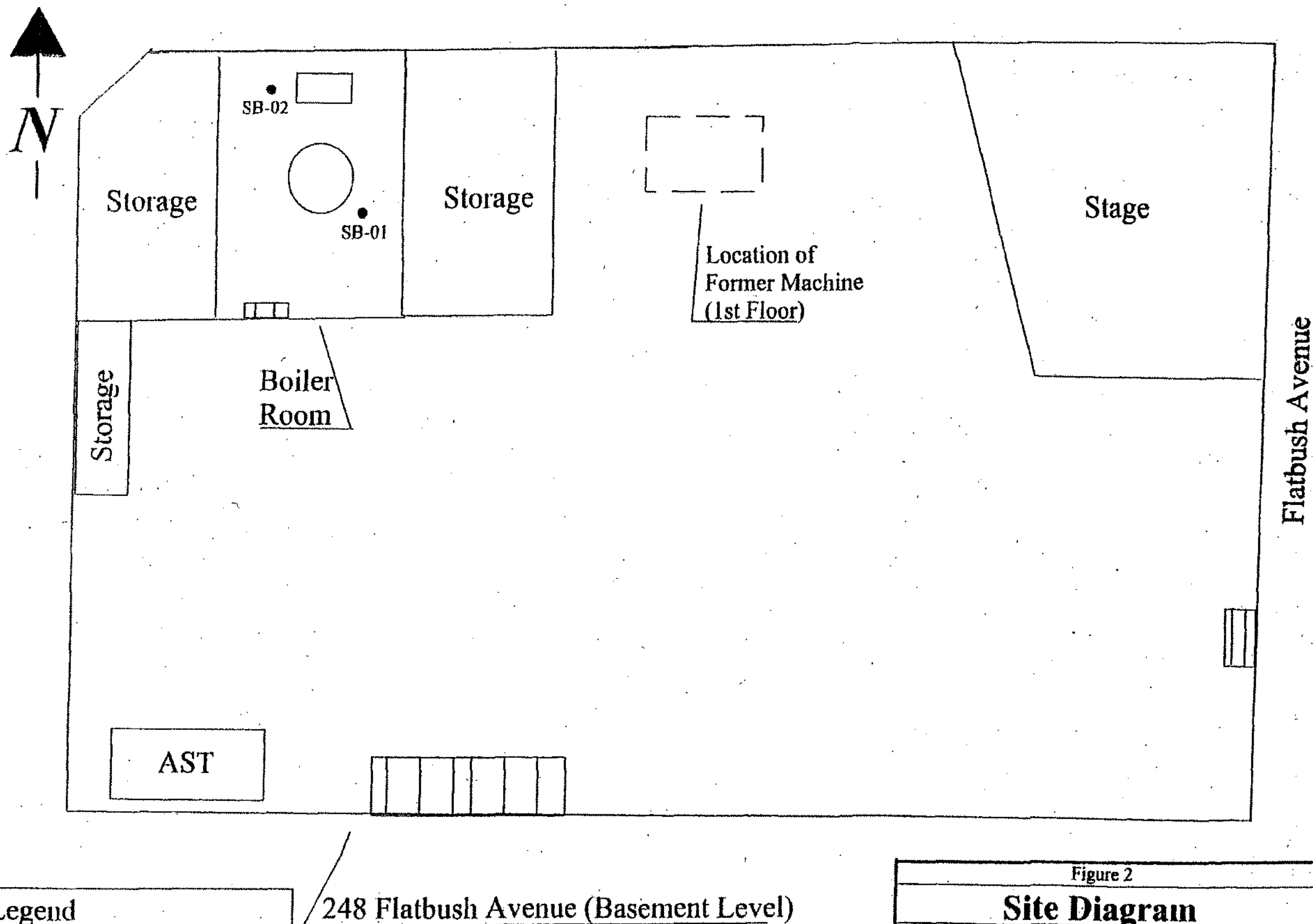
PPS/nl
Enc.



From USGS 7.5 Minute Topographic Map Of
Brooklyn, New York Quadrangle

N

Figure 1	
Locational Diagram	
Job No. 4071-BKNY	Date: 4/04/05
Dwg. No. 4071-01	Scale: 1"=2,000'
Drawn By: Caroline Cadalso	Appr. By: Paul Stewart
Advanced Cleanup Technologies	



Legend

● Boring Location
SB-01

Figure 2

Site Diagram

Job No. 4071-BKNY	Date: 4/4/05
Drawing No. 4071-02	Scale: NTS
Drawn By: Caroline Cadalso	Approved By: Paul Stewart

Advanced Cleanup Technologies, Inc.

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456   Fax - 631-249-8344

03/09/2005

Laboratory Identifier: 0503133

Custody Document: S6245
Received: 03/07/2005 14:35
Sampled by: Steven Walls

Client: Advanced Cleanup Technologies

115 Rome Streeet
Farmingdale,
NY 11735

Project: 4071-BHNY

Manager: Caroline Cadalso

Respectfully submitted,

Patricia Werner-Els
Quality Assurance Officer

NYS Lab ID # 10969
NJ Cert. # 73812
CT Cert. # PH0645
MA Cert. # NY061
PA Cert. # 68-535
NH Cert. # 252592-BA
RI Cert. # 161

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-1
Client Sample ID: SB-01
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 03/08/2005

Collected: 03/04/2005 10:30
% Solid: 91.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1699-167	0.59	0.59	ppb	U
75-45-6	Chlorodifluoromethane	B1699-167	1.07	1.07	ppb	U
74-87-3	Chloromethane	B1699-167	1.82	1.82	ppb	U
75-01-4	Vinyl Chloride	B1699-167	1.07	1.07	ppb	U
74-83-9	Bromomethane	B1699-167	0.68	0.68	ppb	U
75-00-3	Chloroethane	B1699-167	1.01	1.01	ppb	U
75-69-4	Trichlorofluoromethane	B1699-167	0.92	0.92	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1699-167	0.79	0.79	ppb	U
75-35-4	1,1-Dichloroethene	B1699-167	1.27	1.27	ppb	U
67-64-1	Acetone	B1699-167	11.9	11.9	ppb	U
75-15-0	Carbon disulfide	B1699-167	0.85	0.85	ppb	U
75-09-2	Methylene Chloride	B1699-167	1.14	1.14	ppb	U
156-60-5	t-1,2-Dichloroethene	B1699-167	1.12	1.12	ppb	U
1634-04-4	Methyl t-butyl ether	B1699-167	1.82	1.82	ppb	U
75-34-3	1,1-Dichloroethane	B1699-167	0.90	0.90	ppb	U
590-20-7	2,2-Dichloropropane	B1699-167	0.74	0.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B1699-167	1.18	1.18	ppb	U
78-93-3	2-Butanone	B1699-167	10.4	10.4	ppb	U
74-97-5	Bromochloromethane	B1699-167	1.25	1.25	ppb	U
67-66-3	Chloroform	B1699-167	0.79	0.79	ppb	U
71-55-6	1,1,1-Trichloroethane	B1699-167	1.05	1.05	ppb	U
56-23-5	Carbon Tetrachloride	B1699-167	1.20	1.20	ppb	U
563-58-6	1,1-Dichloropropene	B1699-167	1.12	1.12	ppb	U
71-43-2	Benzene	B1699-167	1.07	1.07	ppb	U
107-06-2	1,2-Dichloroethane	B1699-167	0.99	0.99	ppb	U
79-01-6	Trichloroethene	B1699-167	1.03	1.03	ppb	U
78-87-5	1,2-Dichloropropane	B1699-167	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B1699-167	1.47	1.47	ppb	U
75-27-4	Bromodichloromethane	B1699-167	0.90	0.90	ppb	U
110-75-8	2-Chloroethylvinylether	B1699-167	4.73	4.73	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1699-167	0.96	0.96	ppb	U
108-10-1	4-Methyl-2-pentanone	B1699-167	10.1	10.1	ppb	U
108-88-3	Toluene	B1699-167	1.03	1.03	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1699-167	0.92	0.92	ppb	U

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-1
Client Sample ID: SB-01
Matrix: Soil
Remarks: See Case Narrative
Analyzed Date: 03/08/2005

Type: Grab

Collected: 03/04/2005 10:30
% Solid: 91.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1699-167	0.94	0.94	ppb	U
127-18-4	Tetrachloroethene	B1699-167	1.95	**4.47**	ppb	Y
142-28-9	1,3-Dichloropropane	B1699-167	1.34	1.34	ppb	U
591-78-6	2-Hexanone	B1699-167	9.77	9.77	ppb	U
124-48-1	Dibromochloromethane	B1699-167	1.16	1.16	ppb	U
106-93-4	1,2-Dibromoethane	B1699-167	0.94	0.94	ppb	U
108-90-7	Chlorobenzene	B1699-167	0.92	0.92	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1699-167	0.96	0.96	ppb	U
100-41-4	Ethylbenzene	B1699-167	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1699-167	1.82	1.82	ppb	U
95-47-6	o-xylene	B1699-167	0.92	0.92	ppb	U
100-42-5	Styrene	B1699-167	0.94	0.94	ppb	U
75-25-2	Bromoform	B1699-167	1.51	1.51	ppb	U
98-82-8	Isopropylbenzene	B1699-167	0.74	0.74	ppb	U
108-86-1	Bromobenzene	B1699-167	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1699-167	1.36	1.36	ppb	U
103-65-1	n-Propylbenzene	B1699-167	0.74	0.74	ppb	U
96-18-4	1,2,3-Trichloropropane	B1699-167	2.93	2.93	ppb	U
622-96-8	p-Ethyltoluene	B1699-167	0.61	0.61	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1699-167	1.25	1.25	ppb	U
95-49-8	2-Chlorotoluene	B1699-167	0.74	0.74	ppb	U
106-43-4	4-Chlorotoluene	B1699-167	0.77	0.77	ppb	U
98-06-6	tert-Butylbenzene	B1699-167	0.61	0.61	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1699-167	1.38	1.38	ppb	U
135-98-8	sec-Butylbenzene	B1699-167	0.70	0.70	ppb	U
99-87-6	4-Isopropyltoluene	B1699-167	0.90	0.90	ppb	U
541-73-1	1,3-Dichlorobenzene	B1699-167	0.77	0.77	ppb	U
106-46-7	1,4-Dichlorobenzene	B1699-167	0.77	0.77	ppb	U
95-50-1	1,2-Dichlorobenzene	B1699-167	0.85	0.85	ppb	U
105-05-5	p-Diethylbenzene	B1699-167	1.23	1.23	ppb	U
104-51-8	n-Butylbenzene	B1699-167	1.42	1.42	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1699-167	1.45	1.45	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1699-167	2.87	2.87	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1699-167	1.88	1.88	ppb	U

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-1
Client Sample ID: SB-01
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 03/08/2005
Collected: 03/04/2005 10:30
% Solid: 91.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1699-167	0.70	0.70	ppb	U
91-20-3	Naphthalene	B1699-167	2.10	2.10	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1699-167	1.80	1.80	ppb	U
994-05-8	TAME	B1699-167	1.03	1.03	ppb	U
75-65-0	Tertiary butyl alcohol	B1699-167	25.2	25.2	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1699-167	95.7 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1699-167	96.9 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1699-167	100.0 %	(81 - 117)	

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Phone - 631-249-1456 Fax - 631-249-8344

03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-2
Client Sample ID: SB-02
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 03/08/2005

Collected: 03/04/2005 11:30
% Solid: 88.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1699-168	0.61	0.61	ppb	U
75-45-6	Chlorodifluoromethane	B1699-168	1.11	1.11	ppb	U
74-87-3	Chloromethane	B1699-168	1.88	1.88	ppb	U
75-01-4	Vinyl Chloride	B1699-168	1.11	1.11	ppb	U
74-83-9	Bromomethane	B1699-168	0.70	0.70	ppb	U
75-00-3	Chloroethane	B1699-168	1.04	1.04	ppb	U
75-69-4	Trichlorofluoromethane	B1699-168	0.95	0.95	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1699-168	0.82	0.82	ppb	U
75-35-4	1,1-Dichloroethene	B1699-168	1.32	1.32	ppb	U
67-64-1	Acetone	B1699-168	12.4	12.4	ppb	U
75-15-0	Carbon disulfide	B1699-168	0.89	0.89	ppb	U
75-09-2	Methylene Chloride	B1699-168	1.18	1.18	ppb	U
156-60-5	t-1,2-Dichloroethene	B1699-168	1.16	1.16	ppb	U
1634-04-4	Methyl t-butyl ether	B1699-168	1.88	1.88	ppb	U
75-34-3	1,1-Dichloroethane	B1699-168	0.93	0.93	ppb	U
590-20-7	2,2-Dichloropropane	B1699-168	0.77	0.77	ppb	U
156-59-2	c-1,2-Dichloroethene	B1699-168	1.23	1.23	ppb	U
78-93-3	2-Butanone	B1699-168	10.8	10.8	ppb	U
74-97-5	Bromochloromethane	B1699-168	1.29	1.29	ppb	U
67-66-3	Chloroform	B1699-168	0.82	0.82	ppb	U
71-55-6	1,1,1-Trichloroethane	B1699-168	1.09	1.09	ppb	U
56-23-5	Carbon Tetrachloride	B1699-168	1.25	1.25	ppb	U
563-58-6	1,1-Dichloropropene	B1699-168	1.16	1.16	ppb	U
71-43-2	Benzene	B1699-168	1.11	1.11	ppb	U
107-06-2	1,2-Dichloroethane	B1699-168	1.02	1.02	ppb	U
79-01-6	Trichloroethene	B1699-168	1.07	1.07	ppb	U
78-87-5	1,2-Dichloropropane	B1699-168	0.89	0.89	ppb	U
74-95-3	Dibromomethane	B1699-168	1.52	1.52	ppb	U
75-27-4	Bromodichloromethane	B1699-168	0.93	0.93	ppb	U
110-75-8	2-Chloroethylvinylether	B1699-168	4.90	4.90	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1699-168	1.00	1.00	ppb	U
108-10-1	4-Methyl-2-pentanone	B1699-168	10.5	10.5	ppb	U
108-88-3	Toluene	B1699-168	1.07	1.07	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1699-168	0.95	0.95	ppb	U

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Phone - 631-249-1456 Fax - 631-249-8344

03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-2
Client Sample ID: SB-02
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 03/08/2005

Collected: 03/04/2005 11:30
% Solid: 88.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1699-168	0.98	0.98	ppb	U
127-18-4	Tetrachloroethene	B1699-168	2.02	2.02	ppb	U
142-28-9	1,3-Dichloropropane	B1699-168	1.38	1.38	ppb	U
591-78-6	2-Hexanone	B1699-168	10.1	10.1	ppb	U
124-48-1	Dibromochloromethane	B1699-168	1.20	1.20	ppb	U
106-93-4	1,2-Dibromoethane	B1699-168	0.98	0.98	ppb	U
108-90-7	Chlorobenzene	B1699-168	0.95	0.95	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1699-168	1.00	1.00	ppb	U
100-41-4	Ethylbenzene	B1699-168	0.54	0.54	ppb	U
108-38-3	m,p-xylene	B1699-168	1.88	1.88	ppb	U
95-47-6	o-xylene	B1699-168	0.95	0.95	ppb	U
100-42-5	Styrene	B1699-168	0.98	0.98	ppb	U
75-25-2	Bromoform	B1699-168	1.57	1.57	ppb	U
98-82-8	Isopropylbenzene	B1699-168	0.77	0.77	ppb	U
108-86-1	Bromobenzene	B1699-168	0.54	0.54	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1699-168	1.41	1.41	ppb	U
103-65-1	n-Propylbenzene	B1699-168	0.77	0.77	ppb	U
96-18-4	1,2,3-Trichloropropane	B1699-168	3.04	3.04	ppb	U
622-96-8	p-Ethyltoluene	B1699-168	0.64	0.64	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1699-168	1.29	1.29	ppb	U
95-49-8	2-Chlorotoluene	B1699-168	0.77	0.77	ppb	U
106-43-4	4-Chlorotoluene	B1699-168	0.79	0.79	ppb	U
98-06-6	tert-Butylbenzene	B1699-168	0.64	0.64	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1699-168	1.43	1.43	ppb	U
135-98-8	sec-Butylbenzene	B1699-168	0.73	0.73	ppb	U
99-87-6	4-Isopropyltoluene	B1699-168	0.93	0.93	ppb	U
541-73-1	1,3-Dichlorobenzene	B1699-168	0.79	0.79	ppb	U
106-46-7	1,4-Dichlorobenzene	B1699-168	0.79	0.79	ppb	U
95-50-1	1,2-Dichlorobenzene	B1699-168	0.89	0.89	ppb	U
105-05-5	p-Diethylbenzene	B1699-168	1.27	1.27	ppb	U
104-51-8	n-Butylbenzene	B1699-168	1.48	1.48	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1699-168	1.50	1.50	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1699-168	2.97	2.97	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1699-168	1.95	1.95	ppb	U

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03/09/2005

Volatiles - EPA 8260B

Sample: 0503133-2
Client Sample ID: SB-02
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 03/08/2005
Collected: 03/04/2005 11:30
% Solid: 88.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1699-168	0.73	0.73	ppb	U
91-20-3	Naphthalene	B1699-168	2.18	2.18	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1699-168	1.86	1.86	ppb	U
994-05-8	TAME	B1699-168	1.07	1.07	ppb	U
75-65-0	Tertiary butyl alcohol	B1699-168	26.1	26.1	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1699-168	97.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1699-168	98.7 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1699-168	102.0 %	(81 - 117)	

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03/09/2005

Case Narrative

EPA 8260 VOLATILE ANALYSIS:

The following compounds were calibrated at 25, 50, 100, 150 and 200 ppb levels in the initial calibration curve:
Acetone
2-Butanone
4-Methyl-2-pentanone
2-Hexanone

M&P-Xylenes and 2-Chloroethylvinylether were calibrated at 10, 40, 100, 200 and 300 ppb levels.
Acrolein/Acrylonitrile were calibrated at 50,100,150,200 and 250 ppb levels.
Tert Butyl Alcohol (TBA) was calibrated at 50,200,500,1000 and 1500 ppb levels.

All other compounds were calibrated at 5, 20, 50, 100 and 150 ppb levels.

ORGANIC METHOD QUALIFIERS

Q - Qualifier - specified entries and their meanings are as follows:

U - The analytical result is not detected above the Method Detection Limit (MDL). All MDL's are lower than the lowest calibration standard concentration.

J - Indicates an estimated value. The concentration reported was detected below the Method Detection Limit (MDL).

Y - The concentration reported was detected below the lowest calibration standard concentration.

B - The analyte was found in the associated method blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E - The concentration of the analyte exceeded the calibration range of the instrument.

D - This flag indicates a system monitoring compound diluted out.

INORGANIC METHOD QUALIFIERS

C - (Concentration) qualifiers are as follows:

B - Entered if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

U - Entered when the analyte was analyzed for, but not detected above the Method Detection Limit (MDL) which is less than the lowest calibration standard concentration.

Q - Qualifier specific entries and their meanings are as follows:

E - Reported value is estimated because of the presence of interferences.

M - (Method) qualifiers are as follows:

A - Flame AA
AS - Semi-automated Spectrophotometric
AV - Automated Cold Vapor AA
C - Manual Spectrophotometric
F - Furnace AA
P - ICP
T - Titrimetric

OTHER QUALIFIERS

ND - Not Detected

NA - Not Applicable

NR - Not Required

* - Outside Expected Range (NYCDEP Table I/II or Surrogate Limits)

x - Outside Expected Range

ETL

Environmental Testing Laboratories, Inc.

208 Route 109 • Farmingdale • New York 11735

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CHAIN OF CUSTODY DOCUMENT

S [illegible]

Project Name: [illegible]	Project Manager: [illegible]
Sampler (Signature): [illegible]	(Print): [illegible]
Project Address:	
Client [illegible] J/N:	☐ Rush by [illegible]

SAMPLE INFO Type: SS = Split Spoon; G = Grab; C = Composite; B = Blank. Matrix: L = Liquid; S = Soil; SL = Sludge; A* = Air; W = Wipe. *Air - Vol. (Liters) include: Flow (CFM)

ID	Date	Time	Type	Matrix	Sample Location	Total. # Cont.	601/602	BTX/BTEX	MTBE	624/8260/8021	625/8270/BN	PCB/Pesticides	Pet.Prods./8100M	RCRA Metals	pH/Flash/React	418.1 - TRPH
1	[illegible]				[illegible]	1				X						
2	[illegible]	[illegible]		[illegible]	[illegible]	1				X						
3																
4																
5																
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14																
15																

Relinquished by (Signature): [illegible]	Date / Time	Printed Name & Agent: [illegible]	Received by (Signature):	Date / Time	Printed Name & Agent
Relinquished by (Signature):	Date / Time	Printed Name & Agent:	Received for Lab by (Signature): [illegible]	Date / Time	Printed Name [illegible]
Comments & Special Instructions		QA/QC Type:	Number & Type of Containers:	Preservatives:	Temp:

APPENDIX B

LABORATORY REPORTS

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

07/20/2005

Laboratory Identifier: 0507178
Received: 07/11/2005 16:39
Sampled by: Stven Walls

Client: Advanced Cleanup Technologies
115 Rome Streeet
Farmingdale,
NY 11735

Project: 4071-BHNY

Manager: Caroline Cadalso

Respectfully submitted,

Patricia Werner-Els
Quality Assurance Officer

NYS Lab ID # 10969
NJ Cert. # 73812
CT Cert. # PH0645
MA Cert. # NY061
PA Cert. # 68-535
NH Cert. # 252592-BA
RI Cert. # 161

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-1
Client Sample ID: SB-01A (0-2')
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Collected: 07/08/2005
% Solid: 89.9%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1817-2311	0.60	0.60	ppb	U
75-45-6	Chlorodifluoromethane	B1817-2311	1.09	1.09	ppb	U
74-87-3	Chloromethane	B1817-2311	1.84	1.84	ppb	U
75-01-4	Vinyl Chloride	B1817-2311	1.09	1.09	ppb	U
74-83-9	Bromomethane	B1817-2311	0.69	0.69	ppb	U
75-00-3	Chloroethane	B1817-2311	1.02	1.02	ppb	U
75-69-4	Trichlorofluoromethane	B1817-2311	0.93	0.93	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1817-2311	0.80	0.80	ppb	U
75-35-4	1,1-Dichloroethene	B1817-2311	1.29	1.29	ppb	U
67-64-1	Acetone	B1817-2311	12.1	12.1	ppb	U
75-15-0	Carbon disulfide	B1817-2311	0.87	0.87	ppb	U
75-09-2	Methylene Chloride	B1817-2311	1.15	1.15	ppb	U
156-60-5	t-1,2-Dichloroethene	B1817-2311	1.13	1.13	ppb	U
1634-04-4	Methyl t-butyl ether	B1817-2311	1.84	1.84	ppb	U
75-34-3	1,1-Dichloroethane	B1817-2311	0.91	0.91	ppb	U
590-20-7	2,2-Dichloropropane	B1817-2311	0.75	0.75	ppb	U
156-59-2	c-1,2-Dichloroethene	B1817-2311	1.20	1.20	ppb	U
78-93-3	2-Butanone	B1817-2311	10.6	10.6	ppb	U
74-97-5	Bromochloromethane	B1817-2311	1.27	1.27	ppb	U
67-66-3	Chloroform	B1817-2311	0.80	0.80	ppb	U
71-55-6	1,1,1-Trichloroethane	B1817-2311	1.07	1.07	ppb	U
56-23-5	Carbon Tetrachloride	B1817-2311	1.22	1.22	ppb	U
563-58-6	1,1-Dichloropropene	B1817-2311	1.13	1.13	ppb	U
71-43-2	Benzene	B1817-2311	1.09	1.09	ppb	U
107-06-2	1,2-Dichloroethane	B1817-2311	1.00	1.00	ppb	U
79-01-6	Trichloroethene	B1817-2311	1.04	1.04	ppb	U
78-87-5	1,2-Dichloropropane	B1817-2311	0.87	0.87	ppb	U
74-95-3	Dibromomethane	B1817-2311	1.49	1.49	ppb	U
75-27-4	Bromodichloromethane	B1817-2311	0.91	0.91	ppb	U
110-75-8	2-Chloroethylvinylether	B1817-2311	4.80	4.80	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1817-2311	0.98	0.98	ppb	U
108-10-1	4-Methyl-2-pentanone	B1817-2311	10.3	10.3	ppb	U
108-88-3	Toluene	B1817-2311	1.04	1.04	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1817-2311	0.93	0.93	ppb	U

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-1
Client Sample ID: SB-01A (0-2')
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 89.9%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1817-2311	0.95	0.95	ppb	U
127-18-4	Tetrachloroethene	B1817-2311	1.98	1.98	ppb	U
142-28-9	1,3-Dichloropropane	B1817-2311	1.35	1.35	ppb	U
591-78-6	2-Hexanone	B1817-2311	9.90	9.90	ppb	U
124-48-1	Dibromochloromethane	B1817-2311	1.18	1.18	ppb	U
106-93-4	1,2-Dibromoethane	B1817-2311	0.95	0.95	ppb	U
108-90-7	Chlorobenzene	B1817-2311	0.93	0.93	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1817-2311	0.98	0.98	ppb	U
100-41-4	Ethylbenzene	B1817-2311	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1817-2311	1.84	1.84	ppb	U
95-47-6	o-xylene	B1817-2311	0.93	0.93	ppb	U
100-42-5	Styrene	B1817-2311	0.95	0.95	ppb	U
75-25-2	Bromoform	B1817-2311	1.53	1.53	ppb	U
98-82-8	Isopropylbenzene	B1817-2311	0.75	0.75	ppb	U
108-86-1	Bromobenzene	B1817-2311	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1817-2311	1.38	1.38	ppb	U
103-65-1	n-Propylbenzene	B1817-2311	0.75	0.75	ppb	U
96-18-4	1,2,3-Trichloropropane	B1817-2311	2.97	2.97	ppb	U
622-96-8	p-Ethyltoluene	B1817-2311	0.62	0.62	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1817-2311	1.27	1.27	ppb	U
95-49-8	2-Chlorotoluene	B1817-2311	0.75	0.75	ppb	U
106-43-4	4-Chlorotoluene	B1817-2311	0.78	0.78	ppb	U
98-06-6	tert-Butylbenzene	B1817-2311	0.62	0.62	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1817-2311	1.40	1.40	ppb	U
135-98-8	sec-Butylbenzene	B1817-2311	0.71	0.71	ppb	U
99-87-6	4-Isopropyltoluene	B1817-2311	0.91	0.91	ppb	U
541-73-1	1,3-Dichlorobenzene	B1817-2311	0.78	0.78	ppb	U
106-46-7	1,4-Dichlorobenzene	B1817-2311	0.78	0.78	ppb	U
95-50-1	1,2-Dichlorobenzene	B1817-2311	0.87	0.87	ppb	U
105-05-5	p-Diethylbenzene	B1817-2311	1.24	1.24	ppb	U
104-51-8	n-Butylbenzene	B1817-2311	1.44	1.44	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1817-2311	1.47	1.47	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1817-2311	2.91	2.91	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1817-2311	1.91	1.91	ppb	U

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-1
Client Sample ID: SB-01A (0-2')
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 89.9%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1817-2311	0.71	0.71	ppb	U
91-20-3	Naphthalene	B1817-2311	2.13	2.13	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1817-2311	1.82	1.82	ppb	U
994-05-8	TAME	B1817-2311	1.04	1.04	ppb	U
75-65-0	Tertiary butyl alcohol	B1817-2311	25.5	25.5	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1817-2311	102.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1817-2311	101.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1817-2311	104.0 %	(81 - 117)	

07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-2
Client Sample ID: SB-01A (8-10')
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Collected: 07/08/2005
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1817-2312	0.59	0.59	ppb	U
75-45-6	Chlorodifluoromethane	B1817-2312	1.07	1.07	ppb	U
74-87-3	Chloromethane	B1817-2312	1.82	1.82	ppb	U
75-01-4	Vinyl Chloride	B1817-2312	1.07	1.07	ppb	U
74-83-9	Bromomethane	B1817-2312	0.68	0.68	ppb	U
75-00-3	Chloroethane	B1817-2312	1.01	1.01	ppb	U
75-69-4	Trichlorofluoromethane	B1817-2312	0.92	0.92	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1817-2312	0.79	0.79	ppb	U
75-35-4	1,1-Dichloroethene	B1817-2312	1.27	1.27	ppb	U
67-64-1	Acetone	B1817-2312	11.9	11.9	ppb	U
75-15-0	Carbon disulfide	B1817-2312	0.85	0.85	ppb	U
75-09-2	Methylene Chloride	B1817-2312	1.14	1.14	ppb	U
156-60-5	t-1,2-Dichloroethene	B1817-2312	1.12	1.12	ppb	U
1634-04-4	Methyl t-butyl ether	B1817-2312	1.82	1.82	ppb	U
75-34-3	1,1-Dichloroethane	B1817-2312	0.90	0.90	ppb	U
590-20-7	2,2-Dichloropropane	B1817-2312	0.74	0.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B1817-2312	1.18	1.18	ppb	U
78-93-3	2-Butanone	B1817-2312	10.4	10.4	ppb	U
74-97-5	Bromochloromethane	B1817-2312	1.25	1.25	ppb	U
67-66-3	Chloroform	B1817-2312	0.79	0.79	ppb	U
71-55-6	1,1,1-Trichloroethane	B1817-2312	1.05	1.05	ppb	U
56-23-5	Carbon Tetrachloride	B1817-2312	1.20	1.20	ppb	U
563-58-6	1,1-Dichloropropene	B1817-2312	1.12	1.12	ppb	U
71-43-2	Benzene	B1817-2312	1.07	1.07	ppb	U
107-06-2	1,2-Dichloroethane	B1817-2312	0.99	0.99	ppb	U
79-01-6	Trichloroethene	B1817-2312	1.03	1.03	ppb	U
78-87-5	1,2-Dichloropropane	B1817-2312	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B1817-2312	1.47	1.47	ppb	U
75-27-4	Bromodichloromethane	B1817-2312	0.90	0.90	ppb	U
110-75-8	2-Chloroethylvinylether	B1817-2312	4.73	4.73	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1817-2312	0.96	0.96	ppb	U
108-10-1	4-Methyl-2-pentanone	B1817-2312	10.1	10.1	ppb	U
108-88-3	Toluene	B1817-2312	1.03	1.03	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1817-2312	0.92	0.92	ppb	U

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Phone - 631-249-1456 Fax - 631-249-8344

07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-2
Client Sample ID: SB-01A (8-10')
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Collected: 07/08/2005
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1817-2312	0.94	0.94	ppb	U
127-18-4	Tetrachloroethene	B1817-2312	1.95	1.95	ppb	U
142-28-9	1,3-Dichloropropane	B1817-2312	1.34	1.34	ppb	U
591-78-6	2-Hexanone	B1817-2312	9.77	9.77	ppb	U
124-48-1	Dibromochloromethane	B1817-2312	1.16	1.16	ppb	U
106-93-4	1,2-Dibromoethane	B1817-2312	0.94	0.94	ppb	U
108-90-7	Chlorobenzene	B1817-2312	0.92	0.92	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1817-2312	0.96	0.96	ppb	U
100-41-4	Ethylbenzene	B1817-2312	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1817-2312	1.82	1.82	ppb	U
95-47-6	o-xylene	B1817-2312	0.92	0.92	ppb	U
100-42-5	Styrene	B1817-2312	0.94	0.94	ppb	U
75-25-2	Bromoform	B1817-2312	1.51	1.51	ppb	U
98-82-8	Isopropylbenzene	B1817-2312	0.74	0.74	ppb	U
108-86-1	Bromobenzene	B1817-2312	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1817-2312	1.36	1.36	ppb	U
103-65-1	n-Propylbenzene	B1817-2312	0.74	0.74	ppb	U
96-18-4	1,2,3-Trichloropropane	B1817-2312	2.93	2.93	ppb	U
622-96-8	p-Ethyltoluene	B1817-2312	0.61	0.61	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1817-2312	1.25	1.25	ppb	U
95-49-8	2-Chlorotoluene	B1817-2312	0.74	0.74	ppb	U
106-43-4	4-Chlorotoluene	B1817-2312	0.77	0.77	ppb	U
98-06-6	tert-Butylbenzene	B1817-2312	0.61	0.61	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1817-2312	1.38	1.38	ppb	U
135-98-8	sec-Butylbenzene	B1817-2312	0.70	0.70	ppb	U
99-87-6	4-Isopropyltoluene	B1817-2312	0.90	0.90	ppb	U
541-73-1	1,3-Dichlorobenzene	B1817-2312	0.77	0.77	ppb	U
106-46-7	1,4-Dichlorobenzene	B1817-2312	0.77	0.77	ppb	U
95-50-1	1,2-Dichlorobenzene	B1817-2312	0.85	0.85	ppb	U
105-05-5	p-Diethylbenzene	B1817-2312	1.23	1.23	ppb	U
104-51-8	n-Butylbenzene	B1817-2312	1.42	1.42	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1817-2312	1.45	1.45	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1817-2312	2.87	2.87	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1817-2312	1.88	1.88	ppb	U

07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-2
Client Sample ID: SB-01A (8-10')
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1817-2312	0.70	0.70	ppb	U
91-20-3	Naphthalene	B1817-2312	2.10	2.10	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1817-2312	1.80	1.80	ppb	U
994-05-8	TAME	B1817-2312	1.03	1.03	ppb	U
75-65-0	Tertiary butyl alcohol	B1817-2312	25.2	25.2	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1817-2312	100.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1817-2312	101.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1817-2312	104.0 %	(81 - 117)	

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1817-2313	0.60	0.60	ppb	U
75-45-6	Chlorodifluoromethane	B1817-2313	1.08	1.08	ppb	U
74-87-3	Chloromethane	B1817-2313	1.83	1.83	ppb	U
75-01-4	Vinyl Chloride	B1817-2313	1.08	1.08	ppb	U
74-83-9	Bromomethane	B1817-2313	0.69	0.69	ppb	U
75-00-3	Chloroethane	B1817-2313	1.02	1.02	ppb	U
75-69-4	Trichlorofluoromethane	B1817-2313	0.93	0.93	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1817-2313	0.80	0.80	ppb	U
75-35-4	1,1-Dichloroethene	B1817-2313	1.28	1.28	ppb	U
67-64-1	Acetone	B1817-2313	12.0	12.0	ppb	U
75-15-0	Carbon disulfide	B1817-2313	0.86	0.86	ppb	U
75-09-2	Methylene Chloride	B1817-2313	1.15	1.15	ppb	U
156-60-5	t-1,2-Dichloroethene	B1817-2313	1.13	1.13	ppb	U
1634-04-4	Methyl t-butyl ether	B1817-2313	1.83	1.83	ppb	U
75-34-3	1,1-Dichloroethane	B1817-2313	0.91	0.91	ppb	U
590-20-7	2,2-Dichloropropane	B1817-2313	0.75	0.75	ppb	U
156-59-2	c-1,2-Dichloroethene	B1817-2313	1.19	1.19	ppb	U
78-93-3	2-Butanone	B1817-2313	10.5	10.5	ppb	U
74-97-5	Bromochloromethane	B1817-2313	1.26	1.26	ppb	U
67-66-3	Chloroform	B1817-2313	0.80	0.80	ppb	U
71-55-6	1,1,1-Trichloroethane	B1817-2313	1.06	1.06	ppb	U
56-23-5	Carbon Tetrachloride	B1817-2313	1.22	1.22	ppb	U
563-58-6	1,1-Dichloropropene	B1817-2313	1.13	1.13	ppb	U
71-43-2	Benzene	B1817-2313	1.08	1.08	ppb	U
107-06-2	1,2-Dichloroethane	B1817-2313	0.99	0.99	ppb	U
79-01-6	Trichloroethene	B1817-2313	1.04	1.04	ppb	U
78-87-5	1,2-Dichloropropane	B1817-2313	0.86	0.86	ppb	U
74-95-3	Dibromomethane	B1817-2313	1.48	1.48	ppb	U
75-27-4	Bromodichloromethane	B1817-2313	0.91	0.91	ppb	U
110-75-8	2-Chloroethylvinylether	B1817-2313	4.77	4.77	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1817-2313	0.97	0.97	ppb	U
108-10-1	4-Methyl-2-pentanone	B1817-2313	10.2	10.2	ppb	U
108-88-3	Toluene	B1817-2313	1.04	1.04	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1817-2313	0.93	0.93	ppb	U

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1817-2313	0.95	0.95	ppb	U
127-18-4	Tetrachloroethene	B1817-2313	1.97	1.97	ppb	U
142-28-9	1,3-Dichloropropane	B1817-2313	1.35	1.35	ppb	U
591-78-6	2-Hexanone	B1817-2313	9.86	9.86	ppb	U
124-48-1	Dibromochloromethane	B1817-2313	1.17	1.17	ppb	U
106-93-4	1,2-Dibromoethane	B1817-2313	0.95	0.95	ppb	U
108-90-7	Chlorobenzene	B1817-2313	0.93	0.93	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1817-2313	0.97	0.97	ppb	U
100-41-4	Ethylbenzene	B1817-2313	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1817-2313	1.83	1.83	ppb	U
95-47-6	o-xylene	B1817-2313	0.93	0.93	ppb	U
100-42-5	Styrene	B1817-2313	0.95	0.95	ppb	U
75-25-2	Bromoform	B1817-2313	1.52	1.52	ppb	U
98-82-8	Isopropylbenzene	B1817-2313	0.75	0.75	ppb	U
108-86-1	Bromobenzene	B1817-2313	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1817-2313	1.37	1.37	ppb	U
103-65-1	n-Propylbenzene	B1817-2313	0.75	0.75	ppb	U
96-18-4	1,2,3-Trichloropropane	B1817-2313	2.96	2.96	ppb	U
622-96-8	p-Ethyltoluene	B1817-2313	0.62	0.62	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1817-2313	1.26	1.26	ppb	U
95-49-8	2-Chlorotoluene	B1817-2313	0.75	0.75	ppb	U
106-43-4	4-Chlorotoluene	B1817-2313	0.77	0.77	ppb	U
98-06-6	tert-Butylbenzene	B1817-2313	0.62	0.62	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1817-2313	1.39	1.39	ppb	U
135-98-8	sec-Butylbenzene	B1817-2313	0.71	0.71	ppb	U
99-87-6	4-Isopropyltoluene	B1817-2313	0.91	0.91	ppb	U
541-73-1	1,3-Dichlorobenzene	B1817-2313	0.77	0.77	ppb	U
106-46-7	1,4-Dichlorobenzene	B1817-2313	0.77	0.77	ppb	U
95-50-1	1,2-Dichlorobenzene	B1817-2313	0.86	0.86	ppb	U
105-05-5	p-Diethylbenzene	B1817-2313	1.24	1.24	ppb	U
104-51-8	n-Butylbenzene	B1817-2313	1.44	1.44	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1817-2313	1.46	1.46	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1817-2313	2.90	2.90	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1817-2313	1.90	1.90	ppb	U

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1817-2313	0.71	0.71	ppb	U
91-20-3	Naphthalene	B1817-2313	2.12	2.12	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1817-2313	1.81	1.81	ppb	U
994-05-8	TAME	B1817-2313	1.04	1.04	ppb	U
75-65-0	Tertiary butyl alcohol	B1817-2313	25.4	25.4	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1817-2313	100.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1817-2313	103.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1817-2313	103.0 %	(81 - 117)	

07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-4
Client Sample ID: SB-01A
Matrix: Liquid
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Collected: 07/08/2005

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration	Units	Q
75-71-8	Dichlorodifluoromethane	A1836-9072	0.36	0.36	ppb	U
75-45-6	Chlorodifluoromethane	A1836-9072	0.43	0.43	ppb	U
74-87-3	Chloromethane	A1836-9072	0.57	0.57	ppb	U
75-01-4	Vinyl Chloride	A1836-9072	0.38	0.38	ppb	U
74-83-9	Bromomethane	A1836-9072	0.56	0.56	ppb	U
75-00-3	Chloroethane	A1836-9072	0.55	0.55	ppb	U
75-69-4	Trichlorofluoromethane	A1836-9072	0.40	0.40	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	A1836-9072	1.06	1.06	ppb	U
75-35-4	1,1-Dichloroethene	A1836-9072	0.44	0.44	ppb	U
67-64-1	Acetone	A1836-9077	39.5	**3210**	ppb	
75-15-0	Carbon disulfide	A1836-9072	0.45	0.45	ppb	U
75-09-2	Methylene Chloride	A1836-9072	0.19	0.19	ppb	U
156-60-5	t-1,2-Dichloroethene	A1836-9072	0.40	0.40	ppb	U
1634-04-4	Methyl t-butyl ether	A1836-9072	0.41	0.41	ppb	U
75-34-3	1,1-Dichloroethane	A1836-9072	0.32	0.32	ppb	U
590-20-7	2,2-Dichloropropane	A1836-9072	0.66	0.66	ppb	U
156-59-2	c-1,2-Dichloroethene	A1836-9072	0.40	**5.37**	ppb	
78-93-3	2-Butanone	A1836-9072	0.87	0.87	ppb	U
74-97-5	Bromochloromethane	A1836-9072	0.35	0.35	ppb	U
67-66-3	Chloroform	A1836-9072	0.33	**4.44**	ppb	Y
71-55-6	1,1,1-Trichloroethane	A1836-9072	0.40	0.40	ppb	U
56-23-5	Carbon Tetrachloride	A1836-9072	0.34	0.34	ppb	U
563-58-6	1,1-Dichloropropene	A1836-9072	0.31	0.31	ppb	U
71-43-2	Benzene	A1836-9072	0.38	0.38	ppb	U
107-06-2	1,2-Dichloroethane	A1836-9072	0.20	0.20	ppb	U
79-01-6	Trichloroethene	A1836-9072	0.40	**1.20**	ppb	Y
78-87-5	1,2-Dichloropropane	A1836-9072	0.28	0.28	ppb	U
74-95-3	Dibromomethane	A1836-9072	0.24	0.24	ppb	U
75-27-4	Bromodichloromethane	A1836-9072	0.23	0.23	ppb	U
110-75-8	2-Chloroethylvinylether	A1836-9072	0.27	0.27	ppb	U
10061-01-5	c-1,3-Dichloropropene	A1836-9072	0.32	0.32	ppb	U
108-10-1	4-Methyl-2-pentanone	A1836-9072	0.74	0.74	ppb	U
108-88-3	Toluene	A1836-9072	0.36	0.36	ppb	U
10061-02-6	t-1,3-Dichloropropene	A1836-9072	0.30	0.30	ppb	U

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07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-4
Client Sample ID: SB-01A
Matrix: Liquid
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Type: Grab

Collected: 07/08/2005

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration	Units	Q
79-00-5	1,1,2-Trichloroethane	A1836-9072	0.28	0.28	ppb	U
127-18-4	Tetrachloroethene	A1836-9077	16.0	**285**	ppb	
142-28-9	1,3-Dichloropropane	A1836-9072	0.26	0.26	ppb	U
591-78-6	2-Hexanone	A1836-9072	0.95	0.95	ppb	U
124-48-1	Dibromochloromethane	A1836-9072	0.26	0.26	ppb	U
106-93-4	1,2-Dibromoethane	A1836-9072	0.30	0.30	ppb	U
108-90-7	Chlorobenzene	A1836-9072	0.32	0.32	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	A1836-9072	0.31	0.31	ppb	U
100-41-4	Ethylbenzene	A1836-9072	0.30	0.30	ppb	U
108-38-3	m,p-xylene	A1836-9072	0.62	0.62	ppb	U
95-47-6	o-xylene	A1836-9072	0.30	0.30	ppb	U
100-42-5	Styrene	A1836-9072	0.35	0.35	ppb	U
75-25-2	Bromoform	A1836-9072	0.22	0.22	ppb	U
98-82-8	Isopropylbenzene	A1836-9072	0.29	0.29	ppb	U
108-86-1	Bromobenzene	A1836-9072	0.32	0.32	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	A1836-9072	0.21	0.21	ppb	U
103-65-1	n-Propylbenzene	A1836-9072	0.32	0.32	ppb	U
96-18-4	1,2,3-Trichloropropane	A1836-9072	0.42	0.42	ppb	U
622-96-8	p-Ethyltoluene	A1836-9072	0.33	0.33	ppb	U
108-67-8	1,3,5-Trimethylbenzene	A1836-9072	0.42	0.42	ppb	U
95-49-8	2-Chlorotoluene	A1836-9072	0.41	0.41	ppb	U
106-43-4	4-Chlorotoluene	A1836-9072	0.34	0.34	ppb	U
98-06-6	tert-Butylbenzene	A1836-9072	0.32	0.32	ppb	U
95-63-6	1,2,4-Trimethylbenzene	A1836-9072	0.29	0.29	ppb	U
135-98-8	sec-Butylbenzene	A1836-9072	0.34	0.34	ppb	U
99-87-6	4-Isopropyltoluene	A1836-9072	0.24	0.24	ppb	U
541-73-1	1,3-Dichlorobenzene	A1836-9072	0.25	0.25	ppb	U
106-46-7	1,4-Dichlorobenzene	A1836-9072	0.30	0.30	ppb	U
95-50-1	1,2-Dichlorobenzene	A1836-9072	0.28	0.28	ppb	U
105-05-5	p-Diethylbenzene	A1836-9072	0.31	0.31	ppb	U
104-51-8	n-Butylbenzene	A1836-9072	0.29	0.29	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	A1836-9072	0.34	0.34	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	A1836-9072	0.42	0.42	ppb	U
120-82-1	1,2,4-Trichlorobenzene	A1836-9072	0.36	0.36	ppb	U

07/20/2005

Volatiles - EPA 8260B

Sample: 0507178-4
Client Sample ID: SB-01A
Collected: 07/08/2005
Matrix: Liquid
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration	Units	Q
87-68-3	Hexachlorobutadiene	A1836-9072	0.94	0.94	ppb	U
91-20-3	Naphthalene	A1836-9072	0.28	0.28	ppb	U
87-61-6	1,2,3-Trichlorobenzene	A1836-9072	0.28	0.28	ppb	U
994-05-8	TAME	A1836-9072	0.17	0.17	ppb	U
75-65-0	Tertiary butyl alcohol	A1836-9072	1.81	1.81	ppb	U

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	A1836-9072	99.1 %	(86 - 115)	
4774-33-8	DIBROMOFLUOROMETHANE	A1836-9072	98.8 %	(86 - 118)	
2037-26-5	TOLUENE-D8	A1836-9072	100.0 %	(88 - 110)	
460-00-4	4-BROMOFLUOROBENZENE	A1836-9077	99.1 %	(86 - 115)	
4774-33-8	DIBROMOFLUOROMETHANE	A1836-9077	98.9 %	(86 - 118)	
2037-26-5	TOLUENE-D8	A1836-9077	101.0 %	(88 - 110)	

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07/20/2005

TCLP Benzene By SW846 8260

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil   Type: Grab
Remarks: See Case Narrative
Analyzed Date: 07/12/2005
Preparation Date(s) : 07/11/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration	Units	Q
71-43-2	Benzene	A1836-9074	0.0038	0.0038	ppm	U

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	A1836-9074	99.8 %	(86 - 115)	
4774-33-8	DIBROMOFLUOROMETHANE	A1836-9074	99.4 %	(86 - 118)	
2037-26-5	TOLUENE-D8	A1836-9074	101.0 %	(88 - 110)	

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07/20/2005

Semivolatile PAH Compounds - EPA Method 8270C

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks:
Analyzed Date: 07/13/2005
Preparation Date(s) : 07/12/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
83-32-9	Acenaphthene	C1427-7036	50.6	50.6	ppb	U
208-96-8	Acenaphthylene	C1427-7036	50.6	50.6	ppb	U
120-12-7	Anthracene	C1427-7036	48.4	48.4	ppb	U
56-55-3	Benzo(a)Anthracene	C1427-7036	51.7	51.7	ppb	U
50-32-8	Benzo(a)Pyrene	C1427-7036	47.3	47.3	ppb	U
205-99-2	Benzo(b)Fluoranthene	C1427-7036	45.1	45.1	ppb	U
191-24-2	Benzo(g,h,i)Perylene	C1427-7036	48.4	48.4	ppb	U
207-08-9	Benzo(k)Fluoranthene	C1427-7036	46.2	46.2	ppb	U
218-01-9	Chrysene	C1427-7036	48.4	48.4	ppb	U
53-70-3	Dibenzo(a,h)Anthracene	C1427-7036	49.5	49.5	ppb	U
206-44-0	Fluoranthene	C1427-7036	48.4	48.4	ppb	U
86-73-7	Fluorene	C1427-7036	52.8	52.8	ppb	U
193-39-5	Indeno(1,2,3-cd)pyrene	C1427-7036	48.4	48.4	ppb	U
91-20-3	Naphthalene	C1427-7036	48.4	48.4	ppb	U
85-01-8	Phenanthrene	C1427-7036	42.9	42.9	ppb	U
129-00-0	Pyrene	C1427-7036	49.5	49.5	ppb	U
91-57-6	2-Methylnaphthalene	C1427-7036	91.3	91.3	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
321-60-8	2-FLUOROBIPHENYL	C1427-7036	48.7 %	(30 - 115)	
4165-60-0	NITROBENZENE-D5	C1427-7036	51.1 %	(23 - 120)	
1718-51-0	TERPHENYL-D14	C1427-7036	63.9 %	(18 - 137)	

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07/20/2005

Diesel Range Organics - Method 8015B

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil
Type: Grab
Remarks:
Analyzed Date: 07/14/2005
Preparation Date(s) : 07/14/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
	Diesel Range Organics	H 338 -6	42.1	42.1	ppm	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
84-15-1	O-TERPHENYL	H338-6	68.6 %	(30 - 150)	

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07/20/2005

Gasoline Range Organics - EPA 8015B

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil
Type: Grab
Remarks:
Analyzed Date: 07/13/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
	Gasoline Range Organics	M 146 -13	0.48	**11.5**	ppm	

* Results are reported on a dry weight basis

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07/20/2005

PCB Aroclors by SW846 8082/EPA 608

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil   Type: Grab
Remarks:
Analyzed Date: 07/14/2005
Preparation Date(s) : 07/14/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 939 -15	2.25	2.25	ppb	U
11104-28-2	PCB 1221	G 939 -15	10.6	10.6	ppb	U
11141-16-5	PCB 1232	G 939 -15	2.35	2.35	ppb	U
53469-21-9	PCB 1242	G 939 -15	1.77	1.77	ppb	U
12672-29-6	PCB 1248	G 939 -15	3.97	3.97	ppb	U
11097-69-1	PCB 1254	G 939 -15	6.02	6.02	ppb	U
11096-82-5	PCB 1260	G 939 -15	6.91	6.91	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G939-15	65.7 %	(30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G939-15	67.4 %	(30 - 150)	

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07/20/2005

TOX by Modified 8082

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks:
Analyzed Date: 07/14/2005
Preparation Date(s) : 07/14/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
	Total Organic Halides (TOX)	L 448 -21	0.028	0.028	mg/Kg	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	L448-21	82.8 %	(30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	L448-21	72.9 %	(30 - 150)	

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07/20/2005

Mercury by SW846 7470/7471/EPA 245.1

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks:
Analyzed Date: 07/13/2005
Preparation Date(s) : 07/13/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0028	0.0028	mg/L	U

* Results are reported on a dry weight basis

Environmental Testing Laboratories, Inc.
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Phone - 631-249-1456 Fax - 631-249-8344

07/20/2005

RCRA Metals plus Cu, Ni, Zn by Method SW846 6010

Sample: 0507178-3

Client Sample ID: SB-01A (0-10') Collected: 07/08/2005

Matrix: Soil Type: Grab % Solid: 90.6%

Remarks:

Analyzed Date: 07/13/2005

Preparation Date(s) : 07/13/2005 07/13/2005

Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-38-2	Arsenic	0.35	**1.33**	ppm	
7440-39-3	Barium	0.041	**24.1**	ppm	
7440-43-9	Cadmium	0.031	0.031	ppm	U
7440-47-3	Chromium	0.16	**4.76**	ppm	
7440-50-8	Copper	0.30	**11.9**	ppm	
7439-92-1	Lead	0.17	**8.01**	ppm	
7440-02-0	Nickel	0.051	**26.7**	ppm	
7782-49-2	Selenium	0.44	0.44	ppm	U
7440-22-4	Silver	0.10	0.10	ppm	U
7440-66-6	Zinc	0.45	**29.3**	ppm	

* Results are reported on a dry weight basis

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07/20/2005

TCLP Metals - Cu, Ni, Zn by Method SW846 1311/6010

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Collected: 07/08/2005
Matrix: Soil
Type: Grab
% Solid: 90.6%
Remarks:
Analyzed Date: 07/13/2005
Preparation Date(s) : 07/12/2005 07/11/2005

Analytical Results

Cas No	Analyte	MDL	Concentration	Units	Q
7440-50-8	Copper	0.029	0.029	ppm	U
7440-02-0	Nickel	0.0050	**0.061**	ppm	
7440-66-6	Zinc	0.044	**0.41**	ppm	

07/20/2005

TCLP Mercury-Method SW846 1311/7470/7471

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Collected: 07/08/2005
Matrix: Soil
Type: Grab
% Solid: 90.6%
Remarks:
Analyzed Date: 07/13/2005
Preparation Date(s) : 07/13/2005 07/11/2005

Analytical Results

Cas No	Analyte	MDL	Concentration	Units	Q
7439-97-6	Mercury	0.000014	0.000014	mg/L	U

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07/20/2005

TCLP Metals-Method SW846 1311/6010

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Collected: 07/08/2005
Matrix: Soil
Type: Grab
% Solid: 90.6%
Remarks:
Analyzed Date: 07/13/2005
Preparation Date(s) : 07/12/2005 07/13/2005 07/11/2005

Analytical Results

Cas No	Analyte	MDL	Concentration	Units	Q
7440-38-2	Arsenic	0.034	0.034	ppm	U
7440-39-3	Barium	0.0040	**0.54**	ppm	
7440-43-9	Cadmium	0.0030	0.0030	ppm	U
7440-47-3	Chromium	0.016	0.016	ppm	U
7439-92-1	Lead	0.017	**0.021**	ppm	
7782-49-2	Selenium	0.043	0.043	ppm	U
7440-22-4	Silver	0.010	0.010	ppm	U

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07/20/2005

% Moisture - SM 2540G

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks:
Analyzed Date: 07/12/2005 9:57:58 AM

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Result	Units	Q
	% Moisture	0	**9.400**	%	
	% Solid	0	**90.600**	%	

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07/20/2005

Total Petroleum Hydrocarbons - EPA 418.1

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil Type: Grab
Remarks:
Analyzed Date: 07/18/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Result*	Units	Q
	Total Rec.Petr. Hydrocarbons	3.42	23.3	ppm	

* Results are reported on a dry weight basis

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07/20/2005

Flash Point (Ignitability) - SW 846 1010

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil   Type: Grab
Remarks:
Analyzed Date: 07/14/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Result*	Units	Q
	Flash Point	0	>100	°C	

* Results are reported on a dry weight basis

Environmental Testing Laboratories, Inc.

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07/20/2005

Soil pH - SW 846 9045C

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil
Type: Grab
Remarks:
Analyzed Date: 07/12/2005

Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Result	Units	Q
	pH over-aged	0	**9.81**	pH Units	
	Temperature	0	**23.0**	pH Units	

Environmental Testing Laboratories, Inc.
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07/20/2005

Reactivity -SW 846 9010

Sample: 0507178-3
Client Sample ID: SB-01A (0-10')
Matrix: Soil
Type: Grab
Remarks:
Analyzed Date: 07/18/2005
Collected: 07/08/2005
% Solid: 90.6%

Analytical Results

Cas No	Analyte	MDL	Result*	Units	Q
	Releasable Cyanide	0.10	0.10	mg/L	U
	Releasable H2 Sulfide	0.010	0.010	mg/L	U
	Reactivity	0	Negative	mg/L	

* Results are reported on a dry weight basis

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07/20/2005

Case Narrative

EPA 8260 VOLATILE ANALYSIS:

The following compounds were calibrated at 25, 50, 100, 150 and 200 ppb levels in the initial calibration curve:
- Acetone
- 2-Butanone
- 4-Methyl-2-pentanone
- 2-Hexanone

M&P-Xylenes and 2-Chloroethylvinylether were calibrated at 10, 40, 100, 200 and 300 ppb levels.
Acrolein/Acrylonitrile were calibrated at 50,100,150,200 and 250 ppb levels.
Tert Butyl Alcohol (TBA) was calibrated at 50,200,500,1000 and 1500 ppb levels.

All other compounds were calibrated at 5, 20, 50, 100 and 150 ppb levels.

07/20/2005

Case Narrative

PCB ANALYSIS:
Results were calculated using Linear Regression initial calibration curve.

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07/20/2005

ORGANIC METHOD QUALIFIERS

Q - Qualifier - specified entries and their meanings are as follows:

U - The analytical result is not detected above the Method Detection Limit (MDL). All MDL's are lower than the lowest calibration standard concentration.

J - Indicates an estimated value. The concentration reported was detected below the Method Detection Limit (MDL).

Y - The concentration reported was detected below the lowest calibration standard concentration.

B - The analyte was found in the associated method blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E - The concentration of the analyte exceeded the calibration range of the instrument.

D - This flag indicates a system monitoring compound diluted out.

INORGANIC METHOD QUALIFIERS

C - (Concentration) qualifiers are as follows:

B - Entered if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

U - Entered when the analyte was analyzed for, but not detected above the Method Detection Limit (MDL) which is less than the lowest calibration standard concentration.

Q - Qualifier specific entries and their meanings are as follows:

E - Reported value is estimated because of the presence of interferences.

M - (Method) qualifiers are as follows:

A - Flame AA
AS - Semi-automated Spectrophotometric
AV - Automated Cold Vapor AA
C - Manual Spectrophotometric
F - Furnace AA
P - ICP
T - Titrimetric

OTHER QUALIFIERS

ND - Not Detected

NA - Not Applicable

NR - Not Required

* - Outside Expected Range (NYCDEP Table I/II or Surrogate Limits)

x - Outside Expected Range

0507178

0507178

Rec'vd Date: 07/11/05 16:39

CHAIN OF CUSTODY DOCUMENT

R 10890

631-249-1456 • Fax: 631-249-6344

Project Name:	Project Manager: Caroline Cadalbo
Sampler (Signature): [signature] for SW	(Print): Steven Wolls
Project Address: 4071 - BKNY	
Client: ACT	J/N:
☐ Rush by: NORMAL	

SAMPLE INFO — Type: SS = Split Spoon; G = Grab; C = Composite; B = Blank. Matrix: L = Liquid; S = Soil; SL = Sludge; A* = Air; W = Wipe. *Air - Vol. (Liters) include: Flow (CFM)

ID	Date	Time	Type	Matrix	Sample Location	Total # Cont.
1	7/8		G	S	SB-01A (0-2')	2
2	↓		G	S	SB-01A (8-10')	2
3	↓		C	S	SB-01A (0-10')	2
4	↓		G	L	SB-01A	2
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

ID	601/602	BTX/BTEX	MTBE	624/8260/8021	625/8270/BN/PAHs	PCB/Pesticides	Pet.Prods./8100M	RCRA Metals *+	pH/Flash/React	418.1 - TRPH	TPH 8015	* TCLP Metals	PCB SGA 8081	TOX	% Moisture	TCLP [illegible]		
1				X														
2				X														
3				X	X			X	X	X	X	X	X	X	X	X		
4				X														
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by (Signature):	Date / Time	Printed Name & Agent:	Received by (Signature):	Date / Time	Printed Name & Agent
[signature]	Date 7/11/05 Time 1040		[signature]	Date Time	

Relinquished by (Signature):	Date / Time	Printed Name & Agent:	Received for Lab by (Signature):	Date / Time	Printed Name
	Date Time		[signature]	Date 7/11/05 Time 4/10	C. Conerty

Comments & Special Instructions	QA/QC Type:	Number & Type of Containers:	Preservatives:	Temp:
*+ [illegible], Zinc, Nickel				5°

Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Laboratory Identifier: 0509282
Custody Document: R0907
Received: 09/15/2005 15:25
Sampled by: Paul Stawart

Client: Advanced Cleanup Technologies
115 Rome Street
Farmingdale,
NY 11735

Project: 4071-BHNY

Manager: Paul Stawart

Respectfully submitted,

Patricia Werner-Els
Quality Assurance Officer

NYS Lab ID # 10969
NJ Cert. # 73812
CT Cert. # PH0645
MA Cert. # NY061
PA Cert. # 68-535
NH Cert. # 252592-BA
RI Cert. # 161

Environmental Testing Laboratories, Inc.
208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-1
Client Sample ID: EP-1
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 91.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1874-3362	0.59	0.59	ppb	U
75-45-6	Chlorodifluoromethane	B1874-3362	1.07	1.07	ppb	U
74-87-3	Chloromethane	B1874-3362	1.81	1.81	ppb	U
75-01-4	Vinyl Chloride	B1874-3362	1.07	1.07	ppb	U
74-83-9	Bromomethane	B1874-3362	0.68	0.68	ppb	U
75-00-3	Chloroethane	B1874-3362	1.00	1.00	ppb	U
75-69-4	Trichlorofluoromethane	B1874-3362	0.92	0.92	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1874-3362	0.78	0.78	ppb	U
75-35-4	1,1-Dichloroethene	B1874-3362	1.26	1.26	ppb	U
67-64-1	Acetone	B1874-3362	11.9	11.9	ppb	U
75-15-0	Carbon disulfide	B1874-3362	0.85	0.85	ppb	U
75-09-2	Methylene Chloride	B1874-3362	1.13	1.13	ppb	U
156-60-5	t-1,2-Dichloroethene	B1874-3362	1.11	1.11	ppb	U
1634-04-4	Methyl t-butyl ether	B1874-3362	1.81	1.81	ppb	U
75-34-3	1,1-Dichloroethane	B1874-3362	0.89	0.89	ppb	U
590-20-7	2,2-Dichloropropane	B1874-3362	0.74	0.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B1874-3362	1.18	1.18	ppb	U
78-93-3	2-Butanone	B1874-3362	10.4	10.4	ppb	U
74-97-5	Bromochloromethane	B1874-3362	1.24	1.24	ppb	U
67-66-3	Chloroform	B1874-3362	0.78	0.78	ppb	U
71-55-6	1,1,1-Trichloroethane	B1874-3362	1.05	1.05	ppb	U
56-23-5	Carbon Tetrachloride	B1874-3362	1.20	1.20	ppb	U
563-58-6	1,1-Dichloropropene	B1874-3362	1.11	1.11	ppb	U
71-43-2	Benzene	B1874-3362	1.07	1.07	ppb	U
107-06-2	1,2-Dichloroethane	B1874-3362	0.98	0.98	ppb	U
79-01-6	Trichloroethene	B1874-3362	1.02	1.02	ppb	U
78-87-5	1,2-Dichloropropane	B1874-3362	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B1874-3362	1.46	1.46	ppb	U
75-27-4	Bromodichloromethane	B1874-3362	0.89	0.89	ppb	U
110-75-8	2-Chloroethylvinylether	B1874-3362	4.71	4.71	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1874-3362	0.96	0.96	ppb	U
108-10-1	4-Methyl-2-pentanone	B1874-3362	10.1	10.1	ppb	U
108-88-3	Toluene	B1874-3362	1.02	1.02	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1874-3362	0.92	0.92	ppb	U

Environmental Testing Laboratories, Inc.
208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-1
Client Sample ID: EP-1
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 91.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1874-3362	0.94	0.94	ppb	U
127-18-4	Tetrachloroethene	B1874-3362	1.94	1.94	ppb	U
142-28-9	1,3-Dichloropropane	B1874-3362	1.33	1.33	ppb	U
591-78-6	2-Hexanone	B1874-3362	9.72	9.72	ppb	U
124-48-1	Dibromochloromethane	B1874-3362	1.16	1.16	ppb	U
106-93-4	1,2-Dibromoethane	B1874-3362	0.94	0.94	ppb	U
108-90-7	Chlorobenzene	B1874-3362	0.92	0.92	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1874-3362	0.96	0.96	ppb	U
100-41-4	Ethylbenzene	B1874-3362	0.52	0.52	ppb	U
108-38-3	m,p-xylene	B1874-3362	1.81	1.81	ppb	U
95-47-6	o-xylene	B1874-3362	0.92	0.92	ppb	U
100-42-5	Styrene	B1874-3362	0.94	0.94	ppb	U
75-25-2	Bromoform	B1874-3362	1.50	1.50	ppb	U
98-82-8	Isopropylbenzene	B1874-3362	0.74	0.74	ppb	U
108-86-1	Bromobenzene	B1874-3362	0.52	0.52	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1874-3362	1.35	1.35	ppb	U
103-65-1	n-Propylbenzene	B1874-3362	0.74	0.74	ppb	U
96-18-4	1,2,3-Trichloropropane	B1874-3362	2.92	2.92	ppb	U
622-96-8	p-Ethyltoluene	B1874-3362	0.61	0.61	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1874-3362	1.24	1.24	ppb	U
95-49-8	2-Chlorotoluene	B1874-3362	0.74	0.74	ppb	U
106-43-4	4-Chlorotoluene	B1874-3362	0.76	0.76	ppb	U
98-06-6	tert-Butylbenzene	B1874-3362	0.61	0.61	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1874-3362	1.37	1.37	ppb	U
135-98-8	sec-Butylbenzene	B1874-3362	0.70	0.70	ppb	U
99-87-6	4-Isopropyltoluene	B1874-3362	0.89	0.89	ppb	U
541-73-1	1,3-Dichlorobenzene	B1874-3362	0.76	0.76	ppb	U
106-46-7	1,4-Dichlorobenzene	B1874-3362	0.76	0.76	ppb	U
95-50-1	1,2-Dichlorobenzene	B1874-3362	0.85	0.85	ppb	U
105-05-5	p-Diethylbenzene	B1874-3362	1.22	1.22	ppb	U
104-51-8	n-Butylbenzene	B1874-3362	1.42	1.42	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1874-3362	1.44	1.44	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1874-3362	2.86	2.86	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1874-3362	1.87	1.87	ppb	U

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-1
Client Sample ID: EP-1
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 91.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1874-3362	0.70	0.70	ppb	U
91-20-3	Naphthalene	B1874-3362	2.09	2.09	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1874-3362	1.79	1.79	ppb	U
994-05-8	TAME	B1874-3362	1.02	1.02	ppb	U
75-65-0	Tertiary butyl alcohol	B1874-3362	25.1	25.1	ppb	U
107-13-1	Acrylonitrile	B1874-3362	8.81	8.81	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1874-3362	102.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1874-3362	103.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1874-3362	100.0 %	(81 - 117)	

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-2
Client Sample ID: EP-2
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1874-3363	0.60	0.60	ppb	U
75-45-6	Chlorodifluoromethane	B1874-3363	1.08	1.08	ppb	U
74-87-3	Chloromethane	B1874-3363	1.83	1.83	ppb	U
75-01-4	Vinyl Chloride	B1874-3363	1.08	1.08	ppb	U
74-83-9	Bromomethane	B1874-3363	0.69	0.69	ppb	U
75-00-3	Chloroethane	B1874-3363	1.02	1.02	ppb	U
75-69-4	Trichlorofluoromethane	B1874-3363	0.93	0.93	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1874-3363	0.80	0.80	ppb	U
75-35-4	1,1-Dichloroethene	B1874-3363	1.28	1.28	ppb	U
67-64-1	Acetone	B1874-3363	12.0	**21.6**	ppb	Y
75-15-0	Carbon disulfide	B1874-3363	0.86	0.86	ppb	U
75-09-2	Methylene Chloride	B1874-3363	1.15	1.15	ppb	U
156-60-5	t-1,2-Dichloroethene	B1874-3363	1.13	1.13	ppb	U
1634-04-4	Methyl t-butyl ether	B1874-3363	1.83	1.83	ppb	U
75-34-3	1,1-Dichloroethane	B1874-3363	0.91	0.91	ppb	U
590-20-7	2,2-Dichloropropane	B1874-3363	0.75	0.75	ppb	U
156-59-2	c-1,2-Dichloroethene	B1874-3363	1.19	1.19	ppb	U
78-93-3	2-Butanone	B1874-3363	10.5	10.5	ppb	U
74-97-5	Bromochloromethane	B1874-3363	1.26	1.26	ppb	U
67-66-3	Chloroform	B1874-3363	0.80	0.80	ppb	U
71-55-6	1,1,1-Trichloroethane	B1874-3363	1.06	1.06	ppb	U
56-23-5	Carbon Tetrachloride	B1874-3363	1.22	1.22	ppb	U
563-58-6	1,1-Dichloropropene	B1874-3363	1.13	1.13	ppb	U
71-43-2	Benzene	B1874-3363	1.08	1.08	ppb	U
107-06-2	1,2-Dichloroethane	B1874-3363	0.99	0.99	ppb	U
79-01-6	Trichloroethene	B1874-3363	1.04	1.04	ppb	U
78-87-5	1,2-Dichloropropane	B1874-3363	0.86	0.86	ppb	U
74-95-3	Dibromomethane	B1874-3363	1.48	1.48	ppb	U
75-27-4	Bromodichloromethane	B1874-3363	0.91	0.91	ppb	U
110-75-8	2-Chloroethylvinylether	B1874-3363	4.77	4.77	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1874-3363	0.97	0.97	ppb	U
108-10-1	4-Methyl-2-pentanone	B1874-3363	10.2	10.2	ppb	U
108-88-3	Toluene	B1874-3363	1.04	1.04	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1874-3363	0.93	0.93	ppb	U

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-2
Client Sample ID: EP-2
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1874-3363	0.95	0.95	ppb	U
127-18-4	Tetrachloroethene	B1874-3363	1.97	1.97	ppb	U
142-28-9	1,3-Dichloropropane	B1874-3363	1.35	1.35	ppb	U
591-78-6	2-Hexanone	B1874-3363	9.86	9.86	ppb	U
124-48-1	Dibromochloromethane	B1874-3363	1.17	1.17	ppb	U
106-93-4	1,2-Dibromoethane	B1874-3363	0.95	0.95	ppb	U
108-90-7	Chlorobenzene	B1874-3363	0.93	0.93	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1874-3363	0.97	0.97	ppb	U
100-41-4	Ethylbenzene	B1874-3363	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1874-3363	1.83	1.83	ppb	U
95-47-6	o-xylene	B1874-3363	0.93	0.93	ppb	U
100-42-5	Styrene	B1874-3363	0.95	0.95	ppb	U
75-25-2	Bromoform	B1874-3363	1.52	1.52	ppb	U
98-82-8	Isopropylbenzene	B1874-3363	0.75	0.75	ppb	U
108-86-1	Bromobenzene	B1874-3363	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1874-3363	1.37	1.37	ppb	U
103-65-1	n-Propylbenzene	B1874-3363	0.75	0.75	ppb	U
96-18-4	1,2,3-Trichloropropane	B1874-3363	2.96	2.96	ppb	U
622-96-8	p-Ethyltoluene	B1874-3363	0.62	0.62	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1874-3363	1.26	1.26	ppb	U
95-49-8	2-Chlorotoluene	B1874-3363	0.75	0.75	ppb	U
106-43-4	4-Chlorotoluene	B1874-3363	0.77	0.77	ppb	U
98-06-6	tert-Butylbenzene	B1874-3363	0.62	0.62	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1874-3363	1.39	1.39	ppb	U
135-98-8	sec-Butylbenzene	B1874-3363	0.71	0.71	ppb	U
99-87-6	4-Isopropyltoluene	B1874-3363	0.91	0.91	ppb	U
541-73-1	1,3-Dichlorobenzene	B1874-3363	0.77	0.77	ppb	U
106-46-7	1,4-Dichlorobenzene	B1874-3363	0.77	0.77	ppb	U
95-50-1	1,2-Dichlorobenzene	B1874-3363	0.86	0.86	ppb	U
105-05-5	p-Diethylbenzene	B1874-3363	1.24	1.24	ppb	U
104-51-8	n-Butylbenzene	B1874-3363	1.44	1.44	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1874-3363	1.46	1.46	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1874-3363	2.90	2.90	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1874-3363	1.90	1.90	ppb	U

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-2
Client Sample ID: EP-2
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 90.6%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1874-3363	0.71	0.71	ppb	U
91-20-3	Naphthalene	B1874-3363	2.12	2.12	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1874-3363	1.81	1.81	ppb	U
994-05-8	TAME	B1874-3363	1.04	1.04	ppb	U
75-65-0	Tertiary butyl alcohol	B1874-3363	25.4	25.4	ppb	U
107-13-1	Acrylonitrile	B1874-3363	8.93	8.93	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1874-3363	97.7 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1874-3363	105.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1874-3363	99.5 %	(81 - 117)	

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-3
Client Sample ID: EP-3
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 98.4%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1874-3364	0.55	0.55	ppb	U
75-45-6	Chlorodifluoromethane	B1874-3364	0.99	0.99	ppb	U
74-87-3	Chloromethane	B1874-3364	1.68	1.68	ppb	U
75-01-4	Vinyl Chloride	B1874-3364	0.99	0.99	ppb	U
74-83-9	Bromomethane	B1874-3364	0.63	0.63	ppb	U
75-00-3	Chloroethane	B1874-3364	0.93	0.93	ppb	U
75-69-4	Trichlorofluoromethane	B1874-3364	0.85	0.85	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1874-3364	0.73	0.73	ppb	U
75-35-4	1,1-Dichloroethene	B1874-3364	1.18	1.18	ppb	U
67-64-1	Acetone	B1874-3364	11.1	**21.7**	ppb	Y
75-15-0	Carbon disulfide	B1874-3364	0.79	0.79	ppb	U
75-09-2	Methylene Chloride	B1874-3364	1.06	1.06	ppb	U
156-60-5	t-1,2-Dichloroethene	B1874-3364	1.04	1.04	ppb	U
1634-04-4	Methyl t-butyl ether	B1874-3364	1.68	1.68	ppb	U
75-34-3	1,1-Dichloroethane	B1874-3364	0.83	0.83	ppb	U
590-20-7	2,2-Dichloropropane	B1874-3364	0.69	0.69	ppb	U
156-59-2	c-1,2-Dichloroethene	B1874-3364	1.10	1.10	ppb	U
78-93-3	2-Butanone	B1874-3364	9.68	9.68	ppb	U
74-97-5	Bromochloromethane	B1874-3364	1.16	1.16	ppb	U
67-66-3	Chloroform	B1874-3364	0.73	0.73	ppb	U
71-55-6	1,1,1-Trichloroethane	B1874-3364	0.97	0.97	ppb	U
56-23-5	Carbon Tetrachloride	B1874-3364	1.12	1.12	ppb	U
563-58-6	1,1-Dichloropropene	B1874-3364	1.04	1.04	ppb	U
71-43-2	Benzene	B1874-3364	0.99	0.99	ppb	U
107-06-2	1,2-Dichloroethane	B1874-3364	0.91	0.91	ppb	U
79-01-6	Trichloroethene	B1874-3364	0.95	0.95	ppb	U
78-87-5	1,2-Dichloropropane	B1874-3364	0.79	0.79	ppb	U
74-95-3	Dibromomethane	B1874-3364	1.36	1.36	ppb	U
75-27-4	Bromodichloromethane	B1874-3364	0.83	0.83	ppb	U
110-75-8	2-Chloroethylvinylether	B1874-3364	4.38	4.38	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1874-3364	0.89	0.89	ppb	U
108-10-1	4-Methyl-2-pentanone	B1874-3364	9.40	9.40	ppb	U
108-88-3	Toluene	B1874-3364	0.95	0.95	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1874-3364	0.85	0.85	ppb	U

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-3
Client Sample ID: EP-3
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 98.4%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1874-3364	0.87	0.87	ppb	U
127-18-4	Tetrachloroethene	B1874-3364	1.81	1.81	ppb	U
142-28-9	1,3-Dichloropropane	B1874-3364	1.24	1.24	ppb	U
591-78-6	2-Hexanone	B1874-3364	9.05	9.05	ppb	U
124-48-1	Dibromochloromethane	B1874-3364	1.08	1.08	ppb	U
106-93-4	1,2-Dibromoethane	B1874-3364	0.87	0.87	ppb	U
108-90-7	Chlorobenzene	B1874-3364	0.85	0.85	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1874-3364	0.89	0.89	ppb	U
100-41-4	Ethylbenzene	B1874-3364	0.49	0.49	ppb	U
108-38-3	m,p-xylene	B1874-3364	1.68	1.68	ppb	U
95-47-6	o-xylene	B1874-3364	0.85	0.85	ppb	U
100-42-5	Styrene	B1874-3364	0.87	0.87	ppb	U
75-25-2	Bromoform	B1874-3364	1.40	1.40	ppb	U
98-82-8	Isopropylbenzene	B1874-3364	0.69	0.69	ppb	U
108-86-1	Bromobenzene	B1874-3364	0.49	0.49	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1874-3364	1.26	1.26	ppb	U
103-65-1	n-Propylbenzene	B1874-3364	0.69	0.69	ppb	U
96-18-4	1,2,3-Trichloropropane	B1874-3364	2.72	2.72	ppb	U
622-96-8	p-Ethyltoluene	B1874-3364	0.57	0.57	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1874-3364	1.16	1.16	ppb	U
95-49-8	2-Chlorotoluene	B1874-3364	0.69	0.69	ppb	U
106-43-4	4-Chlorotoluene	B1874-3364	0.71	0.71	ppb	U
98-06-6	tert-Butylbenzene	B1874-3364	0.57	0.57	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1874-3364	1.28	1.28	ppb	U
135-98-8	sec-Butylbenzene	B1874-3364	0.65	0.65	ppb	U
99-87-6	4-Isopropyltoluene	B1874-3364	0.83	0.83	ppb	U
541-73-1	1,3-Dichlorobenzene	B1874-3364	0.71	0.71	ppb	U
106-46-7	1,4-Dichlorobenzene	B1874-3364	0.71	0.71	ppb	U
95-50-1	1,2-Dichlorobenzene	B1874-3364	0.79	0.79	ppb	U
105-05-5	p-Diethylbenzene	B1874-3364	1.14	1.14	ppb	U
104-51-8	n-Butylbenzene	B1874-3364	1.32	1.32	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1874-3364	1.34	1.34	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1874-3364	2.66	2.66	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1874-3364	1.75	1.75	ppb	U

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-3
Client Sample ID: EP-3
Matrix: Soil
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Type: Grab

Collected: 09/13/2005 14:00
% Solid: 98.4%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1874-3364	0.65	0.65	ppb	U
91-20-3	Naphthalene	B1874-3364	1.95	1.95	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1874-3364	1.66	1.66	ppb	U
994-05-8	TAME	B1874-3364	0.95	0.95	ppb	U
75-65-0	Tertiary butyl alcohol	B1874-3364	23.3	23.3	ppb	U
107-13-1	Acrylonitrile	B1874-3364	8.20	8.20	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1874-3364	102.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1874-3364	104.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1874-3364	99.2 %	(81 - 117)	

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09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-4
Client Sample ID: EP-4
Matrix: Soil Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1874-3365	0.59	0.59	ppb	U
75-45-6	Chlorodifluoromethane	B1874-3365	1.07	1.07	ppb	U
74-87-3	Chloromethane	B1874-3365	1.82	1.82	ppb	U
75-01-4	Vinyl Chloride	B1874-3365	1.07	1.07	ppb	U
74-83-9	Bromomethane	B1874-3365	0.68	0.68	ppb	U
75-00-3	Chloroethane	B1874-3365	1.01	1.01	ppb	U
75-69-4	Trichlorofluoromethane	B1874-3365	0.92	0.92	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1874-3365	0.79	0.79	ppb	U
75-35-4	1,1-Dichloroethene	B1874-3365	1.27	1.27	ppb	U
67-64-1	Acetone	B1874-3365	11.9	**18.2**	ppb	Y
75-15-0	Carbon disulfide	B1874-3365	0.85	0.85	ppb	U
75-09-2	Methylene Chloride	B1874-3365	1.14	1.14	ppb	U
156-60-5	t-1,2-Dichloroethene	B1874-3365	1.12	1.12	ppb	U
1634-04-4	Methyl t-butyl ether	B1874-3365	1.82	1.82	ppb	U
75-34-3	1,1-Dichloroethane	B1874-3365	0.90	0.90	ppb	U
590-20-7	2,2-Dichloropropane	B1874-3365	0.74	0.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B1874-3365	1.18	1.18	ppb	U
78-93-3	2-Butanone	B1874-3365	10.4	10.4	ppb	U
74-97-5	Bromochloromethane	B1874-3365	1.25	1.25	ppb	U
67-66-3	Chloroform	B1874-3365	0.79	0.79	ppb	U
71-55-6	1,1,1-Trichloroethane	B1874-3365	1.05	1.05	ppb	U
56-23-5	Carbon Tetrachloride	B1874-3365	1.20	1.20	ppb	U
563-58-6	1,1-Dichloropropene	B1874-3365	1.12	1.12	ppb	U
71-43-2	Benzene	B1874-3365	1.07	1.07	ppb	U
107-06-2	1,2-Dichloroethane	B1874-3365	0.99	0.99	ppb	U
79-01-6	Trichloroethene	B1874-3365	1.03	1.03	ppb	U
78-87-5	1,2-Dichloropropane	B1874-3365	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B1874-3365	1.47	1.47	ppb	U
75-27-4	Bromodichloromethane	B1874-3365	0.90	0.90	ppb	U
110-75-8	2-Chloroethylvinylether	B1874-3365	4.73	4.73	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1874-3365	0.96	0.96	ppb	U
108-10-1	4-Methyl-2-pentanone	B1874-3365	10.1	10.1	ppb	U
108-88-3	Toluene	B1874-3365	1.03	1.03	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1874-3365	0.92	0.92	ppb	U

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-4
Client Sample ID: EP-4
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1874-3365	0.94	0.94	ppb	U
127-18-4	Tetrachloroethene	B1874-3365	1.95	1.95	ppb	U
142-28-9	1,3-Dichloropropane	B1874-3365	1.34	1.34	ppb	U
591-78-6	2-Hexanone	B1874-3365	9.77	9.77	ppb	U
124-48-1	Dibromochloromethane	B1874-3365	1.16	1.16	ppb	U
106-93-4	1,2-Dibromoethane	B1874-3365	0.94	0.94	ppb	U
108-90-7	Chlorobenzene	B1874-3365	0.92	0.92	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1874-3365	0.96	0.96	ppb	U
100-41-4	Ethylbenzene	B1874-3365	0.53	0.53	ppb	U
108-38-3	m,p-xylene	B1874-3365	1.82	1.82	ppb	U
95-47-6	o-xylene	B1874-3365	0.92	0.92	ppb	U
100-42-5	Styrene	B1874-3365	0.94	0.94	ppb	U
75-25-2	Bromoform	B1874-3365	1.51	1.51	ppb	U
98-82-8	Isopropylbenzene	B1874-3365	0.74	0.74	ppb	U
108-86-1	Bromobenzene	B1874-3365	0.53	0.53	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1874-3365	1.36	1.36	ppb	U
103-65-1	n-Propylbenzene	B1874-3365	0.74	0.74	ppb	U
96-18-4	1,2,3-Trichloropropane	B1874-3365	2.93	2.93	ppb	U
622-96-8	p-Ethyltoluene	B1874-3365	0.61	0.61	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1874-3365	1.25	1.25	ppb	U
95-49-8	2-Chlorotoluene	B1874-3365	0.74	0.74	ppb	U
106-43-4	4-Chlorotoluene	B1874-3365	0.77	0.77	ppb	U
98-06-6	tert-Butylbenzene	B1874-3365	0.61	0.61	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1874-3365	1.38	1.38	ppb	U
135-98-8	sec-Butylbenzene	B1874-3365	0.70	0.70	ppb	U
99-87-6	4-Isopropyltoluene	B1874-3365	0.90	0.90	ppb	U
541-73-1	1,3-Dichlorobenzene	B1874-3365	0.77	0.77	ppb	U
106-46-7	1,4-Dichlorobenzene	B1874-3365	0.77	0.77	ppb	U
95-50-1	1,2-Dichlorobenzene	B1874-3365	0.85	0.85	ppb	U
105-05-5	p-Diethylbenzene	B1874-3365	1.23	1.23	ppb	U
104-51-8	n-Butylbenzene	B1874-3365	1.42	1.42	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1874-3365	1.45	1.45	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1874-3365	2.87	2.87	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1874-3365	1.88	1.88	ppb	U

Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-4
Client Sample ID: EP-4
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005
Collected: 09/13/2005 14:00
% Solid: 91.5%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1874-3365	0.70	0.70	ppb	U
91-20-3	Naphthalene	B1874-3365	2.10	2.10	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1874-3365	1.80	1.80	ppb	U
994-05-8	TAME	B1874-3365	1.03	1.03	ppb	U
75-65-0	Tertiary butyl alcohol	B1874-3365	25.2	25.2	ppb	U
107-13-1	Acrylonitrile	B1874-3365	8.85	8.85	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1874-3365	102.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1874-3365	103.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1874-3365	99.8 %	(81 - 117)	

Environmental Testing Laboratories, Inc.
208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-5
Client Sample ID: EP-5
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 92.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B1874-3366	0.59	0.59	ppb	U
75-45-6	Chlorodifluoromethane	B1874-3366	1.06	1.06	ppb	U
74-87-3	Chloromethane	B1874-3366	1.80	1.80	ppb	U
75-01-4	Vinyl Chloride	B1874-3366	1.06	1.06	ppb	U
74-83-9	Bromomethane	B1874-3366	0.67	0.67	ppb	U
75-00-3	Chloroethane	B1874-3366	1.00	1.00	ppb	U
75-69-4	Trichlorofluoromethane	B1874-3366	0.91	0.91	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B1874-3366	0.78	0.78	ppb	U
75-35-4	1,1-Dichloroethene	B1874-3366	1.26	1.26	ppb	U
67-64-1	Acetone	B1874-3366	11.8	**35.7**	ppb	Y
75-15-0	Carbon disulfide	B1874-3366	0.85	0.85	ppb	U
75-09-2	Methylene Chloride	B1874-3366	1.13	1.13	ppb	U
156-60-5	t-1,2-Dichloroethene	B1874-3366	1.11	1.11	ppb	U
1634-04-4	Methyl t-butyl ether	B1874-3366	1.80	1.80	ppb	U
75-34-3	1,1-Dichloroethane	B1874-3366	0.89	0.89	ppb	U
590-20-7	2,2-Dichloropropane	B1874-3366	0.74	0.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B1874-3366	1.17	1.17	ppb	U
78-93-3	2-Butanone	B1874-3366	10.4	10.4	ppb	U
74-97-5	Bromochloromethane	B1874-3366	1.24	1.24	ppb	U
67-66-3	Chloroform	B1874-3366	0.78	0.78	ppb	U
71-55-6	1,1,1-Trichloroethane	B1874-3366	1.04	1.04	ppb	U
56-23-5	Carbon Tetrachloride	B1874-3366	1.19	1.19	ppb	U
563-58-6	1,1-Dichloropropene	B1874-3366	1.11	1.11	ppb	U
71-43-2	Benzene	B1874-3366	1.06	1.06	ppb	U
107-06-2	1,2-Dichloroethane	B1874-3366	0.98	0.98	ppb	U
79-01-6	Trichloroethene	B1874-3366	1.02	1.02	ppb	U
78-87-5	1,2-Dichloropropane	B1874-3366	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B1874-3366	1.45	1.45	ppb	U
75-27-4	Bromodichloromethane	B1874-3366	0.89	0.89	ppb	U
110-75-8	2-Chloroethylvinylether	B1874-3366	4.69	4.69	ppb	U
10061-01-5	c-1,3-Dichloropropene	B1874-3366	0.95	0.95	ppb	U
108-10-1	4-Methyl-2-pentanone	B1874-3366	10.0	10.0	ppb	U
108-88-3	Toluene	B1874-3366	1.02	1.02	ppb	U
10061-02-6	t-1,3-Dichloropropene	B1874-3366	0.91	0.91	ppb	U

Environmental Testing Laboratories, Inc.
208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-5
Client Sample ID: EP-5
Matrix: Soil
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Type: Grab

Collected: 09/13/2005 14:00
% Solid: 92.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B1874-3366	0.93	0.93	ppb	U
127-18-4	Tetrachloroethene	B1874-3366	1.93	1.93	ppb	U
142-28-9	1,3-Dichloropropane	B1874-3366	1.32	1.32	ppb	U
591-78-6	2-Hexanone	B1874-3366	9.68	9.68	ppb	U
124-48-1	Dibromochloromethane	B1874-3366	1.15	1.15	ppb	U
106-93-4	1,2-Dibromoethane	B1874-3366	0.93	0.93	ppb	U
108-90-7	Chlorobenzene	B1874-3366	0.91	0.91	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B1874-3366	0.95	0.95	ppb	U
100-41-4	Ethylbenzene	B1874-3366	0.52	0.52	ppb	U
108-38-3	m,p-xylene	B1874-3366	1.80	1.80	ppb	U
95-47-6	o-xylene	B1874-3366	0.91	0.91	ppb	U
100-42-5	Styrene	B1874-3366	0.93	0.93	ppb	U
75-25-2	Bromoform	B1874-3366	1.50	1.50	ppb	U
98-82-8	Isopropylbenzene	B1874-3366	0.74	0.74	ppb	U
108-86-1	Bromobenzene	B1874-3366	0.52	0.52	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B1874-3366	1.35	1.35	ppb	U
103-65-1	n-Propylbenzene	B1874-3366	0.74	0.74	ppb	U
96-18-4	1,2,3-Trichloropropane	B1874-3366	2.91	2.91	ppb	U
622-96-8	p-Ethyltoluene	B1874-3366	0.61	0.61	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B1874-3366	1.24	1.24	ppb	U
95-49-8	2-Chlorotoluene	B1874-3366	0.74	0.74	ppb	U
106-43-4	4-Chlorotoluene	B1874-3366	0.76	0.76	ppb	U
98-06-6	tert-Butylbenzene	B1874-3366	0.61	0.61	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B1874-3366	1.37	1.37	ppb	U
135-98-8	sec-Butylbenzene	B1874-3366	0.69	0.69	ppb	U
99-87-6	4-Isopropyltoluene	B1874-3366	0.89	0.89	ppb	U
541-73-1	1,3-Dichlorobenzene	B1874-3366	0.76	0.76	ppb	U
106-46-7	1,4-Dichlorobenzene	B1874-3366	0.76	0.76	ppb	U
95-50-1	1,2-Dichlorobenzene	B1874-3366	0.85	0.85	ppb	U
105-05-5	p-Diethylbenzene	B1874-3366	1.22	1.22	ppb	U
104-51-8	n-Butylbenzene	B1874-3366	1.41	1.41	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B1874-3366	1.43	1.43	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B1874-3366	2.84	2.84	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B1874-3366	1.87	1.87	ppb	U

Environmental Testing Laboratories, Inc.
208 Route 109, Farmingdale NY 11735
Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

Volatiles - EPA 8260B

Sample: 0509282-5
Client Sample ID: EP-5
Matrix: Soil
Type: Grab
Remarks: See Case Narrative
Analyzed Date: 09/16/2005

Collected: 09/13/2005 14:00
% Solid: 92.2%

Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B1874-3366	0.69	0.69	ppb	U
91-20-3	Naphthalene	B1874-3366	2.08	2.08	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B1874-3366	1.78	1.78	ppb	U
994-05-8	TAME	B1874-3366	1.02	1.02	ppb	U
75-65-0	Tertiary butyl alcohol	B1874-3366	25.0	25.0	ppb	U
107-13-1	Acrylonitrile	B1874-3366	8.77	8.77	ppb	U

* Results are reported on a dry weight basis

Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B1874-3366	102.0 %	(74 - 121)	
4774-33-8	DIBROMOFLUOROMETHANE	B1874-3366	106.0 %	(80 - 120)	
2037-26-5	TOLUENE-D8	B1874-3366	101.0 %	(81 - 117)	

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09/19/2005

Case Narrative

EPA 8260 VOLATILE ANALYSIS:

The following compounds were calibrated at 25, 50, 100,
150 and 200 ppb levels in the initial calibration curve:
Acetone
2-Butanone
4-Methyl-2-pentanone
2-Hexanone

M&P-Xylenes and 2-Chloroethylvinylether were calibrated at 10, 40, 100, 200 and 300 ppb levels.
Acrolein/Acrylonitrile were calibrated at 50,100,150,200 and 250 ppb levels.
Tert Butyl Alcohol (TBA) was calibrated at 50,200,500,1000 and 1500 ppb levels.

All other compounds were calibrated at 5, 20, 50, 100 and 150 ppb levels.

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Phone - 631-249-1456 Fax - 631-249-8344

09/19/2005

ORGANIC METHOD QUALIFIERS

Q - Qualifier - specified entries and their meanings are as follows:

U - The analytical result is not detected above the Method Detection Limit (MDL). All MDL's are lower than the lowest calibration standard concentration.

J - Indicates an estimated value. The concentration reported was detected below the Method Detection Limit (MDL).

Y - The concentration reported was detected below the lowest calibration standard concentration.

B - The analyte was found in the associated method blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E - The concentration of the analyte exceeded the calibration range of the instrument.

D - This flag indicates a system monitoring compound diluted out.

INORGANIC METHOD QUALIFIERS

C - (Concentration) qualifiers are as follows:

B - Entered if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

U - Entered when the analyte was analyzed for, but not detected above the Method Detection Limit (MDL) which is less than the lowest calibration standard concentration.

Q - Qualifier specific entries and their meanings are as follows:

E - Reported value is estimated because of the presence of interferences.

M - (Method) qualifiers are as follows:

A - Flame AA
AS - Semi-automated Spectrophotometric
AV - Automated Cold Vapor AA
C - Manual Spectrophotometric
F - Furnace AA
P - ICP
T - Titrimetric

OTHER QUALIFIERS

ND - Not Detected

NA - Not Applicable

NR - Not Required

* - Outside Expected Range (NYCDEP Table I/II or Surrogate Limits)

x - Outside Expected Range

ETL

Environmental Testing Laboratories, Inc.
208 Route 109 • Farmingdale • New York 11735
631-249-1456 • Fax: 631-249-8344

CHAIN OF CUSTODY DOCUMENT

Project Name:	Project Manager:
Project Address:	
Client	J/N: ☐ Rush by
Sampler (Signature):	(Print):

SAMPLE INFO Type: SS = Split Spoon; G = Grab; C = Composite; B = Blank
Matrix: L = Liquid; S = Soil; SL = Sludge; A* = Air; W = Wipe
*Air - Vol. (Liters) include: Flow (CFM)

ID	Date	Time	Type	Matrix	Sample Location	Total. # Cont.	601/602	BTX/BTEX	MTBE	624/8260/8021	625/8270/BN	PCB/Pesticides	Pet.Prods./8100M	RCRA Metals	pH/Flash/React	418.1 - TRPH									
1	[illegible]	[illegible]	[illegible]	[illegible]	EP-1	[illegible]				X															
2					EP-2	[illegible]				X															
3					EP-3	[illegible]				X															
4					EP-4	[illegible]				X															
5					EP-5	[illegible]				X															
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									

Relinquished by (**Signature**): [illegible]	Date [illegible] Time [illegible]	Printed Name & Agent: [illegible]	Received by (**Signature**):	Date Time	Printed Name & Agent
Relinquished by (**Signature**):	Date Time	Printed Name & Agent:	Received for Lab by (**Signature**): [illegible]	Date Time	Printed Name
Comments & Special Instructions	QA/QC Type:		Number & Type of Containers:	Preservatives:	Temp:

APPENDIX B

TANK ABANDONMENT DOCUMENTS

Action Remediation Inc.

42-14 21st Street, 2nd Floor
Long Island City, NY 11101
Tel: (718) 937-4792

3010 Burns Avenue
Wantagh, NY 11793-3296
Tel: (516) 781-3000
Fax: (516) 781-3085
e-mail: HazMat3000@aol.com

October 14, 2005

New York City Fire Department
Bureau of Fire Prevention
Bulk Fuel Safety Unit-3rd Floor
9 Metrotech Center
Brooklyn, NY 11201

Re: 248 Flatbush Avenue
Brooklyn, NY 11217

This correspondence is to inform you that our company has abandoned one (1) 1,000 gallon aboveground #2 oil storage tank from the above referenced location. This tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules and regulations. Fill and vent pipes were removed and filled with concrete.

Action Remediation is in compliance with New York City fire prevention code sec 27-4019. My certificate #62365598; install, test, repair buried tank; expiration date: 9/15/06.

Sincerely,

Kevin O'Connor

Kevin O'Connor
PROJECT MANAGER

KO:as
Enc.

Sworn to me this 14th

day of October, 2005

Ann Sweeney
Notary Stamp
ANN SWEENEY
Notary Public, State of New York
No. 01SW6073995
Qualified in Nassau County
Commission Expires April 29, 2006

Action Remediation Inc.

3010 Burns Avenue
Wantagh, NY 11793-3296
Tel: (516) 781-3000
Fax: (516) 781-3085
e-mail: HazMat3000@aol.com

October 20, 2005

Cinderella Cleaners & Tailors
248 Flatbush Avenue
Brooklyn, NY 11217
Attn: David Aronowicz

Dear David,

Enclosed please find a Closure Package for the abandonment of (1) 1,000 gallon aboveground oil storage tank at the above address.

Included in this package are a New York City Fire Marshal Affidavit, a Site Plan, a Waste Manifest, and an invoice for services rendered.

Should you know of anyone who might need a storage tank removed or abandoned, we would appreciate it if you would refer them to us. If we can be of any further assistance, do not hesitate to call.

Sincerely,

Ralph Pantony

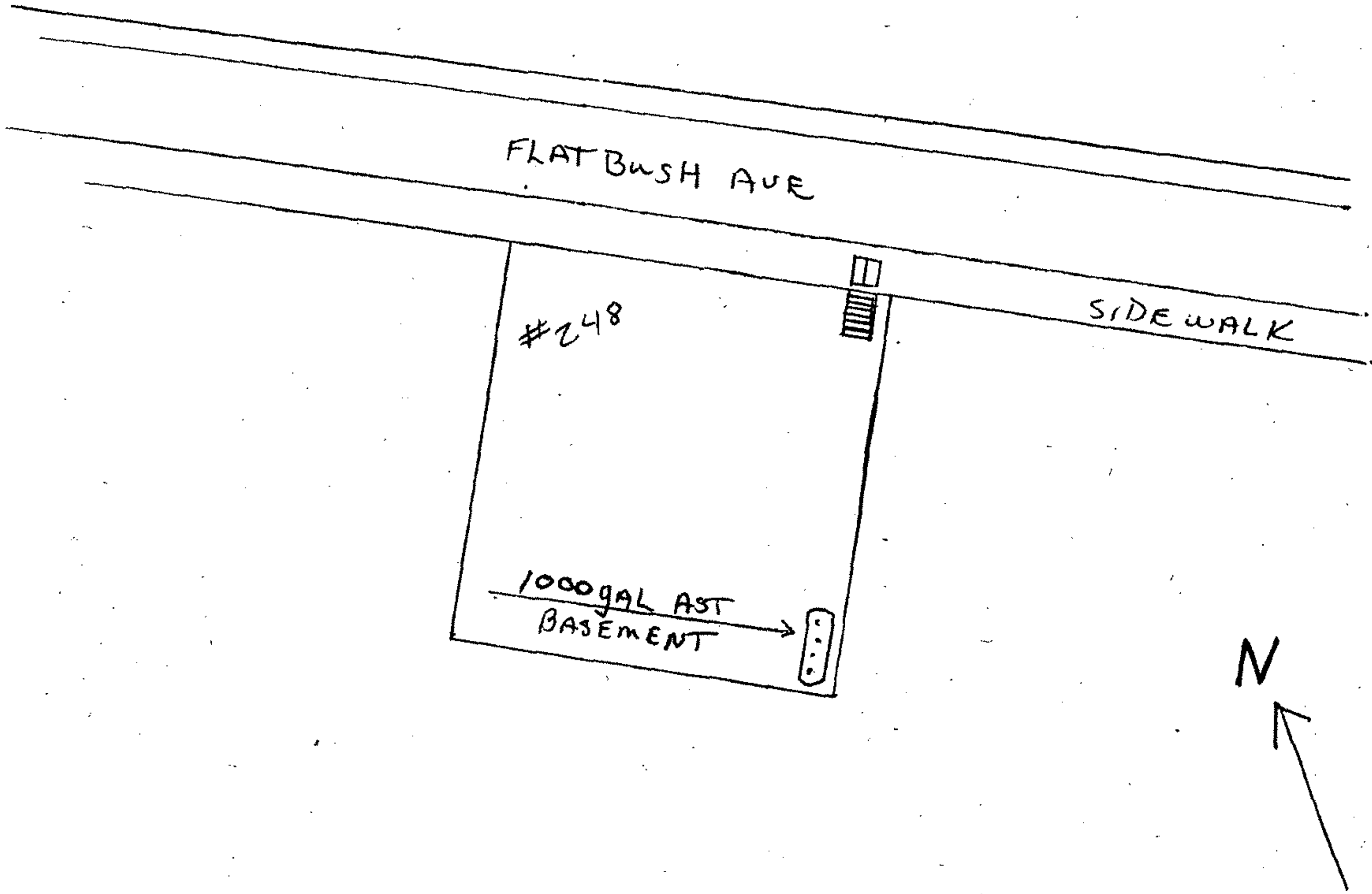
Ralph Pantony
President

RP:as
Enc.

CINDERELLA CLEANERS

248 FLATBUSH AVE

BROOKLYN NY



NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of — BLUE

3. Generator's Name and Mailing Address: CINDERELLA CLEANERS [illegible] BUSH [illegible] AVENUE [illegible]

5) TRUCK 109 2661FJE N.Y.

4. Generator's Phone ( )

5. Transporter 1 Company Name: [illegible] Trucking Inc	6. US EPA ID Number: [illegible]	A. Transporter's Phone: (516) 731-3000
7. Transporter 2 Company Name: Terrace Transportation	8. US EPA ID Number: NYR000[illegible]	B. Transporter's Phone: (718) 981-4600
9. Designated Facility Name and Site Address: Clean Water, 3249 Richmond Terrace, Staten Island NY 10303	10. US EPA ID Number: [illegible]	C. Facility's Phone: (718) 981-4600

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON RCRA, NON DOT, NON HAZARDOUS WASTE LIQUID (#2 Oil / Water Tank Bottoms)	1	TT	40	G
b.	0			
c.	0			
d.	0			

D. Additional Descriptions for Materials Listed Above
a. ERG# 128
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
DAVID ARONOWITZ	[signature]	10	12	05

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
MATT HUFNAGEL	[signature]	10	12	05

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

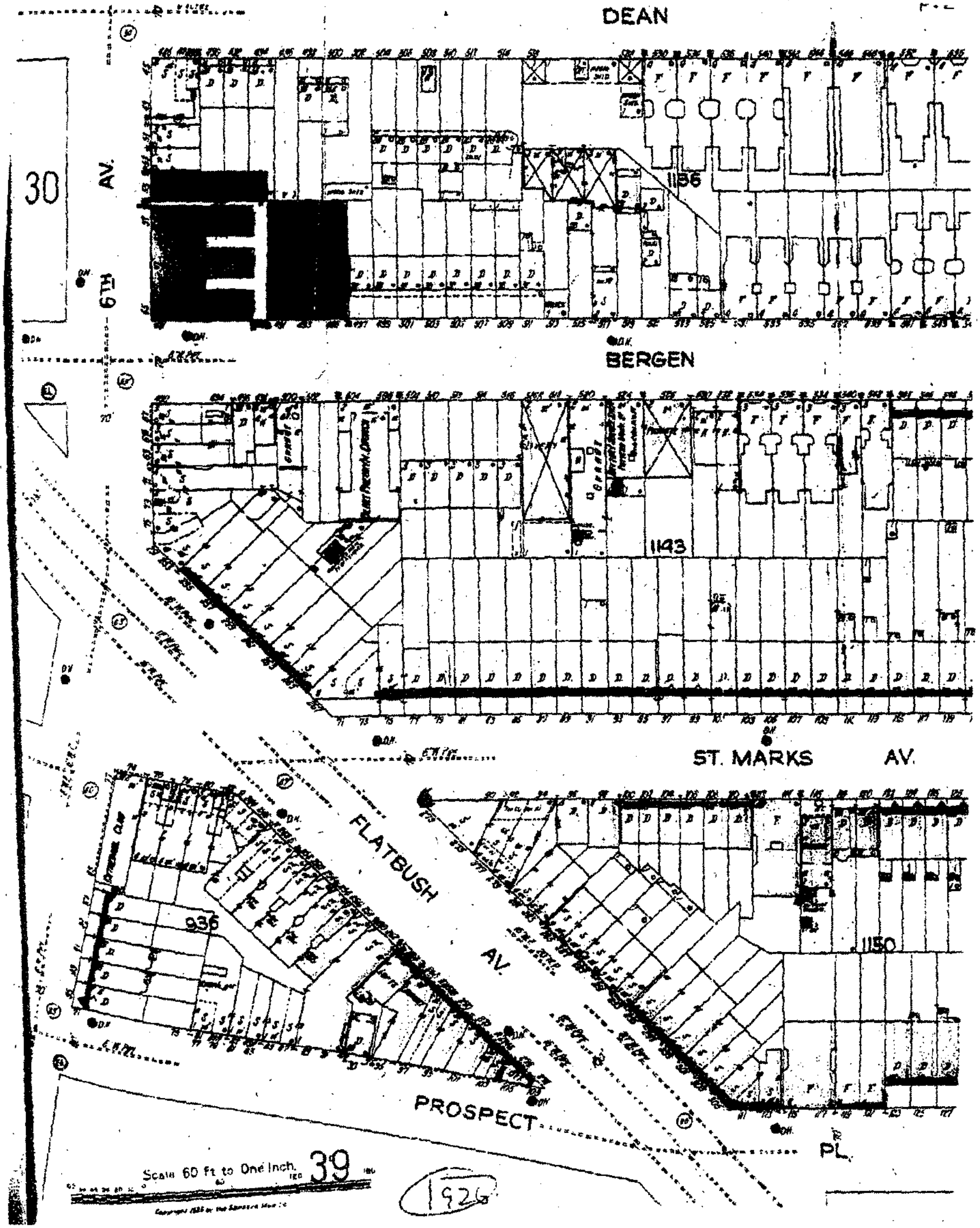
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

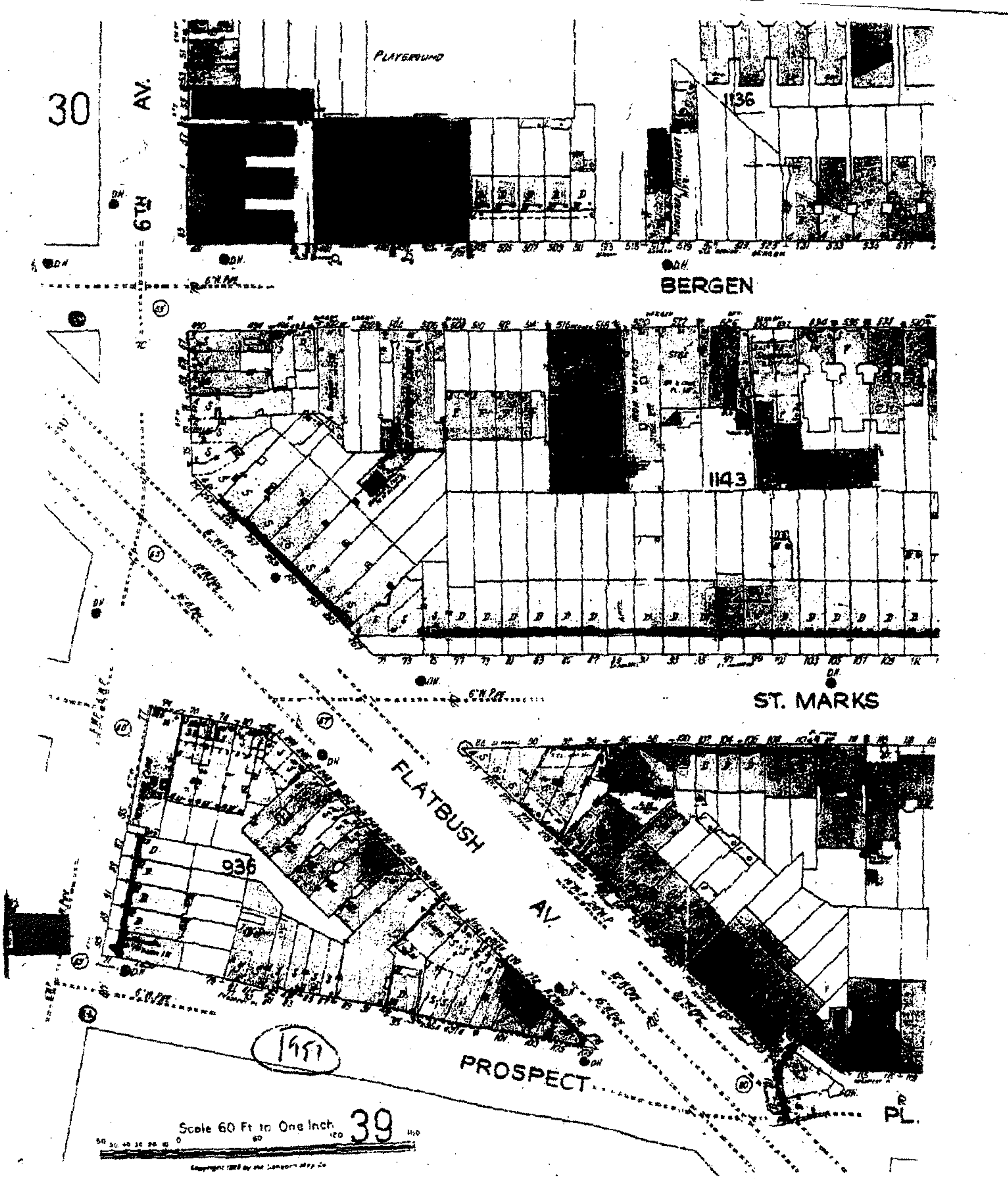
Printed/Typed Name	Signature	Month	Day	Year

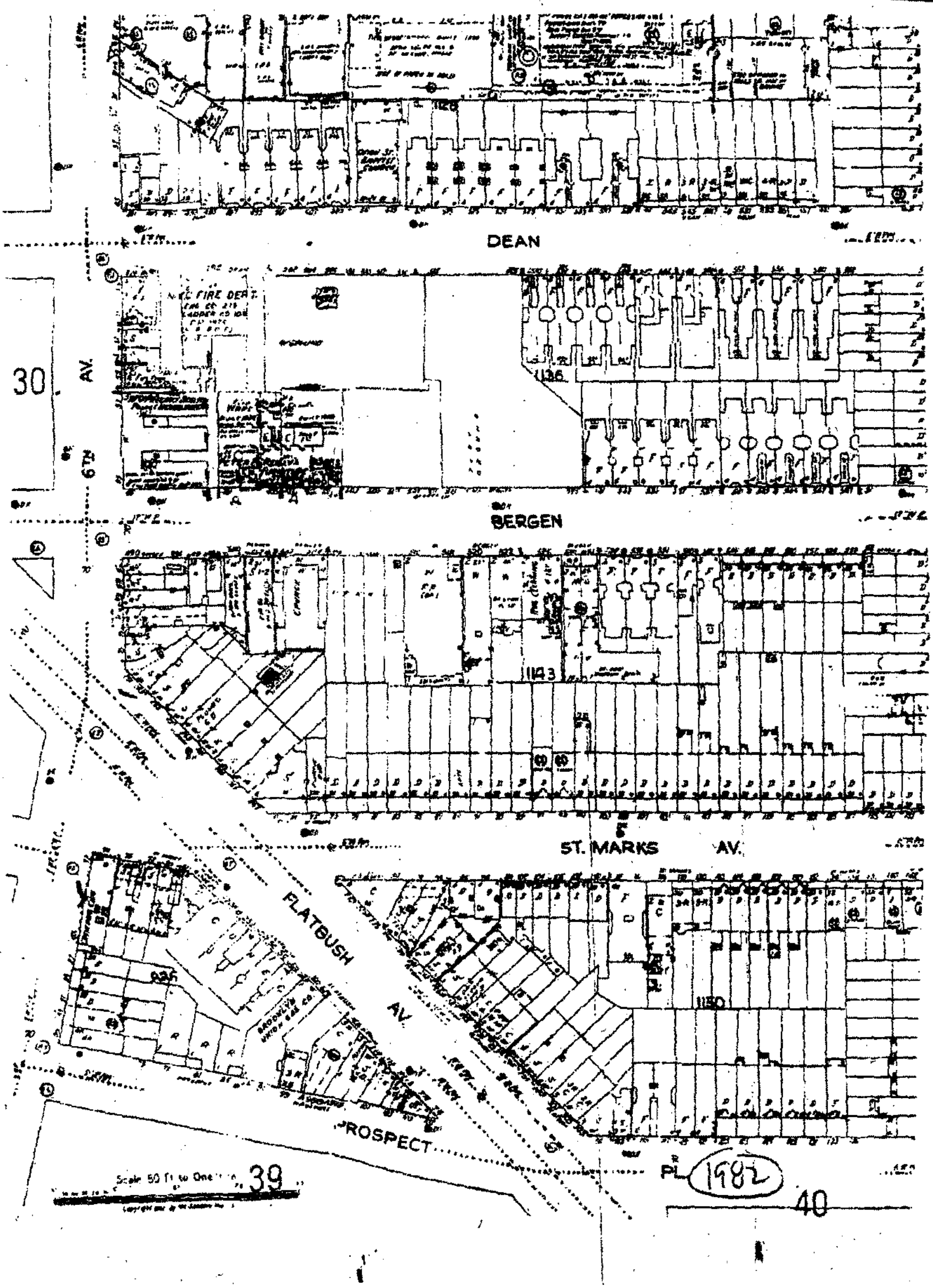
GENERATOR — TRANSPORTER — FACILITY

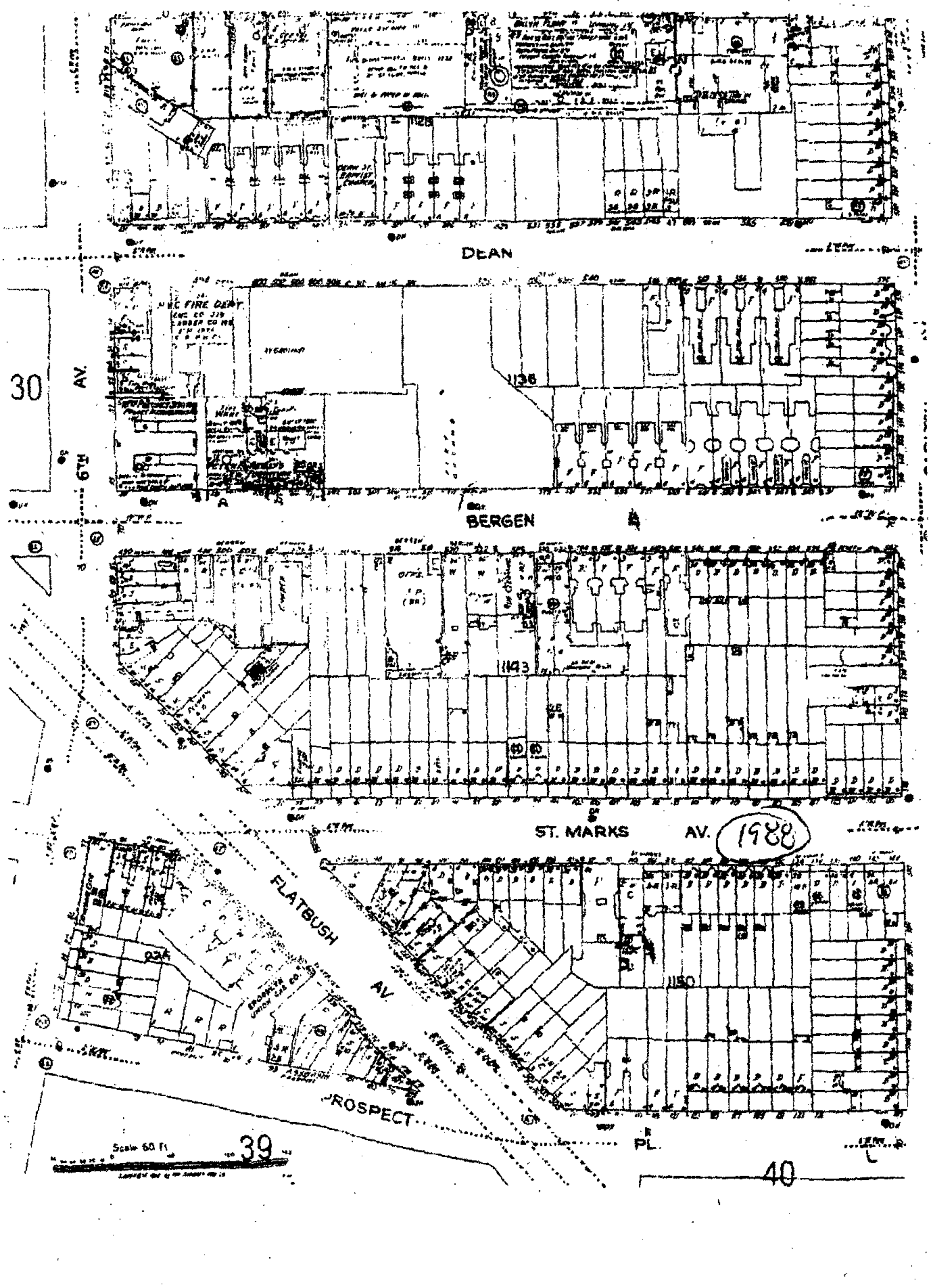
ORIGINAL - RETURN TO GENERATOR

APPENDIX D
FIRE INSURANCE MAPS


DEAN
BERGEN
ST. MARKS AV.
FLATBUSH AV.
PROSPECT PL.
6TH AV.
30
1136
1143
936
1150
Scale 60 Ft to One Inch.
39
1926

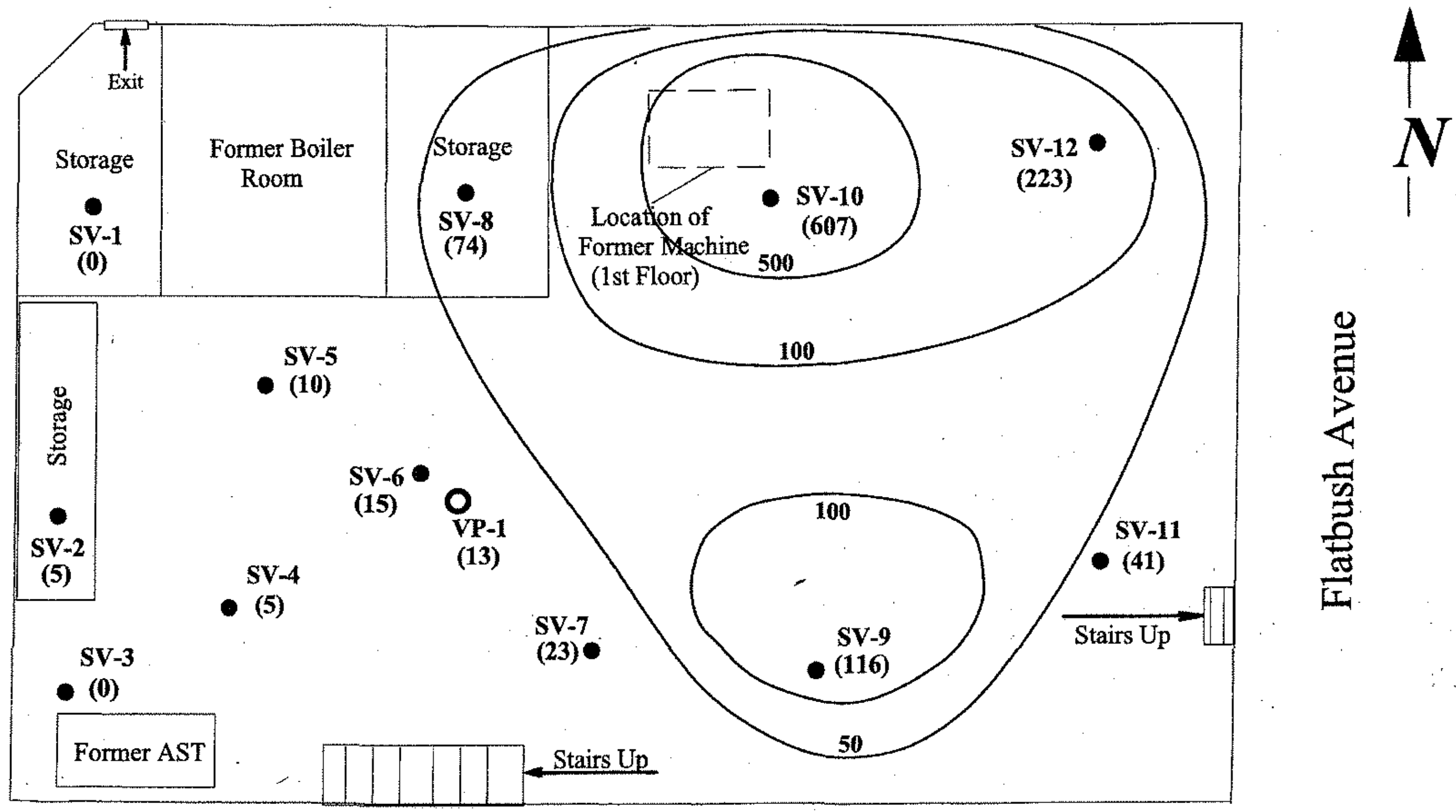

30
6TH AV.
PLAYGROUND
1136
BERGEN
1143
ST. MARKS
FLATBUSH AV.
936
PROSPECT PL.
Scale 60 Ft to One Inch
39


DEAN
BERGEN
ST. MARKS AV.
FLATBUSH AV.
PROSPECT PL.
6TH AV.
30
1126
1136
1143
1150
N.Y.C. FIRE DEPT.
BROOKLYN UNION GAS CO.
Scale 50 Ft to One Inch
39
1982
40



DEAN
BERGEN
ST. MARKS
AV.
6TH
AV.
30
1128
1136
1143
1150
N.Y.C. FIRE DEPT.
DEAN ST. BAPTIST CHURCH
FLATBUSH
AV.
BROOKLYN UNION GAS CO.
PROSPECT
PL.
Scale 60 Ft.
39
40
1988

2007 ACT SOIL VAPOR DATA



Legend

● SV-1	ACT Soil Vapor Sampling Location
○ VP-1	LBG Soil Vapor Sampling Location
(0)	Tetrachloroethene Concentration (mg/m3)
50	Concentration Contour (mg/m3)

Figure 1

Soil Vapor Contamination

Job No. 4071-BKNY	Date: 3/16/07
Drawing No. 4071-05	Scale: 1 in.= 5 ft. (Approx.)
Drawn By: William Sisco	Drawn By: Paul Stewart

Advanced Cleanup Technologies, Inc.

2011 ARCADIS PHASE I ESA

ARCADIS
Infrastructure, environment, buildings

Imagine the result

Phase I Environmental Site Assessment

248 Flatbush Avenue
Brooklyn, New York

June 16, 2011

ARCADIS
Infrastructure, environment, buildings

Imagine the result

Phase I Environmental Site Assessment

248 Flatbush Avenue
Brooklyn, NY

Casey Pringle
Environmental Scientist

Lawrence G. Brunt, PE
Principal Engineer

Prepared for:
Cinderella 248, LLC
c/o Anthony Reitano, Esq.
Herold Law
25 Independence Boulevard
Warren, NJ 07059

Prepared by:
ARCADIS U.S., Inc.
35 Columbia Road
Branchburg, NJ 08876
Tel: 908.526.1000

Our Ref.:
BB018192.0000.00001

Date:
June 16, 2011

Figures

Appendices

Executive Summary

ARCADIS U.S., Inc. (ARCADIS) performed a Phase I Environmental Site Assessment (ESA) of the one-story vacant commercial building identified as 248 Flatbush Avenue, Borough of Brooklyn, New York (the "Site"). The vacant commercial building formerly housed Cinderella Cleaners, a former dry cleaners and shoe repair facility. The Site is an approximately 2,310 square feet, one-story commercial building with a basement that encompasses the entire property. The building was constructed sometime between 1888 and 1906. Cinderella Cleaners operated at the Site from at least 1985 to 2005.

The purpose of the Phase I ESA is to identify, to the extent feasible pursuant to the processes prescribed in the American Society for Testing and Materials (ASTM) document E 1527-05, recognized environmental conditions (RECs) in connection with the Site. ARCADIS performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 of the Site identified as the vacant commercial building at 248 Flatbush Avenue, Brooklyn, New York. Any exceptions to, or deletions from, this practice are described in Section 9 of this report. The Phase I ESA identified one onsite REC and one potential offsite REC.

The onsite REC is the former use of the building for dry cleaning operations for at least 20 years. The former dry-cleaning facility that operated at the Site reportedly utilized tetrachloroethene (PCE) as a dry-cleaning solvent. Previous investigation activities performed at the Site in 2005 and 2007 by Advanced Cleanup Technologies (ACT) identified the presence of PCE in the soil, soil gas and groundwater beneath the building.

ACT's 2005 Phase I references a Limited Phase II ESA of the Site on April 5, 2005 which investigated whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the Site. Based on the results of the Limited Phase II ESA, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The impacted soil appeared to be no deeper than 9 feet below the basement floor. Subsequently, ACT installed a soil boring/temporary well point to determine if the groundwater had been impacted beneath the boiler room. Analytical results for the groundwater sample indicated that the volatile organic compound (VOC) tetrachloroethylene (aka "Perc" and "PCE") was detected slightly above regulatory standards. ACT concluded that due to the slight exceedances of regulatory standards the release was limited in extent and the risk of exposure was low due to the dense, silty soils, and considerable depth of the groundwater beneath the Site.

On September 13, 2005, ACT supervised the excavation of contaminated soil from the boiler room to a depth of 5 feet below the basement floor. ACT collected post-excavation samples that resulted in trace levels of VOCs considerably below regulatory standards. Based on the results of the Limited Phase II ESA, ACT concluded that no further remedial action was necessary. At the time of ARCADIS' recent Site visit, the boiler room and area of the excavation was finished with what appeared to be a relatively new concrete floor. The results of ACT's Limited Phase II ESA are included as an appendix to ACT's 2005 Phase I. A copy of this report is provided as Appendix F.

ARCADIS also reviewed Soil Vapor Contamination Figures prepared by ACT in March of 2007. Elevated levels of PCE were detected in soil vapor below several locations in the basement, in particular below the location of the former dry cleaning machine on the first floor. During ARCADIS' recent Site visit, staining was observed in this area on the concrete floor.

To evaluate the potential impacts from the past use of the Site as a dry cleaner and to assess current Site conditions, ARCADIS performed a Limited Phase II ESA simultaneously with the Phase I ESA. The Phase II ESA focused on the subsurface soils throughout the basement and the collection of groundwater samples, which included the area of staining below the former dry cleaning machine. The results of ARCADIS' Limited Phase II ESA are provided under separate cover.

One potential offsite REC also was identified during the Phase I ESA. A "Dry Cleaners" is depicted on the 1965 through 1995 Sanborn maps to the southeast of the Site, across Flatbush Avenue at 287 Flatbush Avenue. This Dry Cleaner was observed during ARCADIS' recent Site visit and is located upgradient of the Site. The details of the operations at the Dry Cleaner at 287 Flatbush Avenue are unknown. Based on its hydraulically upgradient and close proximity to the Site, the Dry Cleaner at 287 Flatbush Avenue is considered a REC.

1. Introduction

ARCADIS U.S., Inc. (ARCADIS) performed a Phase I Environmental Site Assessment (ESA) of the one-story vacant commercial building identified as 248 Flatbush Avenue, Borough of Brooklyn, New York (the "Site"). The vacant commercial building formerly housed Cinderella Cleaners, a former dry cleaners and shoe repair facility. The Site is an approximately 2,310 square feet, one-story commercial building with a basement that encompasses the entire property. The building was constructed between 1888 and 1906.

1.1 Purpose

Cinderella 248, LLC (the Client) requested that ARCADIS conduct a Phase I ESA of the Site to evaluate the potential environmental risks as part of a due diligence review of the property. The objective of the ESA was to identify recognized environmental conditions (RECs) in connection with the property, to the extent feasible pursuant to the processes prescribed in American Society for Testing and Materials (ASTM) E 1527-05 guidelines. The term "REC" as defined by ASTM is 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 the 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.

This Phase I ESA includes information gathered from federal, state, and local agencies; personal interviews with people familiar with the Site and surrounding properties; and a site visit conducted by an ARCADIS representative.

1.2 Detailed Scope of Services

The Phase I ESA conducted by ARCADIS included, but was not limited to, the following services:

- a reconnaissance-level visit of the Site to look for evidence of the release(s) of hazardous materials and petroleum products and to assess the potential for on-site releases of hazardous materials and petroleum products

- drive-by observations of adjacent properties and the site vicinity
- interviews with people familiar with the Site, as available
- review of regulatory and local agency files, as necessary
- review of historical documents, as available
- preparation of a report presenting our findings, including a summary of conclusions and recommendations

1.3 Significant Assumptions

The purpose of this Phase I ESA is to provide appropriate inquiry into the previous ownership and use of the Site consistent with good commercial and customary practice in an effort to minimize liability. ARCADIS also assumes that the information provided by the Client, the regulatory database provider, and regulatory agencies is true and reliable.

1.4 Limitations and Exceptions

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ARCADIS and the original party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. To the extent that ARCADIS relied upon any information prepared by other parties not under contract to ARCADIS, ARCADIS makes no representation as to the accuracy or completeness of such information. Only the party for whom this report was originally prepared, and other specifically named parties, may make use of and rely upon the information in this report, in its entirety, for a period not to exceed 180 days in accordance with the ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-00 dated May 10, 2000, ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-05 dated November 1, 2005, and/or the Code of Federal Regulations (CFR) 40CFR Part 312 "Standards and Practices for All Appropriate Inquiries: Final Rule" dated November 1, 2005. After 180 days and prior to using the information contained herein, the report should be updated in accordance with ASTM Standards and Federal regulations.

The findings presented in this report apply solely to site conditions existing at the time when ARCADIS's assessment was performed. It must be recognized, however, that an ESA is intended for the purpose of evaluating the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ARCADIS's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in ESA conclusions cannot reasonably be achieved.

ARCADIS, therefore, does not provide any guarantees, certifications, or warranties (express or implied) that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and all applicable laws, codes, regulations, or standards.

ARCADIS was not able to access the roof as part of this investigation.

1.5 Special Terms and Conditions

The scope of work for this Phase I ESA did not include testing of electrical equipment for the potential presence of polychlorinated biphenyls (PCBs) or the assessment of natural hazards such as naturally occurring asbestos or methane gas, assessment of the potential presence of radionuclides, assessment for the presence of microbial contamination, or assessment of nonchemical hazards such as the potential for damage from earthquakes or floods. This Phase I ESA also did not include an extensive assessment of the environmental compliance status of the Site or of the businesses operating at the Site, or a health-based risk assessment.

1.6 User Reliance

This report is for the exclusive use of Cinderella 248, LLC and Herold Law. Use of this report by any other party shall be at such party's sole risk.

2. Site Description

2.1 Location and Legal Description

The Site consists of a vacant one-story commercial building located at 248 Flatbush Avenue, Brooklyn, New York. The Tax Map number for the property is Block 936, Lot 12. The Site is bounded to the east by Flatbush Avenue beyond which are residential and retail properties. The Site is bounded to the south by the Eastern Parkway Project's Resident Engineer's Field Office beyond which are retail stores. The Site is bounded to the west by a courtyard that is utilized as an outdoor dining area for a restaurant. The Site is bounded to the north by Taro Sushi, a liquor store and the Flatbush Farm restaurant beyond which is St. Marks Avenue. The facilities to the north appeared to have residential apartments located on the floors above the businesses. The Site is owned by David and Gila Aronowicz.

A Site Location Map and a Site Plan are provided as Figures 1 and 2, respectively.

2.2 Site and Vicinity General Characteristics

The Site is located in a retail, commercial, and residential area near the southwest corner of Flatbush Avenue and St. Marks Avenue of Brooklyn, New York. The topography of the Site is generally flat. The general topography of the surrounding area slopes gradually to the northwest.

2.3 Current Use of the Site

The Site is currently a vacant commercial building. The equipment utilized during the Site's prior use as a dry cleaner has been removed from the Site.

2.4 Descriptions of Structures, Roads, and Other Improvements on the Site

The vacant commercial building formerly housed Cinderella Cleaners, a former dry cleaners and shoe repair facility. The Site is an approximately 2,310 square feet, one-story commercial building that encompasses the entire property and was constructed between 1888 and 1906. The building is serviced by municipal water and sewer provided by the City of New York. The building was formerly heated via fuel oil fired heating equipment located in the boiler room of the basement. The heating equipment and associated aboveground storage tank (AST) were disconnected and removed from the boiler room and basement. No active heating or cooling equipment was identified in the building. No evidence of staining was identified in the vicinity of the boiler room and or former AST location. Electric is provided to the Site by Con Edison of New York. The Site's solid waste is serviced by the New York City Department of Sanitation. There were no dumpsters located on Site at the time of ARCADIS' Site visit.

2.4.1 Source of Potable Water

The Site is serviced by city water provided by New York City Municipal Water. New York City receives water from the New Croton Reservoir, the Catskill aqueduct, and Delaware and Hudson Rivers.

2.4.2 Sewage Disposal System

The Site is currently connected to the New York City municipal sewer system.

2.4.3 Solid Waste Disposal

The Site's solid waste is serviced by the New York City Department of Sanitation. There were no dumpsters located on Site at the time of ARCADIS' Site visit.

2.4.4 Heating/Cooling Systems

The building was formerly heated via fuel oil fired heating equipment located in the boiler room of the basement. The heating equipment and associated aboveground storage tank (AST) were disconnected and removed from the boiler room and basement. No active heating or cooling equipment was identified in the building. No evidence of staining was identified in the vicinity of the boiler room and or former AST location. Electric is provided to the Site by Con Edison of New York.

2.5 Current Uses of Adjoining Properties

North: Taro Sushi, a liquor store, and the Flatbush Farm restaurant beyond which is St. Marks Avenue. The facilities to the north appeared to have residential apartments located on the floors above the businesses.

South: Eastern Parkway Project's Resident Engineer's Field Office beyond which are retail stores.

East: Flatbush Avenue beyond which are residential and retail properties.

West: A courtyard that is utilized as an outdoor dining area for a restaurant beyond which are residential houses and 6th Avenue.

3. User-Provided Information

ARCADIS requested the following information pertaining to the Site. The information below was provided by Mr. Michael Pintchik of Cinderella 248, LLC.

3.1 Title Records

ARCADIS was not provided with historic title records.

3.2 Environmental Liens or Activity and Use Limitations

The User was asked the following questions as part of the assessment:

- Are they aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?
- Are they aware of any activity or land use limitations, 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, state, or local law?

The User answered "no" to both questions.

3.3 Specialized Knowledge

The User was asked the following questions as part of the assessment:

- Do they have any specialized knowledge or experience related to the property or nearby properties? For example, are they involved in the same line of business as the current or former occupants of the property or an adjoining property so that they would have specialized knowledge of the chemicals and processes used by this type of business?

The User answered "no" to this question.

- Are they aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

- Do they know the past uses of the property?

The User answered "Yes, Dry Cleaner" to this question.

- Do they know of specific chemicals that are present or once were present at the property?

The User answered "Yes, Perc from Dry Cleaning operation" to this question.

- Do they know of spills or other chemical releases that have taken place at the property?

The User answered "No" to this question.

- Do they know of any environmental cleanups that have taken place at the property?

The User answered "Unknown" to this question.

- Do they know if any fill material has been imported to the Site?

The User answered "Unknown" to this question.

- Do they know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?
- Do they know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property?
- Do they know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

The User answered "no" to the above three questions.

3.4 Commonly Known or Reasonably Ascertainable Information

The user was asked the following question as part of the assessment:

- Based on their 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?

The User answered "no" to this question.

3.5 Valuation Reduction for Environmental Issues

ARCADIS was not provided information indicating that the purchase price of the property is significantly less than the purchase price of comparable properties, or that the price of the property has been reduced due to environmental issues.

3.6 Owner, Property Manager, and Occupant Information

The Site is currently owned by David and Gila Aronowicz.

3.7 Reason for Performing Phase I

The Phase I ESA was conducted as part of a due diligence review of the Site.

3.8 Other information provided by the Client

No additional information was provided by Cinderella 248, LLC.

4. Records Review

The following sections provide information regarding the regulatory status and history of the Site and vicinity developed from information available from local, state and federal agencies and ASTM Standard Historical Sources. It also provides topographic, hydrologic and soil conditions in the area of the Site.

4.1 Historical Use Information

Based on a review of available historical information, it appears the Site was developed with the current building sometime between 1888 and 1906. According to the ACT Phase I ESA, the New York City Department of Buildings file contains a Property Profile Overview (PPO) of the Site which indicates the building was constructed in 1921. However, a 1906 Sanborn Map reviewed by ARCADIS indicates that a building that matches the current footprint of the Site building was located on Site and was labeled as an "office". The 1888 Sanborn map depicts the Site property as a vacant lot that is labeled as 248 Flatbush Avenue. The surrounding properties are historically and currently stores, commercial properties, and dwellings/residences.

4.1.1 Aerial Photograph Review

ARCADIS reviewed aerial photographs provided by Environmental Data Resources (EDR) for the years 1954, 1966, 1975, 1984, 1994, and 2006. The aerial photographs dating from 1954 through 2006 all appear to show the current Site building. The surrounding areas appear relatively unchanged throughout the aerial photographs. This area in Brooklyn, NY is a mixed residential, retail, and commercial area.

Copies of the aerial photographs are included as Appendix B.

4.1.2 Historic Map Review

Historic Sanborn Fire Insurance Maps

ARCADIS reviewed Historic Sanborn Fire Insurance Maps provided by Environmental Data Resources (EDR) for the years 1888, 1906, 1926, 1951, 1965, 1978, 1979, 1980, 1982, 1985, 1987, 1988, 1991, 1992, 1993, 1994, 1995, 2001, 2002, 2003, 2004, 2005, 2006, and 2007. The following summarizes ARCADIS' review of the Sanborns.

The 1888 Sanborn map depicts the Site property as a vacant lot that is labeled as 248 Flatbush Avenue. The 1906 Sanborn map depicts the Site property as developed with a building that is labeled as an "office." The Site building appears to match the footprint of the current Site building. In the 1926 and 1951 Sanborn maps, the Site is labeled as stores. The 1965 Sanborn map depicts the Site as being developed with a store that is labeled as "woodworking". In the 1978 through 1995 Sanborn maps, the Site and the four building units to the southeast along Flatbush Avenue are labeled as "C O N E C." This label is not a standard Sanborn map abbreviation, and is believed to indicate that the buildings are connected. The Brooklyn Union Gas Company is depicted at 260 Flatbush Avenue which is the first building unit southeast of the "C O N E C" designation. The 2001 through 2007 Sanborn maps depict the Site and four building units to the southeast along Flatbush Avenue as "Seven C's." Again, this label is not a standard Sanborn map abbreviation, but is believed to indicate that seven commercial units are located on these properties. The surrounding properties are labeled as stores, commercial properties, and dwellings/residences throughout the Sanborn maps. A "Dry Cleaners" is depicted on the 1965 through 1995 Sanborn maps to the southeast of the Site, across Flatbush Avenue at 287 Flatbush Avenue. This Dry Cleaner was observed during ARCADIS' recent Site visit and is located upgradient of the Site.

Copies of the Fire Insurance Maps are included as Appendix C.

4.1.3 Historic Topographic Maps

ARCADIS reviewed 1900, 1947, 1956, 1967, 1979, and 1995 historical topographic maps that were provided by EDR. Copies of these maps are included as Appendix C. The following summarizes the maps:

The scale of the 1900 topographic map is too large to make out details of the Site. However, the Site is depicted as being located within a large city grid of streets. The 1947 through 1995 topographic maps depict the Site as being within a "built-up" area which is represented by either black or pink shading.

4.1.4 City Directories

ARCADIS was provided with a City Directories Abstract from EDR for the years 1928 through 2005. The City Directories Abstract is included in Appendix D. 248 Flatbush Avenue, Brooklyn, NY 11217 (the "Site") was listed as Diloyian John Dry Goods in 1928, Ladd Niel Morrow Book Company and Reid & Chappell books in the 1940, 1945, 1949, 1960, and 1965 directories. The Site was also listed as Closets Inc. in 1960 and Wardrobes USA in 1965. The 1985, 1992, 1997, and 2000 city directories list the Site as Cinderella Cleaners and Tailor. Nearby property uses include commercial and retail businesses and residential properties.

4.1.5 Environmental Lien Search

This investigation did not include an environmental lien search.

4.1.6 Additional Record Sources

ARCADIS reviewed the Advanced Cleanup Technologies, Inc. (ACT) Phase I ESA dated December 1, 2005. According to the ACT Phase I ESA dated December 1, 2005, an abandoned AST was located in the southern portion of the basement. The tank formerly provided fuel oil for the former heating equipment. The AST was abandoned at the Site by Action Remediation Inc. (Action) on October 12, 2005. ACT's Phase I includes the Tank Closure Report dated November 29, 2005, which includes documents indicating that a 1,000 gallon aboveground #2 oil storage tank was abandoned at the property; the tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules and regulations; and 40 gallons of oil/water tank bottoms were removed from the property and disposed offsite. ACT's Phase I ESA indicated that no stains, odors, or evidence of spills were identified in the vicinity of the abandoned aboveground storage tank, the fill pipe had been identified in the sidewalk to the west of the building and was filled with cement, the vent pipe had been removed, and no stains, odors, or evidence of spills were identified in the vicinity of the fill pipe. The ACT Phase I ESA is included as Appendix F.

ACT's 2005 Phase I references a Limited Phase II ESA of the Site on April 5, 2005 which investigated whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the Site. Based on the results of the Limited Phase II ESA, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The impacted soil appeared to be no deeper than 9 feet below the basement floor. Subsequently, ACT installed a soil boring/temporary well point to determine if the groundwater had been impacted beneath the boiler room. Analytical results for the groundwater sample indicated that the volatile organic compound (VOC) tetrachloroethylene (aka "Perc" and "PCE") was detected slightly above regulatory standards. ACT concluded that due to the slight exceedances of regulatory standards the release was limited in extent and the risk of exposure was low due to the dense, silty soils, and considerable depth of the groundwater beneath the Site.

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ARCADIS also reviewed Soil Vapor Contamination Figures prepared by ACT in March of 2007. Elevated levels of PCE were detected in soil vapor below several locations in the basement in particularly below the location of the former dry cleaning machine on the first floor. During ARCADIS' recent Site visit, staining was observed in this area on the concrete floor.

To evaluate the potential impacts from the past use of the Site as a dry cleaner and to assess current Site conditions, ARCADIS performed a Limited Phase II ESA simultaneously with the Phase I ESA. The Phase II ESA focused on the subsurface soils throughout the basement and the collection of groundwater samples which included the area of staining below the former dry cleaning machine. The results of ARCADIS' Limited Phase II ESA are provided under separate cover.

4.2 Historical Use Information on Adjoining Properties

A review of the Sanborn maps from 1888 to 2007 indicates that the surrounding properties are labeled as stores, commercial properties, and dwellings/residences throughout the Sanborn maps. A "Dry Cleaners" is depicted on the 1965 through 1995 Sanborn maps to the southeast of the Site, across Flatbush Avenue at 287 Flatbush Avenue. This Dry Cleaner was observed during ARCADIS' recent Site visit and is located upgradient of the Site.

4.3 Physical Setting Source

4.3.1 Geology

4.3.1.1 Surface Features

The topography of the Site property is generally flat. According to the USGS Brooklyn, NY topographic quadrangle, the Site is located approximately 70 feet above mean sea level.

4.3.1.2 Subsurface Features

According to the EDR Radius Report, soils underlying the Site are classified as Urban Land.

4.3.2 Hydrology

4.3.2.1 Surface Water

No surface water was observed at the Site. The nearest body of water is the Gowanus Canal that flows into the Gowanus Bay. The Gowanus Canal is located approximately 3,400 feet to the west-northwest of the Site.

4.3.2.2 Ground Water

Based upon review of local and regional topographic documentation, groundwater flow is expected to be primarily toward the northwest. Area groundwater levels are influenced by numerous factors including below grade structures, precipitation, surface run-off, utilities, and seasonal and tidal variations. Groundwater below the Site was encountered in temporary well points installed at the Site during the Phase II ESA at depths ranging from 51.6 feet to 52 feet below the surface of the basement floor.

4.4 Standard Environmental Record Sources – Federal and State

Regulatory agency database information was obtained from Environmental Data Resources, Inc. (EDR), which maps and lists properties in Federal and State environmental databases with existing conditions or status that may have the potential to affect the Site.

The EDR report identified the Site in the RCRA-Conditionally Exempt Small Quantity Generators (CESQG), FINDS, Manifest, and Drycleaners databases. According to the EDR database search Cinderella Cleaners was a CESQG as of January 1, 2007 and was historically a Large Quantity Generator in 1985 and not a generator in 1995. No violations were found to be included with these listings. Several Manifest listings associated with the Site are related to the on-Site dry cleaning use and disposal of the dry cleaning solvent tetrachloroethylene which is designated as Waste Code F002 – Halo Solvent. There are no reported releases, spills, or violations associated with any of the database listings for the Site. The EDR database report is provided as Appendix E.

4.4.1 Federal Environmental Record Sources

ASTM E 1527-05 guidance required review of the following federal databases.

4.4.1.1 National Priorities List (NPL; One mile)

According to the EDR database report, no NPL facilities are located within one mile of the Site.

4.4.1.2 Delisted NPL Site List (1/2-mile)

According to the EDR database report, no delisted NPL facilities are located within 1/2-mile of the Site.

4.4.1.3 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS; 1/2-mile)

According to the EDR database report, there is one CERCLIS facility located within 1/2-mile of the Site. The Ulano Corporation at 601 Bergen Street is located approximately 1,206 feet hydraulically cross-gradient of the Site. Based on distance and inferred hydraulic gradient, ARCADIS does not consider the Ulano Corporation facility to pose an environmental threat to the Site.

4.4.1.4 CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP; 1/2-mile)

The search did not identify any CERCLIS-NFRAP facilities within 1/2-mile of the Site.

4.4.1.5 Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS; One mile)

The search identified one CORRACTS facility within one-mile of the Site. Patterson Chemical Co. Inc. at 102 3rd Street is located approximately 5,150 feet cross-gradient of the Site on the west side of the Gowanus Canal.

4.4.1.6 RCRA Treatment, Storage, and Disposal (TSD) Facilities (1/2-mile)

The search did not identify any RCRA TSD facilities within 1/2-mile of the Site.

4.4.1.7 RCRA Generators Lists (Site and Adjoining Properties)

The search did not identify any RCRA Generator facilities at the Site or adjoining properties with the exception of the RCRA-Conditionally Exempt Small Quantity Generator (CESQG) listing of the Site that is discussed above in Section 4.4.

4.4.1.8 Federal Institutional Control/Engineering Control Registries (Site only)

According to the EDR database report, the Site is not on the IC/EC registries searched.

4.4.1.9 Emergency Response Notification System (ERNS; Site Only)

The Site was not identified as an ERNS facility.

4.4.1.10 US Brownfields (1/2-mile)

According to the EDR report, no US Brownfields were identified within 1/2-mile of the Site.

4.4.2 State Environmental Record Sources

4.4.2.1 State and Tribal-Equivalent CERCLIS Hazardous Waste Sites (SHWS; One mile)

According to the EDR Report, no SHWS facilities were identified within 1 mile of the Site.

4.4.2.2 State and Tribal-Equivalent SWF/LF, State Landfill, Historic Landfill (SWLF/LF; HIST LF, 1/2-mile)

According to the EDR report, two SWF/LF or HIST LF, sites are located within 1/2-mile of the Site. Both of the facilities are located greater than 2,240 feet from the Site and hydraulically cross-gradient of the Site. Based on distance and inferred hydraulic gradient, ARCADIS does not consider these facilities to pose an environmental threat to the Site.

4.4.2.3 State and Tribal Leaking Underground Storage Tanks (LTANKS; 1/2-mile)

According to the EDR report, a total of fifty-four (54) LTANKS and forty (40) HIST LTANKS sites were identified within the search radius. The Smith Residence at 99 Saint Marks Avenue is located approximately 300 feet cross-gradient of the Site. Corrective actions were taken and the case was closed on December 20, 2004. ARCADIS does not consider this LTANK listing to pose an environmental threat to the Site.

300 Flatbush Avenue/7th Avenue is located approximately 660 feet upgradient of the Site. Corrective actions were taken and the case was closed on July 3, 1997. ARCADIS does not consider this LTANK listing to pose an environmental threat to the Site.

All remaining listed LTANK and HIST LTANK facilities are not likely to pose an environmental threat to the Site based on either their distance from the Site of greater than 1,000 feet, or their inferred hydraulic gradient location of either cross- or down-gradient from the Site. Additionally, all listed LTANK and HIST LTANK facilities are "closed" cases that have had corrective actions taken.

4.4.2.4 State and Tribal Registered Underground Storage Tank

(UST; Site and Adjoining Properties)

The Site was not identified on the regulated UST database. Additionally no registered UST facilities were located within 1/8-mile upgradient of the Site. Three UST facilities are located within 1/8 mile downgradient of the Site. Based on distance or inferred hydraulic gradient, these facilities are not considered to pose an environmental threat to the Site.

4.4.2.5 State and Tribal Registered Aboveground Storage Tank

(AST; Site and Adjoining Properties)

The Site was not identified on the regulated AST database. Additionally no registered AST facilities were located adjacent to the Site. The Site building was formerly heated by fuel oil stored in an AST located in the southwest corner of the basement. The AST has been removed and only piping was observed during ARCADIS' Site visit.

4.4.2.6 State Institutional and Engineering Controls (Site Only)

The search did not identify institutional controls or engineering controls for the Site.

4.4.2.7 State and Tribal Brownfields (1/2 mile)

The search did not identify any State or Tribal Brownfields facilities within ½ mile from the Site.

4.4.2.8 Spills Site (1/8 mile)

The search identified sixteen (16) NY Spills and nine (9) HIST NY Spills facilities within the search radius. All of the NY Spills and HIST NY Spills facilities are "closed" cases with corrective actions taken and are either located at least 240 feet upgradient of the Site or are located downgradient of the Site. ARCADIS does not consider these facilities to pose environmental threats to the Site.

4.4.2.9 Manifest Facilities (1/4 mile)

The search identified twenty-three (23) Manifest facilities within the search radius including the Site, which is discussed above in Section 4.4. The Manifest facilities that are located upgradient of the Site are located greater than approximately 680 feet from the Site. The remaining facilities are located cross- or downgradient from the Site. Based on either distance or inferred hydraulic gradient, ARCADIS does not consider these facilities to pose environmental threats to the Site.

4.4.3 Unmapped Sites

The "unmapped sites" section of the database report includes sites that could not be properly located due to inadequate or incorrect information provided by the reporting agency. ARCADIS reviewed these unmapped sites and did not identify any sites that could pose a material threat to the Site.

4.5 Additional Environmental Records Sources

4.5.1 New York City Department of Environmental Protection (NYCDEP)

ARCADIS submitted a Freedom of Information Act (FOIA) request to the New York City Department of Environmental Protection (NYCDEP) to obtain any pertinent environmental files related to the Site. The Asbestos Control Program and the Division of Pollution Control and Monitoring responded that no records were found. The Division of Emergency Response and Technical Assessment provided a List of Chemicals that had been filed for the Community Right-to-Know Program. The chemicals included tetrachloroethylene, amyl acetate, and picrin.

4.5.2 New York State Department of Environmental Conservation (NYSDEC)

ARCADIS submitted a FOIA request for information on the Site to the NYSDEC Region 2 in an effort to obtain pertinent information on the Site. NYSDEC responded that no records were found.

5. Site Reconnaissance

5.1 Methodology and Limiting Conditions

ARCADIS conducted a reconnaissance of the Site for evidence of RECs. Mr. Casey Pringle of ARCADIS visited the Site on April 12, 2011. The weather at the time of the investigation was partly cloudy with temperatures in the mid 60s degrees Fahrenheit with intermittent periods of rainfall.

Observations were documented and pertinent Site features were photographed (see Appendix A). Figure 2 depicts pertinent Site features.

5.2 General Site Setting

The Site consists of a one-story vacant commercial building identified as 248 Flatbush Avenue, Borough of Brooklyn, New York (the "Site"). The vacant commercial building formerly housed Cinderella Cleaners, a former dry cleaners and shoe repair facility. The Site is an approximately 2,310 square feet, one-story commercial building with a basement that encompasses the entire property. The building was constructed sometime between 1888 and 1906 according to Sanborn maps. The Site is located in a mixed commercial / residential area near the intersection of Flatbush Avenue and Saint Marks Avenue. Site topography is generally flat.

5.3 Site Observations

5.3.1 Underground Storage Tanks (USTs)

ARCADIS did not observe evidence of a UST at the Site.

5.3.2 Aboveground Storage Tanks (ASTs)

ARCADIS did not observe evidence of an AST at the Site. According to the ACT Phase I ESA dated December 1, 2005, an abandoned AST was located in the southern portion of the basement. The tank formerly provided fuel oil for the former heating equipment. The AST was abandoned at the Site by Action Remediation Inc. (Action) on October 12, 2005. ACT's Phase I includes the Tank Closure Report dated November 29, 2005, which includes documents indicating that a 1,000 gallon aboveground #2 oil storage tank was abandoned at the property; the tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules; and regulations, and 40 gallons of oil/water tank bottoms were removed from the property and properly disposed offsite. ACT's Phase I ESA indicated that no stains, odors, or evidence of spills were identified in the vicinity of the abandoned aboveground storage tank; the fill pipe had been identified in the sidewalk to the west of the building and was filled with cement; the vent pipe had been removed; and no stains, odors, or evidence of spills were identified in the vicinity of the fill pipe. The ACT Phase I ESA is included as Appendix F.

ARCADIS observed some piping that may have been associated with the former AST located in the former AST area. ARCADIS did not observe any evidence of staining or releases in the former AST area.

5.3.3 Hazardous Substance and Petroleum Use

ARCADIS did not observe hazardous substances or petroleum usage at the Site. The former dry-cleaning facility that operated at the Site reportedly utilized tetrachloroethene (PCE) as a dry-cleaning solvent which is discussed in Section 4.1.6 and 5.3.5. The Site was reportedly heated by fuel oil which is discussed above in Section 5.3.2.

5.3.4 Unlabeled Drums/Containers

ARCADIS did not observe unlabeled drums or containers at the Site.

5.3.5 Stained Soil or Pavement

ARCADIS observed stained concrete in the basement located directly under where the former dry cleaning machine was located on the first floor. The staining is located within and around the four steel supporting columns that supported the weight of the former dry cleaning machine. The stained area was investigated as a part of ARCADIS' Limited Phase II ESA. The findings of this investigation are included under separate cover.

5.3.6 Stressed Vegetation

ARCADIS did not observe areas of stressed vegetation at the Site.

5.3.7 Polychlorinated Biphenyls (PCBs)

ARCADIS did not observe any transformers at the Site.

5.3.8 Solid Waste/Dumping

ARCADIS did not observe evidence of solid waste dumping at the Site.

5.3.9 Site Drainage

ARCADIS observed storm water catch basins along Flatbush Avenue in close proximity to the Site. However, the Site building encompasses the entire Site property and there are no on-Site drainage structures.

5.3.10 Pits, Ponds, Lagoons and Pools of Liquid

ARCADIS did not observe any pits, ponds, lagoons, or pools of liquid on the Site.

5.3.11 Wastewater

ARCADIS did not observe wastewater discharges at the Site. The Site is connected to the NYC sewer system. ARCADIS observed a sump that has a U-shaped sediment trap/sump. The sediment trap may have received discharges from on-Site operations. The contents of the sediment trap were sampled as part of the Limited Phase II ESA and the findings are reported under separate cover. The trap/sump appeared to be connected to the sewer discharge lines at the facility based on its orientation and location relative to the sewer lines.

A floor drain was observed in the basement, by the doorway to the staircase that leads to the sidewalk. No staining or evidence of a discharge was observed in the vicinity of the floor drain.

5.3.12 Wells

ARCADIS did not observe any wells at the Site.

5.3.13 Septic Systems

ARCADIS did not observe any evidence of an on-Site septic system. The Site is connected to the NYC sanitary sewer system.

5.3.14 Odors

ARCADIS did not detect evidence of odors indicative of hazardous substances or petroleum usage at the Site.

5.3.15 Other Observations

ARCADIS did not observe any additional significant findings.

6. Interviews

6.1 Interview with Owner/Key Site Manager

A questionnaire was provided to Mr. Michael Pintchik of Cinderella 248, LLC for pertinent information regarding the Site. Mr. Pintchik's answers have been incorporated into the appropriate sections of the report.

6.2 Occupants

The Site consists of a vacant one-story commercial building located at 248 Flatbush Avenue, Brooklyn, New York. The Tax Map number for the property is Block 936, Lot 12.

6.3 Interviews with Local Regulatory Agencies

Interviews conducted with local regulatory agencies and research conducted at local regulatory offices has been summarized in Sections 4.5.

7. Findings/Opinion

7.1 On-Site

ARCADIS did not observe any evidence of an AST at the Site. According to the ACT Phase I ESA dated December 1, 2005, an abandoned AST was located in the southern portion of the basement. The tank formerly provided fuel oil for the former heating equipment. The AST was abandoned at the Site by Action Remediation Inc. (Action) on October 12, 2005. ACT's 2005 Phase I includes the Tank Closure Report dated November 29, 2005, which includes documents indicating that a 1,000 gallon aboveground #2 oil storage tank was abandoned at the property; the tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules and regulations; and 40 gallons of oil/water tank bottoms were removed from the property and disposed offsite. ACT's Phase I ESA indicated that no stains, odors, or evidence of spills were identified in the vicinity of the abandoned aboveground storage tank; the fill pipe had been identified in the sidewalk to the west of the building and was filled with cement; the vent pipe had been removed;

and no stains, odors, or evidence of spills were identified in the vicinity of the fill pipe. The ACT Phase I ESA is included as Appendix F.

ARCADIS observed some piping that may have been associated with the former AST located in the former AST area. ARCADIS did not observe any evidence of staining in the former AST area. Based on the proper disposal of the AST at the Site, ARCADIS does not consider the former AST to be a REC.

ARCADIS observed a sump that has a U-shaped sediment trap/sump. The trap/sump appeared to be connected to the sewer discharge lines at the facility based on its orientation and location relative to the sewer lines. The sediment trap may have received discharges from on-Site operations. The contents of the sediment trap were sampled as part of the Limited Phase II ESA and the findings are reported under separate cover.

ARCADIS observed stained concrete in the basement located directly under where the former dry cleaning machine was located on the first floor. The staining is located within and around the four steel supporting columns that supported the weight of the former dry cleaning machine. The stained area was investigated as a part of ARCADIS' Limited Phase II ESA. The findings of this investigation are included under separate cover.

ARCADIS did not observe any current hazardous substances or petroleum usage at the Site. The former dry-cleaning facility that operated at the Site reportedly utilized PCE as a dry-cleaning solvent.

ACT's 2005 Phase I references a Limited Phase II ESA of the Site on April 5, 2005 which investigated whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the Site. Based on the results of the Limited Phase II ESA, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The impacted soil appeared to be no deeper than 9 feet below the basement floor. Subsequently, ACT installed a soil boring/temporary well point to determine if the groundwater had been impacted beneath the boiler room. Analytical results for the groundwater sample indicated that the VOC tetrachloroethylene (aka "Perc" and "PCE") was detected slightly above regulatory standards. ACT concluded that due to the slight exceedances of regulatory standards the release was limited in extent and the risk of exposure was low due to the dense, silty soils, and considerable depth of the groundwater beneath the Site.

On September 13, 2005, ACT supervised the excavation of contaminated soil from the boiler room to a depth of 5 feet below the basement floor. ACT collected post-excavation samples that resulted in trace levels of VOCs considerably below regulatory standards. Based on the results of the Limited Phase II ESA, ACT concluded that no further remedial action was necessary. At the time of ARCADIS' recent Site visit, the boiler room and area of the excavation was finished with what appeared to be a relatively new concrete floor. The results of ACT's Limited Phase II ESA are included as an appendix to ACT's 2005 Phase I. A copy of this report is provided as Appendix F.

ARCADIS also reviewed Soil Vapor Contamination Figures prepared by ACT in March of 2007. Elevated levels of PCE were detected in soil vapor below several locations in the basement in particularly below the location of the former dry cleaning machine on the first floor. During ARCADIS' recent Site visit, staining was observed in this area on the concrete floor.

To evaluate the potential impacts from the past use of the Site as a dry cleaner and to assess current Site conditions, ARCADIS performed a Limited Phase II ESA simultaneously with the Phase I ESA. The Phase II focused on the subsurface soils throughout the basement and the collection of groundwater samples, which included the area of staining below the former dry cleaning machine. The results of ARCADIS' Limited Phase II ESA are provided under separate cover.

7.2 Off-Site

One potential offsite REC was identified during the Phase I ESA. A "Dry Cleaners" is depicted on the 1965 through 1995 Sanborn maps to the southeast of the Site, across Flatbush Avenue at 287 Flatbush Avenue. This Dry Cleaner was observed during ARCADIS' recent Site visit and is located upgradient of the Site. The details of the operations at the Dry Cleaner at 287 Flatbush Avenue are unknown. Based on its hydraulically upgradient and close proximity to the Site, the Dry Cleaner at 287 Flatbush Avenue is considered a REC.

8. Conclusions

ARCADIS performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 of the Site identified as the one-story vacant commercial building at 248 Flatbush Avenue, Borough of Brooklyn, New York (the "Site. Any exceptions to, or deletions from, this practice are described in Section 9 of this report. The Phase I ESA identified one onsite REC and one potential offsite REC.

The onsite REC is the former use of the building for dry cleaning operations for at least 20 years. The former dry-cleaning facility that operated at the Site reportedly utilized PCE as a dry-cleaning solvent. Previous investigation activities performed at the Site in 2005 and 2007 by ACT identified the presence of PCE in the soil, soil gas and groundwater beneath the building.

ACT's 2005 Phase I references a Limited Phase II ESA of the Site on April 5, 2005 which investigated whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the Site. Based on the results of the Limited Phase II ESA, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents. The impacted soil appeared to be no deeper than 9 feet below the basement floor. Subsequently, ACT installed a soil boring/temporary well point to determine if the groundwater had been impacted beneath the boiler room. Analytical results for the groundwater sample indicated that the VOC tetrachloroethylene (aka "Perc" and "PCE") was detected slightly above regulatory standards. ACT concluded that due to the slight exceedances of regulatory standards the release was limited in extent and the risk of exposure was low due to the dense, silty soils, and considerable depth of the groundwater beneath the Site.

On September 13, 2005, ACT supervised the excavation of contaminated soil from the boiler room to a depth of 5 feet below the basement floor. ACT collected post-excavation samples that resulted in trace levels of VOCs considerably below regulatory standards. Based on the results of the Limited Phase II ESA, ACT concluded that no further remedial action was necessary. At the time of ARCADIS' recent Site visit, the boiler room and area of the excavation was finished with what appeared to be a relatively new concrete floor. The results of ACT's Limited Phase II ESA are included as an appendix to ACT's 2005 Phase I. A copy of this report is provided as Appendix F.

ARCADIS also reviewed Soil Vapor Contamination Figures prepared by ACT in March of 2007. Elevated levels of PCE were detected in soil vapor below several locations in the basement, in particular below the location of the former dry cleaning machine on the first floor. During ARCADIS' recent Site visit, staining was observed in this area on the concrete floor.

To evaluate the potential impacts from the past use of the Site as a dry cleaner and to assess current Site conditions, ARCADIS performed a Limited Phase II ESA simultaneously with the Phase I ESA. The Phase II ESA focused on the subsurface soils throughout the basement and the collection of groundwater samples, which included the area of staining below the former machine. The results of ARCADIS' Limited Phase II ESA are provided under separate cover.

One potential offsite REC also was identified during the Phase I ESA. A "Dry Cleaners" is depicted on the 1965 through 1995 Sanborn maps to the southeast of the Site, across Flatbush Avenue at 287 Flatbush Avenue. This Dry Cleaner was observed during ARCADIS' recent Site visit and is located upgradient of the Site. The details of the operations at the Dry Cleaner at 287 Flatbush Avenue are unknown. Based on its hydraulically upgradient and close proximity to the Site, the Dry Cleaner at 287 Flatbush Avenue is considered a REC.

9. Deviations/Data Gaps

ARCADIS was not able to access the roof of the Site building. However, the general construction of the roof could be observed from the ground. Therefore, ARCADIS believes that this deviation does not prevent ARCADIS from drawing the conclusions that are presented in this report.

10. Additional Services

No additional services were performed as part of this assessment.

11. Signature(S) Of Environmental Professional(S)

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 C.F.R. 312. 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. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Lawrence G. Brunt

Lawrence G. Brunt, PE
Principal Engineer

12. References

1. Persons/Offices Contacted Regarding the Site:

   Site Contact:
   - Mr. Micheal Pintchik, Cinderella 248, LLC.

   Freedom of Information Requests
   - New York City Department of Environmental Protection
   - NYSDEC FOIA Request

2. Reports, Plans and Other Documents Reviewed:

   USGS:
   - Google Earth, 2010 Aerial Photograph

   Environmental Data Resources (EDR):
   - EDR Radius Map dated April 6, 2011
   - Aerial Photographs dated 1954, 1966, 1975, 1984, 1994, and 2006
   - Sanborn Fire Insurance Maps dated 1888 – 2007.
   - Historical Topographic Maps dated 1900, 1947, 1956, 1967, 1979, and 1995
   - City Directories Abstract 1928-2005

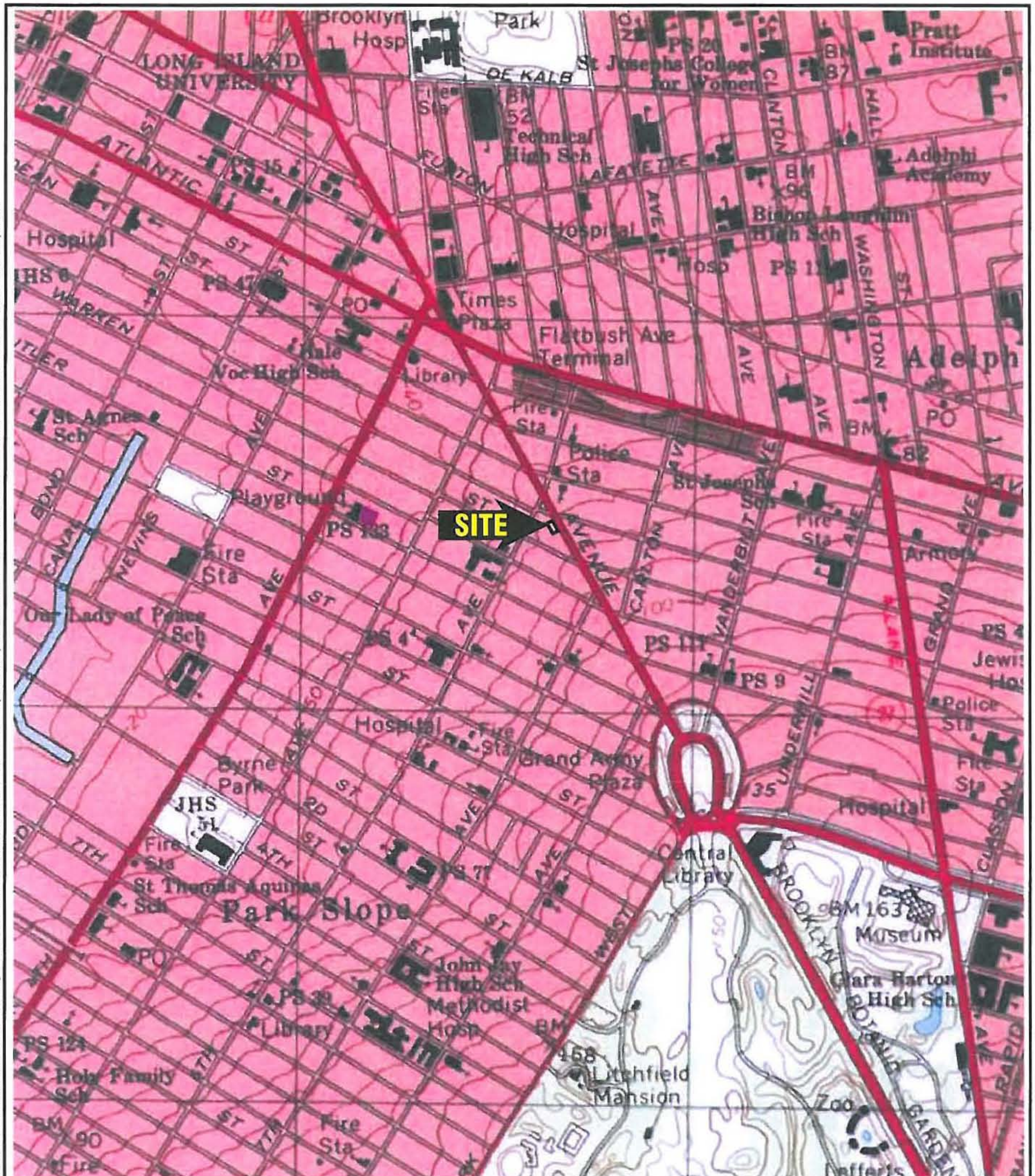
   Advanced Cleanup Technologies, Inc., Phase I Environmental Site Assessment. December 1, 2005.

13. Staff Qualifications

Resumes for Lawrence G. Brunt, PE, and Casey Pringle Environmental Scientist, are included as Appendix G.

ARCADIS

Figures



QUADRANGLE: BROOKLYN
DATED: 1995

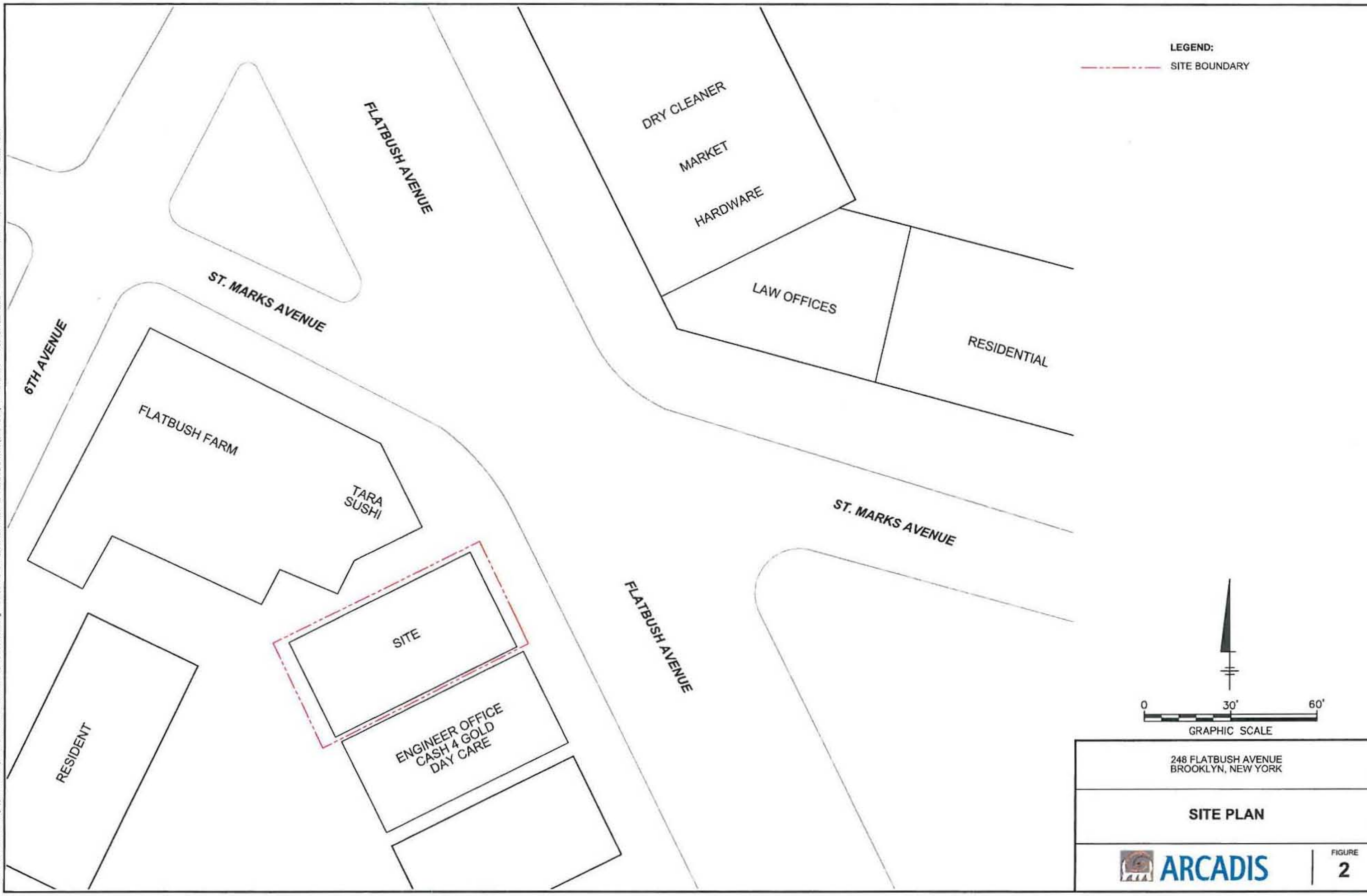
248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

SITE LOCATION MAP

ARCADIS

FIGURE
1

CITY:MANCHESTER DIV/GROUP:ENVCAD DB:T.HALLIWELL PM:
C:\Documents and Settings\pphalliw\Desktop\Return to\BB018192\0000\00001\DWG\BB018192.dwg LAYOUT: 1 SAVED: 6/6/2011 1:08 PM ACADVER: 17.1S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: — PLOTTED: 6/6/2011 1:20 PM BY: HALLIWELL, TRISH



248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

SITE PLAN

ARCADIS

FIGURE 2

2011 ARCADIS PHASE II INVESTIGATION

ARCADIS
Infrastructure, environment, buildings

ARCADIS U.S., Inc.
35 Columbia Road
Branchburg
New Jersey 08876
Tel 908.526.1000
Fax 908.526.7886
www.arcadis-us.com

Mr. Michael Pintchik
Cinderella 248, LLC
c/o Anthony Reitano, Esq.
Herold Law
25 Independence Boulevard
Warren, NJ 07059

Subject:
Summary of Phase II Investigation Activities
248 Flatbush Avenue
Brooklyn, New York

Date:
June 16, 2011

Email:
larry.brunt@arcadis-us.com

Our ref:
BB018192.0000.00002

Dear Mr. Pintchik:

ARCADIS U.S., Inc. (ARCADIS) has prepared this summary letter to document the results of the recent subsurface investigation and sampling activities at the above referenced property (the Site) located in Brooklyn, New York. The activities were completed as outlined in our proposal dated April 6, 2011. The investigation activities were performed based on discussions with environmental counsel, a review of existing environmental reports for the Site, and our experience at other similar sites.

Site Background

The Site is a one-story commercial building that was constructed sometime between 1888 and 1906, and was previously occupied by a dry cleaning operation, Cinderella Cleaners, for at least 20 years. The Tax Map number for the property is Block 936, Lot 12. According to a 2005 Phase I Environmental Site Assessment (ESA) prepared by Advanced Cleanup Technologies, Inc. (ACT), the New York City Department of Buildings file contains a Property Profile Overview (PPO) of the Site which indicates the building was constructed in 1921. However, a 1906 Sanborn Map reviewed by ARCADIS indicates that a building that matches the current footprint of the Site building was located on Site and was labeled as an "office". An earlier 1888 Sanborn map depicts the Site property as a vacant lot that is labeled as 248 Flatbush Avenue. The building contains a full basement and the footprint of the building is approximately 2,310 square feet which encompasses the entire property. The former dry-cleaning facility that operated at the Site reportedly utilized tetrachloroethene (PCE) as a dry-cleaning solvent. Previous investigation activities performed at the Site in 2005 and 2007 by ACT identified the presence of PCE in the soil, soil gas and groundwater beneath the building.

ACT's 2005 Phase I references a Limited Phase II ESA of the Site on April 5, 2005 which investigated whether a reported historical leak of cooling water from the first floor dry cleaning machine into the basement boiler room had impacted the environmental quality of the Site. Based on the results of the Limited Phase II ESA, ACT concluded that the subsurface soil beneath the boiler room had been impacted by dry cleaning solvents based on elevated PID readings. The impacted soil appeared to be no deeper than 9 feet below the basement floor. Subsequently, ACT installed a soil boring/temporary well point to determine if the groundwater had been impacted beneath the boiler room. Analytical results for the groundwater sample indicated that the volatile organic compound (VOC) tetrachloroethylene (aka "Perc" and "PCE") was detected above regulatory standards at 285 ug/L. Additionally, acetone (3,210 ug/L), cis-1,2-Dichloroethene (5.37 ug/L) were detected above their respective regulatory standards. Chloroform (4.44 ug/L) and trichloroethene (1.2 ug/L) were detected at levels below their respective regulator standards. ACT concluded that due to the low exceedances of regulatory standards the release was limited in extent and the risk of exposure was low due to the dense, silty soils, and considerable depth of the groundwater beneath the Site.

On September 13, 2005, ACT supervised the excavation of contaminated soil from the boiler room to a depth of 5 feet below the basement floor. ACT collected post-excavation samples that resulted in trace levels of VOCs considerably below regulatory standards. Based on the results of the Limited Phase II ESA, ACT concluded that no further remedial action was necessary. At the time of ARCADIS' recent Site inspection, the boiler room and area of excavation was finished with what appeared to be a relatively new concrete floor.

ARCADIS also reviewed Soil Vapor Contamination Figures prepared by ACT in March of 2007. Elevated levels of PCE were detected in soil vapor below several locations in the basement, in particular below the location of the former dry cleaning machine on the first floor. During ARCADIS' recent Phase I ESA Site inspection, staining was observed in this area on the concrete floor.

ARCADIS did not observe evidence of any ASTs at the Site. According to the ACT Phase I ESA dated December 1, 2005, an abandoned AST was located in the southern portion of the basement. The tank formerly provided fuel oil for the former heating equipment. The AST was abandoned at the Site by Action Remediation Inc. (Action) on October 12, 2005. ACT's Phase I includes the Tank Closure Report dated November 29, 2005, which includes documents indicating that a 1,000 gallon aboveground #2 oil storage tank was abandoned at the property; the tank was pumped, cleaned of all product and bottom sludge, made vapor free and rendered useless as per New York City rules and regulations; and 40 gallons of oil/water tank bottoms were removed from the property and properly disposed offsite. ACT's Phase I ESA indicated that no stains, odors, or evidence of spills were identified in the vicinity of the abandoned aboveground storage tank; the fill pipe had been identified in the sidewalk to the west of the building and was filled with cement; the vent pipe had been removed; and no stains, odors, or evidence of spills were identified in the vicinity of the fill pipe. During ARCADIS' Phase I ESA Site walk, piping was observed that may have been associated with the former AST located in the former AST area. ARCADIS did not observe any evidence of staining or releases in the former AST area.

The building is serviced by municipal water and sewer provided by the City of New York. The building was formerly heated via fuel oil fired heating equipment located in the boiler room of the basement. As discussed above, the heating equipment and associated AST were disconnected and removed from the boiler room and basement. No evidence of staining was identified in the vicinity of the boiler room and or former AST location. No active heating or cooling equipment was identified in the building. Electric is provided to the Site by Con Edison of New York. The Site's solid waste is serviced by the New York City Department of Sanitation. There were no dumpsters located on Site at the time of ARCADIS' Site visit.

The Site is bounded to the east by Flatbush Avenue beyond which are residential and retail properties. The Site is bounded to the south by the Eastern Parkway Project's Resident Engineer's Field Office beyond which are retail stores. The Site is bounded to the west by a courtyard that is utilized as an outdoor dining area for a restaurant. The Site is bounded to the north by Taro Sushi, a liquor store, and the Flatbush Farm restaurant beyond which is St. Marks Avenue. The facilities to the north appeared to have residential apartments located on the floors above the businesses.

A Site Location Map is attached as Figure 1.

Phase II Investigation

Soil Sampling Activities

To evaluate the conditions at the Site and potential impacts from the former dry cleaning operations, ARCADIS performed a limited Phase II subsurface investigation including soil and groundwater sampling on April 13 and 14, 2011 and May 24 and 25, 2011. Based on the information available, ARCADIS installed ten (10) soil borings through the basement floor to assess the potential impacts from the past operations of the dry cleaning equipment. The borings were installed with an electric jack hammer probe device using direct push sampling cores (4-foot macro-cores) with acetate liners. Samples were collected in the vicinity of previous elevated soil vapor samples SV-9 and SV-10, on the eastern and western portions of the basement, and in the center of the basement.

The soils encountered during the soil boring installations consisted of primarily silty fine sands with some fine to coarse gravels and cobbles throughout the Site. Cobbles were encountered in several borings creating refusal for the jack hammer probe. In these instances, one or two alternate boring locations were selected in attempt to reach 12 feet below the basement floor. The borehole depths ranged from 4 to 12 feet below the basement floor. Continuous sampling was performed throughout each boring using 4-foot macro-cores with acetate liners. All recovered soil samples were screened for the presence of volatile organic compounds by using a properly calibrated photoionization detector (PID). For each boring, the soil/sediment type, color, field estimation of moisture content, field instrumentation readings, evidence of soil contamination, sampling intervals, and boring abandonment details were recorded on a boring lithologic log (Attachment 1).

Soil samples were collected from each boring at the depth in the soil column that exhibited the highest PID readings or discoloration/staining/odor or other evidence of impact and from the bottom 0 to 6 inches of the boring. In the absence of elevated PID readings or other evidence of soil impact, a soil sample was collected from the bottom 0 to 6 inches of the boring. Elevated PID readings were observed in several borings. The PID readings ranged from 0 ppm to 5,500 ppm (SB-10). There were no consistent patterns for increases or decreases throughout the borings. The variations may be associated with the silt content of the soil. No evidence of discoloration, staining or odor was observed in any of the soil borings with the exception of a minor black smearing on the macro-core liner in SB-5 from 0.5 to 2 feet below the basement floor. SB-5 was installed directly under the location of the former dry cleaning machine where staining was observed on the concrete floor. Based on the dry cleaning operations, each sample collected was submitted to a NYSDEC certified laboratory for analysis for the presence of volatile organic compounds plus ten peaks (VOC+10).

After the collection of the samples, the borings were backfilled and sealed with concrete. Lithologic logs for each boring are provided in Attachment 1. The locations of the borings are illustrated on Figure 2. A summary of the soil analytical results is provided as Table 1.

In addition to the soil sampling, sediment samples were collected (Pipe 1 and Pipe 2) on April 14, 2011 from the u-shaped sediment trap that was identified during the Phase I Site inspection. The samples were submitted to a NYSDEC certified laboratory for analysis for the presence of volatile organic compounds plus ten peaks (VOC+10). The locations of the samples are illustrated on Figure 2. A summary of the analytical results is provided as Table 3.

Groundwater Sampling Activities

Following the completion of the soil sampling on April 13 and 14, 2011, SB-7 was converted to a temporary monitoring well (TW-2) for the collection of a groundwater sample for analysis for volatile organic compounds (VOCs). Initially, the borehole was advanced on April 14th with the jack hammer probe to a depth of 32 feet where difficult drilling was encountered. The following day a Dingo Track-mounted GeoProbe was utilized to complete the installation of TW-2 to a depth of 56' below the basement floor. Based on access limitations, the GeoProbe was located on the first floor of the building and drilled through an access opening in the wooden floor into the basement. A 1" diameter temporary polyvinyl chloride (PVC) well screen was installed within the borehole to a depth of 54.5 feet below the basement floor. Due to the expedited nature of the project, the groundwater sample was collected on the same day as installation of the temporary PVC monitoring well. Prior to sampling, the depth to water was measured in the well at 52' below the basement floor. Due to the limited quantity of water in the temporary well point, the initial water sample was collected as a grab sample via a dedicated bailer without purging the well. TW-2 was sampled again later (DUP) once additional water had recharged into the well. Both samples TW-2 and DUP were very turbid.

On April 14th, ARCADIS also attempted to install another temporary well point, TW-3. Again, the GeoProbe was located on the first floor of the building and drilled through an access opening in the wooden floor into the basement. The Dingo GeoProbe drilled down to 35 feet below the basement floor with 1-1/4" probe rods when refusal was encountered. Due to the difficult drilling conditions encountered (cobbles, rubble, etc.), the un-supported drive rods between the first floor and basement floor bent. This created a break in the rods, and the rods had to be abandoned in the borehole. The borehole was subsequently sealed and the driller demobilized from the Site.

On May 24, 2011, the driller re-mobilized to the Site with a Dingo Track-Mounted GeoProbe specially equipped with a roller bit that could utilize air rotary drilling techniques. Using these techniques, the driller was able to install TW-3 to a depth of 62 feet below the basement floor. Many cobbles and boulders were encountered during the installation of TW-3. A 1" diameter temporary PVC well screen was installed within the borehole to a depth of 61.5 feet below the basement floor. TW-3 was allowed to stabilize until May 25, 2011 when a depth to water was measured in the well at 51.6' below the basement floor. ARCADIS then purged 1.5 gallons of water from TW-3 and collected a groundwater sample (TW-3). After sampling, an additional gallon of water was purged from the well and a duplicate sample (DUP-3) was collected approximately two hours after sample TW-3 was collected. Both samples were fairly clear with only slight turbidity. The samples were collected via dedicated bailers.

On May 25, 2011, another temporary well, TW-1, was installed with the Dingo Track-Mounted GeoProbe utilizing air rotary drilling techniques to a depth of 54 feet below the basement floor. Due to tough drilling conditions and several cobbles and boulders that were encountered, the depth of TW-1 was limited to 54 feet. Based on the limited distance between the bottom of the hole and the depth of water, which was observed at 51.63 feet below the basement floor, a 1" diameter PVC well screen was not installed in TW-1. Rather, the groundwater sample was collected via a dedicated bailer through the drilling rods. Due to the limited amount of water in the temporary well point, the well point was not purged. A grab sample was collected via a dedicated bailer. Following the initial sampling, ARCADIS attempted to purge the well and collect another sample; however; the well went dry and additional sampling was not possible.

Following sampling, the temporary well materials were removed from the boreholes. The boreholes were then backfilled using either native soils and/or a cement-bentonite mix, and filled with concrete to grade.

All samples collected were placed in laboratory cleaned sample jars containing an appropriate preservative, maintained on ice and shipped under strict chain-of-custody procedures for laboratory analysis. The samples were submitted to a NYSDEC certified laboratory for analysis for the presence of volatile organic compounds plus ten peaks (VOC+10).

A summary of the groundwater analytical results is presented in Table 2. The locations of the temporary well points are illustrated on Figure 2.

Summary of Results

Soil Sampling Results

To evaluate the data, the soil sampling results have been compared to all of New York's Soil Criteria. No VOCs were detected above laboratory detection limits in the soil borings with the exception of PCE, which was detected in five (5) of the borings at concentrations ranging from 0.0026 mg/kg (SB-8B) to 0.18 mg/kg (SB-5B). The detected levels of PCE are well below the most stringent New York State Criteria (New York Unrestricted Use Criteria/New York Groundwater Protection Criteria).

For comparative purposes, the results of the sediment samples (Pipe 1 and Pipe 2) collected from the U-shaped sediment trap also were compared to New York's Soil Criteria. PCE was identified in Pipe 1 at a concentration of 560 mg/kg, which is above all New York Soil Criteria. PCE was not detected in Pipe 2 at a concentration above laboratory detection limits. No other VOCs were detected above laboratory detection limits in Pipe 1 or Pipe 2, with the exception of acetone. Acetone was identified in

Pipe 2 at 0.082 mg/kg which is slightly above the most stringent New York Soil Criteria (New York Unrestricted Use Criteria/New York Groundwater Protection Criteria).

A summary of the soil analytical results is provided in Table 1. A summary of the sediment analytical results is provided in Table 3. The soil boring locations are shown on Figure 2. The laboratory data package is provided as Attachment 2.

Groundwater Sampling Results

The groundwater sampling results have been compared to the New York Ambient Water Quality Standards (NYAWQS). No VOCs, with the exception of PCE and acetone, were detected above the laboratory detection limits in the groundwater samples. Acetone and chloroform were identified at estimated concentrations below the laboratory detection limits in TW-3 (including its duplicate), and 2-butanone also was detected below the laboratory detection limit in TW-1. The estimated concentrations were well below their respective NYAWQS.

Acetone was detected in TW-2 and its duplicate (DUP) at 17 ug/l and 11 ug/L, respectively. In TW-3 and its duplicate, an estimated concentration of 1.6 ug/l was identified. These concentrations are well below the NYAWQS of 50 ug/L.

PCE was detected in TW-1 at a concentration of 3.9 ug/L which is below the corresponding NYAWQS of 5 ug/L. Analysis of the other groundwater samples identified PCE concentrations exceeding the NYAWQS of 5 ug/L. The analysis of TW-2 and its duplicate (DUP) detected 12 ug/L and 69 ug/L, respectively. The analysis of the groundwater samples from TW-3 and its duplicate (DUP-3) and the re-analysis of DUP-3 identified PCE concentrations of 21 ug/L, 25 ug/L, and 19 ug/L, respectively.

A summary of the groundwater results is provided in Table 2. The temporary well locations are shown on Figure 2. The laboratory data package is provided as Attachment 2.

Conclusions and Recommendations

Based upon the soil sampling results, there are no residual impacts to the subsurface soils from the former dry cleaning operations that need to be addressed. The detected levels of PCE are well below the most stringent New York State Criteria (New York Unrestricted Use Criteria/New York Groundwater Protection Criteria).

During the investigation activities, elevated PID readings (up to 5,000 ppm) were observed in the soil borings indicating a likely soil vapor issue. Previous investigation activities performed in 2007 by ACT identified PCE concentrations in the soil vapor at levels as high as 607 mg/m3. According to NYSDOH soil vapor intrusion guidance, a vapor intrusion investigation is required and based on the 2007 data, mitigation will be required. Typical mitigation systems for these types of contaminants consist of sub-slab depressurization systems. Therefore, at this time, we would recommend a vapor intrusion investigation to evaluate the current Site conditions and confirm the previous soil vapor sampling data.

The groundwater sampling identified PCE in two of the three temporary wells at concentrations exceeding the NYAWQS for PCE of 5 ug/L. The highest concentration observed was 69 ug/L in groundwater sample DUP (duplicate of TW-2), which was a very turbid sample. It is possible this concentration was influenced by the turbidly (suspended sediments) of the sample. The remaining samples had PCE concentrations ranging from 3.9 ug/L to 25 ug/L.

During ACT's 2005 excavation and investigation activities, a temporary well point (SB-01A) was instated and sampled. PCE was detected at a concentration of 285 ug/L in this well point. ARCADIS' TW-1 is located approximately 15-20 feet hydraulically cross-gradient (inferred) of ACT's SB-01A. The analysis of sample TW-1 only identified a PCE concentration of 3.9 ug/L. The low level of PCE in TW-1 indicates that natural attenuation is likely occurring since the cessation of the dry cleaning operations. Based on the decreases in PCE concentrations in the groundwater since the cessation of operations and the lack of any residual source material in the soil, we believe natural attenuation would be an appropriate strategy for addressing the groundwater impacts. Additional groundwater monitoring may be required by NYSDEC to support this approach.

The presence of impacts to the groundwater along with the soil vapor issues, in the absence of any residual soil contamination beneath the basement, could also indicate a potential offsite source. ARCADIS' Phase I identified a drycleaner at 287 Flatbush Avenue located approximately 200 feet upgradient on the east side of Flatbush Avenue. The drycleaner at 287 Flatbush Avenue was identified on the Sanborn Fire Insurance Maps dated from 1965 through 1995. Additional site specific file reviews would be recommended to evaluate this site.

The sampling of the sediments in the U-shaped trap identified elevated concentrations of PCE. ARCADIS recommends cleaning the U-shaped trap and associated wastewater lines in the basement prior to future use. During the cleaning, it is recommended that the lines be video inspected to ensure their integrity. If there is any question regarding their integrity, the lines should be replaced. Also, if the trap is not necessary for future use, it should be removed.

If you have questions regarding this information, please give me a call at 908.526.1000, extension 211.

Sincerely,

Lawrence G. Brunt

Lawrence G. Brunt, P.E.
Principal

LGB/ymt
Attachments

ARCADIS

TABLES

Table 1
Soil Sampling Results Summary
Cinderella 248 LLC
248 Flatbush Avenue, Brooklyn, NY

LOCATION		New York	New York	New York	New York	New York	New York		SB-1A		SB-1B		SB-2A		SB-2B		SB-3A		SB-3B		SB-4A		SB-4B		SB-5A		SB-5B	
SAMPLING DATE		Unrestricted	Commercial	Groundwater	Industrial	Residential	Restricted		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011		4/14/2011	
LAB SAMPLE ID		Use	Soil Criteria	Protection	Soil Criteria	Soil Criteria	Residential		L1105210-01		L1105210-02		L1105210-03		L1105210-04		L1105210-05		L1105210-06		L1105210-07		L1105210-08		L1105210-09		L1105210-10	
SAMPLE TYPE		Criteria	Restricted Use	Criteria	Restricted Use	Restricted Use	Soil Criteria		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
SAMPLE DEPTH (ft.)							Restricted Use		3.5-4.0		8.0-8.5		7.5-8.0		10.5-11.0		4.0-4.5		7.75-8.25		3.5-4.0		5.0-5.5		0.5-1.0		3.5-4.0	
	CasNum	NY-UNRES	NY-RESC	NY-RESGW	NY-RESI	NY-RESR	NY-RESRR	Units		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
General Chemistry - Westborough Lab																												
Solids, Total	NONE							%	92		93		93		91		91		90		92		90		91		92	
Volatile Organics by GC/MS - Westborough Lab																												
Methylene chloride	75-09-2	0.05	500	0.05	1000	51	100	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
1,1-Dichloroethane	75-34-3	0.27	240	0.27	480	19	26	mg/kg	0.0041	U	0.004	U	0.004	U	0.0041	U	0.0041	U	0.0042	U	0.0041	U	0.0042	U	0.0041	U	0.0041	U
Chloroform	67-66-3	0.37	350	0.37	700	10	49	mg/kg	0.0041	U	0.004	U	0.004	U	0.0041	U	0.0041	U	0.0042	U	0.0041	U	0.0042	U	0.0041	U	0.0041	U
Carbon tetrachloride	56-23-5	0.76	22	0.76	44	1.4	2.4	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,2-Dichloropropane	78-87-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0095	U	0.0094	U	0.0094	U	0.0096	U	0.0096	U	0.0097	U	0.0095	U	0.0097	U	0.0096	U	0.0095	U
Dibromochloromethane	124-48-1	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,1,2-Trichloroethane	79-00-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0041	U	0.004	U	0.004	U	0.0041	U	0.0041	U	0.0042	U	0.0041	U	0.0042	U	0.0041	U	0.0041	U
Tetrachloroethene	127-18-4	1.3	150	1.3	300	5.5	19	mg/kg	0.0027	U	0.0027	U	0.0038		0.0095		0.0027	U	0.0062		0.0027	U	0.005		0.035		0.18	
Chlorobenzene	108-90-7	1.1	500	1.1	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Trichlorofluoromethane	75-69-4	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,2-Dichloroethane	107-06-2	0.02	30	0.02	60	2.3	3.1	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,1,1-Trichloroethane	71-55-6	0.68	500	0.68	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Bromodichloromethane	75-27-4	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
trans-1,3-Dichloropropene	10061-02-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
cis-1,3-Dichloropropene	10061-01-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,1-Dichloropropene	563-58-6	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Bromoform	75-25-2	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
1,1,2,2-Tetrachloroethane	79-34-5	NS	NS	0.6	NS	35	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Benzene	71-43-2	0.06	44	0.06	89	2.9	4.8	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Toluene	108-88-3	0.7	500	0.7	1000	100	100	mg/kg	0.0041	U	0.004	U	0.004	U	0.0041	U	0.0041	U	0.0042	U	0.0041	U	0.0042	U	0.0041	U	0.0041	U
Ethylbenzene	100-41-4	1	390	1	780	30	41	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Chloromethane	74-87-3	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Bromomethane	74-83-9	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
Vinyl chloride	75-01-4	0.02	13	0.02	27	0.21	0.9	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
Chloroethane	75-00-3	NS	NS	1.9	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
1,1-Dichloroethene	75-35-4	0.33	500	0.33	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
trans-1,2-Dichloroethene	156-60-5	0.19	500	0.19	1000	100	100	mg/kg	0.0041	U	0.004	U	0.004	U	0.0041	U	0.0041	U	0.0042	U	0.0041	U	0.0042	U	0.0041	U	0.0041	U
Trichloroethene	79-01-6	0.47	200	0.47	400	10	21	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,2-Dichlorobenzene	95-50-1	1.1	500	1.1	1000	100	100	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,3-Dichlorobenzene	541-73-1	2.4	280	2.4	560	17	49	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,4-Dichlorobenzene	106-46-7	1.8	130	1.8	250	9.8	13	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Methyl tert butyl ether	1634-04-4	0.93	500	0.93	1000	62	100	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
p/m-Xylene	106-42-3/108-38-3	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
o-Xylene	95-47-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
cis-1,2-Dichloroethene	156-59-2	0.25	500	0.25	1000	59	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Dibromomethane	74-95-3	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
Styrene	100-42-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0054	U	0.0055	U	0.0055	U	0.0056	U	0.0054	U	0.0056	U	0.0055	U	0.0054	U
Dichlorodifluoromethane	75-71-8	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
Acetone	67-64-1	0.05	500	0.05	1000	100	100	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
Carbon disulfide	75-15-0	NS	NS	2.7	NS	100	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
2-Butanone	78-93-3	0.12	500	0.12	1000	100	100	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
Vinyl acetate	108-05-4	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
4-Methyl-2-pentanone	108-10-1	NS	NS	1	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
1,2,3-Trichloropropane	96-18-4	NS	NS	0.34	NS	80	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
2-Hexanone	591-78-6	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
Bromochloromethane	74-97-5	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
2,2-Dichloropropane	594-20-7	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,2-Dibromoethane	106-93-4	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
1,3-Dichloropropane	142-28-9	NS	NS	0.3	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,1,1,2-Tetrachloroethane	630-20-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Bromobenzene	108-86-1	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
n-Butylbenzene	104-51-8	12	500	12	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
sec-Butylbenzene	135-98-8	11	500	11	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
tert-Butylbenzene	98-06-6	5.9	500	5.9	1000	100	100	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
o-Chlorotoluene	95-49-8	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
p-Chlorotoluene	106-43-4	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,2-Dibromo-3-chloropropane	96-12-8	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Hexachlorobutadiene	87-68-3	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Isopropylbenzene	98-82-8	NS	NS	2.3	NS	100	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
p-Isopropyltoluene	99-87-6	NS	NS	10	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
Naphthalene	91-20-3	12	500	12	1000	100	100	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Acrylonitrile	107-13-1	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	U	0.027	U
n-Propylbenzene	103-65-1	3.9	500	3.9	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0028	U	0.0027	U	0.0028	U	0.0027	U	0.0027	U
1,2,3-Trichlorobenzene	87-61-6	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,2,4-Trichlorobenzene	120-82-1	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	8.4	380	47	52	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	3.6	380	47	52	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
1,4-Diethylbenzene	105-05-5	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
4-Ethyltoluene	622-96-8	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
Ethyl ether	60-29-7	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
trans-1,4-Dichloro-2-butene	110-57-6	NS	NS	NS	NS	NS	NS	mg/kg	0.014	U	0.013	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U

Notes:
mg/kg: milligram per kilogram
U: Not detected at the reported detection limit for the compound.
NS: No standard established for this compound.
Concentration exceeds a NYSDEC standard.

Table 1
Soil Sampling Results Summary
Cinderella 248 LLC
248 Flatbush Avenue, Brooklyn, NY
April 13-14, 2011

LOCATION		New York Unrestricted Use Criteria	New York Commercial Soil Criteria Restricted Use	New York Groundwater Protection Criteria	New York Industrial Soil Criteria Restricted Use	New York Residential Soil Criteria Restricted Use	New York Restricted Residential Soil Criteria Restricted Use		SB-6A		SB-7A		SB-7B		SB-8A		SB-8B		SB-9A		SB-9B		SB-10A		SB-10B	
SAMPLING DATE									4/14/2011		4/13/2011		4/13/2011		4/13/2011		4/13/2011		4/13/2011		4/13/2011		4/13/2011		4/13/2011	
LAB SAMPLE ID									L1105210-11		L1105210-12		L1105210-13		L1105210-14		L1105210-15		L1105210-16		L1105210-17		L1105210-18		L1105210-19	
SAMPLE TYPE									Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
SAMPLE DEPTH (ft.)									0-4.0		9.5-10.0		11.5-12.0		0.5-1.0		11.5-12.0		7.5-8.0		11.5-12.0		5.5-6.0		11.5-12.0	
	CasNum	NY-UNRES	NY-RESC	NY-RESGW	NY-RESI	NY-RESR	NY-RESRR	Units		Q		Q		Q		Q		Q		Q		Q		Q		Q
General Chemistry - Westborough Lab																										
Solids, Total	NONE							%	93		93		95		93		95		95		95		94		97	
Volatile Organics by GC/MS - Westborough Lab																										
Methylene chloride	75-09-2	0.05	500	0.05	1000	51	100	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
1,1-Dichloroethane	75-34-3	0.27	240	0.27	480	19	26	mg/kg	0.004	U	0.004	U	0.0039	U	0.004	U	0.0039	U	0.0039	U	0.0039	U	0.004	U	0.0039	U
Chloroform	67-66-3	0.37	350	0.37	700	10	49	mg/kg	0.004	U	0.004	U	0.0039	U	0.004	U	0.0039	U	0.0039	U	0.0039	U	0.004	U	0.0039	U
Carbon tetrachloride	56-23-5	0.76	22	0.76	44	1.4	2.4	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,2-Dichloropropane	78-87-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0094	U	0.0094	U	0.0092	U	0.0094	U	0.0092	U	0.0092	U	0.0092	U	0.0093	U	0.009	U
Dibromochloromethane	124-48-1	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,1,2-Trichloroethane	79-00-5	NS	NS	NS	NS	NS	NS	mg/kg	0.004	U	0.004	U	0.0039	U	0.004	U	0.0039	U	0.0039	U	0.0039	U	0.004	U	0.0039	U
Tetrachloroethene	127-18-4	1.3	150	1.3	300	5.5	19	mg/kg	0.0027	U	0.0027	U	0.0047		0.0027	U	0.0026		0.0026	U	0.0026	U	0.0026	U	0.0026	U
Chlorobenzene	108-90-7	1.1	500	1.1	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Trichlorofluoromethane	75-69-4	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,2-Dichloroethane	107-06-2	0.02	30	0.02	60	2.3	3.1	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,1,1-Trichloroethane	71-55-6	0.68	500	0.68	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Bromodichloromethane	75-27-4	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
trans-1,3-Dichloropropene	10061-02-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
cis-1,3-Dichloropropene	10061-01-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,1-Dichloropropene	563-58-6	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Bromoform	75-25-2	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.011	U	0.01	U
1,1,2,2-Tetrachloroethane	79-34-5	NS	NS	0.6	NS	35	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Benzene	71-43-2	0.06	44	0.06	89	2.9	4.8	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Toluene	108-88-3	0.7	500	0.7	1000	100	100	mg/kg	0.004	U	0.004	U	0.0039	U	0.004	U	0.0039	U	0.0039	U	0.0039	U	0.004	U	0.0039	U
Ethylbenzene	100-41-4	1	390	1	780	30	41	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Chloromethane	74-87-3	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Bromomethane	74-83-9	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
Vinyl chloride	75-01-4	0.02	13	0.02	27	0.21	0.9	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
Chloroethane	75-00-3	NS	NS	1.9	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
1,1-Dichloroethene	75-35-4	0.33	500	0.33	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
trans-1,2-Dichloroethene	156-60-5	0.19	500	0.19	1000	100	100	mg/kg	0.004	U	0.004	U	0.0039	U	0.004	U	0.0039	U	0.0039	U	0.0039	U	0.004	U	0.0039	U
Trichloroethene	79-01-6	0.47	200	0.47	400	10	21	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,2-Dichlorobenzene	95-50-1	1.1	500	1.1	1000	100	100	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,3-Dichlorobenzene	541-73-1	2.4	280	2.4	560	17	49	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,4-Dichlorobenzene	106-46-7	1.8	130	1.8	250	9.8	13	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Methyl tert butyl ether	1634-04-4	0.93	500	0.93	1000	62	100	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
p/m-Xylene	106-42-3/108-38-3	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
o-Xylene	95-47-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
cis-1,2-Dichloroethene	156-59-2	0.25	500	0.25	1000	59	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Dibromomethane	74-95-3	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
Styrene	100-42-5	NS	NS	NS	NS	NS	NS	mg/kg	0.0054	U	0.0054	U	0.0053	U	0.0054	U	0.0053	U	0.0053	U	0.0053	U	0.0053	U	0.0052	U
Dichlorodifluoromethane	75-71-8	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
Acetone	67-64-1	0.05	500	0.05	1000	100	100	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
Carbon disulfide	75-15-0	NS	NS	2.7	NS	100	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
2-Butanone	78-93-3	0.12	500	0.12	1000	100	100	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
Vinyl acetate	108-05-4	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
4-Methyl-2-pentanone	108-10-1	NS	NS	1	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
1,2,3-Trichloropropane	96-18-4	NS	NS	0.34	NS	80	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
2-Hexanone	591-78-6	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
Bromochloromethane	74-97-5	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
2,2-Dichloropropane	594-20-7	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,2-Dibromoethane	106-93-4	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.011	U	0.01	U
1,3-Dichloropropane	142-28-9	NS	NS	0.3	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,1,1,2-Tetrachloroethane	630-20-6	NS	NS	NS	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Bromobenzene	108-86-1	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
n-Butylbenzene	104-51-8	12	500	12	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
sec-Butylbenzene	135-98-8	11	500	11	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
tert-Butylbenzene	98-06-6	5.9	500	5.9	1000	100	100	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
o-Chlorotoluene	95-49-8	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
p-Chlorotoluene	106-43-4	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,2-Dibromo-3-chloropropane	96-12-8	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Hexachlorobutadiene	87-68-3	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Isopropylbenzene	98-82-8	NS	NS	2.3	NS	100	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
p-Isopropyltoluene	99-87-6	NS	NS	10	NS	NS	NS	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
Naphthalene	91-20-3	12	500	12	1000	100	100	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
Acrylonitrile	107-13-1	NS	NS	NS	NS	NS	NS	mg/kg	0.027	U	0.027	U	0.026	U	0.027	U	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U
n-Propylbenzene	103-65-1	3.9	500	3.9	1000	100	100	mg/kg	0.0027	U	0.0027	U	0.0026	U	0.0027	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U
1,2,3-Trichlorobenzene	87-61-6	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,2,4-Trichlorobenzene	120-82-1	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	8.4	380	47	52	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	3.6	380	47	52	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
1,4-Diethylbenzene	105-05-5	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.011	U	0.01	U
4-Ethyltoluene	622-96-8	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.011	U	0.01	U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	NS	NS	NS	NS	NS	mg/kg	0.011	U	0.011	U	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.011	U	0.01	U
Ethyl ether	60-29-7	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U
trans-1,4-Dichloro-2-butene	110-57-6	NS	NS	NS	NS	NS	NS	mg/kg	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U

Notes:
mg/kg: milligram per kilogram
U: Not detected at the reported detection limit for the compound.
NS: No standard established for this compound.
▒ Concentration exceeds a NYSDEC standard.

Table 2
Groundwater Analytical Results Summary
Cinderella 248 LLC
248 Flatbush Avenue, Brooklyn, NY
April 14, 2011/ May 25, 2011

LOCATION		New York		TW-2		DUP		DUP-3		DUP-3		TW-1		TW-3		FIELD BLANK		TRIP BLANK	
SAMPLING DATE		Ambient Water		4/14/2011		4/14/2011		5/25/2011		5/25/2011		5/25/2011		5/25/2011		5/25/2011		5/25/2011	
LAB SAMPLE ID		Quality Stds.		L1105210-22		L1105210-23		L1107940-01		L1107940-01 RI		L1107458-03		L1107458-01		L1107940-02		L1107940-03	
	CasNum	NY-AWQS	Units		Q		Q		Q		Q		Q		Q		Q		Q
Volatile Organics by GC/MS - Westborough Lab																			
Methylene chloride	75-09-2	5	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	75-34-3	5	ug/l	1.5	U	1.5	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U
Chloroform	67-66-3	7	ug/l	1.5	U	1.5	U	0.71	J	0.6	J	0.75	U	0.6	J	0.75	U	0.75	U
Carbon tetrachloride	56-23-5	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5	1	ug/l	3.5	U	3.5	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Dibromochloromethane	124-48-1	50	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5	1	ug/l	1.5	U	1.5	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U
Tetrachloroethene	127-18-4	5	ug/l	12		69		25		19		3.9		21		0.5	U	0.5	U
Chlorobenzene	108-90-7	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	107-06-2	0.6	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	71-55-6	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4	50	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	563-58-6	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromoform	75-25-2	50	ug/l	4	U	4	U	2	U	2	U	2	U	2	U	2	U	2	U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	71-43-2	1	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	108-88-3	5	ug/l	1.5	U	1.5	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U
Ethylbenzene	100-41-4	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloromethane	74-87-3	NS	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	74-83-9	5	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	75-01-4	2	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	75-00-3	5	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	75-35-4	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	156-60-5	5	ug/l	1.5	U	1.5	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U
Trichloroethene	79-01-6	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	3	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	541-73-1	3	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	106-46-7	3	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert butyl ether	1634-04-4	10	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
p/m-Xylene	106-42-3/108-38-3	5	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
o-Xylene	95-47-6	5	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,2-Dichloroethene	156-59-2	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	74-95-3	5	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
Acrylonitrile	107-13-1	5	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	100-42-5	5	ug/l	2	U	2	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	75-71-8	5	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	67-64-1	50	ug/l	17		11		1.6	J	5	U	6.1		1.6	J	5	U	5	U
Carbon disulfide	75-15-0	60	ug/l	10		10	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	78-93-3	50	ug/l	10	U	10	U	5	U	5	U	2.6	J	5	U	5	U	5	U
Vinyl acetate	108-05-4	NS	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone	108-10-1	NS	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	591-78-6	50	ug/l	10	U	10	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromochloromethane	74-97-5	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2,2-Dichloropropane	594-20-7	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromoethane	106-93-4	0.0006	ug/l	4	U	4	U	2	U	2	U	2	U	2	U	2	U	2	U
1,3-Dichloropropane	142-28-9	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	108-86-1	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Butylbenzene	104-51-8	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	135-98-8	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	98-06-6	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
o-Chlorotoluene	95-49-8	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p-Chlorotoluene	106-43-4	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	87-68-3	0.5	ug/l	1.2	U	1.2	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Isopropylbenzene	98-82-8	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
p-Isopropyltoluene	99-87-6	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	91-20-3	10	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Propylbenzene	103-65-1	5	ug/l	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	108-67-8	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Diethylbenzene	105-05-5	NS	ug/l	4	U	4	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Ethyltoluene	622-96-8	NS	ug/l	4	U	4	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	ug/l	4	U	4	U	2	U	2	U	2	U	2	U	2	U	2	U
Ethyl ether	60-29-7	NS	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,4-Dichloro-2-butene	110-57-6	5	ug/l	5	U	5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

Notes:
ug/l: micrograms per liter
U: Not detected at the reported detection limit for the compound.
NS: No standard established for this compound.
Concentration exceeds a NYSDEC standard.

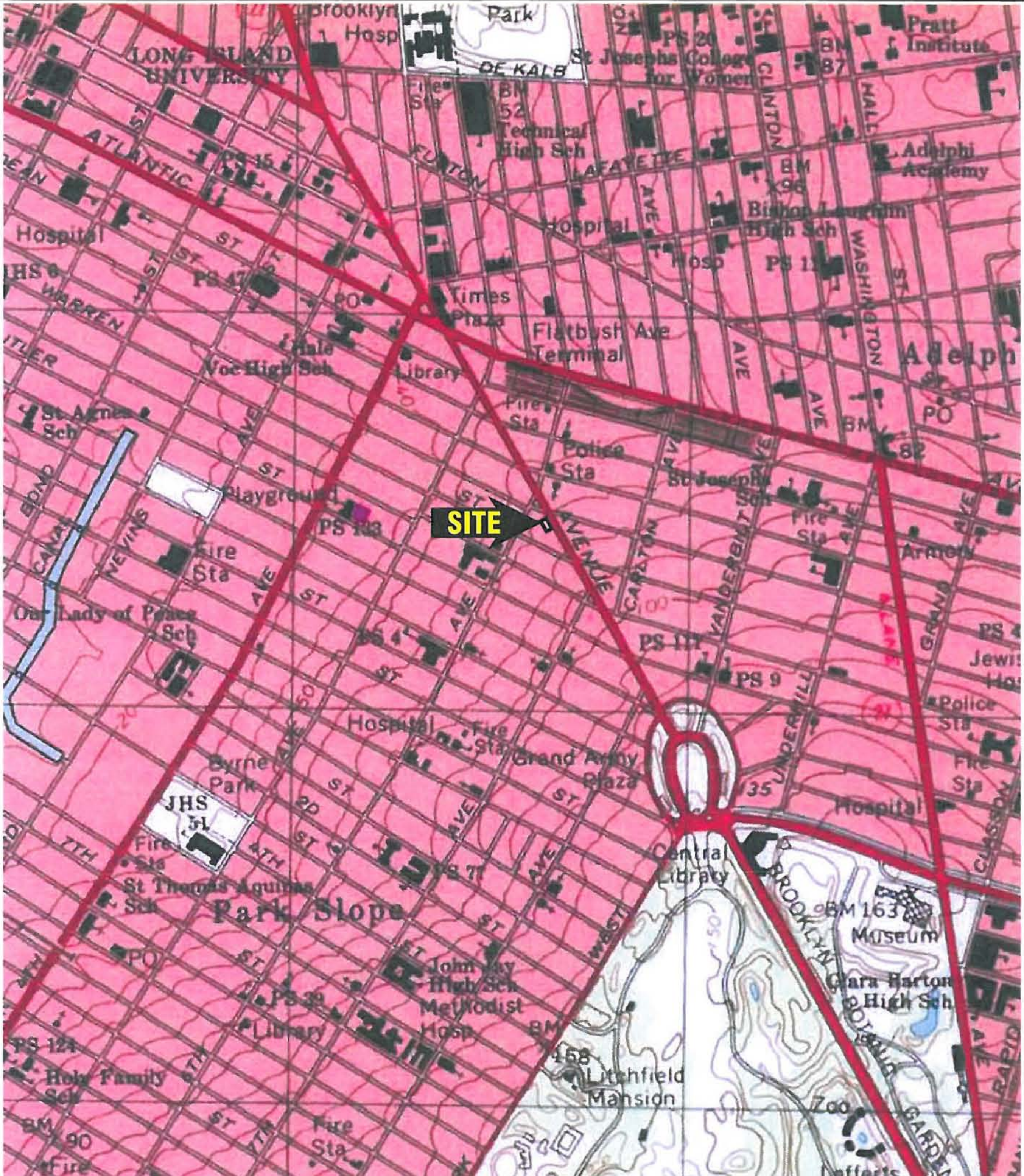
Table 3
Sediment Analytical Results Summary
Cinderella 248 LLC
248 Flatbush Avenue, Brooklyn, NY
April 14, 2011

LOCATION		New York	New York	New York	New York	New York	New York		PIPE 1		PIPE 2	
SAMPLING DATE		Unrestricted	Commercial	Groundwater	Industrial	Residential	Restricted		4/14/2011		4/14/2011	
LAB SAMPLE ID		Use	Soil Criteria	Protection	Soil Criteria	Soil Criteria	Residential		L1105210-20		L1105210-21	
SAMPLE TYPE		Criteria	Restricted Use	Criteria	Restricted Use	Restricted Use	Soil Criteria		Sediments		Sediments	
SAMPLE DEPTH (ft.)							Restricted Use		PIPE 1		PIPE 2	
	CasNum	NY-UNRES	NY-RESC	NY-RESGW	NY-RESI	NY-RESR	NY-RESRR	Units		Q		Q
General Chemistry - Westborough Lab												
Solids, Total	NONE							%	71		65	
Volatile Organics by GC/MS - Westborough Lab												
Methylene chloride	75-09-2	0.05	500	0.05	1000	51	100	mg/kg	70	U	0.038	U
1,1-Dichloroethane	75-34-3	0.27	240	0.27	480	19	26	mg/kg	10	U	0.0058	U
Chloroform	67-66-3	0.37	350	0.37	700	10	49	mg/kg	10	U	0.0058	U
Carbon tetrachloride	56-23-5	0.76	22	0.76	44	1.4	2.4	mg/kg	7	U	0.0038	U
1,2-Dichloropropane	78-87-5	NS	NS	NS	NS	NS	NS	mg/kg	25	U	0.013	U
Dibromochloromethane	124-48-1	NS	NS	NS	NS	NS	NS	mg/kg	7	U	0.0038	U
1,1,2-Trichloroethane	79-00-5	NS	NS	NS	NS	NS	NS	mg/kg	10	U	0.0058	U
Tetrachloroethene	127-18-4	1.3	150	1.3	300	5.5	19	mg/kg	560		0.057	
Chlorobenzene	108-90-7	1.1	500	1.1	1000	100	100	mg/kg	7	U	0.0038	U
Trichlorofluoromethane	75-69-4	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
1,2-Dichloroethane	107-06-2	0.02	30	0.02	60	2.3	3.1	mg/kg	7	U	0.0038	U
1,1,1-Trichloroethane	71-55-6	0.68	500	0.68	1000	100	100	mg/kg	7	U	0.0038	U
Bromodichloromethane	75-27-4	NS	NS	NS	NS	NS	NS	mg/kg	7	U	0.0038	U
trans-1,3-Dichloropropene	10061-02-6	NS	NS	NS	NS	NS	NS	mg/kg	7	U	0.0038	U
cis-1,3-Dichloropropene	10061-01-5	NS	NS	NS	NS	NS	NS	mg/kg	7	U	0.0038	U
1,1-Dichloropropene	563-58-6	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
Bromoform	75-25-2	NS	NS	NS	NS	NS	NS	mg/kg	28	U	0.015	U
1,1,2,2-Tetrachloroethane	79-34-5	NS	NS	0.6	NS	35	NS	mg/kg	7	U	0.0038	U
Benzene	71-43-2	0.06	44	0.06	89	2.9	4.8	mg/kg	7	U	0.0038	U
Toluene	108-88-3	0.7	500	0.7	1000	100	100	mg/kg	10	U	0.0058	U
Ethylbenzene	100-41-4	1	390	1	780	30	41	mg/kg	7	U	0.0038	U
Chloromethane	74-87-3	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
Bromomethane	74-83-9	NS	NS	NS	NS	NS	NS	mg/kg	14	U	0.0077	U
Vinyl chloride	75-01-4	0.02	13	0.02	27	0.21	0.9	mg/kg	14	U	0.0077	U
Chloroethane	75-00-3	NS	NS	1.9	NS	NS	NS	mg/kg	14	U	0.0077	U
1,1-Dichloroethene	75-35-4	0.33	500	0.33	1000	100	100	mg/kg	7	U	0.0038	U
trans-1,2-Dichloroethene	156-60-5	0.19	500	0.19	1000	100	100	mg/kg	10	U	0.0058	U
Trichloroethene	79-01-6	0.47	200	0.47	400	10	21	mg/kg	7	U	0.0038	U
1,2-Dichlorobenzene	95-50-1	1.1	500	1.1	1000	100	100	mg/kg	35	U	0.019	U
1,3-Dichlorobenzene	541-73-1	2.4	280	2.4	560	17	49	mg/kg	35	U	0.019	U
1,4-Dichlorobenzene	106-46-7	1.8	130	1.8	250	9.8	13	mg/kg	35	U	0.019	U
Methyl tert butyl ether	1634-04-4	0.93	500	0.93	1000	62	100	mg/kg	14	U	0.0077	U
p/m-Xylene	106-42-3/108-38-3	NS	NS	NS	NS	NS	NS	mg/kg	14	U	0.0077	U
o-Xylene	95-47-6	NS	NS	NS	NS	NS	NS	mg/kg	14	U	0.0077	U
cis-1,2-Dichloroethene	156-59-2	0.25	500	0.25	1000	59	100	mg/kg	7	U	0.0038	U
Dibromomethane	74-95-3	NS	NS	NS	NS	NS	NS	mg/kg	70	U	0.038	U
Styrene	100-42-5	NS	NS	NS	NS	NS	NS	mg/kg	14	U	0.0077	U
Dichlorodifluoromethane	75-71-8	NS	NS	NS	NS	NS	NS	mg/kg	70	U	0.038	U
Acetone	67-64-1	0.05	500	0.05	1000	100	100	mg/kg	70	U	0.082	
Carbon disulfide	75-15-0	NS	NS	2.7	NS	100	NS	mg/kg	70	U	0.038	U
2-Butanone	78-93-3	0.12	500	0.12	1000	100	100	mg/kg	70	U	0.038	U
Vinyl acetate	108-05-4	NS	NS	NS	NS	NS	NS	mg/kg	70	U	0.038	U
4-Methyl-2-pentanone	108-10-1	NS	NS	1	NS	NS	NS	mg/kg	70	U	0.038	U
1,2,3-Trichloropropane	96-18-4	NS	NS	0.34	NS	80	NS	mg/kg	70	U	0.038	U
2-Hexanone	591-78-6	NS	NS	NS	NS	NS	NS	mg/kg	70	U	0.038	U
Bromochloromethane	74-97-5	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
2,2-Dichloropropane	594-20-7	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
1,2-Dibromoethane	106-93-4	NS	NS	NS	NS	NS	NS	mg/kg	28	U	0.015	U
1,3-Dichloropropane	142-28-9	NS	NS	0.3	NS	NS	NS	mg/kg	35	U	0.019	U
1,1,1,2-Tetrachloroethane	630-20-6	NS	NS	NS	NS	NS	NS	mg/kg	7	U	0.0038	U
Bromobenzene	108-86-1	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
n-Butylbenzene	104-51-8	12	500	12	1000	100	100	mg/kg	7	U	0.0038	U
sec-Butylbenzene	135-98-8	11	500	11	1000	100	100	mg/kg	7	U	0.0038	U
tert-Butylbenzene	98-06-6	5.9	500	5.9	1000	100	100	mg/kg	35	U	0.019	U
o-Chlorotoluene	95-49-8	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
p-Chlorotoluene	106-43-4	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
1,2-Dibromo-3-chloropropane	96-12-8	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
Hexachlorobutadiene	87-68-3	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
Isopropylbenzene	98-82-8	NS	NS	2.3	NS	100	NS	mg/kg	7	U	0.0038	U
p-Isopropyltoluene	99-87-6	NS	NS	10	NS	NS	NS	mg/kg	7	U	0.0038	U
Naphthalene	91-20-3	12	500	12	1000	100	100	mg/kg	35	U	0.019	U
Acrylonitrile	107-13-1	NS	NS	NS	NS	NS	NS	mg/kg	70	U	0.038	U
n-Propylbenzene	103-65-1	3.9	500	3.9	1000	100	100	mg/kg	7	U	0.0038	U
1,2,3-Trichlorobenzene	87-61-6	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
1,2,4-Trichlorobenzene	120-82-1	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	8.4	380	47	52	mg/kg	35	U	0.019	U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	3.6	380	47	52	mg/kg	35	U	0.019	U
1,4-Diethylbenzene	105-05-5	NS	NS	NS	NS	NS	NS	mg/kg	28	U	0.015	U
4-Ethyltoluene	622-96-8	NS	NS	NS	NS	NS	NS	mg/kg	28	U	0.015	U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	NS	NS	NS	NS	NS	mg/kg	28	U	0.015	U
Ethyl ether	60-29-7	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U
trans-1,4-Dichloro-2-butene	110-57-6	NS	NS	NS	NS	NS	NS	mg/kg	35	U	0.019	U

Notes:
mg/kg: milligram per kilogram
U: Not detected at the reported detection limit for the compound.
NS: No standard established for this compound.
[shaded box] Concentration exceeds a NYSDEC standard.
*The NYSDEC Soil Criteria are provided only for a basis of comparison.

ARCADIS

FIGURES



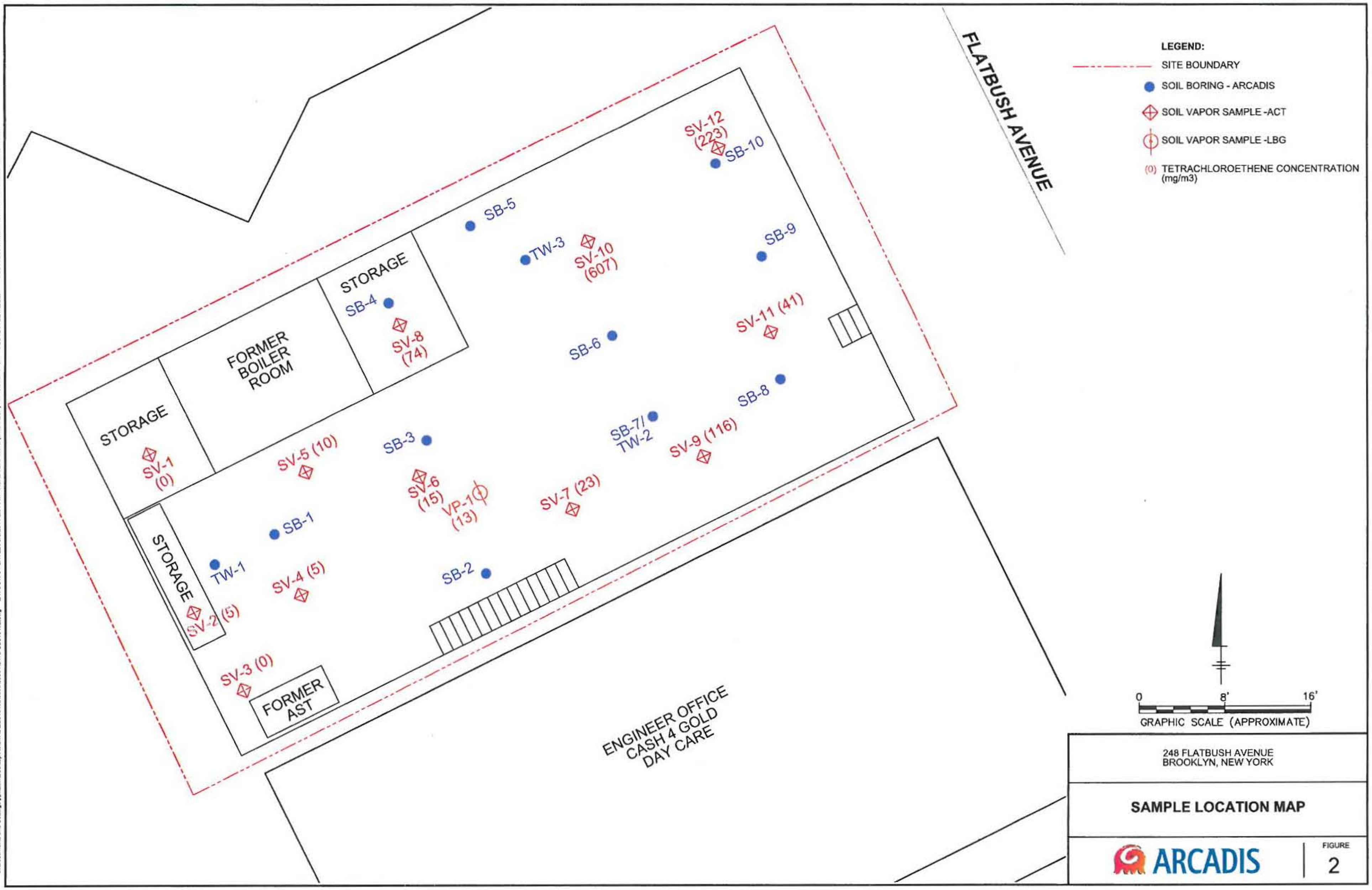
QUADRANGLE: BROOKLYN
DATED: 1995

248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

SITE LOCATION MAP

ARCADIS

FIGURE
1



248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

SAMPLE LOCATION MAP

ARCADIS

FIGURE 2

APPENDIX B

PROJECT PERSONNEL RESUMES

Stephanie O. Davis, PG, CPG

FPM group

Engineering and Environmental Science

Ms. Davis has diversified experience in geology and hydrogeology. Her professional technical experience includes groundwater, soil, and soil vapor investigations, design and management of soil and groundwater remediation projects, design and installation of groundwater containment systems, design and evaluation of soil vapor mitigation systems, groundwater flow modeling, aquifer testing and interpretation, evaluation of site compliance with environmental regulations, environmental permitting, and personnel training. Ms. Davis presently manages several large-scale investigation and remedial programs, including program scopes, budgets, staffing, and schedules.

Functional Role	Title	Years of Experience
Senior Hydrogeologist	**Department Manager - Hydrogeology**	**29**

Personal Data

Education

M.S./1984/Geology/University of Southern California
B.S./1981/Geology/Bucknell University

Registration and Certifications

Certified Professional Geologist #9487, (AIPG) 1995
California Registered Geologist #5192, 1991
Pennsylvania Registered Geologist #PG-000529-G, 1994
OSHA – Approved 40 hour Health and Safety Training Course (1990)
OSHA - Approved 8 hour Health and Safety Training Refresher Courses (1991-Present)
OSHA-Approved 8-hour Site Safety Supervisor Training Course (2008)
National Ground Water Association
Long Island Association of Professional Geologists
USEPA Triad Training for Practitioners

Employment History

1993-Present	FPM Group
1992-1993	Chevron Research and Technology Co.
1990-1992	Chevron Manufacturing Co.
1984-1990	Chevron Exploration, Land, and Production Company

Continuing Education

- Treatment of Contaminated Soil and Rock
- Groundwater Pollution and Hydrology
- Environmental Law and Regulation
- Remedial Engineering
- Soil and Foundation Engineering
- Environmental Geochemistry
- Project Management Professional (PMP) training

Detailed Experience

Site Investigations

- **Program Manager** for ongoing investigation and remedial projects at several New York State Inactive Hazardous Waste Disposal sites, Voluntary Cleanup Program (VCP) sites, and Brownfield Cleanup Program (BCP) sites. Investigations have included site characterization, Remedial Investigations/Feasibility Studies (RI/FS), and Resource Conservation and Recovery Act (RCRA) facility investigations and closures. Remedial services have included contaminated soil removal; ORC and HRC injections; design, installation, and operation of air sparge/soil vapor extraction (AS/SVE) systems and sub-slab depressurization systems (SSDS), capping, and other remedial services.
- **Program Manager, NYS BCP Site, Far Rockaway, NY.** Managed all aspects of pre-application investigation, BCP application, RI Work Plan development, and Citizen Participation Plan (CPP) for a chlorinated solvent site. Responsible for scope development, NYSDEC and NYSDOH coordination, budget, schedule, staffing, and report management.
- **Program Manager, Site Characterization (SC) for NYS Inactive Hazardous Waste Disposal Site, Flushing, NY.** Responsible for SC scope development, budget, schedule, SC Work Plan and report review, staffing, and agency negotiations for a chlorinated solvent site undergoing residential redevelopment.
- **Program Manager** for all Phase I ESA, Phase II investigations, and remediation projects for a major commercial developer on Long Island, New York. Projects have included environmental services associated for the purchase and redevelopment of office buildings, aerospace facilities, former research and development facilities, and large manufacturing plants. Remedial services have included RCRA closures, UIC closures, tank removals, and BCP projects.

- **Program Manager, Remedial Investigation/ Feasibility Study (RI/FS), Levittown, NY.** Managed all aspects of RI/FS for a Class 2 Inactive Hazardous Waste Disposal (Superfund) site involving chlorinated solvents. Responsibilities included RI/FS scope, budget and schedule development, RI/FS work plan, HASP, CAMP, and QAPP, coordination with client, tenants, and regulatory agencies, report review, remedial approach development, and conceptual design.
- **Project Manager, RCRA Facilities Investigation (RFI), Barksdale AFB, LA, AFCEE**. Responsible for all aspects of field program planning, solicitation and selection of subcontractors, mobilization and establishment of a field office, supervising multiple field crews, installation and sampling of monitoring wells, collection and soil samples, data tracking and management and preparation of an RFI report. The scope of work included characterization of the nature and extent of groundwater and soil contamination at thirteen Solid Waste Management Units (SWMUs), performing a base-wide evaluation of background contaminant concentrations, and developing a long-term monitoring (LTM) program for the base.
- **Field Services Manager, UST Investigation, Plattsburgh AFB, NY, AFCEE**. Responsible for field crew training, coordination of sampling crews at multiple sites, sample labeling, handling, tracking, and shipping, field data management and remote field office management. The scope of work included collection of over 450 groundwater samples to characterize groundwater conditions in the vicinity of 150 USTs using a Geoprobe sampling rig, well points, and rapid turnaround-time analysis.
- **Project Manager** for site investigation activities, including soil vapor sampling, soil sampling and analysis, groundwater sampling and analysis, and geotechnical evaluation for numerous sites in Suffolk County, New York. The resulting data were utilized by a major supermarket company in the negotiations for the purchase of the properties and in the property remediation prior to development.
- **Project Manager, Site Investigation, Bronx, NY, NYCT.** Managed field sampling and data analysis activities, including soil vapor analysis, soil sample analysis, and groundwater sampling and analysis at an active commercial bus terminal. Made recommendations for site remediation, including UST removal, soil excavation and disposal, and free-phase product extraction.
- **Project Manager, RCRA Facilities Investigation, City of Richmond, CA**. Prepared RFI work plan, incorporating existing geologic, chemical, and historical data, evaluating newly-acquired site data, and developing recommendations for further investigation and remedial action at a former municipal landfill.
- **Project Manager, Site Investigation, Bay Shore, NY**. **Manufacturing facility.** Managed onsite and offsite soil and groundwater sampling program. Compiled and evaluated data and prepared a comprehensive report of the investigation results for the Suffolk County Department of Health Services (SCDHS) and NYS Department of Environmental Conservation (NYSDEC). Proposed remediation technologies for onsite soil contamination and onsite and offsite groundwater contamination.
- **Project Manager, Site Investigation, Newark Airport, NJ, FAA.** Managed and conducted a soil and groundwater sampling program adjacent to Runway 29. Analyzed chemical analytical data and developed recommendations.
- **Project Manager, Remedial Investigation, Richmond Refinery, CA.** Supervised and conducted drilling, soil sampling, cone penetrometer testing, and well installation at a refinery process water effluent treatment system and former municipal landfill.
- **Senior Hydrogeologist, multiple sites, NY metro area.** Supervised drilling, installation, development, and sampling of monitoring wells at numerous sites in the greater New York metro area. Utilized resulting stratigraphic, hydrologic, and chemical analytical data to evaluate site conditions.
- **Program Manager, multiple sites, major New York Metro area automobile dealer.** Managed all investigation and remedial activities for a major automobile retailer with multiple facilities. Sites included tanks, petroleum spills, underground injection control (UIC) systems, soil vapor intrusion issues, and hazardous waste management. Responsible for work scope and budget preparation, staffing and oversight, client and regulatory agency interactions, addressing insurance issues, reporting and certification, and project closeouts.
- **Program Manager, SWTP groundwater monitoring program, Town of East Hampton.** Managed groundwater sampling and reporting for the Scavenger Waste Treatment Plant (SWTP). Responsibilities included oversight of well installation, purging and sampling the SWTP groundwater monitoring wells, and providing data to the Town for reporting purposes.

Remediation

- **Program Manager, NYSDEC BCP site, NY City, major real estate developer.** In responsible charge of all investigation and remedial activities at a NYSDEC BCP site in New York City. Prepared the Remedial Investigation and Remedial Work Plan; coordinated with the owner, other contractors, and the NYSDEC; prepared for and conducted citizen participation activities; supervised all waste characterization, profile preparation, and waste management; developed the Final Engineering Report (FER) and Site Management Plan (SMP) for NYSDEC approval; and ensured that all remedial requirements were met such that the Certificate of Completion (COC) was issued. Continuing activities include coordination of the ongoing site management, communications with the NYSDEC and NYSDOH, and preparation of the annual Certification Report.
- **Program Manager, Major Oil Storage Facility (MOSF) closure, Glen Harbor, NY. Real estate developer.** Responsibilities included coordination of the work scope with the NYSDEC and NCDOH, development of work plans for tanks, UIC, and petroleum spill closure, budget and schedule development, staffing and oversight, reporting and certification, and closeout of all environmental issues such that residential redevelopment could proceed.
- **Program Manager, Delineation and Remedial Services, NYS Spill Site, St. James, NY.** Responsible for client and agency coordination, budget, schedule, staffing, remedial design and reporting for a petroleum release at a Service Station property with offsite impacts.
- **Program Manager, RCRA Closure Site, Freeport, NY.** Managed all aspects of RCRA Closure of a former printing facility, including scope, budget and schedule development, Closure Plan, NYSDEC interactions, QAPP, and specifications for contractor services.
- **Program Manager, Sub-slab depressurization system (SSDS), Brooklyn, NY.** Managed all aspects of SSDS implementation, including delineation sampling, remedial design, budget and schedule, construction services testing, reporting, and O&M manual development for a former dry cleaner site in an active shopping center.
- **Program Manager, SSDS, Bronx, NY.** Responsible for all aspects of SSDS implementation for a former dry cleaner site in a mixed-use building, including delineation sampling, SSDS design, construction contractor services, testing, reporting, and O&M manual development.
- **Project Manager, Soil Remediation, Hauppauge, NY. Metal plating facility**. Planned remedial project and managed contractor support for soil remediation. Project was completed and approved by SCDHS.
- **Remedial Design, AS/SVE projects**. Developed pilot test plans, evaluated pilot test results, and prepared conceptual designs for several air sparge/soil vapor extraction (AS/SVE) systems to treat petroleum and/or chlorinated solvent VOCs. These systems were subsequently installed and Ms. Davis provides ongoing review of system operations and remedial monitoring results.
- **Program Manager, Waste soil management, Brooklyn, NY. Travelers Insurance**. In responsible charge of several task orders for waste characterization of a 90,000-cy construction soil stockpile at a municipal sewer facility. Responsibilities included development and implementation of Sampling and Analysis Plans (SAP), coordination of staffing, review of lab data, preparation of Field Sampling Summary Reports (FSSR), coordination with disposal facilities, and preparation of waste profiles.
- **Program Manager, NYS Inactive Hazardous Waste Disposal (Superfund) site, Hicksville, NY. Property owner**. Responsibilities included developing and implementing pre-demolition investigations, developing and implementing remedial actions (source removal) in conjunction with retail redevelopment, conceptual design and installation of sub-slab depressurization systems (SSDSs),maintaining ongoing OM&M programs.
- **Project Manager, Remedial projects, Patchogue, NY. US Tape**. Designed and performed indoor underground storage tank abandonment program, leaching pool remediation plan, and managed contractor support for closure activities at a manufacturing facility. SCDHS provided oversight and approval.
- **Senior Hydrogeologist, Remedial design for a landfill, Richmond, CA**. Contributed to the design of a groundwater containment and remediation system for a former municipal landfill, including subsurface groundwater barrier walls and extraction wells.
- **Project Manager, Soil remediation, Carle Place, NY, Kimco**. Designed remedial plan and supervised soil remediation activities at an active construction site involving excavation and disposal of 5,000 tons of PCB-, metal-, and petroleum-contaminated soil. NYSDEC oversaw and approved the completed remediation.

- **Project Manager, Groundwater containment system, Richmond, CA**. Coordinated technical aspects of groundwater barrier wall construction, including routing, permitting, design, material selection, and field activities.
- **Project Manager, Multiple UIC investigations and closures, Suffolk and Nassau Counties, NY** Responsible for investigation and remediation of contaminated cesspool and stormwater drain pool in systems. Fully conversant with SCDHS SOP 9-95 and USEPA UIC regulations for investigation and cleanup of leaching pool systems, including Action Levels and Cleanup Standards, groundwater monitoring criteria, and remedial requirements.
- **Project Coordinator, UIC Closure, Hempstead, NY.** Coordinated and supervised all aspects of waste management for a UIC closure, including disposal facility review, waste sampling and classification, manifesting, project closeout, and taxation issues.

Hydrogeologic Evaluations

- **Project Manager, well permitting, East Hampton, NY. Private client**. Prepared Engineer's Report for Long Island Well Permit for a 230-gpm irrigation supply well. Responsible for evaluation of well interference, salt water upcoming, impacts from contaminants, and other factors affecting the proposed well. Performed well design (gravel pack size, screen size, etc.) for numerous groundwater wells on Long Island. Familiar with sieve analyses, well construction and development methods.
- **Senior Hydrogeologist, groundwater modeling, East Hampton,** NY. Utilized Visual Modflow to evaluate the impact of a contaminant plume on a proposed SCWA wellfield. Model development included evaluation of recharge, aquifer properties, subsurface stratigraphy, boundary conditions, plume source and concentration, and various wellfield locations and pumping rates.
- **Hydrogeologist, aquifer testing, Manhattan, NY. NYCT.** Participated in a multi-day, multi-well aquifer pumping test for NYCT. Responsible for operating and maintaining data logging equipment, coordinating manual water level measurements, and analyzing resulting drawdown data.
- **Hydrogeologist, aquifer evaluation, Brooklyn, NY. NYCT.** Evaluated subsurface geologic conditions for subway site utilizing existing boring logs, topographic, and historic map data.
- **Hydrogeologist, aquifer testing, Queens, NY. NYCT**. Performed slug tests on monitoring wells at an East Side Access site, and evaluated hydrologic properties using the HYDROLOGIC ISOAQX computer program.
- **Hydrogeologist, remedial wells, Deer Park, NY. USEPA.** Supervised drilling, installation and development of groundwater extraction, injection, and monitoring wells at a Superfund site. Interpreted aquifer and well performance from development data and recommended modification of drilling and development procedures.
- **Hydrogeologist, aquifer testing, NYC, NYCT**. Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer program AQTESOLV.
- **Hydrogeologist, aquifer evaluation, Mattituck Airport, Mattituck, NY**. Performed water level and water quality monitoring at a NYSDEC Superfund site. Constructed groundwater elevation contour maps and utilized chemical analytical data to predict contaminant plume migration.
- **Senior Hydrogeologist, DEIS services, Lazy Point, NY. Town of East Hampton**. Prepared a detailed evaluation of groundwater conditions and potential impacts for a water extension to Lazy Point for a draft Environmental Impact Statement (DEIS). Evaluated current and historic groundwater data and analytical models to determine potential impacts for both Lazy Point and the drinking water source area and prepared associated portions of the DEIS.

Landfills

- **Program Manager, Greenhouse gas monitoring program, Town of Islip, NY**. Responsibilities include scope and budget management, staffing, client and USEPA coordination, reporting review, and troubleshooting.
- **Project Manager, Landfill Closure Investigations, Town of East Hampton, NY**. Prepared Closure Investigation work plans, including Hydrogeologic investigations, methane investigations, surface leachate investigations, and vector investigations. Prepared final Closure Investigation Reports, approved by the NYSDEC.
- **Project Manager, Landfill monitoring networks, Town of East Hampton, NY.** Supervised installation of groundwater and methane monitoring wells at the landfills, including hollow-stern auger and mud-rotary well installations, split-spoon soil sampling and boring log preparation, oversight and interpretation of wireline electric logging, and completion of initial baseline monitoring events.
- **Hydrogeologist, Landfill groundwater monitoring, NJ, private client**. Performed groundwater sampling at a radio tower facility constructed on a landfill. Analyzed results and made recommendations.

- **Hydrogeologist, Landfill gas monitoring, Town of East Hampton, NY**. Conducted methane monitoring at two landfills over a multi-year period.
- **Program Manager, Landfill monitoring programs, Town of East Hampton, NY.** Supervises ongoing groundwater and methane monitoring programs, including field team coordination, communications with the Town, report scheduling, data review, and report review prior to distribution to the client and NYSDEC. Negotiated successfully with NYSDEC for reduced monitoring frequencies based on historic monitoring results.
- **Senior Hydrogeologist, Landfill plume modeling, Town of East Hampton, NY.** Conducted groundwater flow modeling to evaluate the nature and extent of a landfill plume and its fate. Findings were presented at public meetings and were used to determine the configuration of the landfill's groundwater monitoring network.
- **Hydrogeologist, Septage lagoon Superfund site, Town of East Hampton, NY.** Conducted sampling of former septage lagoons at a landfill. Evaluated the resulting data and prepared a delisting petition for this NYSDEC Superfund site.
- **Hydrogeologist, containment system modeling, Richmond, CA.** Used the FLOW PATH modeling program to predict groundwater flow directions and evaluate extraction well locations and pumping rates for a groundwater containment and remediation system at a former municipal landfill.
- **Program Manager, Landfill gas monitoring program, Town of Islip, NY**. Manages monthly methane monitoring for all landfills, including onsite and offsite monitoring wells, methane collection systems, and flare systems. Data is recorded electronically and downloaded to computer for formatting prior to expedited delivery to Town.
- **Program Manager, Landfill monitoring reporting program, Town of Smithtown, NY**. Supervised and reviewed production of quarterly and annual monitoring reports for all monitoring programs at the landfills for Town compliance with NYSDEC requirements, including tabulation and reporting of groundwater and methane monitoring data, solid waste and recycling collection data, yard waste composting operations, and landfill leachate collection and disposal data.
- **Program Manager, Landfill remediation, Town of Huntington, NY.** An historic landfill was removed from parkland under the NYSDEC's ERP. Responsibilities included work scope development, schedule and budget management, staffing, client and regulatory agency coordination and reporting, and report review and certification.

Environmental Data Analysis

Ms. Davis has participated in multiple sessions of environmental geochemistry training provided by environmental geochemists, including physical chemistry, thermodynamics, ionic interactions, complexation, biologic effects, and other basic principles. Training also included field sampling procedures and effects on chemical data, chemical analytical methods and equipment, and QA/QC procedures and interpretation. Attended periodic environmental chemistry training sessions hosted by environmental laboratories and participated in hands-on training in data and QA/QC evaluation.

- **Data Evaluation, multiple projects**. Reviewed and evaluated numerous soil, groundwater, product, indoor/ambient air, and soil vapor chemical analytical datasets, including evaluation of batch and site-specific QA/QC samples, laboratory narratives, comparison to regulatory agency criteria, historic data, and background data.
- **QAPPs, multiple projects**. Developed and implemented numerous QAPP, including QAPP design, sample delivery group (SDG) evaluations, sampling procedures and sequences, and QA/QC sample preparation/collection.
- **DUSR Preparation, multiple projects**. Prepared Data Usability Summary Reports (DUSRs) for numerous chemical analytical datasets for projects overseen by USEPA, NYSDEC and other regulatory agencies, including soil, groundwater, soil vapor, indoor air, and ambient air datasets.
- **Electronic Data Deliverables, multiple projects**. Implemented protocols and procedures for all FPM sites for which NYSDEC Electronic Data Deliverables (EDDs) are required. Responsibilities included staff training, data package QA/QC, client interactions, budget and schedule impact assessments, and dissemination of EDD training information.
- **Data Evaluation, multiple sites**. Performed forensic assessments of historic environmental chemical analytical data to resolve apparent discrepancies with modern data and other inconsistencies.
- **Leachate test assessments**. Assessed leachate test protocols and results to determine the most applicable methods to evaluate and develop soil cleanup objectives for non-regulated compounds.
- **Organic parameter breakdown assessments.** Interpreted numerous organic parameter datasets to evaluate breakdown sequences, likely original parameters, and rates of degradation.

- **Insitu remediation assessments, multiple sites**. Formulated numerous chemical treatment plans for insitu remediation, including assessment of contaminant concentrations and distribution, chemical processes and indicators, natural attenuation indicators, additional stociometric demands, and hydrogeologic factors.

Community Impacts

- **Community Monitoring Plans, multiple hazardous waste sites**. Developed Community Air Monitoring Plans (CAMP) for investigation and remediation projects, including monitoring procedures, action levels, and mitigation measures for odors, traffic, noise, dust, and/or vapors with the potential to affect surrounding communities. Each CAMP was reviewed and approved by the NYSDEC and NYSDOH and was implemented under agency oversight. Presented CAMP findings at numerous community meetings. Addressed community and agency questions and issues
- **Vector Assessments, multiple landfill sites, Long Island, NY**. Evaluated and implemented abatement for vectors (rodents, flies, and seagulls) in association with landfill closures, including inspection and reporting of vector populations, development of vector abatement plans, and assisting Town personnel with vector abatement.
- **Odor Abatement, NYSDEC BCP site, NYC, NY. Major real estate developer**. Developed and implemented an odor abatement plan for highly-odorous soil discovered during a remedial project. The site was surrounded by three public schools; complaints following discovery of odorous soil resulted in a job shutdown until the nuisance was abated. The odor abatement plan was prepared and implemented within 24 hours and involved immediate covering of the odorous soil followed by spot excavation and removal during non-school hours (night work) and the use of odor-controlling foam. The removal was completed within one week without further incident. The NYSDEC and NYSDOH approved the completed work, allowing the job to recommence.
- **Vector Assessment, transfer station, Town of East Hampton, NY**. Conducted inspections of intense fly infestations at a Town transfer station building to identify the locations and migration pathways of flies inside the building and to develop an abatement plan. This plan was successfully implemented and abated the nuisance flies.
- **Soil Vapor Intrusion Assessments, multiple sites**. Developed and implemented air and soil vapor investigations of residential and commercial properties, as approved by the NYSDEC/NYSDOH, to evaluate potential air quality impacts and determine if mitigation or monitoring was necessary. Monitoring/mitigation designs were developed for NYSDEC/NYSDOH approval.
- **CAMP Monitoring, multiple sites**. Conducted odor, dust, noise, and organic vapor monitoring in communities surrounding environmental sites. Data were collected and interpreted in accordance with NYSDEC and/or NYSDOH guidance and the results were submitted to these agencies together with recommendations for mitigation, if appropriate.
- **Project Manager, Environmental data assessment, Windmill Village, Town of East Hampton, NY.** Evaluated environmental data obtained during due diligence testing for a proposed housing development. Recommended additional sampling and confirmed the absence of impacts.

Expert Witness/Technical Services

- **Expert Witness/Technical Services, residential project, Glen Harbor, NY. Private client**. Provided expert witness and technical services regarding environmental conditions and remedial procedures for residential redevelopment of a former oil terminal, including preparing and obtaining NYSDEC and NCDOH approval of remedial work plans, preparing remedial cost estimates and schedules, and providing testimony at a public hearing before the Town Board from which a change of zone was requested. The proposed change of zone, although subject to considerable public opposition, was approved, allowing redevelopment and associated remediation of the property to move forward.
- **Expert Witness/Technical Services, petroleum spill site, Westbury, NY. Private client.** Provided expert witness and technical services to a petroleum company defending NYSDEC cost recovery claims for a petroleum spill. The spill site involved two very large petroleum releases at gasoline stations adjoining the defendant's property. Services provided included evaluating tank tests, groundwater, soil and soil vapor chemical analytical data, petroleum fingerprint data, remediation activities and costs. Prepared numerous detailed timelines of activities, large displays of site information and subsurface conditions, and cost allocation calculations. Conducted a detailed subsurface investigation to evaluate stratigraphic conditions.

- **Expert Technical Services, development site, Village of Larchmont, NY**. Assisted the Village in successfully opposing the construction of a very large superstore in the adjoining community, including evaluating previous environmental investigations, developing cost estimates and scopes of work for a full environmental site assessment, preparing scoping cost estimates for likely remediation scenarios, preparing technical documents in support of the Village's position, and making a presentation at a public hearing. The proposed project was subsequently withdrawn.
- **Expert Hydrogeologist Services, development site, Town of Carmel, NY**. Provided technical evaluation of a proposed water district. The proposed water district would impact existing residents due to limited available water supplies and likely impact on existing wells. The work included evaluation of aquifer pumping tests, determining impacts on nearby wells, assessment of likely increased water demand, preparation of supporting documents, and presentations at project hearings. The proposed project was subsequently conditionally approved by the NYSDEC with significant modifications to protect the water rights of existing residents.
- **Expert Witness Affidavits, multiple projects**. Prepared affidavits regarding environmental conditions at client properties in support of pending legal actions, including landfill issues, wetlands and navigatable waterway issues, and petroleum spills.
- **Expert Technical Services, road construction projects, Westchester County, NY. Croton Watershed Clean Water Coalition**. Provided technical services to the CWCWC to assess impacts from proposed road construction projects on the Kensico Reservoir and other New York City water supply system facilities. This work included evaluating stormwater pollutant loading calculations, assessing impacts to wetlands, promoting application of more accurate stormwater runoff calculation methods, assessing proposed stormwater management techniques, presenting at public meetings, preparing technical statements for submittal to regulatory agencies, and participating in the NYSDOT SWPPP Guidance committee.
- **Expert Technical Services, solvent plume site, Nassau County, NY. Private client**. Provided technical support to a property owner subject to a USEPA investigation as the potential source of a large chlorinated solvent plume, including evaluation of a plume-wide RI/FS, detailed review of property historic information, multiple meetings with the USEPA, client and counsel, and identification of additional potential source areas.

Health and Safety

- **Health and safety monitoring, multiple sites**. Implemented HASP monitoring at investigation and remediation sites during intrusive activities, including calibration and operation of photoionization detector (PID) and flame ionization detector (FID) for organic vapors and combustible gas indicator (CGI) for methane. Compared results to applicable action levels and implemented protective measures as necessary.
- **CAMP monitoring, multiple sites**. Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors. Recorded observations and compared to applicable action levels. Calibrated and operated noise meters, particulate monitors, and PID/FID.
- **Radiation screening, multiple sites**. Performed screening for radiation at select sites, including operating Geiger counter in different radiation modes and obtaining background readings.

Miscellaneous Projects

- **Phase I ESAs**. Performed numerous Phase I Site Assessments for residential and industrial sites in the metropolitan New York area.
- **Environmental Trainer.** Conducted aquifer pumping and soil vapor extraction test training. Instructed classes for site investigation methods, aquifer pumping test analysis, and risk assessment.
- **Project Management**. Performs a wide range of project management functions, including development and management of project budgets and schedules, coordination of field and office staffing, document preparation, review, editing, and interaction with clients, regulatory, legal, real estate, consultant, and compliance personnel.
- **Field Mapping Studies**. Organized, supervised, and conducted field mapping studies in Alaska.
- **Downhole Logging**. Directed petroleum well site geophysical logging operations and interpreted geophysical well logs.
- **Geophysical Data Interpretation**. Processed and interpreted seismic reflection data and constructed seismic velocity models.
- **Regulatory Evaluations**. Assisted and reviewed regulator's revision of proposed risk assessment-based UST cleanup guidelines. Reviewed proposed USEPA NPDES permits for remediation system effluent.
- **Geologic Mapping**. Constructed and interpreted structural and stratigraphic cross sections, and structure contour, fault surface, isochore, and isopach maps.

Regulatory Compliance

- **Site Audits**. Has conducted numerous site audits for regulatory compliance, particularly with respect to Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Responsibility and Liability Act (CERCLA), the Clean Water Act (CWA) and Clean Air Act (CAA).
- **RCRA compliance audits.** Conducted inspections and reporting regarding underground and aboveground storage tanks (USTs and ASTs), hazardous waste storage facilities, waste management and reporting requirements, and hazardous waste storage area closures in compliance with RCRA.
- **CERCLA Compliance**. Oversees and coordinates environmental site assessments (ESAs) for compliance with CERCLA requirements for a wide variety of facilities including operating and historic industrial sites manufacturing plants, abandoned facilities, and multi-property Brownfield sites.
- **Superfund Sites**. Managed multiple investigation and remedial projects at state and federal Superfund sites. Is very familiar with all phases of CERCLA projects including PA/SI, RI, FS, RD and RA. Has overseen activities at many Superfund sites from investigation through closure.
- **CWA Projects.** Conducted investigation and remediation of Class V underground injection control (UIC) Systems, investigation and acquisition of UIC discharge permits, and discharges into surface water bodies.
- **CAA Compliance Projects**. Conducted facility investigations for emissions sources, including paint booths, fume hoods, process discharges and other point sources. Sampled and evaluated remediation system discharges for CAA compliance, recommended emissions treatment when required.

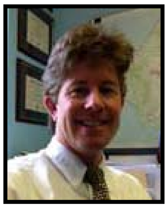
Representative DOD Projects

- **Barksdale RFI, Barksdale AFB, LA, $520K-**Lead Geologist for RFI for multiple Base-wide sites at Barksdale AFB, including landfills, petroleum spills, fire training areas, sewage treatment plans, and chemical spills. Managed field crews and sampling of soil, groundwater, and waste, performed sample and waste management, and coordinated with Base representatives. Prepared RFI Report, including analytical data reports, CS, and recommendations.
- **Barksdale LTM Program, Barksdale AFB, LA, $1.7M-**Lead Geologist for LTM Program for Base-wide Barksdale groundwater, including landfills, petroleum spills, fire training areas, sewage treatment plants, and chemical spills. Supervised field crews, managed samples and waste, prepared LTM Reports and made recommendations for LTM optimization.
- **Site Characterization, Plattsburgh AFB, NY, $720K-**Field Team Leader for SC investigation of fuel oil USTs and petroleum spills at Base housing, officers' quarters, and support building prior to transition of these areas to other uses. Working for AFCEE, developed and conducted an SC for over 200 USTs, including soil and groundwater sampling to identify petroleum contamination. Supervised several field crews in an accelerated sampling program to complete the SC prior to winter conditions. Prepared SC Report submitted to and approved by the NYSDEC.

Kevin F. Loyst, PE, PMP

FPM group

Engineering and Environmental Science



Mr. Loyst has over 24 years of experience in environmental and civil engineering involving areas such as regulation compliance/permitting, environmental impact analysis, solid waste management, site investigations, remediation, hydrology, design, and feasibility studies.

Functional Role	Title	Years of Experience
Environmental/Civil Engineer	Department Manager - Environmental Engineering	24

Personal Data

Education

M.S./1997/Environmental Engineering - Brooklyn Polytechnic University
B.S./1989/Interdisciplinary Engineering & Management Clarkson University
B.S./1988/Civil and Environmental Engineering-Clarkson University

Registration and Certifications

Licensed Professional Engineer in State of New York
Project Management Professional/2012
NYSDEC Stormwater Qualified Inspector Training ('09)
OSHA-approved 40-hr Health and Safety Training Course
OSHA-approved 8-hr Refresher Training Course
Asbestos Project Designer
OSHA 8-hr HAZWOPER Supervisor

Societies/Associations

Chi Epsilon - National Civil Engineering Honor Society
American Society of Civil Engineers

Employment History

1992 to Present FPM Group
1989-1992 Westinghouse Electric Corp.

Technical Seminars

Hazardous Waste/RCRA, Emergency Planning & Community Right-To-Know (EPCRA), Environmental Impact Analysis/NEPA/EIS/EA, Air/CAA, Stormwater, Soil Erosion & Sediment Control, Soil Remediation

Detailed Experience

Regulation Compliance/Permitting

- Client List: Governmental –US Postal Service, US Army Corps of Engineers, US Air Force, Veterans Administration, NYS Office of General Services (NYSOGS), NYS Parks, NYS Corrections, NYS Department of Transportation; Municipalities: Town of Islip, Private/Industrial-numerous.
- Environmental compliance audits covering the Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Emergency Planning and Community Right to Know Act (EPCRA), and local regulations involving areas such as hazardous material storage.
- Air permitting and associated reporting including Title V and 76-19-3 air permits; new source review; seasonal variance applications; BACT analysis; emission statements; EPA NESHAP surveys annual and semi-annual compliance certifications; Air Guide 1 and Screen 2 modeling; Air Facility Registrations; air quality assessments; emission reduction credits, and stack testing.
- Performed RCRA compliance activities involving waste stream characterizations; waste minimization; pollution prevention; manifest tracking; preparation of quarterly, annual, and bi-annual reports; and training.
- Prepared hazardous waste closure plans in accordance with 6NYCRR 373-3 and implemented closure of hazardous waste management areas in accordance with 6NYCRR 373-3.7(c).
- Expert witness testimony for hazardous waste disposal matters.
- Performed EPCRA/Sara Title III audits, reporting and investigated administrative complaints.
- Suffolk County Department of Health Services (SCDHS) Article 12 and Nassau County Department of Health (NCDOH) Article 11 Toxic and Hazardous Material Storage Facility Permits.
- Prepared, reviewed, and certified numerous Spill Prevention Control and Countermeasure Plans (SPCCPs) in accordance with 40 CFR Part 112.
- UST compliance inspections in accordance with NYSDEC - Petroleum Bulk Storage (PBS) and Chemical Bulk Storage (CBS) regulations; SCDHS Article 12; NCDOH Article 11; and National Fire Protection Agency (NFPA) codes.
- UST Closure activities for private industrial clients in LI NY.
- SCDHS Article 7 compliance reviews for restricted chemical storage.
- SCDPW sewer connection and agreements for a flavor manufacturer in Melville, NY.
- Prepared and acquired NYCDEP construction dewatering permits for a Corporate center Bldg in Queens, NY.

- NYS Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) permits for industrial and stormwater discharges.
- Baseline and semi-annual monitoring, BMR and SMR reporting, and sampling for wastewater discharges for compliance with NYCDEP and SCDPW requirements.
- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detector (PID) and flame-ionization detector (FID) for organic vapors and combustible gas indicator (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- Site Specific Health and Safety Plans (HASPs).
- Sound level studies to determine compliance with local noise ordinances.
- Prepared engineering report for a LI Well permit for irrigation needs in Cold Spring, Harbor, NY.

Environmental Impact Analysis

- Client List: Governmental-Federal Aviation Administration, US Army, US Army Corps of Engineers, US Department of Agriculture (USDA)
- Environmental Assessments for Federal Aviation Administration (FAA) navigational aid projects at numerous airports in the northeast region in accordance with the National Environmental Policy Act (NEPA) and FAA order 1050.1D Policies and Procedures for Considering Environmental Impacts. Airport projects included Instrument Landing Systems (ILS), Approach Lighting Systems, Remote Transmitters, Doppler Equipment, Air Traffic Control Towers and Air Route Traffic Control Centers. Airports and support areas included Teterboro, Richmond Intl, Baltimore Washington Intl, Syracuse-Hancock Intl, Newark Intl, Stewart, Philadelphia Intl, LaGuardia, and Leesburgh.
- Environmental assessments for the Army and Air Force Exchange Service (AAFES) at bases in Oahu, HI in accordance with NEPA, AR-200 Environmental Effects of Army Actions and DOD Directive 6050.1 Environmental Effects in the US of DOD Actions. Projects included capital improvement projects at Schofield Barracks, Helemano Military Reservation, Aliamanu Military Reservation, and Bellows Air Force Base.
- Coastal/Biological Monitoring Program components for the US Army Corps of Engineers (USACE), New York District Beach Erosion Control Projects including intertidal ichthyoplankton studies, intertidal offshore finfish studies, nearshore and offshore benthic sampling, water quality analysis, and creel census.
- Cultural resource projects for USACE and FAA in the northeast region including cultural resource surveys; cultural resource assessments; underwater archeology surveys; and recordations.
- Wetland Delineations and Biological Surveys (Grassland Birds) in support of FAA EAs at Teterboro Airport.
- Historic Preservation Plan for Plum Island NY and Historic Structure Report for Plum Island Light Station, Plum Island Animal Disease Center, NY.
- Environmental Scoping Document and presentation agenda for the District's Atlantic Coast of Long Island Fire Island Inlet to Montauk Point, NY Storm Damage Reduction Reformation Study.
- Preliminary Environmental Assessment (PEA) Reconnaissance Studies for USACE Flood Control and Shore Protection Projects in South River, Raritan River Basin, NJ and Cliffwood Beach, NJ.
- Environmental assessment and architectural and historical study for a USMA historical building/site at West Point, NY.
- Draft Supplemental Environmental Impact Statement (EIS) Limited Reevaluation Study for the Deepening of the Arthur Kill/Howland Hook Navigation Channel in NY/NJ.
- Long and Short Environmental Assessment Forms (EAFs) for construction and site development projects in LI, NY.

Solid Waste Management

- Client List: Governmental- USDA, NYSOGS,; Municipalities – Town of Riverhead
- Performed site reconnaissance, surveying, identification, and enumeration activities to develop plans, specifications, and environmental permitting for NYSOGS for processing waste tire materials into beneficial shred material to be used by the New York State Department of Transportation (NYSDOT) in road construction projects. Following the development of plans and specifications, FPM assisted NYSOGS with bidding phase services including contractor award and construction/ remediation/restoration/ oversight. In total approx. 4 million tires were recycled at four sites across New York State.
- Prepared Solid Waste Management Plan (SWMP) for Town of Riverhead.
- Estimated the remaining volume and footprint for the Youngs Avenue Landfill, Riverhead, NY which currently was in a full scale reclamation mode. Prepared and implemented a boring and excavation plan involving numerous deep borings and shallow test pits and used topographic surveys/landfill maps to estimate footprint boundaries and landfill volume.

Based on the results, approximately 2m cy were estimated to be remaining or approximately four to five times the estimated amount. Riverhead Town then put the reclamation project on hold while it evaluated other options including capping. Assisted the Town with capping estimates, feasibility study for reclaiming and capping a reduced landfill and engineering reviews for a full Part 360 landfill cap design.

- Removal, recycling, and disposal of over 10,000 cy of construction and demolition debris at various waste management areas on Plum Island, NY involving plans, specifications, cost estimating, and construction oversight for USDA.

Site Investigations

- Client List: Governmental-US Army Corps of Engineers, NYS Office of General Services, NYS Dept. of Corrections, Internal Revenue Service; Municipalities-Town of East Hampton; Private-numerous
- Developed and Implemented SAPs for USCG Station dredging projects in LI in accordance with NYSDEC Region 1 Marine Habitat Division protocols.
- Quarterly and semi-annual sampling/monitoring and reporting in accordance with NYSDEC Part 360 regulations for several landfills in Long Island.
- ASTM Phase I Environmental Assessments for property transactions in Suffolk, Nassau, and the five boroughs of New York.
- Sampling and Analysis Plans for Phase II investigations in Long Island and NYC.
- Groundwater, soil, and air sampling at numerous sites on LI and NYC for landfill closures, remedial investigations, and petroleum spills.
- Petroleum Spill Investigations (gasoline, diesel, No. 2 and 6 fuel oil) and associated closure work for tanks and other types of discharges in the metropolitan and upstate NY regions.
- Hazardous, Toxic, and Radioactive Waste (HTRW) Preliminary Assessments in NY and NJ.
- Polychlorinated Biphenyl (PCB) basewide (3500 acres) evaluation of electrical equipment at Griffiss Air Force Base.
- Anthrax sampling for several IRS mail sorting facilities.
- Performed Indoor Air Quality Study for an office building in Lake, Success, NY.

Remediation

- Client List: Governmental-US Air Force, NYSOGS; Private/Industrial-Star Corrugated Box Co., Shorewood Packaging, Metex Corp.
- Remediation of lead contaminated soil at four water tower sites at Barksdale Air Force Base, LA via excavation/disposal. Feasibility studies, work plans, Health and Safety Plans, Closure Reports, and No Further Response Action Planned Memorandums were prepared in conjunction with the remediation.
- In-site soil remediation of VOCs through vapor extraction and soil aeration techniques at LI and NJ contaminated sites.
- Removal of contaminated soil associated with petroleum spills and tank issues at LI, NYC, and upstate facilities.
- Identification, characterization, and removal of hazardous material and hazardous waste at industrial facilities and psychiatric centers in LI and NYC.

Hydrology

- Client List: Governmental-New York City Transit, Palisades Interstate Park Commission; NYS Office of General Services, NYC Department of Environmental Protection Municipalities-Town of Greenburgh, City of Rye; Private-numerous.
- Hydrologist consultant to New York City Transit (NYCT) involving numerous drainage studies and investigation of mitigation measures for stormwater and groundwater issues at bus depots, train yards, and subway stations.
- Hydrologist consultant to Town of Greenburgh involving the review of EIS documents, Stormwater Management Plans, Soil Erosion and Sediment Control Plans, drainage calculations, and modeling for proposed development projects on sites up to 300 acres.
- Hydrologist consultant to City of Rye involving site design review flooding analysis, and environmental impact assessment for a 10-acre Brownfield remediation/development project.
- Reviewed, prepared, and implemented numerous State Pollutant Discharge Elimination System (SPDES) General Permits for Stormwater Discharges from Construction Activities, Stormwater Pollution Prevention Plans (SWPPPs), and Soil Erosion and Sediment Control Plans for government, municipal, and private clients.
- Prepared SWPPP and performed bi-weekly stormwater inspections for a NYCDEP 11-acre 30 million gallon combined storage overflow facility in Brooklyn, NY.
- Performed dye-testing studies at several NYCT facilities in NYC, Grand Central Terminal, and La Salle Military Academy to identify discharges and remedies.
- Provided expert witness testimony on flooding cases involving residences and municipalities in Long Island and Westchester County.

- Runoff calculations, drainage alternatives, and best management practices for site development projects in Long Island, NY City, and Westchester County.
- Evaluation of porous pavement installations at several NYCT bus terminals.
- Evaluation of existing surface and subsurface disposal systems at NYCT facilities and Long Island commercial residential properties.
- Water resources impact analysis for Ramapo Energy Limited Partnership DEIS.
- Evaluation and rehabilitation of groundwater well dewatering pumping systems via downhole camera videotaping, riser swab cleaning high velocity jetting, pump test analysis, specific capacity testing, and pump redesign.
- Performed leak investigation studies for MTA Grand Central Station and South Ferry Station in Manhattan, NY.

Design

- PE certification for numerous types of reports including periodic review, feasibility study, engineering, and work plan reports for inactive hazardous waste disposal (NYS Superfund) and environmental restoration program (ERP) sites.
- As a Village of Lake Success environmental consultant, involved in a groundwater pump and treat system design review as well as review of the quarterly OU-1 and OU-2 remedial system operation, maintenance and monitoring reports.
- Client List: Governmental-FAA, NYCT, NYSOGS, USCG, NYS Parks, DASNY, USPS, USAF; Municipalities-Riverhead Central School District, East Hampton Airport, Town of Southold; Village of Lake Success, Private-Net Properties, TGI Fridays, Arkay Packaging, Kiss Nails, Orlandi, Grucci Fireworks.
- Hazardous material storage area design for industrial and governmental facilities in accordance with Suffolk County and Nassau County regulations and containment provisions (e.g., containment buildings, bermed epoxy coated storage areas).
- Conventional subsurface sewage disposal system and reduced pressure zone device designs and construction management services for numerous governmental, municipal, and private facilities.
- Soil erosion and sediment control plans and certifications for FAA airport navigational aid projects.
- Porous pavement designs for NYCT bus depots.
- Plans and specifications for asbestos abatement projects for elementary schools in LI.
- Asbestos abatement specification reviews for FAA facility rehabilitations.
- New track and field athletic complex at USCG Academy, New London, CT involving NCAA regulation 8-lane track with synthetic type running service, separate event throwing areas, NCAA regulation soccer field inside the track and all necessary elements for typical collegiate facilities (lighting, grandstand, scoreboard, etc.) Critical design aspects included managing infiltration and surface water runoff for discharge into Thames River and environmental permitting (SWPPP and coastal zone consistency determination).
- Performed study and conceptual design of an equalization tank for storing roof runoff to be used at two NYCT bus depots in Manhattan and Staten Island.
- Soil Vapor Intrusion (SVI and sub slab depressurization systems (SSDS) design work for office buildings and aircraft hangar/warehouses at former Griffiss AFB and 1.3 million sf of mixed use building in Nassau County.
- Sub-slab depressurization system (SSDS) design including a horizontal well and blower system for a DASNY and NYS Office of Alcoholism and Substance Abuse Services (OASAS) 4,000 sf facility on a 1-acre parcel on a municipal landfill in the City of Peekskill.
- Designed an 80’x45’x30’ deep recharge basin with infiltration wells for an 11-acre NYCT bus depot in Staten Island, NY.
- Provided water well treatment design services for a golf course irrigation system in Lake Success, NY.
- Designed a ground mounted 10kw Photovoltaic system for a Town of Islip Compost Facility.
- Performer condition assessments for the Latimer Reef and Little Gull Light Stations in Southold, NY.

Feasibility Studies

- Client List: Governmental-NYCT; Private-Chugai Boyecki, Net Properties.
- Study to prevent the potential migration of a PCB oil pool/contaminated aqueous plume and peat layer settlement due to dewatering activities at Sunnyside Yard, Queens.
- Investigated disposal alternatives for permanent subway dewatering activities in Brooklyn and Manhattan, NY
- Site Planning studies for property consolidations and expansion of shopping centers in LI. Site development potential was evaluated in accordance with local ordinances/codes.

Quality Control

- As Department Manager and Project Manager, performs QC on environmental compliance tasks including review of data, designs, and report of Task Leaders.

Ben T. Cancemi, CPG

FPM group

Engineering and Environmental Science

Mr. Cancemi has diversified experience in geology and hydrogeology. His professional experience includes groundwater and soil investigations, design and management of soil remediation projects, installation and maintenance of groundwater containment and remediation systems, aquifer testing and interpretation, geotechnical studies, evaluation of site compliance with environmental regulations and environmental permitting.

Functional Role	Title	Years of Experience
Hydrogeologist	Senior Hydrogeologist	17

Personal Data

Education
M.S./2001/Hydrogeology/SUNY Stony Brook
B.S./1995/Geology/SUNY Stony Brook

Registration and Certifications
Certified Professional Geologist – American Institute of Professional Geologists
OSHA 40-hour HAZWOPER and Current 8-hour Health and Safety Training and Current Annual Physical
OSHA 8-hour HAZWOPER Supervisor
OSHA 10-hour Construction Safety and Health
OSHA Permit-Required Confined Space Training
Long Island Geologists
National Groundwater Association
MTA NYC Transit Track Safety Certification

Employment History

2001-Present	FPM Group
1998-2001	Burns & McDonnell Engineering Company
1997-1998	Groundwater and Environmental Services
1996-1997	Advanced Cleanup Technologies

Detailed Experience

Hydrogeologic Evaluations

- Performed constant head hydraulic conductivity (packer) testing in boreholes located in fractured bedrock in lower Manhattan, NY to evaluate fracture connectivity with the nearby Hudson and East Rivers and determine hydraulic conductivity and related parameters such that water management procedures could be implemented for redevelopment of the New South Ferry Subway Station.
- Coordinated and performed a hydrogeologic investigation, including utility clearing, soil borings, rock coring, packer testing, aquifer pumping testing, data collection, and interpretation, to evaluate subsurface conditions and determine geologic parameters for a proposed subway extension of the NYC Transit No.7 Subway Line.
- Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer program AQTESOLV.

Site Investigations/Groundwater Monitoring

- Coordinated and performed an investigation at a vacant commercial property Far Rockaway, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts from an adjoining offsite source.
- Coordinated and performed soil and groundwater sampling and soil vapor studies at several aerospace manufacturing facilities on Long Island, NY. Assessments included an evaluation of past manufacturing and facility operations, storage and use of solvents, petroleum and manufacturing-derived wastes, and impacts to soils, soil vapor, and groundwater. Areas of concern were identified for further evaluation and/or corrective action.
- Coordinated and performed long term groundwater monitoring at two closed Town of East Hampton, NY municipal landfills, including the sampling a multi-depth monitoring well network, analysis and interpretation of analytical and hydrogeologic data, and regulatory reporting in accordance with NYSDEC Part 360 requirements.
- Coordinated and performed soil and groundwater investigations at various agricultural and horticultural properties to evaluate impacts of past herbicide and pesticide usage on the underlying soil and groundwater.

- Managed and performed routine methane monitoring at two Town of East Hampton landfills for compliance with NYSDEC requirements and to evaluate potential offsite migration to the surrounding community. Monitored indoor air with a flame ionization detector (FID) to evaluate impacts to buildings.
- Assisted with groundwater flow modeling for the Springs-Fireplace Road Landfill to evaluate the nature and extent of the landfill plume, its likely downgradient extent, and its fate.
- Coordinated and performed onsite and offsite monitoring at petroleum release sites on Long Island, the New York metropolitan area, and in Westchester County in accordance with NYSDEC Spill program requirements. The monitoring programs generally included sampling multi-depth monitoring well networks utilizing low-flow sampling techniques, analysis/interpretation of analytical and hydrogeologic data, and regulatory reporting.
- Coordinated a soil and groundwater sampling program to evaluate environmental conditions at Terminal A, Logan International Airport, East Boston, Massachusetts. The program included an assessment of the current fuel hydrant system and other locations of potential environmental concern using non-destructive air vacuum extraction-clearing techniques combined with direct-push sampling.
- Managed and performed a soil and groundwater investigation, a remedial soil excavation, and groundwater monitoring at a pyrotechnics manufacturing facility in Suffolk County, NY. The work was performed under the direction of the Suffolk County Department of Health Services (SCDHS) to investigate and remediate contamination from historic use of perchlorate-containing materials at the facility.
- Coordinated and performed soil and groundwater investigations at several automobile dealerships in Westchester County, NY to evaluate potential impacts from petroleum and chemical solvent storage and usage and onsite waste water disposal systems.

Phase I Environmental Site Assessments

- Performed numerous Phase I Environmental Site Assessments (ESAs) for commercial and industrial properties throughout the Northeastern United States for various clients including trucking companies, major airlines, telecommunication companies, chemical/ petroleum storage facilities, aerospace manufacturing facilities, machine shops, retail shopping centers, auto dealerships and service stations.

Remediation

- Managed remedial activities at a NY State Environmental Restoration Program (ERP) Site situated at a former hospital landfill in Northport, NY. Responsibilities contractor management and oversight, soil disposal management, confirmatory testing, data review, and preparation of a final engineering report to document remedial activities.
- Performed pilot testing, design, installation and procurement of numerous multi-depth soil vapor extraction (SVE) and air sparge (AS) remediation systems on Long Island and in the NYC metropolitan area to remediate chlorinated solvents and petroleum. Conducted remediation system operation and maintenance, and evaluations of system performance.
- Performed numerous storm water and sanitary leaching structure (UIC) cleanouts utilizing excavation and/or vacuum assisted equipment to remove contaminated sediments and liquids. Conducted waste characterization and profiling, pipe camera surveys, and structure locating utilizing water-soluble dyes and electronic locating equipment.
- Designed and oversaw the installation of a sub-slab depressurization system (SSDS) in the Bronx, NY to mitigate chlorinated solvent impacts. SSDS monitoring was conducted to ensure proper operation and emissions compliance of with NYSDEC air discharge guidelines.
- Operated and maintained remediation systems, including SVE, groundwater pump and treat, AS, dual-phase extraction, SSDS and free-phase petroleum recovery systems.

Health and Safety

- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Calibrated and operated photoionization detectors (PID) and flame-ionization detectors (FID) for organic vapors and combustible gas indicators (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors. Recorded observations and compared to applicable action levels. Calibrated and operated noise meters, particulate monitors, and PID/FID.
- Prepared community air monitoring and health and safety plans for several NYSDEC inactive hazardous waste, brownfield cleanup program, volunteer cleanup program, petroleum spill, and NYC e-designation program sites.
- Performed screening for radiation at select sites. Operated Geiger counter in different radiation modes and obtained and evaluated background readings.

Other

- Coordinated RCRA closure activities and performed confirmatory sampling at a former package manufacturing facility in Garden City, NY. Project duties included contractor procurement, rinsate and soil sampling, and regulatory agency reporting and coordination.
- Prepared a remedial design (RD) work plan for a former hospital landfill on Long Island. The RD work plan included a summary of past investigations, a materials management plan for the excavation and disposal of contaminated soils and debris, a post-excavation sampling plan, a site restoration plan, community air monitoring plan (CAMP), health and safety plan (HASP) and a quality assurance and quality control (QA/QC) plan.
- Managed and performed monthly soil gas sampling and quarterly indoor air quality sampling at an elementary school in southwestern Nassau County, NY. The monitoring and related reporting were performed to ensure that a gasoline groundwater plume migrating through the school property was not impacting the school occupants.
- Performed compliance inspections to assess issues of potential environmental concern at manufacturing, aviation, trucking, retail and not-for-profit facilities.
- Managed and performed methane monitoring at two eastern Long Island landfills to evaluate potential offsite impacts, indoor air quality, and methane generation and migration.
- Managed and coordinated a petroleum spill investigation to evaluate the nature and extent of a fuel oil release at an office building in White Plains, NY. The investigation included excavation and removal of a 5,000-gallon situated over 20 feet below grade, tightness testing of the UST and associated piping, a soil and groundwater investigation, free product recovery utilizing vacuum-enhanced fluid recovery techniques, and coordination and reporting to the NYSDEC and Westchester County Department of Health.

Richard J. Baldwin, C.P.G., P.G.

Apex Companies, LLC, Project Director

Mr. Baldwin is a hydrogeologist with more than twenty five years of experience in the fields of environmental consulting, hydrogeology and geology with particular experience in conducting and supervising environmental investigations and remedial actions at industrial, private, Federal and publicly-owned facilities and sites. Additionally, Mr. Baldwin has experience in evaluating potential environmental impacts of projects including golf courses, housing developments, senior housing, schools and retail shopping centers. For the last several years, Mr. Baldwin's work has focused primarily on sites and facilities located in the Long Island, New York City and Upstate New York areas. He has extensive knowledge and experience pertaining to Long Island's federally-designated sole-source drinking water aquifer system. Mr. Baldwin has extensive experience in evaluating complex laboratory data packages to ensure that they are precise, accurate, repeatable and comparable.

Education

- *Graduate Course Work, San Jose State University, 1985-1988*
- *BA Geology, San Francisco State University, 1982*

Professional Registrations

- *Professional Geologist, PG-000552-G, Commonwealth of Pennsylvania*
- *Certified Professional Geologist, CPG #9158, Amer.Inst. of Prof. Geologists*
- *OSHA Certification, 40-hour Health and Safety Training at Hazardous Waste Sites*
- *OSHA Certification, 8-hou Refresher Health and Safety Training at Hazardous Waste Sites*
- *OSHA Certification, 8-hour Management Training*
- *OSHA Certification, 8-hour Radiation Safety Training*

Continuing Education

- *Princeton Groundwater Hydrogeology and Pollution course*
- *Environmental Law and Regulations Course, U.C. Berkeley Extension*
- *NGWA MODFLOW and MODPATH Modeling Course*
- *NGWA Visual MODFLOW Modeling Course*

Typical Project Experience

Mr. Baldwin has extensive experience in the selection, design, installation and maintenance of a wide range of soil and groundwater remediation systems. Remedial systems have included both active and passive free-product recovery, traditional groundwater pump and treat, soil-vapor extraction, air sparging, bioventing, bioremediation, excavation impacted-soil management and natural attenuation.

Mr. Baldwin has been the principal-in-charge and directly responsible for hundreds of projects related to the wireless telecommunications field. He has overseen the conduct of hundreds of Phase I Environmental Site Assessments (ESAs) and limited Phase II ESAs. He has developed and implemented Soil and Groundwater Management Work Plan to address environmental impairment issues. He has been instrumental in developing appropriate mitigation measures with various project team members including site acquisition, legal counsel and headquarters level staff.

Mr. Baldwin has evaluated the potential environmental impacts of proposed projects including golf courses, housing developments, senior housing, schools, automobile repair facilities and retail shopping centers. The potential impacts included those to groundwater quality from herbicide/pesticide application, disposal of sanitary waste and school laboratory waste and the impacts to soil quality from handling and disposal of hazardous materials, leaking underground storage tanks, historic disposal of hazardous waste and pesticide/herbicide application. These impacts were evaluated through a variety of means including the collection and analysis of soil and groundwater samples, geo- and organic-chemistry modeling, groundwater fate and transport modeling and basic research of materials, their uses and their potential migration pathways. Mr. Baldwin has provided expert witness services for various venues ranging from NYSDEC spill and hazardous waste sites to potential noise impacts.

Mr. Baldwin has been involved in hundreds of subsurface soil and groundwater investigations ranging from Phase I & II Environmental Site Assessments (ESAs) to Remedial Investigations. Investigation and delineation techniques have included soil borings, groundwater monitoring well networks, hydropunch/GeoProbe sampling, surface and bore-hole geophysical methods, soil-gas surveys, aquifer testing, surface water and sediment sampling, waste characterization (soils piles, drums, USTs, ASTs, landfills, etc), test pits, and computer fate and transport modeling. Materials investigated have included petroleum products (heating/fuel oil and gasoline), PCB oils, coal tar, heavy metals, chlorinated solvents, explosives, pesticides, herbicides and buried medical waste.

Mr. Baldwin has been in the forefront of both evaluating and addressing shallow soils on Long Island which have been impacted by pesticides (particularly arsenic) and herbicides. This important issue is particularly of concern due to the re-development of agricultural lands for residential and educational end uses. Mr. Baldwin has work closely with the SCDHS and Town of Brookhaven to develop effective and easily implementable Soil Management Plans.

Mr. Baldwin works closely with the U.S. Environmental Protection Agency (EPA), New York State Department of Environmental Conservation (NYSDEC) Region 1, Region 2, Region 3 and Central Office, New York State Department of Health (NYSDOH), Suffolk County

Department of Health Services (SCDHS) and Nassau County Department of Health (NCDOH). Mr. Baldwin also works with local planning and review boards including the Town of East Hampton, Town of Southampton, Town of Babylon, Town of Brookhaven, Village of Patchogue, Village of Great Neck and New York City on issues ranging from groundwater quality to historic resources to noise impacts.

Mr. Baldwin's projects include supervising and performing Remedial Investigations/Feasibility Studies (RI/FSs), Interim Remedial Actions (IRMs), and implementation of selected remedies at NYSDEC Class 2 and 2a Inactive Hazardous Waste Disposal sites. Other work, conducted with the NYSDEC, includes evaluating and implementing large-scale groundwater and soil treatment systems to remediate MTBE.

Environmental Data Analyses

Mr. Baldwin has received multiple sessions of environmental geochemistry training provided by environmental geochemists, including physical chemistry, thermodynamics, ionic interactions, complexation, biologic effects, and other basic principles. Training also included field sampling procedures and effects on chemical data chemical analytical methods and equipment, and QA / QC procedures and interpretation.

Mr. Baldwin has reviewed and evaluated numerous soil, groundwater, product, indoor / ambient air and soil vapor chemical analytical datasets, including evaluation of batch and site-specific QA / QC samples, laboratory narratives, comparison to regulatory agency criteria, historic data, and background data.

Mr. Baldwin has been responsible for the development and implementation of numerous Quality Assurance Project Plans (QAPP), including QAPP design, sample delivery group (SDG) evaluations, sampling procedures and sequences, and QA / QC sample preparation/collection.

Mr. Baldwin has attended periodic environmental chemistry training sessions hosted by environmental laboratories and participated in hands-on training in data and QA / QC evaluation.

Mr. Baldwin has prepared Data Usability Summary Reports (DUSRs) for numerous chemical analytical datasets for projects overseen by the USEPA, NYSDEC and other regulatory agencies. Datasets evaluated have included soil, groundwater, soil vapor, indoor air and ambient air.

Mr. Baldwin has performed forensic assessments of historic environmental chemical analytical data to resolve apparent discrepancies with modern data and other dataset inconsistencies.
Mr. Baldwin has interpreted numerous organic parameter datasets to evaluate breakdown sequences, likely original parameters and rates of degradation.

Mr. Baldwin has formulated numerous chemical treatment plans for insitu remediation of environment contaminants, including assessment of contaminant concentrations and distribution, chemical processes and indicators, natural attenuation indicators, additional stociometric demands and hydrogeologic factors.

Selected Project Experience

Project Director for Major NY Metro Airport Project

Mr. Baldwin is part of a large project team which has been tasked by a coalition of major airlines to evaluate the efficacy of re-instituting the delivery of jet fuel via a water-borne barge delivery system. As part of the project, Mr. Baldwin evaluated the requirements for permits from various agencies including the NYSDEC, USACE, NYSDOS and New York City. Mr. Baldwin has also been providing ongoing evaluations of potential project design scenarios which required the evaluation of existing data sets (e.g., bathymetric surveys, former permits, etc.), conducting cost-benefit analyses assuming various dredge spoil disposal options, etc. This is a major, on-going project with long-term ramifications at all of the major New York Metropolitan airport facilities.

Project Director for Ferry Terminal Project, Glen Cove, NY

The City of Glen Cove Industrial Development Agency (IDA) has acquired Federal Stimulus Funding to develop a ferry terminal along their waterfront area in order to provide passenger ferry service from the North Shore of Long Island to the New York Metropolitan Area, and potentially to selected Connecticut locations. The selected site is part of the former Li Tungsten and Captains Cove Federal and New York State Department of Environmental Conservation (NYSDEC) Superfund Sites. Both sites were subject to remedial actions and were "closed" by both the United States Environmental Protection Agency (USEPA) and NYSDEC circa 2000. A wide range of contaminant types were potentially associated with both sites including solvents, petroleum, oils, heavy metals and radiation. The

NYSDEC and IDA required the preparation of a Soil Management Plan (SMP) as potentially-impacted soils and bottom sediments were potentially going to be encountered as part of the project. Mr. Baldwin successfully prepared and executed a Dredging / Excavation (D / E) Work Plan which detailed the requirements to field screen all excavated soils and dredge spoils with a radiation detector, photo-ionization detector (PID) and by visual / olfactory inspection. Based upon the results of the field screening, excavated soils and dredge spoils were to be addressed by one of the following: 1) cleared for use as on-site backfill materials; 2) disposed of as non-hazardous, regulated materials; or, 3) as hazardous waste. Mr. Baldwin was also responsible for designing and implementing a sediment sampling and analyses program to: 1) evaluate ambient creek bottom conditions with respect to a wide-range of contaminant types; and, 2) confirm the chemical conditions of the "new sea floor" prior of dredging and excavation activities. Mr. Baldwin also successfully applied for a received a NYSDEC Case-specific Beneficial Use Determination (BUD) finding as part of a cost-effective materials disposal option, as well as successfully applying for a NYSEC Long Island Well permit required as part of continuing project support activities.

Project Director for Marina Property, Glen Cove, NY

Mr. Baldwin was responsible for conducting turn-key environmental and engineering services for this active marina facility. The services included: 1) conducting a high-resolution bathymetric survey of the marina's basin in order to evaluate effective depths / vessel mooring and access restrictions; 2) successful acquisition of a United States Army Corps of Engineers (USACE) / NYSDEC Joint Application permit to repair a failed bulk head; 3) preparation of a full engineered design package to rebuild a failing dock-side water supply system; 4) conduct of a land-ward and marine geotechnical evaluation to determine the suitability of sub-surface materials for future construction projects; 5) collection and analyses of multiple bottom sediment samples to evaluate same for dredging issues; and, 6) participation in the marina design team. As part of this, Apex participated in multiple site meetings to discuss dock geometry, future infrastructure repair requirements, future regulatory permitting requirements, travel lift slip issues, potential future dredging protocols, etc.

Project Director for Marina Property, Patchogue, NY

Mr. Baldwin was responsible for providing turn-key environmental and engineering services for this active marina facility. These services included: 1) conduct of a high-resolution bathymetric survey of the marina's basin in order to evaluate effective depths / vessel mooring and access restrictions; 2) Preparation and submission of a USACE / NYSDEC Joint Application permit for maintenance dredging /marina infrastructure improvement; 3) preparation of a full engineered design package to rebuild a failing travel lift rail system; 4) contractor oversight; and, 5) Participation in the marina design team. As part of this, Apex has participated in multiple site meetings to discuss dock geometry, future infrastructure repair requirements, future regulatory permitting requirements, travel lift slip issues, potential future dredging protocols, etc.

Project Director for 10-Year Dredging and Beach Nourishment Program, Yarmouth, MA

Mr. Baldwin has been responsible for providing permit application preparation services for the Town of Yarmouth on Cape Cod. There are currently 37 Town-wide sites which are subject to multiple local, State and Federal permits for maintenance dredging and beach nourishment activities. The Town of Yarmouth's wetlands and waterways represent a highly-valuable, yet fragile ecosystem/resource. Current and historic dredging and beach nourishment practices on a site-by-site basis over the past decades have resulted in a confusing and difficult-to-manage situation with respect to this highly-complex system. Apex recommended that a 10-Year Town-wide Dredging and Beach Nourishment Program be approved and implemented wherein all 37 Yarmouth and Dennis dredge and beach nourishment sites are included/managed under one comprehensive management program. This will allow for effective use of Town resources, as well as ensuring that the dredge/nourishment sites are appropriately managed within appropriate regulatory guidelines. Again, the overall goal of this program is to allow the Town of Yarmouth to manage more effectively its waterways and beaches.

New York State Department of Environmental Conservation, Groundwater Evaluation and Treatment, Taconic Developmental Disabilities Services Office, Wassaic, NY

Worked on a public water supply site in New York conducting a full-scale groundwater investigation in the vicinity of the facility's supply wells which have been impacted by MTBE. Multiple well clusters were installed surrounding the high-capacity wells to evaluate subsurface conditions. One impacted well was converted to a remediation well to provide hydraulic capture of the MTBE plume prior to its impacting the remaining downgradient wells. A large-scale granulated-activated carbon (GAC) system was installed to treat the water extracted from the well. A 40,000-pound GAC unit was also installed in standby mode to address the facility's drinking water should the concentrations of MTBE ever warrant treatment. Several rounds of groundwater investigation were also conducted to confirm the MTBE source area as a nearby gasoline service station. Pilot testing was conducted and an on-site groundwater treatment system was being designed to provide source area remediation.

New York State Department of Environmental Conservation, Potable Water Treatment System, Village of Brewster, NY

Designed and constructed a supplemental water treatment system at a public water supply plant to address MTBE contamination in the system prior to its distribution. The treatment system consisted of a large air stripping tower, installed in line with an existing air stripper to remove the MTBE to non-detectable concentrations. Additionally, a source area investigation was being conducted to determine the potential source(s) of the MTBE contamination.

New York State Department of Environmental Conservation, Potable Water Treatment System, Sullivan Correctional Facility, Fallsburg, NY

Worked with the NYSDEC to evaluate, design and install a supplemental water treatment system to address MTBE present in a New York State Correctional Facility's drinking water. All four of the facility's wells were impacted. Several remedial options including utilizing GAC or air strippers were evaluated. The selected alternative was a 20,000-pound GAC system which was installed inline and in standby mode.

New York State Department of Environmental Conservation, Large Scale Investigation / Remediation Project, Lake Success, New York

Managed large-scale site activities at a major Long Island aerospace facility. Activities included operations of on-going IRMs (soil vapor extraction and groundwater extraction and treatment systems); citizen participation activities; design and implementation of on-site remedies (drywell removal and soil excavation, installation of fencing and an 1,800 gallon per minute groundwater extraction and treatment system); on- and off-site RIs; regulatory compliance activities; client interactions; multi-task, multi-contractor scheduling and management; and general project management. As part of the RI, prepared a large three-dimensional groundwater flow and particle model utilizing Visual MODFLOW and MODPATH. The model was then utilized to design an optimum groundwater treatment system.

Prepared a scoping plan and RI report for an Inactive Hazardous Waste Disposal site in New York under the NYSDEC Superfund program. The work involved evaluating the nature and extent of halogenated solvents in soil and groundwater both on and off of the site. Was responsible for overseeing all phases of the report preparation, including communications with the NYSDEC and for implementing the citizen participation program. Also involved in the preparation of the FS report and selection of the final remedy which included the use of an innovative groundwater treatment technology, in-well air stripping.

Project Director for Marina Property Assessment, Hampton Bays, NY

The owner of this active marina facility was served with a Notice of Violation (NOV) by the NYSDEC for various environmental issues, mostly related to on-site petroleum storage / delivery systems, as well as impacts potentially associated with marine-activity uses such as vessel bottom paint removal and application, use of preserved woods, vessel maintenance activities, housing-keeping issues, etc. Apex was responsible, with input from the NYSDEC, for developing and implementing a Site Investigation Program to investigate potential soil and groundwater impacts associated with the aforementioned on-site practices. Based upon the results of the investigation, Apex was able to conclude that the fuel distribution system was not leaking and that groundwater was not deleteriously impacted. Minor areas of impacted soil, likely from vessel bottom cleaning activities, were identified. Apex prepared and implemented a NYSDEC-approved Remedial Action Plan which included the following: 1) targeted removal of metals-impacted soils; 2) conversion of the existing gasoline / diesel underground storage tank (UST) / sub-grade distribution system to non-regulated biofuel use; 3) confirmation of facility use of aboveground storage tanks (ASTs) equipped with double-walled containment, 4) permitting a vessel-washing rinsate containment/treatment system; and, 5) use of asphaltic/concrete paving as engineering controls to minimize future potential user contact with remaining impacted soils.

Project Manager for Dredge Spoils Quality Investigation, New London, CT.

Mr. Baldwin was retained by a not-for-profit group concerned that the planned disposition of dredge spoils from the Thames River associated with the US Navy nuclear submarine base would negatively impact the lobster fishery of off Fishers Island in the Long Island Sound. Mr. Baldwin directed the field team which collected gravity cores from along the portion of the Thames River slated for dredging. Mr. Baldwin utilized the services of a nationally-recognized laboratory to analyze the bottom sediment samples for a wide-range of contaminants. Other than potentially elevated concentrations of dioxins, the bottom sediments proved to be relatively free of anthropogenic contaminants.

Project Director for Marina Property Assessment, Center Moriches, NY.

Mr. Baldwin was responsible for conducting an evaluation of environmental conditions at this active marina which was under consideration for re-development with residential housing. Issues evaluated included soil and groundwater conditions associated with on-site vessel repair, bottom paint application/removal, USTs and dredge spoils. Based upon the results of the investigation, impacted soils were excavated, transported to and disposed of at an appropriately-licensed facility. The dredge spoils were not impacted above regulatory criteria and required not special actions. Based upon the results of the investigation and remediation activities, the Suffolk County Department of Health Services approved the site for residential re-development.

Senior Project Manager for Former La Salle Military Academy, Oakdale, NY.

Mr. Baldwin was part of project team that conducted a feasibility study for the redevelopment of a portion of this former educational facility. A major component of the Feasibility Study was the evaluation of an on-site boat basin and associated building infrastructure (e.g., a team house) with respect to potential dredging requirements, permitting issues, bottom sediment conditions and marina design.

Former Hess Terminal, Patchogue River, Patchogue, NY.

Mr. Baldwin conducted a site investigation program at this former major fuel oil terminal site to evaluate the efficacy of same for residential re-development, which would have included a residence-use only marina. The site had been the subject of previous site remediation activities, and the NYSDEC had closed its spill file assuming that the site would only be utilized for commercial or industrial purposes. Soil, groundwater, soil vapor and outdoor ambient air samples were collected and analyzed as part of this evaluation. The results of the investigation indicated that additional soil remediation would have been required to make the property suitable for residential re-development. Additionally, the NYSDEC would have likely required the installation and operation of sub-slab depressurization systems for all on-site residential buildings prior to their approving the plans for the site.

Former Lumber Yard Facility, Arverne, NY.

Mr. Baldwin provided environmental consulting services associated with planned redevelopment of a six-acre parcel of land located on the Barbados Basin. The client proposed to construct and operate a boat marina with associated catering hall/shopping complex on this former lumber yard. An exhaustive site investigation including a geophysical survey, soil and groundwater testing and wetlands/permit evaluation was conducted in accordance with the New York City Environmental Quality Review (CEQR) regulations. Also conducted an exhaustive feasibility study regarding stormwater runoff /sanitary waste disposal options. The results of the investigation indicated that historic fill materials on the subject property contained actionable concentrations of lead. Prepared a site specific Soil Management Plan for submission to the New York City Department of Environmental Protection (NYCDEP). The NYCDEP agreed with the remedial option of capping the lead-impacted fill materials under two feet of clean fill to prevent future site users from coming into contact with same.

Dielectric Fluid Release, Village of Port Washington, NY.

During excavation activities being conducted for installing a team building at a Town-owned marina facility, Town of North Hempstead personnel encountered and broke a major, unmarked buried electric line. This rupture caused the immediate and catastrophic release of an estimated 30,000 gallons of dielectric fluid. Mr. Baldwin was retained by the Town of North Hempstead to oversee the cleanup of surface materials, as well as the evaluation of dielectric fluid floating on top of the water table. Adsorbent booms were placed and maintained along the associated wetlands and all identified areas of impacted soils were remediated. A series of monitoring wells were installed and evaluated to ensure the absence of dielectric fluid floating on the water table which would eventually discharge to the adjacent water way. Based upon the work conducted, the released dielectric fluid did not contain polychlorinated biphenyls (PCBs), and the NYSDEC was satisfied that the released had been adequately remediated.

Brownfield Re-development, Greenport, NY.

Mr. Baldwin managed one of the few active NYSDEC Brownfield sites on Long Island utilizing New York State Environmental Bond Act funding. The work included evaluating a large Village-owned undeveloped water-front property for the presence of undocumented USTs utilizing surface geophysical techniques, removing the USTs and associated impacted soils and preparing Site Investigation and Remedial Action reports. Responsible for all regulatory interactions, subcontractor management and Citizen Participation Plan implementation. The work was conducted concurrently with the redevelopment of the site for use as a public park including a water-front walk way, amphitheater and historic carousal.

Preliminary Site Assessment, Concord Naval Weapons Station, Concord, NY.

Mr. Baldwin was the Project Manager responsible for conducting an environmental investigation in the portion of the Concord Naval Weapons Station known as the Tidal Area. The investigation included collecting and analyzing soil, sediment and groundwater samples from adjacent to and within on-site wetlands. Mr. Baldwin also utilized an aerial magnetic survey to identify anomalies on a nearby off-shore island which could potentially represent buried railcars full of munitions which were reportedly buried after a major WW II explosion which killed hundreds of people. Mr. Baldwin conducted the field investigation which evaluated the nine magnetic anomalies which turned out to be ship wrecks, a crane, gas well heads, miscellaneous debris, etc. No anomalies representative of buried rail cars were observed. Mr. Baldwin was responsible for conducting a geotechnical evaluation of the materials making up the island, known as Bay Muds, which due to their very poor shear strength, could not have been excavated sufficiently to allow for burial of the rail cars. Therefore, it was Mr. Baldwin's belief that the reported burial of the rail cars full of munitions was incorrect.

Site Investigation Activities, Saint George Ferry Terminal, Staten Island NY

Mr. Baldwin was responsible for implementing a groundwater evaluation of the major ferry terminal site to evaluate the most efficacious means of removing two, large out-of-service No. 6 fuel oil USTs. The work including setting up and conducting a tidal influence study, major aquifer pumping test and conducting three-dimensional groundwater modeling. Evaluated and recommended the use of sheet piling surrounding the two USTs to isolate same from the surrounding aquifer materials and protect the adjacent buildings. The recommended remedial approach was implemented and the USTs were successfully removed with minimal de-watering required and the adjacent buildings were successfully protected.

Bottom Sediment Evaluation, Lake Success, NY

As part of a major environmental investigation of a nearby New York State Superfund site, Mr. Baldwin was responsible for the collection and analysis of bottom sediment samples from Lake Success and two on-site stormwater recharge basins. The results of the investigation indicated that the bottom sediment conditions in the on-site recharge basins and Lake Success were very similar leading to the conclusion that the observed impacts to the basins were likely non-site related and typical of stormwater runoff. Further, a bathymetric survey and at-depth water quality investigation was conducted for Lake Success.

Stormwater Retention Basin Bottom Sediment Evaluation, Lake Success, NY

As part of a major environmental investigation of a New York State Superfund site, Mr. Baldwin was responsible for evaluating the thickness of potentially impacted bottom sediments in two on-site stormwater recharge basins. The basins had reportedly been subject to discharge on impacted non-contact cooling waters and other site process waters. As a cost-saving measure, and in order to collected as much data as quickly as possible, Apex utilized an innovative investigation approach of transecting the surfaces of both frozen basins with a ground-penetrating radar (GPR) units. The GPR data was then cross-correlated with direct field measurements collected utilizing more standard techniques (e.g., gravity coring, penetration tests, etc.) to confirm the accuracy of the geophysical technique. The final data set was utilized to evaluate potential remedial techniques and costs.

Terrestrial/Martian Analogue Evaluation, Dry Valley Lakes, Antarctica

While at the United States Geological Survey (USGS), Mr. Baldwin participated on a project team which evaluated the physical and biota conditions of ice-covered lakes in the Dry Valley Region of Antarctica. Such conditions (e.g., ice-covered lakes in an otherwise frozen, low-precipitation region) were believed to be a strong terrestrial analogue for potential lakes which may have formed in the distant past in the Valles Marineris Canyon System on Mars. The biota of the Dry Valley ice-covered lakes was dominated by primitive stromatolites mounds, with much of the sedimentary section dominated by sand and gravel which had migrated through the ice cover. The overall purpose of the work was to assist NASA in evaluating future Mars landing sites with the highest potential for providing fossilized evidence for life on Mars.

Riverine Sediment Evaluation, Thames River, New London, CT

Mr. Baldwin was retained by a not-for-profit group concerned that the planned disposition of dredge spoils from the Thames River associated with the US Navy nuclear submarine base would negatively impact the lobster fishery of off Fishers Island in the Long Island Sound. Mr. Baldwin directed the field team which collected gravity cores from along the portion of the Thames River slated for dredging. Mr. Baldwin utilized the services of a nationally-recognized laboratory to analyze the bottom sediment samples for a wide-range of contaminants. Other than potentially elevated concentrations of dioxins.

Additional information upon request

APPENDIX C

HEALTH AND SAFETY PLAN INCLUDING COMMUNITY AIR MONITORING PLAN

APPENDIX C
HEALTH AND SAFETY PLAN

This worker Health and Safety Plan (HASP) has been prepared by FPM Group (FPM) for New York State Department of Environmental Conservation (NYSDEC) Brownfield Program Site #C224160, identified as the 248 Cinderella, LLC Site located at 248 Flatbush Avenue, Brooklyn, New York (Site). This HASP is part of the Remedial Investigation (RI)/Alternatives Analyses (AA) Work Plan and includes measures for the protection of worker health and safety during RI activities. A Community Air Monitoring Plan (CAMP) is also included to address potential issues that may affect the Site community during onsite activities.

C.1 Worker Health and Safety Plan

C.1.1 Introduction

This HASP has been written for compliance with "OSHA Hazardous Waste Operations Standards (29 CFR 1910.120)", the guidance documents, "Standard Operating Safety Guidelines (Office of Solid Waste and Emergency Response, 1992)" and the "Occupational Safety and Health Guidance Manual for Hazardous Waste Activities" (U.S. Department of Health and Human Services, 1985).

C.1.2 Scope and Applicability of the HASP

This HASP is designed to be applicable to locations where soil borings, soil vapor sampling, monitoring well installation and sampling, monitoring point installation, and indoor/outdoor air sampling are performed at the Site by all parties that either perform or witness the activities. This HASP may also be modified or amended to meet specific needs of the proposed work.

This HASP will detail the Site safety procedures, Site background, and safety monitoring. Contractors will be required to adopt this HASP in full or to follow an FPM-approved HASP. The Health and Safety Officer (HSO) will be present at the Site to inspect the implementation of the HASP; however, it is the sole responsibility of the contractor(s) to comply with the HASP.

The HASP has been formulated as a guide to complement professional judgment and experience. The appropriateness of the information presented should always be evaluated with respect to unforeseen Site conditions that may arise.

C.1.3 Site Work Zone and Visitors

The Site work zone (a.k.a. exclusion zone) during the performance of the boring, well installation, monitoring point installation, and sampling activities will be a 30-foot radius about the work location. This work zone may be extended if, in the judgment of the HSO, Site conditions warrant a larger work zone.

No visitors will be permitted within the work zone without the consent of the HSO. All visitors will be required to be familiar with, and comply with, the HASP. The HSO will deny access to those whose presence within the work zone is unnecessary or those who are deemed by the HSO to be in non-compliance with the HASP.

All Site workers, including the contractors, will be required to have 40-hour hazardous material training (eight-hour refresher courses annually), respirator fit test certification, and current medical surveillance as stated in 29 CFR 1910.120.

The HSO will also give an on-Site health and safety discussion to all Site personnel, including the contractors, prior to initiating the Site work. Workers not in attendance during the health and safety talk will be required to have the discussion with the HSO prior to entering the work zone.

Emergency telephone numbers and directions to the nearest hospital are shown in Table C.1.3.1 and will be kept at the Site in the possession of the HSO and will be available to all Site workers and visitors.

C.1.4 Key Personnel/Alternates

The project coordinator and Quality Assurance Officer (QAO) for this project is Stephanie Davis. The project manager will be Ben Cancemi. Mr. Cancemi will also act as the HSO. An assistant project manager and assistant health and safety officer may be designated for the field activities.

C.1.5 Site Background

Based on the Site history and previous analyses of samples, the known chemicals present at the Site include the volatile organic compound tetrachloroethylene (PCE). This chemical is present in soil, groundwater, soil vapor, and indoor air at the Site. Subsurface investigation activities will include the collection of soil, soil vapor, groundwater, and indoor/outdoor air samples.

C.1.6 Task/Operation Health and Safety Analysis

This section presents health and safety analyses for the boring, well installation, monitoring point installation, and sampling tasks. In general, FPM will employ one to two persons at the Site. No soil borings or other intrusive Site operations will be conducted by contractors without the presence of an FPM representative on Site. In the event that the HSO is not present on the Site, the Assistant HSO will implement the HASP. Levels of personal protection mentioned in this section are defined in Section C.1.9.

Soil Boring/Soil Vapor Implant/Well Installation and Intrusive Sampling Safety Analysis

Intrusive activities, including performing soil borings, placing soil vapor implants, and installing wells and monitoring points, will be performed by a direct-push contractor and FPM personnel. The soil borings, soil vapor points, wells, and monitoring points will be installed by a direct-push contractor advancing direct-push tooling into unconsolidated deposits consisting primarily of silty sand. The depth to groundwater is approximately 60 feet below the basement floor at the Site and will not be contacted during intrusive activities except during well installation and sampling. FPM personnel will be present to coordinate, oversee, and monitor intrusive activities.

TABLE C.1.3.1
EMERGENCY TELEPHONE NUMBERS AND
DIRECTIONS TO BROOKLYN HOSPITAL CENTER

Police 911
Ambulance 911
Poison Control Center 212-689-9014
The Brooklyn Hospital Center (Emergency Room) 718-250-8075

FPM Contact Personnel (631-737-6200)

Dr. Kevin J. Phillips, P.E. .... Cell # 631-374-6066
Stephanie Davis, Project Manager .... Cell # 516-381-3400
Ben Cancemi .... Cell # 516-383-7106

Directions to the Brooklyn Hospital Center

121 DeKalb Avenue
Brooklyn, NY 11201
Tel: 718-869-7000

Exit the Site and turn left on to Flatbush Avenue. Travel north on Flatbush Avenue for approximately 10 blocks to Myrtle Avenue. Make a right onto Myrtle Avenue and continue four blocks to Ashland Place. Turn right onto Ashland Place and continue to DeKalb Avenue. Hospital is on northwest corner of DeKalb Avenue and Ashland Place; follow the signs to the Emergency Room.

FPM

To minimize the potential for dust inhalation during intrusive activities, the HSO will assess wind and soil moisture conditions and, if it is deemed necessary by the HSO, the affected area will be wetted with potable water. If this measure is determined to be ineffective, the HSO may decide to upgrade personal protection to Level C respiratory protection to include respirators with dust cartridges. If extremely dusty conditions exist that cannot be successfully controlled by dust suppression with potable water, then the HSO may choose to postpone intrusive activities until such time as conditions improve.

Organic vapor concentrations will be monitored in the work zone by utilizing a Photovac MicroTIP PID or equivalent. The PID will be "zeroed" by exposing the PID to ambient (outdoor) air prior to intrusive activities and the upper range of calibration will be established by calibrating at 98 to 100 parts per million (ppm) of isobutylene. Background organic vapor concentrations will then be established in the work zone prior to intrusive activities and recorded in the HSO field book. Upon commencement of intrusive activities, PID readings will be obtained in the workers' breathing zone. Readings will be obtained following the initial advance into the ground and every five feet thereafter. At the discretion of the HSO, PID readings may be obtained more frequently. All readings and observations will be recorded in the HSO field book. PID air monitoring will be conducted by FPM personnel. Steady-state PID readings greater than five ppm in the worker's breathing zone will require upgrading to Level C personal protective equipment. Steady-state readings, for this purpose, will be defined as readings exceeding five ppm above background for a minimum of ten seconds at points approximately one foot above and then around the borehole opening. These points will define the worker's breathing zone. Level C personal protection will be implemented including full-face air-purifying respirators with dust and organic vapor cartridges (personal protective equipment will be described in greater detail in Section C.1.9). All FPM personnel and contractors must be properly trained and fit tested prior to donning respirators.

If PID readings exceed steady-state levels greater than 50 ppm above background or any conditions exist for which the HSO determines require Level B personal protective equipment, all work at the Site will cease immediately and all personnel will evacuate the work zone. Evacuation will occur in the upwind direction if discernible. Specific evacuation routes will be discussed prior to commencement of work at each location based on work location and wind direction and an evacuation meeting place will be determined. Level B conditions are not anticipated to be encountered; however, if level B conditions arise, no Site work will be performed by FPM or contractors and a complete evaluation of the operation will be performed and this HASP will be modified.

All personnel will be required to wear chemical-resistant nitrile gloves when the potential for dermal contact with the soil or groundwater is possible. This will include handling equipment retrieved from the borehole or wells. Dermal contact with soil or groundwater and equipment that has been in contact with soil or groundwater will be avoided.

<u>Other Safety Considerations</u>

- <u>Noise</u>

During operations that may generate potentially harmful levels of noise, the HSO will monitor noise levels with a Realistic™ hand-held sound level meter. Noise levels will be monitored in decibels (dBs) in the A-weighted, slow-response mode. Noise level readings which exceed the 29 CFR 1910.95 permissible noise exposure limits will require hearing protection (see Table C.1.6.1 for Permissible Noise Exposures).

TABLE C.1.6.1
PERMISSIBLE NOISE EXPOSURES*

Duration Per Day Hours	Sound Level dBA Slow Response
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
½	110

Notes:

When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C_1/T_1+C_2/T_2+.....C_n/T_n$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level.

Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

*Standards derived from 29 CFR 1910.95

Hearing protection will be available to all Site workers and will be required for exceedances of noise exposure limits. The hearing protection will consist of foam, expansion-fit earplugs (or other approved hearing protection) with a noise reduction rating of at least 29 dB. Hearing protection must alleviate worker exposure to noise to an eight-hour time-weighted average of 85 dB or below. In the event that the hearing protection is inadequate, work will cease until a higher level of hearing protection can be incorporated.

- Slip/Trip/Fall Preventative Measures

To reduce the potential for slipping, tripping, or falling, the work zone will be kept clear of unnecessary equipment. In addition, all Site workers will be required to wear work boots with adequate tread to reduce the potential for slipping (work boots must be leather or chemical-resistant and contain steel toes and steel shanks).

- Insects

Potential insect problems include, but are not limited to stinging insects such as bees, wasps, and hornets, and ticks. Prior to commencement of work, each work area will be surveyed for nests and hives to reduce the possibility of disturbing stinging insects. In addition, each Site worker will be asked to disclose any allergies related to insect stings or bites. The worker will be requested to keep his or her anti-allergy medicine on Site.

Tick species native to Long Island consist of the pinhead-sized deer tick and the much-larger dog tick. Ticks are unlikely to exist at the Site due to a paucity of suitable habitat. All Site workers will be advised to avoid walking through vegetated areas and will be advised to check for ticks on clothing periodically.

- Potential Electrical and Other Utility Hazards

Potential electric hazards consist mainly of overhead and underground power lines. Other utilities that may present hazards include telephone lines, gas lines, sewer lines, water lines, and other overhead or underground utilities. Prior to commencement of work at the Site, all locations will be inspected with respect to overhead lines. Intrusive work involving heavy equipment will not be performed when the horizontal distance between the equipment and overhead wires is less than 30 feet.

Underground potential utility hazards will be minimized by contacting the One-Call service to provide markouts of the utilities beneath adjoining public streets.

- Heat/Cold Stress

Heat stress may become a concern especially if protective clothing is donned that will decrease natural ventilation. To assist in reducing heat stress, an adequate supply of water or other liquids will be staged on the Site and personnel will be encouraged to rehydrate at least every two hours even if not thirsty. In addition, a shady rest area will be designated to provide shelter during sunny or warm days and Site workers will break for at least 10 minutes every two hours in the rest area, and, in very hot weather, workers wearing protective clothing may be rotated.

Indications of heat stress range from mild (fatigue, irritability, anxiety, decreased concentration, dexterity or movement) to fatal. Medical help will be obtained for serious conditions.

Heat-related problems are:

- Heat rash: caused by continuous exposure to heat and humid air and aggravated by chafing clothes. Decreases ability to tolerate heat.

- Heat cramps: caused by profuse perspiration with inadequate fluid intake and chemical replacement (especially salts). Signs: muscle spasm and pain in the extremities and abdomen.

- Heat exhaustion: caused by increased stress on various organs to meet increased demands to cool the body. Signs: shallow breathing; pale, cool, moist skin; profuse sweating; dizziness and lassitude.

- Heat stroke: the most severe form of heat stress. Can be fatal. Medical help must be obtained immediately. Body must be cooled immediately to prevent severe injury and/or death. Signs: red, hot, dry skin; no perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

Cold exposure is a concern if work is conducted during cold weather, marginally cold weather during precipitation periods, or moderate to high wind periods. To assist in reducing cold exposure the following measures will be taken when cold exposure concerns are present:

- All personnel will be required to wear adequate and appropriate clothing. This will include head gear to prevent the high percentage loss of heat that occurs in this area (thermal liners for hard hats if hard hats are required).

- A readily-available warm shelter will be identified near the work zone.

- Work and rest periods will be scheduled to account for the current temperature and wind velocity conditions.

- Work patterns and the physical condition of workers will be monitored and personnel will be rotated, as necessary.

- Indications of cold exposure include shivering, dizziness, numbness, confusion, weakness, impaired judgment, impaired vision, and drowsiness. Medical help will be obtained for serious conditions if they occur.

Cold exposure-related problems are:

- Frost bite: Ice crystal formation in body tissues. The restricted blood flow to the injured part results in local tissue destruction.

- Hypothermia: Severe exposure to cold temperature resulting in the body losing heat at a rate faster than the body can generate heat. The stages of hypothermia are shivering, apathy, loss of consciousness, decreasing pulse and breathing rate, and death.

The Buddy System

All activities in contaminated or potentially contaminated areas will be conducted by pairing off the Site workers in groups of two (or three if necessary). Each person (buddy) will be able to provide his or her partner with assistance, observe his or her partner for signs of chemical, cold, or heat exposure, periodically check the integrity of his or her partner's protective clothing, and notify the HSO or others if emergency help is needed. The buddy system will be instituted at the beginning of each work day. If new workers arrive on Site, a buddy will be chosen prior to the new worker entering the work zone.

Site Communications

Two sets of communication systems will be established at the Site: internal communication among personnel on-Site, and external communication between on-Site and off-Site personnel. Internal communication will be used to alert team members to emergencies, pass along safety information such as heat stress check, protective clothing check, etc, communicate changes in the work to be accomplished, and maintain Site control. Due to ambient noise, verbal communications may be difficult at times. The HSO will carry a whistle (and compressed air horn if respirators are donned) to signal Site workers. A single whistle blast will be the signal to immediately evacuate the work zone through the access control point. This signal will be discussed with all Site workers prior to commencement of work.

An external communication system between on-Site and off-Site personnel will be established to coordinate emergency response, report to the Project Manager, and maintain contact with essential off-Site personnel. A field telephone will be available at all times in the HSO's vehicle. In addition, a backup telephone will be identified prior to the commencement of Site operations and this location will be relayed to all Site workers.

General Safe Work Practices

Standing orders applicable during Site operations are as follows:

- No smoking, eating, drinking, or application of cosmetics in the work zone.
- No matches or lighters in the work zone.
- All Site workers will enter/exit work zone through the Site access point.
- Any signs of contamination, radioactivity, explosivity, or unusual conditions will require evacuating the Site immediately and reporting the information to the HSO.
- Loose-fitting clothing and loose long hair will be prohibited in the work zone during heavy equipment operations.
- A signal person will direct the backing of work vehicles.
- Equipment operators will be instructed to check equipment for abnormalities such as oozing liquids, frayed cables, unusual odors, etc.

C.1.7 Personnel Training Requirements

All FPM personnel and contractor personnel will receive adequate training prior to entering the Site. FPM and contractor personnel will, at a minimum, have completed OSHA-approved, 40-hour hazardous materials Site safety training and OSHA-approved, eight-hour safety refresher course within one year prior to commencing field work. In addition, each worker must have a minimum of three days field experience under the direct supervision of a trained, experienced supervisor.

Prior to Site field work, the HSO will conduct an in-house review of the project with respect to health and safety with all FPM personnel who will be involved with field work at the Site. The review will include discussions of signs and symptoms of chemical exposure and heat/cold stress that indicate potential medical emergencies. In addition, review of PPE will be conducted to include the proper use of air-purifying respirators.

C.1.8 Medical Surveillance Program

All workers at the Site must participate in a medical surveillance program in accordance with 29 CFR 1910.120. A medical examination and consultation must have been performed within the last twelve months to be eligible for field work.

The content of the examination and consultation will include a medical and work history with special emphasis on symptoms related to the handling of hazardous substances, health hazards, and fitness for duty including the ability to wear required personal protective equipment under conditions (i.e., temperature extremes) that may be expected at the work Site.

All medical examinations and procedures shall be performed by, or under the supervision of, a licensed physician. The Physician shall furnish a written opinion containing:

- The results of the medical examination and tests;

- The physician’s opinion as to whether the employee has any detected medical conditions which would place the worker at increased risk of material impairment of the employee's health from work in hazardous waste operations;

- The physician's recommended limitations upon the worker assigned to the work; and

- A statement that the worker has been informed by the physician of the results of the medical examination and any further examination or treatment.

- An accurate record of the medical surveillance will be retained. The record will consist of at least the following information:

- The name and social security number of the employee;

- The physician’s written opinions, recommended limitations, and results of examinations and tests; and

- Any worker medical complaints related to exposure to hazardous substances.

C.1.9 Personal Protective Equipment

General Considerations

The two basic objectives of the personal protective equipment (PPE) are to protect the wearer from safety and health hazards, and to prevent the wearer from incorrect use and/or malfunction of the PPE.

Potential Site hazards have been discussed previously in Section C.1.6. The duration of Site activities is estimated to be periods of several days. All work is expected to be performed during daylight hours and workdays, in general, are expected to be eight to ten hours in duration. Any work performed beyond daylight hours will require the permission of the HSO. This decision will be based on the adequacy of artificial illumination and the type and necessity of the task being performed.

Personal protection levels for the Site activities, based on past investigations at the Site, are anticipated to be Level D with the possibility of upgrading to Level C. The equipment included for each level of protection is provided as follows:

Level C Protection

Level C personnel protective equipment includes:

- Air-purifying respirator, full-face
- Chemical-resistant clothing includes: Tyvek™ (spunbonded olefin fibers) for particulate and limited splash protection or Saranex™ (plastic film-laminated Tyvek) for permeation resistance to solvents.
- Coveralls*, or
- Long cotton underwear*
- Gloves (outer), chemical-resistant

- Gloves (inner), chemical-resistant
- Boots (outer), leather or chemical-resistant, steel toe and shank
- Boot covers (outer), chemical-resistant (disposable)*
- Hard hat (face shield)*
- Escape mask*
- 2-way radio communications (inherently safe)*

(*) optional

Meeting all of these criteria permits use of Level C protection:

- Oxygen concentrations are not less than 19.5% by volume.
- Measured air concentrations of identified substances will be reduced by the respirator below the substance's threshold limit value (TLV).
- Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any body area left unprotected by chemical-resistant clothing.
- Job functions do not require self-contained breathing apparatus.
- Direct readings are below 50 ppm on the PID.

Level D Protection

Personnel protective equipment:

- Coveralls
- Gloves*
- Boots/shoes, leather or chemical-resistant, steel toe and shank
- Safety glasses or chemical splash goggles*
- Hard hat (face shield*)
- Escape mask*

(*) optional

Meeting any of these criteria allows use of Level D protection:

- No contaminant levels above 5 ppm organic vapors or dusty conditions are present.
- Work functions preclude splashes, immersion, or the reasonable potential for unexpected inhalation of any chemicals above the TLV.

Additional Considerations for Selecting Levels of Protection

Another factor that will be considered in selecting the appropriate level of protection is heat and physical stress. The use of protective clothing and respirators increases physical stress, in particular, heat stress on the wearer. Chemical protective clothing greatly reduces natural ventilation and diminishes the body's ability to regulate its temperature. Even in moderate ambient temperatures, the diminished capacity of the body to dissipate heat can result in one or more heat-related problems.

All chemical protective garments can be a contributing factor to heat stress. Greater susceptibility to heat stress occurs when protective clothing requires the use of a tightly-fitted hood against the respirator face piece, or when gloves or boots are taped to the suit. As more body area is covered, less cooling takes place, increasing the probability of heat stress.

Wearing protective equipment also increases the risk of accidents. It is heavy, cumbersome, decreases dexterity, agility, interferes with vision, and is fatiguing to wear. These factors all increase physical stress and the potential for accidents. In particular, the necessity of selecting a level of protection will be balanced against the increased probability of heat stress and accidents.

Donning and Doffing Ensembles

- Donning an Ensemble

A routine will be established and practiced periodically for donning a Level C ensemble. Assistance may be provided for donning and doffing since these operations are difficult to perform alone. Table C.1.9.1 lists sample procedures for donning a Level C ensemble. These procedures should be modified depending on the particular type of suit and/or when extra gloves and/or boots are used.

- Doffing an Ensemble

Exact procedures for removing Level C ensembles must be established and followed to prevent contaminant migration from the work area and transfer of contaminants to the wearer's body, the doffing assistant, and others. Doffing procedures are provided in Table C.1.9.2. These procedures should be performed only after decontamination of the suited worker. They require a suitably attired assistant. Throughout the procedures, both worker and assistant should avoid any direct contact with the outside surface of the suit.

Respirator Fit Testing

The fit or integrity of the facepiece-to-face seal of a respirator affects its performance. Most facepieces fit only a certain percentage of the population; thus each facepiece must be tested on the potential wearer in order to ensure a tight seal. Facial features such as scars, hollow temples, very prominent cheekbones, deep skin creases, dentures or missing teeth, and the chewing of gum and tobacco may interfere with the respirator-to-face seal. A respirator shall not be worn when such conditions prevent a good seal. The worker's diligence in observing these factors shall be evaluated by periodic checks. Fit testing will comply with 29 CFR 1910.1025 regulations.

TABLE C.1.9.1
SAMPLE LEVEL C DONNING PROCEDURES

1. Inspect the clothing and respiratory equipment before donning (see Inspection in subsection C.1.7).

2. Adjust hard hat or headpiece if worn, to fit user's head.

3. Standing or sitting, step into the legs of the suit; ensure proper placement of the feet within the suit; then gather the suit around the waist.

4. Put on chemical-resistant safety boots over the feet of the suit. Tape the leg cuff over the tops of the boots.

5. Don the respirator and adjust it to be secure, but comfortable.

6. Perform negative and positive respirator facepiece seal test procedures.

   – To conduct a negative pressure test, close the inlet part with the palm of the hand or squeeze the breathing tube so it does not pass air, and gently inhale for about 10 seconds. Any inward rushing of air indicates a poor fit. Note that a leaking facepiece may be drawn tightly to the face to form a good seal, giving a false indication of adequate fit.

   – To conduct a positive pressure test, gently exhale while covering the exhalation valve to ensure that a positive pressure can be built up. Failure to build a positive pressure indicates a poor fit.

7. Depending on type of suit:

   – Put on inner gloves (surgical gloves).

   – Additional overgloves, worn over attached suit gloves, may be donned later.

8. Put on hard hat

9. Have assistant observe the wearer for a period of time to ensure that the wearer is comfortable, psychologically stable, and that the equipment is functioning properly.

TABLE C.1.9.2
DOFFING PROCEDURES

1. Remove any extraneous or disposable clothing, boot covers, outer gloves, and tape.

2. Remove respirator by loosening straps and pulling straps over the top of the head and move mask away from head. Do not pull mask over the top of the head.

3. Remove arms, one at a time, from suit, avoiding any contact between the outside surface of the suit and wearer's body and lay the suit out flat behind the wearer. Leave internal gloves on, if any.

4. Sitting, if possible, remove both legs from the suit.

5. After suit is removed, remove internal gloves by rolling them off the hand, inside out.

<u>Inspection</u>

The PPE inspection program will entail five different inspections:

- Inspection and operational testing of equipment received from the factory or distributor;

- Inspection of equipment as it is issued to workers;

- Inspection after use;

- Periodic inspection of stored equipment; and

- Periodic inspection when a question arises concerning the appropriateness of the selected equipment, or when problems with similar equipment arise.

The inspection checklist is provided in Table C.1.9.3. Records will be kept of all inspection procedures. Individual identification numbers will be assigned to all reusable pieces of equipment and records should be maintained by that number. At a minimum, each inspection should record the ID number, date, inspector, and any unusual conditions or findings. Periodic review of these records may indicate an item or type of item with excessive maintenance costs or a particularly high level of down-time.

<u>Storage</u>

Clothing and respirators will be stored properly to prevent damage or malfunction due to exposure to dust, moisture, sunlight, damaging chemicals, extreme temperatures, and impact. Storage procedures are as follows:

- Clothing: Potentially-contaminated clothing will be stored in a well-ventilated area separate from street clothing, with good air flow around each item, if possible. Different types and materials of clothing and gloves will be stored separately to prevent issuing the wrong materials by mistake, and protective clothing will be folded or hung in accordance with manufacturer's recommendations.

TABLE C.1.9.3
PPE INSPECTION CHECKLIST

CLOTHING

Before use:

- Determine that the clothing material is correct for the specified task at hand.
- Visually inspect for imperfect seams, non-uniform coatings, tears, and/or malfunctioning closures.
- Hold up to light and check for pinholes.
- Flex product and observe for cracks or other signs of deterioration.
- If the product has been used previously, inspect inside and out for signs of chemical attack, including discoloration, swelling, and/or stiffness.

During the work task, periodically inspect for:

- Evidence of chemical attack such as discoloration, swelling, stiffening, and softening. Keep in mind, however, that chemical permeation can occur without any visible effects.
- Indication of physical damage, including closure failure, tears, punctures, and/or seam discontinuities.

GLOVES

Before use:

- Pressurize glove to check for pinholes. Either blow into glove, then roll gauntlet toward fingers, or inflate glove and hold under water. In either case, no air should escape.

AIR-PURIFYING RESPIRATORS

- Inspect air-purifying respirators before each use to be sure they have been adequately cleaned.
- Check material conditions for signs of pliability, deterioration, and/or distortion.
- Examine cartridges to ensure that they are the proper type for the intended use, the expiration date has not been passed, and they have not been opened or used previously.
- Check faceshields and lenses for cracks, crazing, and/or fogginess.
- Air-purifying respirators will be stored individually in resealable plastic bags.

- Respirators: After each use air-purifying respirators will be dismantled, washed, and placed in sealed plastic bags.

PPE Maintenance

Specialized PPE maintenance will be performed only by the factory or an authorized repair person. Routine maintenance, such as cleaning, will be performed by the personnel to whom the equipment is assigned. Respirators will be cleaned at the end of each day with alcohol pads or, preferably, by washing with warm soapy water.

Decontamination Methods

All personnel, clothing, equipment, and samples leaving the work zone area of the Site must be decontaminated to remove any harmful chemicals that may have adhered to them. Decontamination methods either (1) physically remove contaminants (2) inactivate contaminants by chemical detoxification or disinfection/sterilization, or (3) remove contaminants by a combination of both physical and chemical means. In many cases, gross contamination can be removed by physical means involving dislodging/displacement, rinsing, wiping off, and evaporation. Contaminants that can be removed by physical means include dust, vapors, and volatile liquids. All reusable equipment will be decontaminated by rinsing in a bath of detergent and water (respirators, gloves to be reused). Monitoring equipment will be decontaminated by wiping with paper towels and water. All used PPE to be discarded will be disposed offsite as solid waste.

The effectiveness of the decontamination will be evaluated near the beginning of Site activities and will be modified if determined to be ineffective. Visual observation will be used for this purpose. The HSO will inspect decontaminated materials for discoloration, stains, corrosive effects, visible dirt, or other signs of possible residual contamination.

C.2 Community Air Monitoring Plan

This Community Air Monitoring Plan (CAMP) will be implemented at the Site by FPM during the intrusive investigation activities, including soil borings, well installation, monitoring point installation, and sampling. Due to the nature of the contaminant at the Site, there is a potential for organic vapor emissions as these activities occur. In addition, there is the potential for dust to be associated with intrusive activities. To address these concerns, organic vapor monitoring and dust monitoring will be performed.

Any CAMP monitoring results that exceed the action levels described below will be reported (or notice provided by another arrangement acceptable to the NYSDEC) when identified if a NYSDEC representative is present at the Site or within two hours by phone call or email to the NYSDEC Project manager when no NYSDEC representative is onsite. Exceedances of the CAMP action levels will also be summarized in the monthly progress reports, including the duration of the exceedance(s) and any response actions taken.

C.2.1 Organic Vapor Monitoring

Under the CAMP, organic vapor concentrations will be monitored at the boundaries of the work zone. It will be the responsibility of the HSO to implement the plan and to ensure that proper action is taken in the event that any of the established action levels are exceeded.

To monitor organic vapors, a PID capable of calculating 15-minute running average concentrations will be used and maintained in good operating condition. Calibration of the PID will be performed according to manufacturer's instructions. Background levels of organic vapors will be measured at the work zone boundary prior to beginning work and upwind of the work area periodically using a PID. Monitoring may be performed more frequently at the discretion of the HSO. Organic vapors will be monitored continuously at the downwind perimeter of the work area during ground intrusive activities.

PID readings will be recorded in the field logbook for both background and work area perimeter. Logbook recordings will include the time, location, and PID readings observed. Downwind perimeter levels will be recorded in the log whenever the level reaches 5 ppm above the background along with the action(s) taken to mitigate the level. If the level of organic vapors exceeds 5 ppm above the background at the downwind perimeter of the work area, work activities will be halted and monitoring continued. The vapor emission response plan will then be implemented.

C.2.1.1 Vapor Emission Response Plan

The vapor emission response plan includes the following trigger levels and responses:

- Greater than 5 ppm at perimeter:

  In the event the level of organic vapors exceeds 5 ppm above the background at the downwind perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level then decreases to below 5 ppm above background, work activities can resume but organic vapor readings will be obtained more frequently as directed by the HSO.

- 5 ppm to 25 ppm at perimeter and less than 5 ppm at the work zone boundary:

  If the level of organic vapors is greater than 5 ppm but less than 25 ppm over background at the downwind perimeter of the work area, activities will be halted, the source of the vapors will be identified and corrective actions will be taken. Monitoring will be continued and activities will resume if the organic vapor concentration at half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background. More frequent intervals of monitoring will be performed as directed by the HSO.

- Above 25 ppm at perimeter:

  If the level of organic vapors is above 25 ppm at the perimeter of the work area, activities will be shut down. Should such a shutdown be necessary, downwind air monitoring will continue as directed by the HSO to confirm that organic vapor concentrations decrease. Actions will be taken to abate the source of vapor emissions and activities will not resume until the source is controlled.

C.2.1.2 Major Vapor Emission Response Plan

The Major Vapor Emission Response Plan shall automatically be placed into effect if:

- Efforts to abate the emission source are unsuccessful and levels above 5 ppm persist for more than 30 minutes in the 20-foot zone; or

- The vapor levels are greater than 10 ppm above background in the 20-foot zone.

Upon activation of the Major Vapor Emission Response Plan, the following activities will be undertaken:

- All emergency response contacts as listed in the HASP will be notified;

- 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 will be halted or modified as directed by the HSO; or

- If air monitoring readings remain above action levels, work will be halted and further measures taken to reduce organic vapors.

If a Major Vapor Emission Response Plan is implemented, the NYSDEC and NYSODH will be contacted within 24 hours.

C.2.2 Dust Monitoring

Dust (particulate) monitoring will be performed during intrusive activities with the potential to create dust by using a Miniram personal monitor calibrated according to the manufacturer's instructions. The Miniram will be capable of calculating 15-minute running average concentrations and operated continuously at the downwind perimeter of the work zone during ground intrusive activities. To ensure the validity of the fugitive dust measurements, appropriate QA/QC measures will be employed, including periodic instrument calibration, operator training, daily instrument performance (span) checks, and record-keeping on daily log sheets. If measurable dust levels are noted, then readings will also be obtained upwind of the work zone. If the downwind particulate level exceeds the upwind level by more than 100 micrograms per cubic meter (ug/m^3), then dust suppression techniques will be employed or work will be halted or controlled such that dust levels are reduced at the downwind perimeter to within 150 ug/m^3 of the upwind level.

If dust is generated during boring or well installation activities, then dust suppression will be performed, as discussed in Section C.1.6 of this HASP. Corrective measures may include increasing the level of PPE for onsite personnel and implementing additional dust suppression techniques. Should the action level of 150 $\mu g/m^3$ continue to be exceeded, work will stop and the NYSDEC will be notified as described in Section C.2 above. The notification will include a description of the control measures implemented to prevent further exceedances.

Reasonable fugitive dust suppression techniques will be employed during all intrusive Site activities that may generate fugitive dust. Particulate (fugitive dust) monitoring will be employed during the handling of contaminated soil or when onsite activities may generate fugitive dust from exposed contaminated soil.

Fugitive dust from contaminated soil that migrates offsite has the potential for transporting contaminants offsite. Although there may be situations when the monitoring equipment does not measure dust at or above the action level, visual observation may indicate that dust is leaving the Site. If dust is observed leaving the working area, additional dust suppression techniques will be employed.

The following techniques have been shown to be effective for controlling the generation and migration of dust during intrusive investigation activities and will be used as needed during investigation activities at the Site:

- Wetting equipment and exposed soil;

- Restricting vehicle speeds to 10 mph;
- Covering areas of exposed soil after investigation activity ceases; and
- Reducing the size and/or number of areas of exposed soil.

When techniques involving water application are used, care will be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will be considered to prevent overly wet conditions, conserve water, and provide an effective means of suppressing fugitive dust.

Evaluation of weather conditions is also necessary for proper fugitive dust control. When extreme wind conditions may make dust control ineffective, investigation actions may be suspended until wind speeds are reduced.

C.2.3 Noise Monitoring

Due to the use of heavy equipment, there is a potential for noise to impact the surrounding community. Work will be performed only during normal working hours when ambient noise levels are elevated due to ongoing activities in the surrounding community, which is primarily urban and commercial. In addition, much of the work will be performed indoors in a vacant building. Therefore, the potential for noise impacts on the surrounding community is low.

However, if pedestrians are present in the Site vicinity, it is possible for noise impacts to occur. To address these concerns and other safety concerns, pedestrians will be barred from entering the work zone. In addition, the HSO will periodically monitor noise levels at the work zone boundary and the closest property boundary with a Realistic™ hand-held sound level meter. Noise levels will be monitored in dBs in the A-weighted, slow-response mode. If noise level readings exceed an eight-hour time-weighted average of 85 dB at the work zone boundary or at the closest property boundary, the HSO will take appropriate measures to reduce noise exposure beyond these boundaries. These measures may include extension of the work zone boundary, issuing appropriate hearing protection devices as discussed in Section C.1.6 of this work plan, or other measures, as appropriate. In the event that the noise exposure measures are inadequate, work will cease until noise levels can be reduced to below 85 dB at the work zone boundary and/or at the closest property boundary.