124-22 QUEENS BOULEVARD

KEW GARDENS, NEW YORK

NYSDEC BCP ID: C241177

BLOCK: 3359, LOT: 21

REMEDIAL ACTION WORK PLAN

SUBMITTED TO:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

ON BEHALF OF:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030

PREPARED BY:

P.W[illegible]r Consulting, Inc.
6[illegible]venue, Suite 7
B[illegible] York 11716
Ph[illegible]89-6353
Fax: 631-589-8705

Kris Almskog, PG, Principal krisa@pwgrosser.com
John Eichler, PG, Project Manager johne@pwgrosser.com

PWGC Project Number: ACT1701

JUNE 2020

REMEDIAL ACTION WORK PLAN

124-22 QUEENS BLVD

KEW GARDENS, NEW YORK

TABLE OF CONTENTS PAGE

FIGURES

TABLES

APPENDICES

CLIENT DRIVEN SOLUTIONS PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

ACRONYMS

Acronym	Definition
AAL	Alpha Analytical Services
ACT	Advanced Cleanup Technologies, Inc.
AGV	Air Guidance Value
AHA	Activity Hazard Analysis
AOC	Area of Concern
AS	Air Sparge
AS/SVE	Air Sparging/Soil Vapor Extraction
ASP	Analytical Services Protocol
AST	Aboveground Storage Tank
AWQS	Ambient Water Quality Standard
BCA	Brownfield Cleanup Agreement
BOA	Brownfield Opportunity Area
bgs	below grade surface
CAH	Chlorinated Aliphatic Hydrocarbon
CAMP	Community Air Monitoring Plan
CBS	Chemical Bulk Storage
C&D	Construction and Demolition
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
COCs	Contaminants of Concerns
COPC	Constituents of Potential Concern
CP	Commissioner Policy
CQAP	Construction Quality Assurance Plan
CSM	Conceptual Site Model
CSOP	Contractors Site Operation Plan
CVOC	Chlorinated Volatile Organic Compound
DCE	cis-1,2-dichloroethene
DCR	Declaration of Covenants and Restrictions
4,4'-DDD	Dichlorodiphenyldichloroethane
DER	Division of Environmental Remediation
DER-10	Technical Guidance for Site Investigation and Remediation
DNAPL	Dense Non-Aqueous Phase Liquid
DOC	Dissolved Organic Carbon
DTW	Depth to Water
DUSR	Data Usability Summary Report
EC	Engineering Control
EE	Environmental Easement
ECL	Environmental Conservation Law
EDD	Electronic Data Deliverable
EIMS	Environmental Information Management System
ELAP	Environmental Laboratory Accreditation Program
EPH	Extractable Petroleum Hydrocarbon
ESA	Environmental Site Assessment
ESI	Environmental Site Investigation
EWP	Excavation Work Plan
FDNY	Fire Department of New York
FER	Final Engineering Report
feet	Feet
GPR	Ground Penetrating Radar
GQS	Groundwater Quality Standard

GV	Guidance Value
GWE	Groundwater Elevation
GWET	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
HDPE	High density polyethylene
HFM	Historic Fill Material
HSM	Health & Safety Manager
IBZ	Industrial Business Zone
IC	Institutional Control
IDW	Investigative Derived Waste
IH	Industrial Hygiene
ISCO	In-Situ Chemical Oxidant
IRM	Interim Remedial Measure
LNAPL	Light Non-Aqueous Phase Liquid
MDL	Method Detection Limit
MNA	Monitored Natural Attenuation
MTBE	Methyl tert-butyl ether
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NAVD88	North American Vertical Datum of 1988
NOC	Notice of Completion
NYS DEC	New York State Department of Environmental Conservation
NYC DEP	New York City Department of Environmental Protection
NYC DOB	New York City Department of Buildings
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYC VCP	New York City Voluntary Cleanup Program
NYCRR	New York Codes Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DOH	New York State Department of Health
NYSDOH Guidance	Guidance for Evaluating Soil Vapor Intrusion in New York State, October 2006
NYS DOT	New York State Department of Transportation
O&M	Operation and Maintenance
ORC	Oxygen-Release Compound
ORP	Oxygen Reduction Potential
OSHA	United States Occupational Health and Safety Administration
PBS	Petroleum Bulk Storage
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PE	Professional Engineer
PID	Photo Ionization Detector
PM	Project Manager
PPB	Parts Per Billion
PPE	Personal Protective Equipment
PPM	Parts Per Million
PRSC	Post Remedial Site Control
PWGC	P.W. Grosser Consulting, Inc. or P.W. Grosser Consulting Engineer & Hydrogeologist, PC
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment

RAO	Remedial Action Objective
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RE	Remedial Engineer
REC	Recognized Environmental Condition
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RMZ	Residual Management Zone
RRSCO	Restricted Residential Soil Cleanup Objectives
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SEQRA	New York State Environmental Quality Review Act
SI	Subsurface Investigation
SMP	Site Management Plan
SMMP	Soil/Material Management Plan
SOP	Site Operation Plan
SOP	Standard Operating Procedure
SPDES	State Pollutant Discharge Elimination System
SQG	Small Quantity Generator
SRI	Supplemental Remedial Investigation
SSDS	Sub-Slab Depressurization System
SSI	Supplemental Subsurface Investigation
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWPPP	Storm Water Pollution Prevention Plan
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
TCE	Trichloroethene
TOC	Total Organic Carbon
the Site	122-24 Queens Blvd, Kew Gardens, NY
USCS	Unified Soil Classification System
USGS	United States Geological Survey
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
UUSCO	Unrestricted Use Soil Cleanup Objective
VC	Vinyl Chloride
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound

CLIENT DRIVEN SOLUTIONS PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716

LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

PWGC
CLIENT DRIVEN SOLUTIONS

CERTIFICATION

I, PAUL BOYCE, am currently a NYS registered professional engineer as defined in Title 6 New York Codes, Rules, and Regulations (NYCRR) Part 375. I performed professional engineering services and had primary direct responsibility for designing the remedial program for the site located at 124-22 Queens Boulevard, Kew Gardens, New York 11415, NYSDEC BCP Site ID C241177. I certify to the following:

- I have reviewed this document and the Stipulation List, to which my signature and seal are affixed.
- This Remedial Action Work Plan (RAWP) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).
- Engineering Controls developed for this remedial action were designed by me or a person under my direct supervision and designed to achieve the goals established in this RAWP for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the RAWP text and drawings and are of sufficient detail to enable proper construction.
- This RAWP has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of soil, fill and other material from off-Site will be in accordance with applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and intrusive work, including dust and odor suppression.
- I certify that information and statements in this certification are true.
- I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

PAUL K. BOYCE, PE, PG

Name

074604

PE License Number

Paul Boyce

Signature

06.05.2020

Date

PE Stamp

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

CLIENT DRIVEN SOLUTIONS PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

1.0 INTRODUCTION

P.W. Grosser Consulting Engineer & Hydrogeologist, PC (PWGC) was contracted by Advanced Cleanup Technologies, Inc. (ACT) to prepare this Remedial Action Work Plan (RAWP) for the Brownfield Cleanup Program (BCP) Site located at 124-22 Queens Boulevard in Kew Gardens, New York (Site). The Site is currently enrolled in the New York State Department of Environmental Protection (NYSDEC) BCP as a Volunteer (Site # C241177). The Site was admitted to the BCP on January 20, 2016 due to the presence of chlorinated volatile organic compounds (CVOCs) detected in the subsurface, the apparent result of former on-site dry cleaning operations. The proposed scope of work is based upon the findings and results of an Interim Remedial Measure (IRM) performed in 2017 and 2018, the analytical results and measurements collected during the February 2018 groundwater sampling event performed by ACT, a Subsurface Investigation performed by ACT in July 2015, and a Remedial Investigation (RI) performed at the Site through 2018.

The remedial action to be performed is intended to be protective of human health and the environment and is consistent with the contemplated end use. The proposed redevelopment consists of a 13-story mixed-use building with a basement. The building will consist of a parking garage on the basement level (along with machine/utility spaces), commercial space on the first through third floors, community space on the fourth and fifth floors, and residential space on the sixth through thirteenth floors. The project architectural plans are included in **Appendix A.**

1.1 Site Location and Description

The Site is located at 124-22 Queens Boulevard in the Kew Gardens neighborhood of the Borough of Queens, New York. The site is situated on the southwest side of Queens Boulevard, between 82nd Road and 82nd Avenue. The property is identified as Block 03359, Lot 0021 by the New York City Department of Assessment. The site measures approximately 7,700 square (sq.) feet (feet) (0.18 acre) and is bounded by a building under construction to the north, an eight-story mixed-use building with apartments above retail stores to the south, Queens Boulevard followed by an eight-story government building to the east, and a 20-story commercial hotel to the west. Currently, the Site consists of an excavated lot with foundation construction in progress. **Figure 1** depicts a locational diagram of the Site, **Figure 2** is a Site Plan and **Figure 3** depicts uses in the immediate vicinity of the Site.

1.2 Contemplated Redevelopment Plan

The subject site was purchased by Luciano LLC with plans for redevelopment consisting of a 13-story mixed use building with a basement. The building will consist of a parking garage on the basement level (along with machine/utility spaces), community space on the fourth and fifth floors, and residential space on the sixth through thirteenth floors. Construction of the proposed building foundation will require that the majority of the Site be excavated to approximately 13 feet below ground surface (bgs), with portions excavated deeper for footings, elevator pit, etc.

1.3 Surrounding Property

Currently, the immediately adjoining properties are as follows:

North:	A one-story commercial building under construction.

CLIENT DRIVEN SOLUTIONS PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

South:	An eight-story mixed use building with apartments above retail stores.
East:	An eight-story government building.
West:	A 20-story commercial hotel under construction.

As outlined in the table below, the surrounding properties were mostly undeveloped until 1902.

North:	As of 1902, the property consisted of undeveloped land. By 1914, the property contained a pond. By 1915, a three-story commercial building had been constructed, which was replaced with a one-story commercial building by 1981. The property has remained substantially unchanged.
South:	As of 1902, the property consisted of undeveloped land. By 1914, a property contained a pond. By 1925, the pond was no longer identified. By 1951, an eight-story mixed-use building had been constructed which remains.
East:	As of 1902, the property was identified as undeveloped land. By 1963, an eight-story government building had been constructed, which remains.
West:	As of 1902, the property consisted of undeveloped land. By 1914, the property contained a two-story commercial building, which was converted to residential by 1925 and back to commercial by 1942. By 1963, the building had been demolished. A 20-story residential structure has since been constructed.

The general zoning and property usage in the surrounding area consists of mixed commercial, municipal, and residential buildings. There are potentially-sensitive receptors in the vicinity of the subject property. Public School 99 is located approximately 200 feet to the south of the subject property. Archbishop Mallow High School is located approximately 0.4 miles to the east of the subject property. An Ezra Jack Keats Pre-K Center is located approximately 700 feet to the south. Maple Grove Park is located approximately 700 feet to the east. Hoover-Manton Playgrounds is located approximately ¼ mile to the east. There are no rivers, streams, or wetlands in the immediate vicinity of the Site. However, Flushing Bay is located approximately 3.4 miles north of the Site and Willow Lake is located approximately 0.6 miles to the north.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The RI was conducted by ACT beginning in December 2016 in accordance with NYSDEC DER-10 and in accordance with the NYSDEC-approved IRM work plan prepared by PWGC and dated February 2016. A draft RI Report (RIR) was prepared by ACT and submitted to the NYSDEC in December 2018 and is currently under review and is included in **Appendix D.**

Impact to the soil, soil vapor, and groundwater has been observed on-Site. Site soil investigation activities performed on-Site included: the July 2015 Subsurface Investigation (SSI), the RI activities from December 2016 – March 2017, waste classification sampling activities in August and October 2017, and IRM hotspot endpoint sampling in November 2017. Analytical results from these sampling events revealed the presence of CVOCs at concentrations greater than New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) in several samples. Samples with the highest CVOC concentrations were found adjacent to the former dry cleaning machine and centered within the hot spot area located near the western property line, also known as the rear yard area. In addition to CVOCs, several metals and pesticides were identified in excess of UUSCOs in the surface to two feet bgs soil interval. CVOCs in excess of New York State Ambient Water Quality Standards were detected in groundwater throughout the site. Elevated concentrations of CVOCs were also detected in soil vapor samples collected on-site.

2.1 Summary of Remedial Investigations Performed

The following section summarizes the investigation activities performed at the Site to date.

2.1.1 Sample Methodology and Results

SOIL VAPOR INTRUSION STUDY – APRIL 2015

Based on the findings of a Phase I ESA, ACT performed a Soil Vapor Intrusion (SVI) Study which was documented in their April 14, 2015 letter report. The scope of work included the collection and analysis of four sub-slab soil vapor samples from within the building. Soil vapor samples were analyzed for volatile organic compounds (VOCs) by United States Department of Environmental Conservation (USEPA) Method TO-15. Sample results were compared to sub-slab vapor / indoor air matrices specified in New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006) and the NYSDOH Soil Vapor/Indoor Air Matrix updates dated May 2017.

Sub-slab vapor samples exceeded the NYSDOH Soil Vapor / Indoor Air Matrix screening levels for tetrachloroethene (PCE; 240,000 µg/m^3 in SS-2) and trichloroethene (TCE; 1,500 µg/m^3, in SS-2). SS-2 was collected adjacent to the dry-cleaning machine.

Indoor air samples were not collected. However, sub-slab tetrachloroethene (PCE) concentrations exceeded 1,000 µg/m^3 in each of the four soil vapor samples collected. Regardless of indoor air concentrations, PCE concentrations in soil vapor exceeding 1,000 µg/m^3 fall within the mitigation range of NYSDOH Soil Vapor / Indoor Air Matrix B.

Based on the findings of the SVI Study, ACT recommended that a sub-slab depressurization system (SSDS) be installed at the Site, and that the Site be entered into the BCP.

The SVI Study was submitted to NYSDEC with the BCP application and is included as **Appendix B**. The BCP Application is included as **Appendix T**.

SUBSURFACE INVESTIGATION REPORT – JULY 2015

Based on the findings of the ACT SVI Study dated July 28, 2015, ACT performed a subsurface investigation (SSI) at the site in July 2015 to delineate the extent of subsurface soil impact. The scope of work included the collection and analysis of soil samples from three soil borings installed within the building, in the vicinity of the dry-cleaning equipment. At each boring location, a shallow soil sample (0 to 2 feet bgs) and deep soil sample (up to 10 to 11 feet bgs) were collected. Soil samples were analyzed for VOCs by USEPA Method 8260 and compared to the UUSCOs.

PCE was detected at concentrations exceeding the UUSCO of 1.3 ppm in each of the shallow (0 to 2 feet bgs) soil samples collected. PCE concentrations in these samples ranged from 7.2 ppm to 82 ppm. PCE concentrations in the deep soil samples collected were significantly lower (maximum concentration of 0.096 ppm), and did not exceed the UUSCO. Low concentrations of several other VOCs were detected in soil samples collected from the Site. However, PCE was the only compound detected above the UUSCO.

A copy of the SSI was submitted to NYSDEC with the BCP application and is included as **Appendix C**.

REMEDIAL INVESTIGATION REPORT (DRAFT) – DECEMBER 2018

The Remedial Investigation (RI) included was conducted by ACT and included the installation, screening, and sampling of twenty-five (25) soil borings, eight (8) soil vapor probes, and six (6) groundwater monitoring wells at the Site.

An alphanumeric grid system was set up to track the locations of all sampling performed at the site. The grid system consists of ten-foot spacings along the northwest and southwest site boundary. Letters were marked on building walls along the northwest boundary and numbers along the southwest boundary.

Soil borings were advanced utilizing a truck-mounted AMS Powerprobe 9600 direct-push drill rig, a Fraste XL Max sonic drill rig and a portable Geoprobe drill rig. The soil borings were installed utilizing four or five-foot Macrocore soil samplers with dedicated disposable acetate liners to collect continuous soil cores from ground surface to the terminal depth of each soil boring. A sonic drill rig was utilized to collect soil samples from soil borings for monitoring wells MW-1 through MW-6, with the exception of MW-2, at which soil boring IW-8 was installed and sampled adjacent to the well. Core samples with a diameter of 3 inches were continuously retrieved from ground surface to 80 feet bgs and placed in dedicated sleeves for classification and screening.

Soil samples were screened with a portable Photoionization Detector (PID) to measure concentrations of VOCs. The soil was classified by a geologist utilizing tactile, olfactory and visual observations to examine the lithology.

Samples were placed in coolers with ice during field activities and transported to the laboratory. Proper chain of custody documentation was prepared for the soil samples. Soil samples collected from the site were analyzed for the Target Compound List (TCL) VOCs by USEPA Method 8260. Select soil samples were analyzed for additional parameters including TCL Semi-Volatile Organic Compounds (SVOCs), Target Analyte List Metals, and TCL Pesticides and PCBs. The samples were delivered via courier to York Analytical Laboratories, an ELAP-certified laboratory (NYSDOH Nos. 10854 and 12058).

Non-dedicated sampling equipment was decontaminated with an Alconox solution and rinsed prior to reuse. Equipment blanks were collected at a frequency of one per day. As required by the IRM Work Plan, a Community Air Monitoring Plan was

implemented during the remedial investigation with a pDR-1500 dust monitor and Photovac 2020 or a RAE Systems ppbRAE PID. Periodic air monitoring for VOCs was performed of the breathing zone during field activities.

First Delineation Sampling Event: December 5 and 6, 2016

On December 5 and 6, 2016, the first phase of delineation sampling consisted of advancing seven soil borings (SB-4 through SB-10) and collecting 28 soil samples and one blind duplicate sample (SB-11 collected from SB-9 (8-10')). The soil borings were located within the previously investigated area of SB-1 through SB-3, with additional step-out borings.

Second Delineation Sampling Event: December 19 and 20, 2016

On December 19 and 20, 2016, step-out delineation soil borings were installed at the perimeter of soil borings, SB-1 through SB-10. The step-out borings consisted of advancing seven soil borings (SB-12, SB-13, and SB-15 through SB-19) and collecting 31 soil samples.

Third Delineation Sampling Event: February 14, 15, 17, and 21, 2017

On February 14 through 21, 2017, additional delineation soil borings were advanced in accordance with comments from the NYSDEC. Two soil borings (SB-20 and SB-21) and one soil boring converted to a monitoring well (MW-1) were installed to investigate soil quality in the southwestern portion of the Site. In addition, exposed soil in the western portion of the Site was sampled from 0 to 2 inches at soil sample location SB-22 and beneath the bottom of the concrete slab from 0 to 2 inches bgs at soil sample location SB-23.

Soil borings SB-20 and SB-21 were continuously sampled and screened to 16 feet bgs. The soil boring for monitoring well MW-1 was continuously sampled and screened to 80 feet bgs prior to its conversion to groundwater monitoring well MW-1. A total of 16 soil samples were collected. The soil boring becoming MW-1 exhibited a maximum PID reading of 2,800 ppmv at 16 to 18 feet bsl.

Fourth Delineation Sampling Event: August 2, 3, and 4, 2017

Between August 2 and 4, 2017, four soil borings (SB-29, SB-30, SB-31A and SB-32A) were installed to define the extent of shallow soil contamination beneath the site.

The results from these soil borings were incorporated into PW Grosser's September 11, 2017 letter requesting a Contained-In determination by the NYSDEC. The letter defined the horizontal and vertical boundaries of hazardous and non-hazardous soil to a depth of 13 feet bgs.

Additional Monitoring Well Installations Event: April 20 – July 25, 2018

At the request of the NYSDEC and following issuance of NYCTA permitting, three additional monitoring wells (MW-4, MW-5, and MW-6) were installed. Monitoring well MW-3 was also inspected, found to be damaged, and replaced with MW-3R in the same general location as MW-3.

Discrete soil samples were submitted from MW-3R, MW-4, MW-5, and MW-6 at locations with the highest PID readings or at the water table and sent to a NYSDOH approved laboratory for VOC analysis in accordance with EPA Method 8260. The laboratory

results indicated that areas of PCE-contaminated soil above its UUSCO were observed between 43 and 45 feet bgs in MW-4. The laboratory results also indicated that an area of PCE-contaminated soil above its RRSCO was present between 16 and 18 feet bsl in the vicinity of MW-5.

Fifth Delineation Sampling Event: July 13 and September 7, 2018

On July 13, 2018, nine endpoint soil samples (EP-1 through EP-9) were collected in the western portion of the site. These samples further defined the horizontal extent of contaminated soil at basement grade in the western portion of the site. The results indicated that PCE was detected above its RRSCO at only one location (EP-9) adjacent to MW-1.

On September 7, 2018, two additional soil borings (SB-32B and SB-33) were installed to evaluate the vertical extent of contamination in the western portion of the site.

Soil boring SB-32B was located approximately 3 feet south of MW-1 and soil boring SB-33 was located approximately 10 feet to the west of MW-1. Both soil borings were installed and continuously sampled from basement grade to a depth of 12 feet below basement grade (25 feet bgs). The laboratory results indicate that PCE was not detected above its RRSCO more than 10 feet below basement grade (23 feet bgs) in the immediate vicinity of MW-1 (SB-32B) and was not detected above its UUSCO more than 2 feet below basement grade (15 feet bgs) along the western site boundary (SB-33).

SOIL VAPOR INVESTIGATION

On February 14 through 15 and March 3, 2017, a soil vapor survey was conducted at the perimeter of the Site. Soil vapor samples were collected at eight locations around the perimeter with two samples collected from the four property boundary sides. The soil vapor samples were collected from a depth of six feet.

The soil vapor sample points were installed by driving a soil vapor rod with an extendable screen point. The soil vapor rods were retracted approximately 4 inches to expose the subsurface soil vapor screen. Teflon tubing was extended from the soil vapor screen to the surface. The tubing was purged at a rate of 0.040 liters per minute and screened with a PID. The tubing at the surface was connected to a 6-liter laboratory-cleaned Summa canister at the surface. The Summa canister collected the sample at a rate of approximately 0.025 liters per minute for approximately 4 hours. A vacuum gauge on the canister was monitored until indications of a sufficient sample within the canister was observed. Subsequently, the flow controller to the canister was closed and the soil vapor point was removed from the subsurface.

GROUNDWATER INVESTIGATION

Between February 2017 and August 2018, six groundwater monitoring wells were installed and one was replaced.

On February 14 and 15, 2017, groundwater monitoring wells MW-1 through MW-3 were installed at the site to characterize on-site groundwater quality and flow direction. Monitoring well MW-1 was installed in the western portion of the site, while monitoring wells MW-2 and MW-3 were installed in northeast and southeast portions of the site, respectively. Based upon

surface topography, nearby surface water bodies and the USGS Long Island Depth to Water Viewer (March-April 2006), the groundwater gradient was presumed to be towards the north.

On February 22 and 23, 2018, four temporary groundwater monitoring wells were installed in the southeastern portion of the site. The purpose for these wells was to determine the presence of groundwater impacts beneath the former partial basement. The temporary wells were installed utilizing a track-mounted Geoprobe 6600 rig in combination with 3-inch diameter drive rods and a slotted steel well screen.

On April 30, 2018, monitoring well MW-6 was installed in the eastern portion of the site and on July 24 and 25, 2018, monitoring wells MW-4 and MW-5 were installed in the north-central and southwestern portions of the site, respectively. On July 23, 2018, monitoring well MW-3R was installed to replace damaged MW-3 in its general location.

Based on a depth to groundwater at the site of approximately 60 feet bgs, the monitoring wells were installed utilizing a Fraste XL Max sonic drill rig and constructed of 2-inch diameter PVC riser pipe above 15 to 20 feet of 20 mil slotted PVC well screen. Monitoring well MW-1 was installed to a depth of 80 feet bgs and screened from 60 to 80 feet bgs. Monitoring wells MW-2 and MW-3R were installed to a depth of 75 feet bgs and screened from 55 to 75 feet bgs. Monitoring wells MW-4 and MW-5 were installed to a depth of 65 feet bgs and screened from 50 to 65 feet bgs. Monitoring well MW-6 was installed to a depth of 77 feet bgs and screened from 62 to 77 feet bgs.

The filter pack around each well screen consisted of No. 2 sand placed in the annulus of the soil boring from the base of the boring to 2 feet above the top of the well screen. A 3-foot bentonite seal was placed above the top of the filter pack. Bentonite grout consisting of Portland cement and bentonite was mixed at the surface and placed from the top of the bentonite seal to the surface. The wells were completed with riser pipes capped with J-plugs.

Installation of groundwater monitoring wells MW-1, MW-3R, MW-4, MW-5 and MW-6 was conducted by collecting continuous cylindrical cores of soil from ground surface to the terminal depth of investigation. No soil sampling was conducted during installation of monitoring well MW-2. However, soil sampling was subsequently performed adjacent to MW-2 at boring location IW-8. A portable PID screened the soil column from the ground surface to the terminus of the soil boring.

Groundwater monitoring conducted on August 10, 2018 identified depth to water in the six onsite monitoring wells ranging from 55.35 feet bgs in MW-1 to 68.22 feet bgs in MW-6. A survey of top of casing elevations confirmed that groundwater flow was toward the northeast.

Between March 2017 and July 2018, three rounds of groundwater sampling took place at the site. The first two rounds included MW-1, MW-2, and MW-3 and took place on March 3, 2017 and February 23, 2018. The third round of groundwater sampling took place on July 20, 2018 and included MW-1, MW-2, MW-3R, MW-4, MW-5 and MW-6.

RI LABORATORY RESULTS

RI Soil Quality

Initially, there were three discrete areas of concern (AOCs) where chlorinated volatile organic compounds (CVOCs) were detected above RRSCOs in soil beneath the site. AOC-1 is located in the vicinity of the former dry-cleaning machine in the north-central

portion of the site. AOC-2 is located in the western portion of the site formerly occupied by an exterior concrete yard and one or more suspected storm drains. AOC-3 was located adjacent to Queens Boulevard in the northeastern portion of the site. AOC-3 has been incorporated into AOC-1 as, upon excavation, impact observed in the AOC-3 area appears related to the former dry cleaning apparatus as well.

PCE concentrations in AOC-1 generally trended along a layer of unsaturated silt and clay from higher concentrations beneath the dry-cleaning machine in the north-central portion of the site to lower concentrations along the southern and eastern property boundaries, the highest PCE concentration in AOC-1 (82 mg/kg) was found in shallow soil sample SB-3 at 0 to 2 feet bgs.

The deepest soil sample in AOC-1 containing PCE above its UUSCO was collected in the soil boring from monitoring well MW-4 where 11 mg/kg of PCE was detected at 43-45 feet bgs.

In AOC-2, the highest PCE concentration (510 mg/kg) was found at 16 to 18 feet bgs in the soil boring for monitoring well MW-1. A review of the boring log for MW-1 indicates that the highest in-field PID reading (2,800 ppmv) was observed at 15 to 16 feet bgs. Soil samples at the 22-foot interval exhibited a PID reading of 120 ppmv, which was the deepest extent of observed PID responses above 100 ppmv.

Soil borings SB-29, SB-30, SB-32B, and SB-33 installed in the vicinity of MW-1 delineated the vertical extent of PCE in soil beneath AOC-2. PCE exceeded its RRSCO in soil samples collected from 13 to 23 feet bgs in SB-29, SB-30, and SB-32B. The highest concentration of PCE was detected in this area at a concentration of 510 mg/kg. PCE was not found above its RRSCO in soil samples collected from these borings below 23 feet bgs.

An area of PCE contamination above its RRSCO was also identified between 16 and 18 feet bgs along the southern property boundary (21 mg/kg in MW-5). Field screening results and laboratory analyses of soil samples collected below that depth from MW-5 and MW-3R indicate the absence soil contamination along the southern property boundary. The area of impacted soil around MW-5 is only a few feet southeast of AOC-2 and may be the result of lateral unsaturated dispersion.

ACT's Phase I Environmental Site Assessment identified two storm drains in the rear yard. Pieces of cast iron from one of the drains was discovered during subsequent delineation soil sampling. The storm drains could have acted as conduits for the observed PCE impacts in deep soil in the west and southwest portions of the site.

In AOC-3, the highest PCE concentration (35 mg/kg in SB-18) was found in shallow soil samples (0 to 2 feet bgs). Vinyl chloride, a PCE degradation product, was also detected above its UUSCO in soil borings SB-7, SB-17A, and SB-18 at 13 to 15 feet bgs. The highest concentration of vinyl chloride detected was 0.076 mg/kg. Cis-1,2-Dichloroethylene (DCE, 7.6 mg/kg) was also detected above its UUSCO in soil boring SB-7 at 13 to 15 feet bgs.

Two surface soil samples (SB-22 and SB-23) were collected from the rear undeveloped portion of the property. Surface soil sample SB-22 was collected from exposed soil in the western portion of the site from 0 to 2 inches beneath the surface soil. Surface soil sample SB-23 was collected in the southwestern portion of the site beneath the concrete slab from 0 to 2 inches beneath the slab. The surface soil sample, SB-22 exhibited the pesticides 4,4' DDT and 4,4' DDD above UUSCOs. Surface samples exhibited concentrations above the respective UUSCOs for cadmium, copper, nickel, and mercury and the RRSCO for lead in surface soil sample SB-22 and the respective UUSCOs for lead and zinc in SB-23.

RI Soil Vapor Quality

PCE was detected in the eight soil vapor samples during the 2017 sampling event. The highest concentration of PCE in soil vapor (250,000 µg/m^3) was detected in SV-3, located proximate to the former dry-cleaning machine in AOC-1. Soil vapor sample SV-4, located in the rear yard in the vicinity of AOC-2, contained the second highest PCE concentration (200,000 µg/m^3).

TCE was detected in seven of the eight samples at concentrations ranging from 19 to 4,300 µg/m^3. Cis-1,2-Dichloroethylene was detected in six of the eight soil vapor samples at concentrations ranging from 9.9 to 530 µg/m^3. The highest concentrations of TCE and DCE were detected in soil vapor sample SV-8 (4,300 µg/m^3 and 530 µg/m^3, respectively) located along the eastern portion of the site adjacent to Queens Boulevard.

RI Groundwater Quality

During the most recent sampling event in July 2018, PCE was found in the six monitoring wells above its NYSDEC Water Quality Standard (WQS) of 5 µg/L at concentrations ranging from 110 µg/L in MW-1 and MW-5 in the west and southwest portions of the site to 28,000 µg/L in MW-4 adjacent to the former dry cleaning machine along the northern property boundary.

Other CVOCs, including TCE and DCE were detected in groundwater samples from four monitoring wells above their WQS of 5 ug/L. TCE concentrations ranged from 13 ug/L in MW-5 to 2,500 ug/L in MW-2 and DCE concentrations ranged from 47 ug/L in MW-4 to 1,900 ug/L in MW-2. Vinyl chloride (VC) was found in three of the six monitoring wells above its WQS of 2 µg/l including MW-2 (340 µg/L), MW-3R (95 µg/L) and MW-6 (1,300 µg/L).

Concentrations of TCE, DCE, and VC in groundwater is an indication that anaerobic biodegradation of PCE is taking place beneath the site. The presence of these degradation products in monitoring wells MW-2, MW-3R, and MW-6, which are cross-gradient of MW-4, may be the result of lateral dispersion and degradation from the source area around MW-4. The low levels of PCE along with the absence of degradation products in MW-1 and MW-5 indicates that these areas are hydraulically upgradient of MW-4 as well as geologically isolated from the overlying soil contamination in AOC-2.

Further analyses conducted on groundwater samples from monitoring well MW-1 indicated that it was not impacted by SVOCs, Pesticides, or PCBs above their respective NYSDEC WQS. Antimony, magnesium, manganese, and sodium were detected above their respective NYSDEC WQS. These metal detections are likely from turbid samples and are not believed to be associated with historical dry-cleaning activities at the Site.

The Draft RI Report is included as **Appendix D.**

2.2 Significant Threat

The NYSDEC and NYSDOH have determined that this Site does pose a significant threat to human health and the environment.

2.3 Site History

2.3.1 Past Uses and Ownership

Historical fire insurance maps from the years 1902 through 2006 were obtained from Environmental Data Resources Inc. and reviewed by ACT. Based on a review of these maps, the subject Site appeared to consist of undeveloped land as of 1902. In 1914 the property contained a pond. In 1925, the pond was no longer identified. In 1951, a two-story commercial building was constructed and remained through 2006. Historical findings also indicated that a dry cleaner occupied the two-story commercial building from at least 1986 until it was demolished in 2016, prior to proceeding with IRM construction activities.

2.3.2 ACT Phase I ESA

The Phase I ESA prepared by ACT for the Site and dated March 23, 2015 identified the following Recognized Environmental Conditions (RECs):

- A portion of the site has been occupied by a drycleaner from at least 1986 through the present.

Based on this REC, ACT recommended that soil vapor sampling be performed at the Site to evaluate whether a vapor encroachment condition exists at the subject property.

The Phase I ESA Report was submitted to NYSDEC with the BCP application and is included as **Appendix F**.

2.4 Geologic/Hydrologic Conditions

The geologic setting of Long Island is well documented and consists of crystalline bedrock composed of schist and gneiss overlain by layers of unconsolidated deposits. Immediately overlying the bedrock is the Raritan Formation, consisting of the Lloyd sand confined by the Raritan Clay Member. The Lloyd aquifer consists of discontinuous layers of gravel, sand, sandy and silty clay, and solid clay. The Raritan Clay is a solid and silty clay confining unit with few lenses of sand and gravel, abundant lignite and pyrite, and is grey, red or white in color.

Above the Raritan Clay lies the Magothy Formation. The Magothy Aquifer consists of layers of fine to coarse sand of moderate to high permeability, with inter-bedded lenses of silt and clay of low permeability resulting in areas of preferential horizontal flow. The Magothy Aquifer is overlain by the Jameco and Upper Glacial Aquifer systems. The Upper Glacial Aquifer is the water table aquifer at this location and is comprised of medium to coarse sand and gravel with occasional thin lenses of fine sand and clay. This aquifer extends from the land surface to the top of the Magothy and, therefore, is hydraulically connected to the Magothy Aquifer.

The Site is located over the Long Island aquifer system, which underlies Nassau, Suffolk, Kings (Brooklyn), and Queens Counties. The Site overlies an interconnected aquifer system consisting of the upper glacial deposits and the underlying Magothy Formation. The Upper Glacial aquifer is found at the surface in most of Kings and Queens Counties. The unconsolidated aquifer formations form a southward-dipping wedge that attains a maximum thickness in Kings County about 800 feet in the southeast area of Brooklyn. The Lloyd, Magothy, Jameco, and Upper Glacial aquifer systems overlie bedrock in the area, which is present at approximately 200 feet bgs.

As detailed in the draft Draft RIR prepared by ACT, groundwater on the Site was encountered in three on-Site monitoring wells at a depth of approximately 67 feet bgs. As such, groundwater is not expected to be encountered during excavation and dewatering activities are not anticipated. Groundwater flow direction was determined to be toward the northeast with a gradient of 0.01 feet/foot. The top two to five feet of Site soils are comprised of historic fill material and are underlain by layers of fine to medium silty sands and silt. The municipal water supply is provided by the New York City Department of Environmental Protection (NYCDEP).

According to survey data within the structural building plans provided by the owner, Site street elevation is approximately 83 feet per NAVD88. There are no exposed areas of vegetation.

2.5 Contaminant Conditions

2.5.1 Conceptual Site Model

The conceptual site model (CSM) considers Site history and context, including the factors that influence the distribution, fate, and transport of the contaminants of concern (COCs), PCE and other CVOCs, as well as potential receptors and pathways for exposure. These factors include potential sources and release mechanisms, the physical and chemical mechanisms that control constituent fate and transport, and the likely exposure pathways that govern the potential for adverse effects to human and ecological receptors. A positive significant threat determination was made by the NYSDEC and the NYSDOH on August 24, 2018.

ACT has classified the geological profile for most of the Site to be lacustrine-derived sediment with a discontinuous clay layer as shallow as 7 feet bgs. The western portion of the site consists of coarser material with less amounts of fine-grained material. Groundwater was measured to be at a depth of approximately 67 feet bgs and flows northeast.

Soil borings were conducted on-Site during the July 2015 SSI, the December 2016 RI activities, the February 2017 RI activities, Waste Classification Sampling Events in August and October 2017, and IRM hazardous waste hotspot endpoint sampling in 2017. Analytical results from these sampling events revealed the presence of CVOCs at concentrations greater than UUSCOs in several samples. Analytical results for soil samples collected in the vicinity of the former dry-cleaning machine had the highest PCE concentrations within surface soils. The highest concentrations of PCE were detected in samples collected from the rear yard area (AOC-2) at 15 to 19 feet bgs. In addition to the CVOCs, metals and pesticides were identified by ACT within the first two feet of soils at the Site. Soil borings performed during the RI and observations during IRM excavation activities have documented the presence of historic fill within the top five feet of soils across the Site. Historic fill material is typically impacted with SVOCs and metals.

The most probable source of PCE impact to the subsurface is the former dry-cleaning machine as illustrated in **Figure 4.** The facility was reportedly utilized by a dry cleaner from 1986 until it was recently demolished in 2016. During this time, PCE was likely released to the subsurface in the vicinity of the former dry-cleaning machine. The ACT Phase I ESA also identified two storm drains in the rear yard. One of the drains was subsequently identified during delineation soil sampling. The storm drains may have acted as conduits for the PCE impact to the soil in the rear yard.

Potential impacts to off-Site soils are possible based upon analytical results from IRM endpoint sample EP-27, which was collected at the property line in the northeast corner of property. A PCE concentration of 7.9 ppm was detected above UUSCOs at a depth of 5 feet from the base of the IRM excavation in this location.

Impact to the groundwater has also been detected on-Site. Groundwater samples were collected during the ACT RI on February 2017, March 2017, and recently during the IRM in February 2018 from permanent monitoring wells (MW-1, MW-2, and MW-3). Groundwater samples were collected and analyzed for the presence of VOCs. The COCs identified within the groundwater included PCE and its breakdown products TCE, DCE, and VC. One groundwater sample, MW-1, was collected and analyzed for full-TCLP sampling parameters (VOCs, SVOCs, PCBs, pesticides, and TAL metals) in 2017. This analysis indicated several metals, including antimony, magnesium, manganese, and sodium, detected above respective AWQS. PCE concentrations in excess of the AWQS were detected in MW-1, MW-2, and MW-3 ranging from 29 to 1,100 µg/L.

In February 2018, during IRM activities, monitoring wells MW-1, MW-2, and MW-3 and temporary monitoring wells TW-1, TW-2, TW-3, and TW-4 were sampled for the presence of VOCs. Analytical results from TW-1, TW-2, and TW-3 were detected below the PCE AWQS of 5 µg/L. PCE was detected at concentrations above the AWQS of 5 µg/L in the three monitoring wells and temporary well TW-4, ranging from 9.7 µg/L in MW-1 to 1,300 µg/L in MW-3. MW-3 is located at the center of the southern property line. Other CVOCs detected at concentrations above of their AWQS included DCE, TCE, VC, trans-1,2-dichloroethylene, benzene, 1,2,4-trimethylbenzene, toluene, and total xylenes.

Off-Site impact to groundwater is likely toward the north, based upon the likely migration of impacted groundwater toward the north.

Soil vapor impact has also been observed on-Site. Four sub-slab soil vapor samples and an additional eight soil vapor samples were collected in 2015. Each of these samples contained concentrations of CVOCs which warrant mitigation. The highest concentrations of PCE within soil vapor were observed in the area adjacent to the former dry-cleaning machine.

Soil vapor has not been sampled off-Site. Permission to perform off-Site soil vapor sampling has not been granted by neighboring properties.

2.5.2 Description of Areas of Concern (AOCs)

ACT performed an RI at the site from December 2016 to March 2017. The ACT draft RIR documented the presence of elevated concentrations of CVOCs in soils at the site, which they divided into three AOCs. For the purposes of this RAWP, the AOCs have been modified following review of recent analytical data. AOC-3 is now included in AOC-2. The AOCs are illustrated in **Figure 5** and summarized below:

- **AOC-1: Former Dry-Cleaning Machine** – AOC-1 consists of the northern portion of the property surrounding the former dry-cleaning machine location as shown on **Figure 5**.
- **AOC-2: Former Rear Yard** – AOC-2 consists of the western portion of the property, including a portion of the rear yard beyond the former building's footprint as shown on **Figure 5**.

2.5.3 Identification of Standards, Criteria, and Guidance

The applicable Standards, Criteria, and Guidance (SCGs) for soil, groundwater, and soil vapor characterization and remediation for this Site include:

- DER-10
- 6 NYCRR Part 375-6.8 Soil Cleanup Objectives (SCOs)
- New York State Groundwater Quality Standards and Guidance Values (GQS/GVs) – 6 NYCRR Part 703
- New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York
- NYSDEC Technical Guidance and Administrative Guidance Memorandum (TAGM) # 4031
- Commissioner Policy – Soil Cleanup Guidance (CP-51)
- NYSDOH Generic Community Air Monitoring Plan (CAMP)
- 29 Code of Federal Regulations (CFR) 1910.120(h) - Hazardous Waste Operations and Emergency Response
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels
- 40 CFR Part 144 - Underground Injection Control Program
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- DER-23 - Citizen Participation Handbook for Remedial Programs
- OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites
- CP-43 - Groundwater Monitoring Well Decommissioning Policy
- DER Technical Guidance for Site Investigation and Remediation (DER-10)
- DER Green Remediation (DER 31)
- DER Institutional Controls (DER 33)

The following SCGs typically apply to the remedy selection process conducted in New York State:

- 6 NYCRR Part 375 - Inactive Hazardous Waste Disposal Sites
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands - Permit Requirements
- 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998)
- 19 NYCRR Part 600 - Waterfront Revitalization and Coastal Resources
- TAGM 4044 - Accelerated Remedial Actions at Class 2, Non-RARA Regulated Landfills (March 1992)
- TAGM 4051 - Early Design Strategy (August 1993)
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)

- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- Freshwater Wetlands Regulations - Guidelines on Compensatory Mitigation (October 1993)
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- Technical Guidance for Screening Contaminated Sediments (January 1999)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.047FS Presumptive Remedies: Policy and Procedures (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.048FS Presumptive Remedies
- Site Characterization and Technology Selection for CERCLA sites with Volatile Organic Compounds in Soils (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.049FS Presumptive Remedy for CERCLA Municipal Landfills (September 1993)
- USEPA June 2015 Soil Vapor Intrusion Guidance Document

The following SCGs typically apply to Remedial Actions conducted in New York State:

- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 40 CFR Part 144 - Underground Injection Control Program
- 10 NYCRR Part 67 – Lead
- 12 NYCRR Part 56 - Industrial Code Rule 56 (Asbestos)
- 6 NYCRR Part 175 - Special Licenses and Permits--Definitions and Uniform Procedures
- N/A6 NYCRR Part 360 and Part 364 - NYS Solid Waste Management Requirements
- 6 NYCRR Part 364 - NYS Waste Transporter Permits
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- 6 NYCRR Subpart 373-4 - Facility Standards for the Collection of Household Hazardous Waste and Hazardous Waste from Conditionally Exempt Small Quantity Generators (November 1998)
- 6 NYCRR Subpart 374-1 - Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998)
- 6 NYCRR Subpart 374-3 - Standards for Universal Waste (November 1998)
- 6 NYCRR Part 375 - Inactive Hazardous Waste Disposal Sites (as amended January 1998)
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998)
- 6 NYCRR Part 750 through 758 - Implementation of NPDES Program in NYS (“SPDES Regulations”)
- TAGM 4013 - Emergency Hazardous Waste Drum Removal/ Surficial Cleanup Procedures (March 1996)
- TAGM 4046 - Determination of Soil Cleanup Objectives and Cleanup Levels (January 1994)

- TAGM 4059 - Making Changes to Selected Remedies (May 1998)
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- TOGS 1.3.8 - New Discharges to Publicly Owned Treatment Works
- TOGS 2.1.2 - Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RARA Corrective Action, and Underground Storage Tank Sites (November 1997)
- NYSDOH Environmental Health Manual CSFP-530 - "Individual Water Supplies - Activated Carbon Treatment Systems"

The following standards and criteria typically apply to Site Management activities conducted in New York State:

- 6 NYCRR Part 175 - Special Licenses and Permits--Definitions and Uniform Procedures

The following guidance typically applies to Site Management activities conducted in New York State:

- Groundwater Monitoring Well Decommissioning Procedures (May 1995)
- The activity is a component of a program selected by a process complying with the public participation requirements of section 1.10, to the extent applicable

2.5.4 Soil/Fill Contamination

This section provides a summary of the soil/fill contamination present on-Site and how these impacts compare to the soil/fill SCGs identified in Section 2.5.3. Based on ACT's findings, the COCs for the subject Site include PCE and its breakdown products, TCE, DCE, and VC, as well as metals (Copper, Mercury, Lead, Selenium, and Zinc) and pesticides (4-4'-DDD, 4-4'-DDT).

2.5.4.1 Summary of Soil/Fill Contamination

The COCs identified within the soil include PCE and its breakdown products, TCE, DCE, and VC. Several soil samples collected in the northern section of the Site contained concentrations of PCE up to 82 mg/kg. Soil samples collected from the former rear yard area located in the western portion of the Site had concentrations of PCE as high as 350 mg/kg. Soil sample results for VOCs and SVOCs have been tabulated and included as **Tables 2** and **3**.

In addition to the CVOCs listed above, metals and pesticides were observed in areas of the top two feet of on-Site soils. Soil borings performed during the RI and observations during IRM excavation activities have documented the presence of historic fill material within the top five feet of soils across the Site. Historic fill material is typically impacted with minor levels of SVOCs and metals. Surface samples of the top two feet of Site soil were also tested for PCBs by EPA method 8082. No concentrations above UUSCOs were observed. Soil sampling results for pesticides/PCBs and metals have been tabulated and included as **Tables 4** and **5**. **Figure 5** indicates the locations and summarizes exceedances from Track 1 UUSCOs for soil/fill.

2.5.4.2 *Comparison of Soil/Fill with SCGs*

Prior to implementation of the IRM excavation, several soil samples in the northern section of the Site (AOC-1) contained concentrations of PCE greater than the UUSCO. The highest concentrations of PCE were observed in shallow samples (0 to 2 feet bgs.) in AOC-1. The highest concentrations of PCE in AOC-2 were detected at 16 to 18 feet bgs. PCE was detected in soil at concentrations above the UUSCO of 1.3 mg/Kg as deep as 25 feet bgs. Other CVOCs, such as VC, were detected above the UUSCO in a localized area in the northeastern portion of the Site from 8-15 feet bgs. DCE and TCE were also detected at concentrations above the UUSCOs as deep as 6.5 feet and 8 feet bgs, respectively.

Several of the shallow samples were analyzed for TCL VOCs by EPA Method 82620C, TCL SVOCs by EPA Method 8270D, TCL pesticides by EPA Method 8081B, PCBs by EPA Method 8082, and TAL metals by EPA Method 6010C/7471/9012B. Metals, including copper, mercury, lead, selenium, and Zinc were detected in shallow samples at concentrations above UUSCOs in the southwestern portion of the Site. Mercury and pesticides, 4-4'DDD and 4-4'-DDT, were also detected above UUSCOs in surface sample SB-22, located in the northwest corner of the Site.

Tables 2, **3**, **4**, and **5** show exceedances from Track 1 UUSCOs for soil/fill at the Site. **Figure 5** indicates the locations and summarizes exceedances from Track 1 UUSCOs for soil/fill.

2.5.5 *Groundwater Contamination*

The following section provides a summary of the groundwater contamination and how this contamination compares to the SCGs identified in Section 2.5.3. The COCs identified within the groundwater include PCE and its breakdown products TCE, DCE, and VC.

2.5.5.1 *Summary of Groundwater Data*

Impact to groundwater has been observed on-Site. Groundwater samples were collected during the February and March 2017 RI activities, as well as during groundwater sampling events performed by ACT in February and July 2018. A total of five groundwater samples were collected from the three on-Site monitoring wells and analyzed for the presence of VOCs in February and March 2017. PCE was detected in all three monitoring wells at concentrations ranging from 29 µg/L (MW-1) to 1,100 µg/L (MW-3), which are above the AWQS. The highest concentration of PCE in groundwater was detected in MW-3, which is located in the southern portion of the Site.

During the February 2018 sampling event, four temporary wells (TW-1 through TW-4) were installed, screened at the water table, and sampled along with permanent monitoring wells MW-1, MW-2 and MW-3. PCE was detected above its AWQS in all samples with the exception of those collected from TW-1, TW-2, and TW-3. PCE concentrations ranged from 9.7 µg/L (MW-1) to 1,300 µg/L (MW-3). Additional CVOCs were detected above their respective AWQS in each sample with the exception of the sample collected from MW-1.

The six monitoring wells were sampled during the July 2018 sampling event. Analytical results indicated elevated concentrations of PCE ranging from 110 µg/L in MW-1 to 28,000 µg/L in MW-4, located adjacent to the former dry cleaning machine along the north property boundary. Other CVOCs, including TCE and DCE were detected in groundwater samples from four monitoring wells above AWGS of 5 ug/L. TCE concentrations ranged from 13 ug/L in MW-5 to 2,500 ug/L in MW-2 and DCE concentrations

ranged from 47 ug/L in MW-4 to 1,900 ug/L in MW-2. Vinyl chloride (VC) was found in three of the six monitoring wells above its WQS of 2 ug/l including MW-2 (340 ug/L), MW-3R (95 ug/L) and MW-6 (1,300 ug/L).

In March 2017, a groundwater sample was collected from MW-1 and analyzed for full-TCLP sampling parameters (VOCs, SVOCs, PCBs, Pesticides, and TAL Metals). Several metals were detected at concentrations above their respective AWQS. These concentrations were likely associated with the historical fill identified in the top five feet of Site soils during.

Free phase dense non-aqueous phase liquid (DNAPL) and light non-aqueous phase liquid (LNAPL) have not been observed on-Site during the sampling or monitoring events. Permission for off-Site groundwater sampling has yet to be granted by the neighboring properties. Therefore, impact to the groundwater has not been investigated off-Site.

Groundwater sampling results for VOCs and SVOCs have been tabulated and included as **Tables 6** and **7**. Groundwater sampling results for pesticides/PCBs and metals have been tabulated and included as **Tables 8** and **9**. The extent of CVOC groundwater impacts are depicted in **Figure 6**.

2.5.5.2 Comparison of Groundwater with SCGs

The NYSDEC TOGS 1.1.1 - Ambient Water Quality Standards (AWQS) & Guidance Values (GV) and Groundwater Effluent Limitations dated June 1998 is a regulatory document that identifies the specific AWQS and GVs that are set forth by the NYSDEC to protect the various classes of New York State waters. The Site's groundwater is identified as Water Class – GA. Groundwater analytical results were compared to AWQS and GVs for Water Class – GA.

Groundwater sample results have exceeded the AWQS for PCE and, in some monitoring well locations, TCE, DCE, and VC. The highest concentrations of these CVOCs have been observed in the northern section of the Site at MW-4. Monitoring well MW-1, located within the rear yard area (AOC-2), has consistently exhibited the lowest concentrations of PCE and other CVOCs in groundwater. With the removal of the bulk of the source area during the IRM excavation, concentrations of these analytes are anticipated to decrease through natural attenuation along with the proposed remedial action.

Exceedances of AWQS in monitoring wells are indicated on **Tables 6**, **7**, **8**, and **9**. A map that indicates the locations of AWQS exceedances is included as **Figure 6**.

2.5.6 Soil Vapor Contamination

The following section provides a summary of the soil vapor contamination and how these impacts compare to the SCGs identified in Section 2.5.3.

2.5.6.1 Summary Soil Vapor Data

Four sub-slab vapor samples (SS-1 through SS-4) were collected during the SVI Study in April 2015. The sample points were installed beneath the building slab, to a depth immediately below the slab. SS-1, SS-2, and SS-3 were collected inside the former dry cleaner space. SS-4 was collected from inside the adjacent commercial unit. Each of the four samples was analyzed for VOCs by USEPA Method TO-15 and contained elevated concentrations of CVOCs. The two locations that contained the highest concentrations of CVOCs in soil vapor were SS-2 and SS-3, which were adjacent to the former dry-cleaning room and adjacent to the door to the rear courtyard

Additionally, a total of eight soil vapor samples were collected on-Site during the RI, in February 2017. The samples were collected in various locations around the Site to determine the extent of the contamination. PCE was detected in all eight soil vapor samples at concentrations ranging from 430 to 250,000 µg/m^3. The highest concentration of PCE in soil vapor was detected in SV-3, located in the vicinity of the former dry-cleaning machine. Soil vapor sample SV-4, located in the rear undeveloped area in the vicinity of AOC-2, had the second highest PCE concentration during the February 2017 sampling event. TCE was detected in seven of the eight samples at concentrations ranging from 19 to 4,300 µg/m^3. DCE was detected in six of the eight soil vapor samples at concentrations ranging from 9.9 to 530 µg/m^3. The highest concentrations of TCE and DCE were detected in soil vapor sample SV-8 (4,300 µg/m^3 and 530 µg/m^3, respectively), which was located along the eastern portion of the site adjacent to Queens Boulevard.

Exceedances of NYSDOH guidance values is shown in **Table 10**. The soil vapor sample locations and analytical results that exceed the latest NYSDOH guidance values are depicted on **Figure 7**.

2.5.6.2 Comparison of Soil Vapor with SCGs

The NYSDOH has developed Indoor Air / Soil Vapor Matrices to address potential chlorinated VOC vapor intrusion. In order to comprehensively evaluate vapor intrusion, both soil vapor and indoor air sampling are typically performed concurrently. At the Site, indoor air sampling was not performed due to the absence of a building at the time of the soil vapor sampling. Two of these five VOCs are PCE and TCE, which are classified as solvents and are utilized in dry cleaning operations. All sub-slab soil vapor samples contained chlorinated and non-chlorinated VOCs and exceeded the NYSDOH screening levels for PCE (240,000 µg/m^3 in SS-2) and TCE (1,500 µg/m^3, in SS-2). SS-2 was installed adjacent to the former dry-cleaning machine location.

PCE was detected in all eight soil vapor samples at concentrations ranging from 430 µg/m^3 to 250,000 µg/m^3. The highest concentrations of PCE in soil vapor were detected in SV-3, the location of the former dry-cleaning machine. TCE was detected in seven of the eight samples at concentrations ranging from 19 µg/m3 to 4,300 µg/m^3 in SV-8. DCE was detected in two of the eight soil vapor samples, SV-4 (300 µg/m^3) and SV-8 (530 µg/m^3).

2.6 Environmental and Public Health Assessments

2.6.1 Qualitative Human Health Exposure Assessment

The overall purpose of the Qualitative Human Exposure Assessment is to evaluate and document how people might be exposed to Site-related contaminants, and to identify and characterize the potentially exposed population(s) now and under reasonably anticipated future use of the Site. To evaluate if an exposure pathway exists, the exposure assessment should assess the quality, representativeness, and adequacy of the available data. In addition, the qualitative exposure assessment should consider the nature of populations currently exposed or that have the potential to be exposed to Site-related contaminants, both on-Site and off-Site, and describe the reasonably anticipated future land use of the Site and affected off-Site areas.

2.6.1.1 Contaminant Source

The subject site is located at 124-22 Queens Boulevard in the Kew Gardens neighborhood of the Borough of Queens, New York. The site is situated on the southwest side of Queens Boulevard, between 82nd Road and 82nd Avenue. The property, most recently

a two-story commercial building with a partial basement, was demolished in 2017. One of the building's previous tenants was a dry cleaner from 1986 until the building was demolished.

Soil borings installed on-Site indicated impact to the soil in the northern portion of the Site in the vicinity of the former dry-cleaning machine and western portion of the Site in the vicinity of the rear yard area. Soil sample analytical results identified PCE at concentrations exceeding its UUSCO of 1.3 ppm. PCE is a colorless, chlorinated hydrocarbon that is a liquid from -19° C to 121° C. PCE is a central nervous system depressant and a probable human carcinogen. Degradation products of PCE, such as TCE and DCE, were also detected in soil samples collected from these boring locations. The original SSI performed in 2015 reported that PCE concentrations were the highest in the shallow (0 to 2 feet bgs) soil samples collected. The associated PCE concentrations ranged from 7.2 ppm to 82 ppm. However, recent investigations in February and August 2017 have shown PCE concentrations were highest in samples located adjacent to the former rear yard area (AOC-2) collected between 15 to 23 feet bgs and ranged from 7.8 ppm to 510 ppm.

Impact to groundwater was also identified in varying degrees within the current monitoring wells on-Site (MW-1 through MW-6) and greatest within the wells located in the eastern half of the Site (MW-2, MW-3, and MW-4).

The likely introduction of PCE and its degradation products to the environment was an improper discharge(s) from the former dry-cleaning machine located in the northern portion of the Site (AOC-1).

2.6.1.2 Contaminant Release and Transport

Visual observations and laboratory analytical results for subsurface soils collected during the RI indicate that poor housekeeping practices and the presence of contaminated historic fill is collectively responsible for the presence of VOCs, particularly PCE and TCE, and metals in soils and groundwater. Surface discharges of PCE were likely released from the former dry-cleaning machine area and/or to the surface drains within the rear yard area at surface grade which then infiltrated the surrounding subsurface soils and groundwater beneath the Site.

PCE is known to be a DNAPL and characteristically may migrate vertically downward once entering groundwater. On-Site groundwater samples indicate there are elevated concentrations of PCE and its degradation products at levels greater than AWQS. PCE concentrations were detected as high as 28,000 ug/L in MW-4.

High VOC concentrations in soil vapor were also detected throughout the Site and highest in the vicinity of the former dry-cleaning machine. The available information indicates that the former dry-cleaning machine and related piping may be a source of a PCE release to the area.

Similarly, the source of PCE observed in soil between the two former storm drains in the rear yard area (AOC-2), as well as site groundwater, are also suspected to be linked to the dry-cleaning machine and its associated piping. The Phase I ESA prepared by ACT identified two storm drains in the rear yard area on opposite ends of the rear yard hotspot area. The two storm drains are suspected to have acted as a pathway for PCE, and other Chlorinated Aliphatic Hydrocarbons (CAHs), to travel to greater depths and accumulate at the depths observed within this rear yard hotspot area.

Poor housekeeping is also suspected to have influenced this rear yard hotspot area. Due to its proximity to the outer wall of the former building, former tenants could have discharged spent waste out the back door or window leading to the rear yard area where it reached the storm drains identified above.

2.6.1.3 Points and Routes of Exposure

PCE and its degradation products can have adverse effects on human health and can be absorbed after ingestion, inhalation, or dermal exposure. Acute exposure symptoms may include headache, dizziness, unconsciousness, abdominal pain, nausea, diarrhea, and skin and eye irritation among other affects. Chronic exposure may cause harm to the central nervous system, liver, kidneys, and dermatitis among other affects. Many of the compounds are known or probable human carcinogens.

The possible on-Site exposure pathways are by ingestion, inhalation, or dermal exposure by a person on the Site (trespasser or construction worker). Ingestion, inhalation, and dermal exposure of workers at the Site during construction would not likely be extensive given the intermittent nature of exposure, as well as the implementation of the precautions to prevent exposure presented in the Health and Safety Plan (HASP) and CAMP. Off-Site exposure scenarios include inhalation of particulates during construction. These exposures would be temporary and can be avoided through implementation of the precautions to prevent exposure and off-Site dust migration presented in the HASP and CAMP, which include measures such as a stabilized construction entrance, truck wash, and CAMP monitoring. There are no plausible off-Site ingestion or dermal exposure pathways under current conditions, however these exposure pathways may exist once the slab is removed. Site access should be prevented by a fence during remediation.

The planned future use of the Site is a mixed-use commercial and residential housing complex. Since the Site will be used as residential, there will be restrictions such as no gardening or landscaping on-Site. There could be a route for the contaminants to be ingested by humans via uptake within fruits or vegetables grown on-Site. Ingestion and dermal contact will be further limited by impervious surfaces that will encapsulate the soil below the planned development. Concrete parking areas, concrete sidewalks, and a concrete slab are engineering controls (ECs) that will prevent direct contact of the impacted soil with human receptors.

There is a limited off-Site pathway for ingestion or inhalation exposure since the COCs have the potential to migrate off-Site with the natural movement of groundwater. Even so, the groundwater pathway is not a complete route of exposure because the Site is within the boundary of New York City, which is supplied with potable water by surface reservoirs that are located outside of the New York City area. Therefore, there are no public drinking water wells in the vicinity of the Site that would complete the route of exposure.

A route of exposure through inhalation of soil vapor has been minimized by removing the majority of impacted soils through the IRM; however, potential for a complete inhalation pathway may be present on-Site and off-Site from area-wide residual soil vapor intrusion that can occur from VOCs in groundwater. Therefore, evaluation of remedial measures and or engineering/institutional controls should be considered as part of the final remedy to eliminate this potential exposure pathway under current and future conditions in connection with potential on or off-Site sources.

2.6.1.4 *Characterization of Potential Receptor Populations*

The subject Site is located at 124-22 Queens Boulevard, New York and is currently a 0.18-acre vacant lot that has been unoccupied by tenants since the former building was demolished and the lot was enclosed with a plywood construction fence. Therefore, there are currently no sensitive receptors at the Site.

The adjacent properties are densely populated and comprised commercial buildings under construction to the north and west and a multi-story residential apartment building to the south. The neighboring properties also consist of densely populated residential and commercial properties.

Because of the relatively small size of the Site, the proximity of the neighboring residential properties, and the impact in groundwater and soil vapor, future on-Site and current and future off-Site neighboring populations are potential receptors if appropriate institutional controls (ICs)/ECs are not properly implemented. Therefore, the chosen remedy presented within this RAWP will strongly consider involving additional remediation of potential source material that may remain on the Site as part of an overall remedy that would be protective of human health and the environment.

The following table provides a summary of the routes of exposure.

In-Line Table 1
Qualitative Human Health Exposure Assessment Summary Table

Environmental Media & Exposure Route	Human Assessment
Direct contact with surface soils	• Public access is restricted by fencing. • Trespasser can come into contact. • The source area soils above Unrestricted Use SCOs have been partially removed through the IRM in progress. • Construction workers can come into contact when development begins but exposure could be prevented through CAMP and HASP implementation. • Future contact could be prevented by engineering controls such as a composite cap system
Direct contact with subsurface soils	• Workers can come into contact if they complete ground intrusive work at the Site but exposure could be prevented through CAMP and HASP implementation.
Direct contact with groundwater	• Workers would not come into contact if they complete ground intrusive work at the Site. Work would extend to ~20-25 feet bgs. Groundwater is at ~67 feet bgs.
Ingestion of groundwater	• Groundwater is not utilized for drinking water. New York City public drinking water is supplied from reservoirs outside of the New York City area. • There are no known domestic water supply wells in the area.

Environmental Media & Exposure Route	Human Assessment
Inhalation of air	• The majority of source area soils have been removed through the IRM. • An EC, such as a composite cap system, will likely be installed on Site as part of the final remedy to mitigate the potential for vapor entering the building. • A potential for off-Site vapor intrusion exists. • Source area soils could be removed during redevelopment in soil although VOCs would remain in groundwater. • Workers can come into contact if they complete ground intrusive work at the site. • An SSDS could prevent soil vapor intrusion of the vapor-phase CAHs, including PCE. • A proposed vapor barrier alone will be insufficient in preventing vapor intrusion from occurring. • An SSDS could be incorporated into a composite cap system which can be installed on Site as part of the final remedy to mitigate the potential for vapor entering the building from both residual on- and off-Site PCE and off-Site CAHs migrating onto the Site in groundwater.
Direct contact with surface waters	• Groundwater discharges to surface waters are not anticipated based upon on-Site groundwater concentrations and the distance to the nearest surface water body.

2.6.2 Fish & Wildlife Remedial Impact Analysis

A Fish and Wildlife Resources Impact Analysis is not required for this Site as there are no known or potential adverse impacts to fish and wildlife resources, the Site is a point source of contamination as the result of historic dry-cleaning operations, and there are no ecological resources present or the habitat of endangered, threatened, or special concern species. The subject Site is located within an urban area in Queens where there are no known or potential adverse impacts to fish and wildlife resources. In addition, there are no known environmental resources, such as mining or recreational uses, on the Site or in the vicinity of the Site.

2.7 Interim Remedial Action

2.7.1 IRM Work Plan and IRM Work Plan Addendum/Excavation Work Plan

An IRM Work Plan for the site prepared by PWGC, dated February 2016, identified: the interim remedial objectives , building demolition activities, soil excavation and disposal requirements, engineering specifications and controls, monitoring and maintenance activities, reporting requirements, a site-specific Health and Safety Plan, Community Air Monitoring Plan, Quality Assurance Plan and schedule for the site.

An Addendum to the IRM Workplan was prepared by PWGC in June 2017 to provide additional detail on the proposed excavation activities to be performed during the IRM. Details typical of a Soil/Materials Management Plan were provided, such as further detail on the IRM's proposed soil excavation, management, and off-Site disposal activities. Post-excavation sample locations,

proposed areas and depths of excavation, additional soil management practices, and engineering/institutional controls were also provided.

The NYSDEC-Approved IRM Work Plan and IRM Work Plan Addendum/EWP are included in **Appendix G**. The significant components of the IRM are detailed in the following sections.

2.7.2 Site Preparation Activities

The premises were vacated by the previous tenant in advance of the IRM. The demolition of on-Site above ground structures, with exception to the concrete floor slab, were completed prior to July 2017. Asbestos abatement activities on the remaining floor slab were completed and supervised by ACT and their subcontractors. Once abatement activities were completed, the contractor proceeded with demolishing the remaining building floor slab in July 2017. The floor slab was demolished in place where no sub-slab soils were excavated or disposed of during the slab demolition activities. Removal of any additional sub-surface structures will occur as part of the final remediation.

2.7.3 Waste Classification Sampling, Disposal Facility Approvals, and "Contained-In" Determinations

Waste characterization samples were collected by ACT from the Site on three separate occasions to obtain waste approval letters from properly permitted disposal facilities prior to the start of both hazardous and non-hazardous soil excavation activities. In December 2016, ACT mobilized to the Site to collect waste classification samples WC-1 and WC-2 for coordinating with potential waste disposal facilities. The samples were collected in the general area of the former dry-cleaning building. WC-1 was a five-point composite sample comprised of shallow samples of 0-5 feet bgs. WC-2 was a five-point composite sample collected from depths of 3-15 feet bgs. The specific sample intervals that were used for each are as follows:

- WC-1: SB-4 (0-3'), SB-7 (0-2'), SB-8 (0-5'), SB-9 (0-2'), SB-10 (0-5')
- WC-2: SB-4 (8-10'), SB-5 (3-5'), SB-7 (13-15'), SB-8 (13-15'), SB-10 (8-10')

On August 4, 2017, ACT returned to the site to collect additional waste characterization samples WC-3 and WC-4 from the southwestern portion of the Site. Both WC-3 and WC-4 consisted of five-point composite samples taken in the vicinity of the rear yard hotspot, in the western portion of the Site.

WC-3 was collected from borings SB-22 and SB-30 at depths of 0-19 feet bgs, and WC-4 was collected from SB-29 at depths of 0-10 feet bgs. The specific sample intervals that were used for each are as follows:

- WC-3: SB-29 (0-2'), SB-29 (3-5'), SB-29 (8-10'), SB-29 (13-15'), SB-29 (17-19')
- WC-4: SB-31A (0-2'), SB-31A (3-5'), SB-31A (8-10'), SB-32 (0-2'), SB-32 (8-10')

Once results of the August 2017 sampling event were received, PWGC compiled the waste classification and RI data to-date in order to define the limits of hazardous and non-hazardous soil, as documented in the non-hazardous "contained-in" determination request letter submitted to and approved by NYSDEC on September 21, 2017. The waste classification sample data and contained-in approval was then used to obtain a letter of acceptance for hazardous waste disposal from the Biogenie Corp. of Montreal, Canada.

On October 26, 2017 ACT collected an additional two TCLP Waste Characterization samples (WC-6 and WC-7) and additional Extractable Petroleum Hydrocarbon (EPH) samples (WC-5, WC-8, WC-9) at various locations throughout the Site to obtain a letter of acceptance for non-hazardous soil disposal from Bayshore Soil Management, LLC (Bayshore). On November 1, 2017, Bayshore reviewed the sample results and issued a formal letter of approval to accept the non-hazardous contained-in material from the Site to a depth of 13 feet. The letters of acceptance from both hazardous and non-hazardous waste disposal facilities currently being used for the Site are provided in **Appendix H.**

A subsequent non-hazardous "contained-in" determination request letter was sent to NYSDEC in November 2017 to reduce the vertical extent of the current hazardous material zones to match the recent endpoint sample results collected from these areas in November 2017. NYSDEC issued an approval on the latest PWGC "contained-in" determination request on November 20, 2017, which was limited to soils from 0-13 feet bgs. Any proposed excavation to depths greater than 13 feet will require the submittal of a separate "contained-in" determination request to NYSDEC prior to excavation activities. Copies of the both the September and November 2017 non-hazardous "contained-in" determination requests and their respective NYSDEC approvals are included in **Appendix I**.

2.7.4 IRM Excavation and Construction Activities

Remedial construction activities were performed at the Site in accordance with the PWGC-prepared IRM Work Plan dated February 2016 and IRM Work Plan Addendum/EWP dated June 2017. The property owner contracted with First Class Contracting to perform the IRM construction activities. The IRM Work Plan and Addendum/EWP are included as **Appendix G**.

First Class Contracting mobilized to the Site to begin installing the excavation support system piles on July 31, 2017. Drilling fluids and spoils generated from the installation of excavation support system piles were directly conveyed into a covered steel liquid holding tank via vacuum hoses. Investigation derived waste (IDW) from the August 2017 waste classification sampling event was also collected and stored within the holding tank. PWGC provided field oversight and CAMP monitoring for these intrusive construction activities.

Hazardous soil excavation and disposal activities occurred at the Site from October 11, 2017 to November 7, 2017. The contractor has excavated and disposed of hazardous PCE-impacted soils at the Biogenie Corp. Facility in Montreal, Canada. The footprint and depths of these hazardous soil excavations are shown within the NYDEC-approved "Contained-In" determination letter dated November 20, 2017 provided in **Appendix I**.

Following the completion of the first round of hazardous soil excavation and disposal activities in 2017, endpoint samples were collected and analyzed for TCL VOCs by EPA Method 8260C. The results of these endpoint samples were then used in redefining the limits of hazardous material remaining at the Site. A revised non-hazardous "contained-in" determination request letter was submitted to NYSDEC, which was approved on November 20, 2017.

Hazardous soil removal was completed to the vertical and horizontal extents identified within this latest NYSDEC-approved "contained-in" letter dated November 20, 2017. Final depths of these hazardous waste hotspot excavations ranged from 6.5 – 13.5 feet bgs.

Non-hazardous soil excavation and disposal activities began on November 7, 2017 and are still ongoing. As of February 2019, approximately 5,300 tons of non-hazardous soil excavated from the Site has been disposed of at Bayshore Recycling LLC located in Keasbey, New Jersey.

A waterproof membrane (Preprufe® 300R & 160R by GCP Applied Technologies) is in the process of being installed below the building foundation. The installation and engineering documentation of this construction activity will be further documented in the future FER for the Site. The IRM excavation was advanced to the proposed development depth of 13 feet bgs in accordance with the IRM Work Plan Addendum/EWP dated June 2016.

2.7.5 Community Air Monitoring

As per the CAMP in the IRM Work Plan, community air monitoring was performed during intrusive earth disturbing activities commencing on July 31, 2017 and currently continues on an as-needed basis to support IRM construction activities. A MiniRAE 2000 PID is utilized to monitor VOCs in the breathing zone and at the perimeter of the Site. The PID is calibrated daily before intrusive work begins by performing a fresh air zeroing followed by a span gas calibration with 100 ppm isobutylene. During intrusive activities, PID results have not exceeded the action levels set forth in the CAMP. CAMP readings are being recorded on log sheets and will be included in the IRM Construction Completion Report (CCR).

Monitoring of particulates is accomplished with a PDR-1000 dust meter. The dust meter is zeroed daily before intrusive work begins. Dust concentrations at the work area perimeter have not exceeded the action levels set forth in the CAMP. When dust concentrations become elevated within the work zone, the soils are wetted to decrease dust concentrations and maintain concentrations of dust less than the action levels. Visible dust has not been observed leaving the Site. A copy of the CAMP is included in **Appendix J**.

2.7.6 Post-Excavation Monitoring and Verification

Following completion of the IRM excavation, endpoint samples will be collected from the bottom of the excavation in accordance with the IRM Work Plan and IRM Work Plan Addendum/EWP. Endpoint samples will be collected from the bottom of the IRM excavation and will be analyzed for TCL VOCs by EPA Method 8260C, TCL SVOCs by EPA Method 8270D, TCL Pesticides by EPA Method 8081B, PCBs by EPA Method 8082, and TAL Metals by EPA Method 6010C/7471/9012B. The results will be compared to the RRSCOs. Final IRM excavation bottom samples as described above have yet to be collected at the Site. Endpoint samples will be collected in the locations and frequencies shown on **Figure 5**.

The endpoint samples collected during the IRM were analyzed for VOCs by EPA Method 8260C to demonstrate completion of the hazardous soil remediation areas as established within the NYSDEC-approved non-hazardous "contained-in" determination request letter dated September 2017. Subsequent endpoint samples collected from the proposed 13-foot development depth were analyzed for the full TAL list of parameters. Excavations were over-excavated and resampled until endpoint samples could demonstrate VOC concentrations below their respective NYSDEC "contained-in" hazardous criteria. Results for IRM endpoint samples collected to-date are provided in **Table 2**. The locations of these endpoint samples and the analytes above UUSCOs are depicted on **Figure 5**. The analytical laboratory reports associated with these samples are included as **Appendix E**.

Endpoint sample results will be compared to RRSCOs where exceedances may prompt additional excavation and sampling during IRM construction, or will be addressed within the proposed remedial action.

In-Line Table 2 – IRM Post-Excavation Endpoint Samples (ongoing)

Soil Sample ID	Depth(s) in feet bgs	Analytical Method(s)	Sample Year
EP-8	9	8260C	2017
EP-9	8	8260C	2017
EP-10	9	8260C	2017
EP-11	12	8260C	2017
EP-12	10	8260C	2017
EP-13	12	8260C	2017
EP-14	11	8260C	2017
EP-15	13.5	8260C	2017
EP-16	12	8260C	2017
EP-17	11	8260C	2017
EP-18	7.5	8260C	2017
EP-19	7	8260C	2017
EP-20	6	8260C	2017
EP-21	5	8260C	2017
EP-22	10	8260C	2017
EP-23	5	8260C	2017
EP-24	5	8260C	2017
EP-25	5	8260C	2017
EP-26	6.5	8260C	2017
EP-27	5	8260C	2017

2.7.7 Backfilling of Excavation

IRM excavations may be partially backfilled where needed for construction purposes with certified clean fill material. Following removal of impacted soils, excavated areas may be partially backfilled for future construction needs with clean fill. Clean fill, as defined by 6NYCRR Part 360, may be brought in from off-site to backfill the excavations and will be in compliance with 6NYCRR Part 375-6.7(d). The NYSDEC will be consulted, and must approve in advance, the return of excavated soil and the use of off-site fill. NYSDEC will be notified in advance of backfilling activities. A demarcation barrier composed of orange snow fencing will be placed at the bottom and sides of excavations in excess of 13 feet bgs prior to placement of backfill material. Backfill necessary to support IRM activities is limited as proposed within the current NYSDEC approved IRM Work Plan and IRM Work Plan Addenda/EWP.

2.8 Remedial Action Objectives

As per NYSDEC Part 375-3.8, the chosen remedy shall be fully protective of public health and the environment including but not limited to, groundwater, drinking water, surface water, and air (including indoor air). Generic Remedial Action Outcomes (RAOs) for the protection of public health and the environment are presented below. The BCP program allows for various specific RAOs based upon the proposed clean-up Track.

Based on the findings of the Remedial Investigation, the following RAOs have been identified for this Site.

2.8.1 Soil

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.8.2 Groundwater

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.
- Remove the source of ground or surface water contamination.
- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.

2.8.3 Soil Vapor

- Mitigate potential impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings.

3.0 DESCRIPTION OF REMEDIAL ACTION PLAN

3.1 Evaluation of Remedial Alternatives

Each remedial alternative is detailed in the Alternatives Analysis summarized in the following sections. The following alternatives were developed are designed to satisfy the site RAOs detailed in Section 2.8:

1. ***Alternative 1*** – Full soil excavation (in excess of protection of groundwater and UUSCOs), ISCO treatment of groundwater, groundwater monitoring (GM) (Track 1 cleanup);

2. ***Alternative 2*** – No Action

3. ***Alternative 3*** – Impacted soil excavation to 13 feet which corresponds to the proposed development depth, SSDS, SVE with contingency ISCO treatment of soil, ISCO treatment of groundwater, GM, and implementation of ICs/ECs (Track 4 cleanup)

4. ***Alternative 4*** – Impacted soil excavation to 13 feet which corresponds to the proposed development depth, additional hotspot excavation to 19 feet, SVE system, ISCO treatment of groundwater, GM, and implementation of ICs/ECs (Track 4 cleanup)

Each alternative was evaluated based upon consideration of the following criteria in accordance with Part 375-1.8(f):

- Protection of human health and the environment;
- Compliance with standards, criteria, and guidelines (SCGs);
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance; and
- Land use.

3.1.1 Alternative 1 – Full Soil Excavation (In Excess of Protection of Groundwater and UUSCOs), ISCO Groundwater Treatment, and Groundwater Monitoring (GM) (Track 1 Cleanup)

Alternative 1 would consist of the following:

1. Excavation of soils in excess of UUSCOs throughout the site to the bedrock surface;

2. ISCO of groundwater in the entire eastern portion of the site groundwater to address on-Site groundwater contamination;

3. Groundwater monitoring to track the effectiveness of the soil remediation and ISCO groundwater treatment; and

4. Short-term ICs/ECs may be used within five years of the Certificate of Completion issuance to further protect human health and the environment in accordance with RAOs.

Based upon the IRM endpoint and RI samples collected to-date, the excavation to achieve the required RAOs for this alternative would be to a minimum depth of 25 feet in western portion of the site with further lateral expansion towards the east to remove additional areas of soil exceeding UUSCOs. Specific short-term ICs/ECs that may be part of this alternative are detailed below.

3.1.1.1 Overall Protectiveness of Public Health and the Environment

Alternative 1 provides protection of public health and the environment by achieving RAOs. This includes the protection of site employees, the surrounding community, and general construction and utility workers. Remedial contractors and the surrounding neighborhood could be exposed to impacted soil, dust, and groundwater during the implementation of this alternative, but the potential risks can be minimized by implementing and following a site-specific HASP and CAMP. Post-remedial exposure to off-Site residents from soil vapors is not expected and groundwater use will be restricted until groundwater quality achieves RAOs.

3.1.1.2 Compliance with Remedial Goals, SCGs, and RAOs

Alternative 1 could meet compliance with remedial goals, SCGs, and RAOs if the full vertical extent of soil contamination can be excavated utilizing available technology.

3.1.1.3 Long-Term Effectiveness and Permanence

Alternative 1 would achieve long term effectiveness and permanence by permanently removing and/or remediating soils affected by site contaminants. Bulk reductions in groundwater contamination, as implemented, will also be permanent. Under this Alternative, risk from soil impact is eliminated and risk from groundwater impacts is significantly reduced. Alternative 1 will continue to meet RAOs for soil and groundwater in the future, providing a permanent long-term solution for the site.

3.1.1.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 1 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by meeting UUSCOs. The removal/remediation of on-Site soil will also reduce the toxicity, mobility, and volume of contaminants within on-Site soil vapor. Treatment of groundwater will reduce the toxicity, mobility, and volume of contaminants in on-Site groundwater.

3.1.1.5 Short Term Impacts and Effectiveness

The short-term adverse impacts and exposure to the public and the environment during the implementation of Alternative 1 is minimal. Short term exposure to on-Site workers during excavation and loading activities will be addressed with a HASP and mitigated using personal protective equipment (PPE), monitoring, and ECs. Potential short-term exposure to the surrounding community will be addressed using odor and dust suppression techniques and through the implementation of a CAMP, which will require air monitoring activities during excavation and soil disturbance activities. Other potential impacts to the community, such as construction related noise, vibrations, and traffic, will be controlled and regulated under the terms of the New York City Department of Buildings (NYCDOB)-issued building permit, which can place a Stop Work Order on the property for unsafe conditions, community impacts, or violation of the terms and conditions of the permit. Decontamination procedures of

equipment, including trucks transporting soil to off-Site disposal facilities, will minimize the potential for impacted soil to be dispersed beyond the Site boundary.

3.1.1.6 Implementability

Alternative 1 presents significant technical difficulties and may not achieve goals for groundwater without employing long-term ECs (> five years). The proposed finished IRM excavation depth is currently 13 feet bgs, which has extended to the foundation walls of all neighboring buildings. In order to excavate safely, different methods of sheeting, shoring and underpinning of adjacent building foundations are required to safely proceed to 13 feet bgs without undermining adjacent structures. The deepest known soil sample to exceed UUSCOs is approximately 25 feet bgs, although exceedances may exist deeper than 25 feet bgs. To achieve the necessary cleanup of construction at-risk foundation sections, under-pinning, and lagging systems may be implementable using available technologies depending upon the final excavation depth. Excavation to depths of greater than 13 feet bgs would require significant shoring and stabilization operations and may not be feasible as a result of potential impacts to neighboring building foundations.

3.1.1.7 Cost-Effectiveness

The cost estimate to implement Alternative 1 is estimated at the following:

Capital Costs	$1,000,000
Post Remedial Site Control (PRSC) Costs	$200,000
Total Costs	$1,200,000

The capital costs for this estimate include the equipment, materials, waste disposal, and indirect capital costs such as engineering and design expenses, and legal and administrative costs. The post remedial site control (PRSC) costs for this estimate includes monitoring. This estimate assumes that the alternative, including GM, will be completed in three years.

3.1.1.8 Compatibility with Land Use

Alternative 1 is compatible with respect to the proposed land use and to land uses in the vicinity of the Site. The proposed use is consistent with existing zoning designation for the property and consistent with development patterns. The Site is a residential zoned site with a commercial overlay, and the neighboring buildings consist of mixed use residential and commercial properties. The alternative is consistent with the NYSDEC BCP goal for cleanup of contaminated land and brings the property into productive use. The alternative is protective of natural resources and cultural resources.

3.1.1.9 Community Acceptance

As per DER-10 4.2, after the decision document is subject to public comment, the final criterion of community acceptance is considered. This modifying criterion is evaluated after public comments on the remedy have been received, prior to DER selection of the remedy. No public comments have been received to-date regarding the potential alternatives. The public will be provided the opportunity to provide public input on the chosen alternative during the RAWP public comment period, which will be evaluated by DER.

3.1.2 Alternative 2 – No Action

Alternative 2 would consist of the following:

1. Excavation of soils in excess of UUSCOs throughout the site to a depth of 13 feet bgs. (significantly completed during the IRM)

Specific ICs/ECs that would be part of this alternative are detailed below.

3.1.2.1 Overall Protectiveness of Public Health and the Environment

Alternative 2 does not provide protection of public health and the environment and will likely not achieve RAOs. Remedial contractors and the surrounding neighborhood could be exposed to impacted soil, dust, and groundwater during the construction of this alternative. Off-Site impact is to be investigated and mitigated by others.

3.1.2.2 Compliance with Remedial Goals, SCGs, and RAOs

Alternative 2 is unlikely to meet compliance with remedial goals, SCGs, and RAOs for the site.

3.1.2.3 Long-Term Effectiveness and Permanence

Alternative 2 will have some long-term effectiveness and permanence by permanently removing and/or remediating soils affected by site contaminants greater than UUSCOs for the top 13 feet of soil.

3.1.2.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 2 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by meeting UUSCOs to a depth of 13 feet bgs. The removal/remediation of on-Site soil will also reduce the toxicity, mobility, and volume of contaminants within on-Site soil vapor.

3.1.2.5 Short Term Impacts and Effectiveness

The short-term adverse impacts and exposure to the public and the environment during the implementation of Alternatives 2 is minimal. Short-term exposure to on-Site workers during excavation and loading activities will be addressed with a HASP and mitigated using PPE, monitoring, and ECs. Potential short-term exposure to the surrounding community will be addressed using odor and dust suppression techniques and through the implementation of a CAMP, which will require air monitoring activities during excavation and soil disturbance activities. Other potential impacts to the community, such as construction related noise, vibrations, and traffic, will be controlled and regulated under the terms of the NYCDOB-issued building permit, which can place a Stop Work Order on the property for unsafe conditions, community impacts, or violation of the terms and conditions of the permit.

3.1.2.6 Implementability

Alternative 2 can be implemented using readily available and proven technologies. Both the technical and non-technical aspects of implementing this alternative are feasible and have been partially implemented during the IRM.

3.1.2.7 *Cost-Effectiveness*

The cost estimate to implement Alternative 2 is estimated to cost the following:

Capital Costs	$0
PRSC Costs	$0
Total Costs	$0

3.1.2.8 *Compatibility with Land Use*

Alternative 2 may not be compatible with respect to the proposed land use and to land uses in the vicinity of the Site. The proposed use is consistent with existing zoning designation for the property and consistent with development patterns, including transit-oriented housing. The Site is a residential zoned site with a commercial overlay and the neighboring buildings consist of mixed use residential and commercial properties. The alternative is inconsistent with the NYSDEC BCP goal for cleanup of contaminated land.

3.1.2.9 *Community Acceptance*

As per DER-10 4.2, after the decision document is subject to public comment, the final criterion of community acceptance is considered. This modifying criterion is evaluated after any public comments on the remedy have been received, prior to DER selection of the remedy. No public comments have been received to date regarding the potential alternatives. The public will be provided the opportunity to provide public input on the chosen alternative during the RAWP public comment period, which will be evaluated by DER.

3.1.3 *Alternative 3 – Impacted Soil Excavation to 13 feet, SVE, SSDS, ISCO Treatment, Cover System, GM, and Implementation of ICs/ECs (Track 4 Cleanup)*

Alternative 3 would consist of the following:

1. Excavation of soils in excess of UUSCOs throughout the site to a depth of 13 feet bgs. (completed during the IRM, no further excavation needed);

2. Installation and operation of a Soil Vapor Extraction system to reduce residual PCE in soil and soil vapor. The SVE system will be comprised of nine (9) 2" dia. SVE wells each installed 10' deep below the basement slab. Each SVE well screen is 5' long (from 5' – 10' below the slab) with a 5' long riser connecting the screen to the surface piping. All SVE wells will manifold into a single inlet pipe connecting to a 1.5HP SVE blower;

3. Installation of a Sub-slab Depressurization System to protect human health within the building;

4. ISCO of groundwater to reduce PCE concentrations in groundwater and provide plume stabilization;

5. Installation of a concrete slab throughout the building footprint to protect human health within the building;

6. Groundwater monitoring to track the effectiveness of the soil remediation, ISCO groundwater treatment, and SSD system;

7. The implementation of ICs/ECs to further protect human health and the environment in accordance with RAOs.

Specific ICs/ECs that would be part of this alternative are detailed below; and

3.1.3.1 Overall Protectiveness of Public Health and the Environment

Alternative 3 provides protection of public health and the environment by achieving RAOs. This includes the protection of site employees, the surrounding community, and general construction and utility workers. Remedial contractors and the surrounding neighborhood could be exposed to impacted soil, dust, and groundwater during the construction of this alternative, but the potential risks can be minimized by implementing and following a Site-specific HASP and CAMP. Post remedial exposure to off-Site residents from soil vapors would be decreased. Off-Site impact is to be investigated and mitigated by others. The use of ICs/ECs will provide protection of public health and the environment during implementation of the alternative.

3.1.3.2 Compliance with Remedial Goals, SCGs, and RAOs

Alternative 3 could meet compliance with remedial goals, SCGs, and RAOs for the site by meeting UUSCOs down to a depth of 13 feet, ensuring plume stabilization using ISCO, and the use of ICs/ECs while the remediation is ongoing.

3.1.3.3 Long Term Effectiveness and Permanence

Alternative 3 achieves long-term effectiveness and permanence by permanently removing and/or remediating all soils affected by site contaminants greater than UUSCOs for the top 13 feet of soil (completed during the IRM, no further excavation needed). Bulk reductions in groundwater contamination, as implemented under this alternative, will be permanent. Under this alternative, risk from soil impact is eliminated for on-Site residents and off-Site residents. Risk from groundwater impacts is also reduced. Post remedial exposure to off-Site residents from soil vapors would be decreased. Off-Site impact is to be investigated and mitigated by others. This alternative is capable of meeting RAOs for soil and groundwater in the future.

3.1.3.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 3 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by meeting UUSCOs to a depth of 13 feet bgs. The removal/remediation of on-Site soil will also reduce the toxicity, mobility, and volume of contaminants within on-Site soil vapor. Treatment of groundwater will reduce the toxicity, mobility, and volume of contaminants in on-Site groundwater. With the implementation of the ICs/ECs at the site, the potential mobility of the PCE is limited through the sub-slab vapor barrier and site controls within the SMP and the EE.

3.1.3.5 Short Term Impacts and Effectiveness

The short-term adverse impacts and exposure to the public and the environment during the implementation of Alternatives 3 is minimal. Short-term exposure to on-Site workers during excavation and loading activities will be addressed with a HASP and mitigated using PPE, monitoring, and ECs. Potential short-term exposure to the surrounding community will be addressed using

odor and dust suppression techniques and through the implementation of a CAMP, which will require air monitoring activities during all excavation and soil disturbance activities. Other potential impacts to the community, such as construction related noise, vibrations, and traffic, will be controlled and regulated under the terms of the NYCDOB-issued building permit, which can place a Stop Work Order on the property for unsafe conditions, community impacts, or violation of the terms and conditions of the permit.

3.1.3.6 Implementability

Alternative 3 can be implemented using readily available and proven technologies. Both the technical and non-technical aspects of implementing this alternative are feasible and have proven successful in other remedial sites. Access to construct and house the required equipment needed could be very limited due to the small size of the property and there may be long-term nuisance issues related to the noise, heat, and vibrations caused by the blowers required for this Alternative.

Based on SVE pilot testing performed at the subject site, the implementation of a high-vacuum SVE system will not be feasible due to a substantial positive pressure from off-site. However, a low vacuum SVE system with several well points may be utilized instead. Given the unusual positive pressure readings during the pilot test, the contingency plan if the low vacuum SVE system does not perform as designed, shallow ISCO injections into the unsaturated soils will be done.

3.1.3.7 Cost-Effectiveness

The cost estimate to implement Alternative 3 is estimated to cost the following:

Capital Costs	$1,300,000
PRSC Costs	$300,000
Total Costs	$1,600,000

The capital costs for this estimate include the construction, equipment, materials, waste disposal, and indirect capital costs such as engineering and design expenses, legal and administrative costs, and start-up costs. The PRSC costs for this estimate include O&M, monitoring, energy usage, and disposal of generated waste. This estimate assumes that GM will be completed in 15 years.

3.1.3.8 Compatibility with Land Use

Alternative 3 is compatible with respect to the proposed land use and to land uses in the vicinity of the Site. The proposed use is consistent with existing zoning designation for the property and consistent with development patterns, including transit-oriented housing. The Site is a residential zoned site with a commercial overlay and the neighboring buildings consist of mixed use residential and commercial properties. The alternative is consistent with the NYSDEC BCP goal for cleanup of contaminated land and brings the property into productive use. The alternative is protective of natural resources and cultural resources.

3.1.3.9 Community Acceptance

As per DER-10 4.2, after the decision document is subject to public comment, the final criterion, community acceptance, is considered. This modifying criterion is evaluated after any public comments on the remedy have been received, prior to DER selection of the remedy. No public comments have been received to-date regarding the potential alternatives. The public will

be provided the opportunity to provide public input on the chosen alternative during the RAWP public comment period, which will be evaluated by DER.

3.1.4 Alternative 4 – Impacted Soil Excavation to 13 feet, Additional Hotspot Excavation to 19 feet, SVE system (Later to be Converted to a SSDS), ISCO Treatment, GM, and Implementation of ICs/ECs (Track 4 Cleanup)

Alternative 4 would consist of the following:

1. Excavation of soils in excess of UUSCOs throughout the site to a depth of 13 feet bgs. (significantly completed during the IRM);

2. An additional hotspot excavation to 19 feet in the rear yard area (AOC-2) to reduce the need for a long-term remedial schedule;

3. The installation and operation of a Soil Vapor Extraction system (later to be converted to an SSDS) to reduce residual PCE in soil and soil vapor;

4. ISCO of groundwater in the entire eastern portion of the site groundwater to reduce PCE concentrations in groundwater and provide plume stabilization;

5. Groundwater monitoring to track the effectiveness of the soil remediation, ISCO groundwater treatment, and SVE system; and

6. The implementation of ICs/ECs, such as a vapor barrier, to further protect human health and the environment in accordance with RAOs.

When it is determined that recovery of VOCs have reached an asymptotic low in the SVE system, the system will be converted to a SSDS by replacing specific equipment, such as the blower, with equipment meeting the specifications for a SSDS. Specific ICs/ECs that would be part of this alternative are detailed below.

3.1.4.1 Overall Protectiveness of Public Health and the Environment

Alternative 4 provides protection of public health and the environment by achieving RAOs. This includes the protection of site employees, the surrounding community, and general construction and utility workers. Remedial contractors and the surrounding neighborhood could be exposed to impacted soil, dust, and groundwater during the construction of this alternative, but the potential risks can be minimized by implementing and following a Site-specific HASP and CAMP. Post remedial exposure to off-Site residents from soil vapors would be decreased. Off-Site impact is to be investigated and mitigated by others. The use of ICs/ECs will provide protection of public health and the environment during implementation of the alternative.

3.1.4.2 Compliance with Remedial Goals, SCGs, and RAOs

Alternative 4 could meet compliance with remedial goals, SCGs, and RAOs for the Site by meeting UUSCOs to a depth of 13 feet bgs. and within the rear yard hot spot area to 19 feet bgs., installation of a SVE system/SSDS to remediate soil and soil vapor and

mitigate potential soil vapor intrusion in the proposed building, and ensuring plume stabilization by removal of source areas by excavating impacted soils using ISCO and the use of ICs/ECs while the remediation is ongoing.

3.1.4.3 Long Term Effectiveness and Permanence

Alternative 4 achieves long -term effectiveness and permanence by permanently removing and/or remediating soils affected by Site contaminants greater than UUSCOs to a depth of 13 feet bgs. and within the rear yard hot spot area to 19 feet bgs. Bulk reductions in groundwater contamination, as implemented under this alternative, will be permanent. Under this alternative, risk from soil impact is eliminated for on-Site residents and off-Site residents. Risk from groundwater impacts is also reduced. This alternative is capable of meeting RAOs for soil and groundwater in the future.

3.1.4.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 4 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by meeting UUSCOs to a depth of 13 feet bgs. and within the rear yard hot spot area to 19 feet bgs. The removal/remediation of on-Site soil will also reduce the toxicity, mobility, and volume of contaminants within on-Site soil vapor. Treatment utilizing SVE will reduce the toxicity, mobility, and volume of contaminants in on-Site soils. With the implementation of the ICs/ECs at the site, the potential mobility of the PCE is limited through the sub-slab vapor barrier and site controls within the SMP and the EE.

3.1.4.5 Short Term Impacts and Effectiveness

The short-term adverse impacts and exposure to the public and the environment during the implementation of Alternatives 4 is minimal. Short-term exposure to on-Site workers during excavation and loading activities will be addressed with a HASP and mitigated using PPE, monitoring, and ECs. Potential short-term exposure to the surrounding community will be addressed using odor and dust suppression techniques and through the implementation of a CAMP, which will require air monitoring activities during all excavation and soil disturbance activities. Other potential impacts to the community such as construction related noise, vibrations, and traffic will be controlled and regulated under the terms of the NYCDOB-issued building permit, which can place a Stop Work Order on the property for unsafe conditions, community impacts, or violation of the terms and conditions of the permit.

3.1.4.6 Implementability

Based on SVE pilot testing performed at the subject site, the implementation of a high-vacuum SVE system will not be feasible due to a substantial positive pressure from off-site. Furthermore, additional excavation beyond 13 feet bgs will be lower than the footings of neighboring buildings, causing structural concerns through soil destabilization. Given these site-specific factors, Alternative 4 is recommended.

3.1.4.7 Cost-Effectiveness

The cost estimate to implement Alternative 4 is estimated to cost the following:

Capital Costs	$1,400,000
PRSC Costs	$300,000

Total Costs	$1,700,000

The capital costs for this estimate include the construction, equipment, materials, waste disposal, and indirect capital costs such as engineering and design expenses, legal and administrative costs, and start-up costs. The PRSC costs for this estimate include O&M, monitoring, energy usage, and disposal of generated waste. This estimate assumes that the SVE system and GM will be completed in 15 years.

3.1.4.8 Compatibility with Land Use

Alternative 4 is compatible with respect to the proposed land use and to land uses in the vicinity of the Site. The proposed use is consistent with existing zoning designation for the property and consistent with development patterns, including transit-oriented housing. The Site is a residential zoned Site with a commercial overlay and the neighboring buildings consist of mixed use residential and commercial properties. The alternative is consistent with the NYSDEC BCP goal for cleanup of contaminated land and brings the property into productive use. The alternative is protective of natural and cultural resources.

3.1.4.9 Community Acceptance

As per DER-10 4.2, after the decision document is subject to public comment, the final criterion of community acceptance is considered. This modifying criterion is evaluated after any public comments on the remedy have been received, prior to DER selection of the remedy. No public comments have been received to date regarding the potential alternatives. The public will be provided the opportunity to provide public input on the chosen alternative during the RAWP public comment period, which will be evaluated by DER.

3.2 Selection of the Preferred Remedy

Based upon the findings of the RI, SVI study, groundwater sampling data, current IRM construction progress and endpoint analytical data, location and depth of the residual PCE impact, lithology and hydrogeologic conditions at the Site, green remediation guidelines, and the schedule for the future redevelopment of the Site, implementation of Alternative 3 is recommended as the chosen remedial strategy for the Site.

Alternative 3, which consists of excavation of impacted soils to a sitewide depth of 13 feet bgs (completed during the IRM excavation), installation of a composite cover system and vapor barrier, installation and operation of a SVE, SSDS, GM, ISCO treatment of CVOC-contaminated soil and groundwater at the Site, and implementation of ICs/ECs is protective of the public health and environment, compliant with Remedial Goals, SCGs, and RAOs for the site, has proven technology to ensure long-term effectiveness and permanence, reduces the toxicity, mobility, and volume of the contamination, has minimal short term impacts, is readily implementable and compatible with the size of the Site, and is cost effective compared to the other alternatives. Based upon the strengths of this alternative, the protection of public health and environmental aspects, and the minimal visual impact created by this alternative, community acceptance of this alternative should be strong.

This alternative would achieve RAOs by implementing the following tasks:

- Remove soils that exceed the Protection of Groundwater and UUSCOs down to 13 feet bgs throughout the site, which has been completed under the IRM;

- Utilize an SVE, SSDS, a composite cover system, and a vapor barrier installation to mitigate potential vapor intrusion into the proposed on-Site building and neighboring properties. The vapor barrier will be chosen to ensure protection based upon the contaminant concentrations;

- Utilize ISCO to reduce contaminant concentrations in soil and groundwater and provide plume stabilization at the property boundary, as needed;

- Provide for GM to ensure that the RAOs are being achieved; and

- Implement appropriate ICs/ECs (i.e. on-Site soil management, dust suppression, truck wash and other ECs) to ensure protection to public health and the environment while the final remedy is being implemented.

There are two proposed soil ISCO treatment areas located in the western portion of the site measuring approximately 400 square feet and 100 square feet. A series of 2-inch diameter injection wells have been installed in these soil treatment areas. Sixteen wells were installed in the larger treatment area and seven wells were installed in the smaller area. The top of these well screens correspond with the top of existing site soils, at a depth of approximately 13 feet below street level.

As part of an SVE the piping will be installed in the basement area with the exhaust pipe extending outside. The piping will be supported temporarily until it can be determined that the SVE operates as designed (see Section 7.2). The nine (9) SVE wells will be manifolded together into a single inlet pipe connected to a blower, piping, valves, gauges, instrumentation and controls. The effluent air will discharge to the atmosphere on the east side of the building. If SVE influent concentrations are within allowable discharge limits as set forth in 6 NYCRR Part 212, the NYSDEC will be petitioned to allow the effluent to bypass carbon treatment. The current SVE design documents are included in **Appendix U**. The SSDS piping trenches would be installed across the property, including beneath the footprint of the proposed building. The trenches would be piped back to air phase granulated activated carbon (GAC) units in the parking area and then up to an enclosure on the roof containing a blower, piping, valves, gauges, instrumentation, and controls. The effluent air would be discharged to the atmosphere above the roof. The effluent air, prior to entering the GAC units, will be tested periodically to determine if continual use of the carbon treatment system is required. The decision to remove the carbon treatment will be made in consultation with the NYSDEC. A vapor barrier system would be installed beneath the concrete slab to further mitigate the potential for vapor intrusion. The vapor barrier product will be certified by the manufacturer that it can withstand exposure to the concentrations observed on the Site. The GM portion of the alternative provides for implementation of a groundwater monitoring plan to effectively monitor groundwater impact on-Site and at the Site boundary. Prior to commencing groundwater monitoring as part of the remedial action, each permanent monitoring well will need to be inspected, developed and surveyed within their new flush-mounted well boxes to be located in the proposed basement building floor slab. If a well is determined to be damaged as a result of IRM construction activities, the well must be replaced. The monitoring program would utilize the existing on-Site groundwater monitoring well network at the site and replacement wells that will be installed for wells damaged beyond repair during IRM construction activities. Initially, each designated monitoring well would be monitored and sampled on a quarterly basis. Samples would be analyzed for VOCs by EPA method 8260. If groundwater samples are collected following ISCO, a quenching agent or colorimetric kit will be utilized in the applicable samples. Following the receipt of the results from the 4th quarterly sampling event, the frequency and number of monitoring wells to be sampled in the future may be adjusted, based upon NYSDEC approval.

In an effort to provide protection of public health and the environment during the implementation of the final remedy, ICs/ECs will be put in place for the Site to provide notice, restrict and limit exposures, and maintain appropriate physical barriers to eliminate potential exposure pathways to contamination. For this Site, ECs would include a vapor barrier system and SSDS beneath the proposed structure. An Environmental Easement (EE) and SMP for the site would detail the requirements for:

- Inspecting and certifying that the composite cover system, SVE and SSDS is still functioning properly and there are no cracks in the foundation;
- Soil Management Plan to address residual contaminated soil left in place,
- Groundwater monitoring to be proposed in confirming the effectiveness of ISCO treatment of on-Site groundwater contamination;
- The prohibition of the use of the groundwater underlying the property without treatment;
- Amending the EE in the event of modifications to the ECs, and
- Compliance with the EE by the Grantor and the Grantor's successors.

The specific design and specifications of the remedial alternative will be more fully detailed in the Remedial Design Report for the Site.

3.2.1 Zoning

The Site's proposed use conforms to the current commercial and residential zoning.

The subject Site was identified on Zoning Map 14B of the New York City Department of City Planning, dated November 28, 2017 and is in an C4-4 Commercial district. Nearby properties are also zoned as C4-4. The Site's proposed use conforms with the current zoning.

3.2.2 Applicable Comprehensive Community Master Plans or Land Use Plans

There are no current comprehensive community master plans or land use plans pertaining to or in the vicinity of the subject Site.

3.2.3 Surrounding Property Uses

The immediately adjoining properties consist of a one -story commercial building to the north, one eight-story mixed use building with apartments above retail stores to the south, an eight-story government building to the east and a commercial hotel under construction to the west. The general zoning and property usage in the surrounding area consists of mixed commercial and residential buildings. There are no schools, day care facilities, hospitals, or other sensitive receptors in the immediate vicinity of the subject Site. There are also no rivers, streams, or wetlands in the immediate vicinity of the Site; however, the Flushing Bay is located approximately 3.4 miles north of the Site and Willow Lake is located approximately 0.6 miles to the north as well.

3.2.4 Citizen Participation

In accordance with DER-23, a 45-day comment period will be open to the community following submission of this RAWP to the NYSDEC.

3.2.5 Environmental Justice Concerns

There are no environmental justice concerns related to the proposed redevelopment of this Site as the redevelopment will not reasonably be expected to cause or increase a disproportionate burden on the community in which the Site is located, including low-income minority communities, or to result in a disproportionate concentration of commercial or industrial uses in what has historically been a mixed use or residential community.

3.2.6 Land Use Designations

There are no federal or state land use designations for the subject Site.

3.2.7 Population Growth Patterns

The proposed use of the Site conforms to recent development patterns in the area.

3.2.8 Accessibility to Existing Infrastructure

The Site is accessible to existing infrastructure, such as the Metropolitan Transit Authority (MTA) subway lines and bus routes.

3.2.9 Proximity to Cultural Resources

There are no important cultural resources, including Federal or State historic heritages sites or Native American sites located within ½ mile of the subject site.

3.2.10 Proximity to Natural Resources

The Site is located within a highly industrialized and densely populated urban area in Long Island City in the Borough of Queens in New York and is not in close proximity to natural resources. The Site has been historically developed and does not serve as habitat for native species.

3.2.11 Off-Site Groundwater Impacts

There are no known downgradient groundwater receptors.

3.2.12 Proximity to Floodplains

The FEMA FIRM shows that the Site is currently not in a flood zone. The property is within 1 mile to the southwest of Flood Zone X and Special Flood Hazard Area Zone AE.

3.2.13 Current Institutional Controls

There are no institutional controls currently implemented at the Site.

3.3 Summary of Selected Remedial Actions

The proposed remedy achieves the RAOs established for the redevelopment project. The remedial action is protective of the public health and environment, is compliant with remedial goals, SCGs, and RAOs, demonstrates short-term and long-term effectiveness, will result in the reduction of toxicity, mobility, and volume of contaminants through treatment, is implementable, cost effective, compatible with land use, and will generally be acceptable to the surrounding community.

The proposed remedial action will consist of the following:

- Responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with applicable Federal, State, and local rules and regulations;
- Implementation of a CAMP for particulates and volatile organic carbon compounds during intrusive activities;
- Excavation of soil/fill that exceed UUSCOs to 13 feet bgs. This task has been significantly completed during the IRM;
- Screening of excavated soil / fill during intrusive activities for indications of contamination by visual means, odor, and monitoring with a PID;
- ISCO injections to reduce the toxicity, mobility, and volume of contaminants in groundwater;
- Collection and laboratory analysis of endpoint soil samples to confirm the performance of the remedy with respect to attainment of UUSCOs;
- Appropriate off-Site disposal of material removed from the Site in accordance with Federal, State and local rules and regulations for handling, transport, and disposal;
- Construction and maintenance of an engineered composite cover consisting of a concrete building slab with an SSDS incorporated into the slab;
- Installation of a vapor barrier system to further mitigate potential vapor intrusion into the proposed on-Site building;
- Construction and maintenance of an engineered composite cover consisting of concrete sidewalks, a concrete parking lot, and a concrete slab to prevent human exposure to residual contaminated soil/fill remaining under the Site;
- If necessary for a conditional Track 1 remedy or required for a Track 4 remedy, recording of an EE, including ICs, to prevent future exposure to residual contamination remaining at the Site (a copy of the EE will be provided as an appendix to the Final Engineering Report [FER]);
- If necessary, publication of a SMP for long-term management of residual contamination as required by the EE, including plans for: (1) ICs and ECs, (2) monitoring, (3) operation and maintenance, and (4) reporting;
- If Track 1 UUSCOs or Track 4 (Restricted Residential) RRUSCOs are not met, restriction on the use of the property to commercial or more restrictive use as detailed in the EE;
- Prohibition on the use of groundwater beneath the Site without treatment rendering it safe for its intended use; and
- Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications as identified within this Work Plan, (2) all Federal, State and local rules and regulations for handling and transport of material.

The remedy does not contemplate the importation of fill material. However, should it be determined that fill is needed, the import of materials to be used for backfill and cover would be performed in compliance with applicable chemical limits, and other specifications, as well as Federal, State and local rules and regulations for handling and transport of material. Native material that meets the UUSCOs may be used as backfill on-Site, if necessary.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP. Deviations from the RAWP will be promptly reported to NYSDEC for approval and explained in the FER.

4.0 REMEDIAL ACTION PROGRAM

4.1 Governing Documents

4.1.1 Site Specific Health & Safety Plan (HASP)

The HASP has been included as **Appendix K**. The HASP outlines the requirements for training, medical surveillance, daily tailgate meetings, emergency response, and accident and injury reporting.

The PWGC Field Team Leader will be responsible for implementing the HASP, completing the daily tailgate safety meetings and performing necessary Industrial Hygiene monitoring as specified in the HASP.

Subcontractors to ACT and/or Luciano LLC will have the option of adopting this HASP or developing their own Site-specific document. If a subcontractor chooses to prepare their own HASP, it must meet the minimum requirements as detailed in the Site HASP prepared by PWGC, and must be made available to PWGC and NYSDEC.

Remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA and the PWGC Corporate Environmental Health and Safety policy. Modifications to the HASP may be made with the approval of the PWGC Health and Safety Manager and/or Project Manager.

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

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

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

4.1.2 Quality Assurance Project Plan (QAPP)

The quality assurance project plan (QAPP), included as **Appendix L**, presents the objectives, functional activities, methods, and quality assurance / quality control (QA/QC) requirements associated with sample collection and laboratory analysis for remedial activities. The QAPP follows requirements detailed in DER-10, Section 2.

The components of the QAPP include:

- Project Organization,
- Sampling requirements, including methodology, identification, quantity, volumes, locations, frequency, chain-of-custody procedures, and sample packaging,
- Field/Laboratory data control requirements,
- Equipment decontamination, and
- Field documentation.

4.1.3 Soil/Materials Management Plan (SMMP)

A Soil/Materials Management Plan (SMMP), further detailed in Section 5.4 of this RAWP, includes detailed plans for managing soils/materials that are disturbed at the Site, including excavation, handling, storage, transport, and disposal. The SMMP will also include the controls that will be applied to these efforts to assure effective, nuisance-free performance in compliance with applicable Federal, State, and local laws and regulations.

4.1.4 Storm-Water Pollution Prevention Plan (SWPPP)

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during remedial activities. Erosion and sediment controls will be in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control.

4.1.5 Community Air Monitoring Plan (CAMP)

A Site-specific CAMP has been prepared and included as **Appendix J** to provide measures for protection for on-Site workers and the downwind community (i.e., off-Site receptors including residences, businesses, and on-Site workers not directly involved in the remedial work) from potential airborne contaminants as a direct result of the remedial activities. The primary concerns for this Site are VOCs and dust particulates.

The CAMP will be implemented and executed in accordance with 29 CFR 1910.120(h), the NYSDOH Generic CAMP, and the NYSDEC TAGM #4031.

4.1.6 Community Participation Plan (CPP)

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

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

The approved Community Participation Plan for this project is attached in **Appendix M**.

Document repositories have been established at the following location which contains applicable project documents:

Queens Library at Richmond hill

118-14 Hillside Avenue

Richmond Hill, NY 11418

Phone: (718) 849-7150

Contact Person: Sandra Sutton

4.2 General Remedial Construction Information

4.2.1 Project Organization

The Remedial Engineer (RE) and Project Manager (PM) for this project are Paul K. Boyce, PE, PG and John Eichler, PG, respectively. Principal personnel who will participate in the remedial action include an on-Site environmental scientist or engineer (TBD). The on-Site environmental scientist/engineer will document that the remedial actions are implemented in accordance with this RAWP, HASP, SMMP, and supporting documents, and promptly report deviations from these documents to the appropriate team members, the RE, and the PM that the issue can be rectified in a timely manner. The environmental scientist/engineer will report directly to the PM and RE, and will provide daily summary reports of the Site remedial activities.

4.2.2 Remedial Engineer

The RE for this project will be Paul K. Boyce. The RE is a registered professional engineer licensed by the State of New York. The RE will have primary direct responsibility for implementation of the remedial program for the Site, located at 124-22 Queens Boulevard, Kew Gardens, NY (NYSDEC BCA Site No. C241177.) The RE will certify in the FER that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the RAWP and other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other RE certification requirements are listed later in this RAWP.

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

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

The RE will provide the certifications listed in Section 9.1 in the FER.

4.2.3 Remedial Action Construction Schedule

The estimated duration to complete the construction of the remedy (excavation, installation of vapor barrier, installation of SVE system, installation of groundwater monitoring and ISCO injection network) is estimated at 6-12 months following NYSDEC approval of the RAWP.

The estimated duration to complete the remaining impacted soil excavation, installation of the SSDS, and installation of the vapor barrier and cellar and first floor concrete slabs is three to four months and is currently being performed at risk by the contractor. Once the building is near completion, which is estimated at approximately 8-12 months from the approval of this RAWP, the above grade portion of the SSDS will be installed, which may take an additional 2-4 weeks.

A generalized timeline has been prepared to illustrate the proposed schedule starting with the approval of this RAWP and is included as **Table 12**. Following approval of this RAWP by the NYSDEC, a revised timeline with actual dates will be submitted.

4.2.4 Work Hours

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

4.2.5 Site Security

Site security will be maintained by utilizing and maintaining the existing eight-foot-high plywood construction fence surrounding the property. The fence will be maintained throughout the project and the vehicle access gate will be maintained during daily operations and closed and locked at other times.

4.2.6 Traffic Control

Drivers of trucks leaving the Site with soil or arriving with fill will be instructed to proceed without stopping in the vicinity of the Site to prevent neighborhood impacts. The planned truck route from the Site is attached as **Figure 8**.

4.2.7 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to the NYSDEC Project Manager. Petroleum spills will be reported to the NYSDEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development related excavation, sampling will be performed on contaminated source material and surrounding soils and the associated results will be reported to NYSDEC. Chemical analytical testing will be performed for Full List volatiles and semi-volatiles, pesticides/PCBs, and TAL/TCLP metals, as appropriate.

4.2.8 Worker Training and Monitoring

Remedial site workers will be required, at a minimum, to have completed 29 CFR 1910.120 HAZWOPER, Site safety training, and medical monitoring for Site workers. HAZWOPER training completion certificates will be submitted to the RE before commencement of Site work. Once the full concrete slab is in place, HAZWOPER training will not be required of Site construction workers.

4.2.9 Agency Approvals

The Volunteer has addressed New York State Environmental Quality Review Act (SEQRA) requirements for this Site. Permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction. The building permits for the proposed foundation/earthwork and the proposed 13-story mixed use residential building were obtained from NYC DOB in April 2017 and are presented in **Appendix N.**

The planned end use for the Site is in conformance with the current zoning for the property as determined by New York City Department of Planning.

4.2.10 NYSDEC BCP Signage

A project sign was erected at the main entrance to the Site prior to the start of remedial activities. The sign indicates that the project is being performed under the New York State Brownfield Cleanup Program. The sign meets the detailed specifications provided by the NYSDEC Project Manager and contained in **Appendix O**.

4.2.11 Pre-Construction Meeting with NYSDEC

A pre-construction meeting is currently not proposed. However, at NYSDEC's request, a construction meeting can be scheduled with the NYSDEC, the Volunteer, ACT, PWGC, and the contractor during remedial action construction activities.

4.2.12 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in **Table 13**. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

4.3 Site Preparation

4.3.1 Mobilization

Mobilization will include the delivery of construction equipment and materials to the Site. Site workers will receive Site orientation and training in accordance with the Site-specific HASP, CAMP, and established policies and procedures to be followed during the implementation of remedial activities. The remediation contractor and associated subcontractors will each receive a copy of the RAWP, HASP, and CAMP and will be briefed on their contents.

4.3.2 Erosion and Sedimentation Controls

Erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff will be placed to protect the excavation work and adjacent areas during excavation activities. Storm water control measures, such as straw hay bales or silt fence, may be utilized during excavation activities to prevent storm water runoff from impacting excavation areas and neighboring sites.

4.3.3 Stabilized Construction Entrance(s)

During site remediation, continuity will be achieved between the truck wash and the stone-based egress path by placing the truck wash system right before the egress path of the Site. Egress points for truck and equipment transport will be kept clean of dirt and other materials during Site remediation and development, so that trucks will be decontaminated prior to departure from the Site. All stone imports necessary to maintain this egress path during remedial activities will be approved by the RE and notification provided to NYSDEC prior to arrival on-Site.

4.3.4 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of intrusive and other work performed under this RAWP. The Volunteer and its contractors must obtain local, State or Federal permits or approvals pertinent

to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

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

4.3.5 Sheeting and Shoring

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

4.3.6 Equipment and Material Staging

Equipment and materials staging areas will be designated during the remediation activities by the RE, in coordination with the Construction Manager, to facilitate remediation work and prevent cross-contamination.

4.3.7 Decontamination Area

A temporary decontamination area lined with polyethylene sheeting will be constructed for steam-cleaning or washing excavation and drilling equipment, when appropriate. The location of the decontamination area will be coordinated between the RE and Construction Manager. At a minimum, the decontamination pad will have a 30-mil low-permeability liner, be bermed and sloped to a collection sump to contain and collect fluids, and have side walls to mitigate, to the extent practicable, errant overspray, especially when decontaminating large equipment.

4.3.8 Site Fencing

Site security will be maintained by utilizing and maintaining the existing eight-foot-high plywood construction fence surrounding the property. The fence will be maintained throughout the project and the vehicle access gate will be kept closed during daily operations and closed and locked at other times.

4.3.9 Demobilization

Following the completion of remedial activities at the Site, equipment and remedial structures will be decontaminated and dismantled and removed from the Site. Sediment and erosion control measures and solid wastes generated during remedial activities (i.e., polyethylene sheeting) will be properly disposed of.

4.4 Reporting

Daily and monthly Reports will be included in the FER.

4.4.1 Daily Reports

Daily reports will be submitted to NYSDEC Project Manager by the end of each week following the reporting period and will include:

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

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

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

The NYSDEC-assigned project number will appear on reports.

4.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers within one week following the end of the month of the reporting period and will include:

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

4.4.3 Other Reporting

Remedial activities will be appropriately documented in a log book maintained on-Site during the project duration and available for inspection by NYSDEC and NYSDOH staff. Photographs will be taken of remedial activities and submitted to NYSDEC in digital

(JPEG) format. Representative photos will be provided of each contaminant source, source area and Site structures before, during, and after remediation.

4.4.4 Complaint Management Plan

Complaints from the public regarding nuisance or other Site conditions will be reported directly to the NYSDEC project manager and included in the daily reports.

4.4.5 Deviations from the Remedial Action Work Plan

If remedial activities require deviation from the RAWP due to unforeseen Site conditions, a detailed description of the conditions and required deviations from the RAWP will be submitted to the NYSDEC project manager. The description will include the reasons that dictate deviation from the RAWP, changes/editions to the RAWP, and how the proposed remedy is affected.

5.0 REMEDIAL ACTION – SOIL REMOVAL

The remedial action for the Site consists of remedial activities that have already been completed at the Site during the IRM, construction activities to be completed following RAWP approval, and long-term operation and maintenance (O&M) and reporting actions to take place following construction and start-up of system operation. The individual remedial activities are detailed in the following sections.

The majority of soil impacted with PCE and TCE at concentrations greater than UUSCOs has already been removed during IRM activities in accordance with the NYSDEC-approved "contained-in" letter dated September 2017. The hot spots containing PCE soils that were remediated during the IRM were segregated and characterized for proper disposal as potentially hazardous waste. The hot spots in AOC-2 were excavated to depth of 13 feet bgs, hotspots within AOC-1 were excavated to depths of 6.5 feet, 8 feet and 11 feet bgs, and AOC 4 was excavated to a depth of 6.5 feet bgs. The Revised NYSDEC approved "contained-in" letter dated November 20, 2017 is provided in **Appendix I**. The IRM excavation will advance the Site excavation site-wide to a depth of 13 bgs. Some footings and building features may require local excavation to depths greater than 13 feet bgs, as shown on the excavation plan, **Figure 10**.

The remedial action for the Site will consist of excavation to approximately to 13 feet bgs across the entire Site to remove source material that exceeds applicable UUSCOs. Excavated soils will be characterized and disposed of at permitted and approved disposal facilities consistent with applicable local, State, and Federal laws and regulations. Construction soils to be removed from the Site will be disposed of as non-hazardous soils at Bayshore Recycling in Keasbey, New Jersey or at an alternative facility approved by the NYSDEC. Hazardous soils will be disposed of at Biogenie in Canada or at an alternative facility approved by the NYSDEC. The location of hot-spot excavations and additional soils that are required to be removed for general and remedial construction activities is included on **Figure 9**. Endpoint samples will be collected following IRM excavation and Remedial Action hot-spot excavations to confirm that concentrations are less than UUSCOs. Endpoint samples will be collected in accordance with the QAPP in **Appendix L**.

With the exception from the previously generated development and purge water from the on-Site monitoring wells, no additional water is expected to be removed from the Site. If dewatering becomes necessary, a State Pollutant Discharge Elimination System permit will be obtained from the New York City Department of Environmental Protection. No additional structures are expected to be uncovered at the Site; however, any structures located will be disposed of in accordance with Federal, State, and local regulations and the NYSDEC project manager will be contacted following the uncovering of the structure.

5.1 Soil Cleanup Objectives

The Soil Cleanup Objectives for this Site are the NYSDEC RRSCOs. Soil and materials management on-Site and off-Site will be conducted in accordance with the SMMP as described below.

5.2 Remedial Performance Evaluation (Post Excavation Endpoint Sampling)

Post-excavation documentation samples will be collected to document what has been left beneath the Site after the remedy has been performed. Post-excavation documentation soil samples will be collected in accordance with the IRM Work Plan and IRM Work Plan Addendum/EWP provided in **Appendix G,** and in accordance with the QAPP provided in **Appendix L**.

5.2.1 Endpoint Soil Sampling

UST / Spill Closure Contingency: During UST / spill closure activities, endpoint samples will be collected in accordance with the procedures set forth in Section 5.5 of DER-10.

Hotspot Contingency: If hotspots are encountered during excavation, the following endpoint sampling protocol will be followed:

- Hot-spot excavations will have a minimum of one bottom sample and, if required by NYSDEC, a sidewall sample collected from along applicable property boundaries.
- For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.
- For contaminated soil removal, endpoint soil samples for laboratory analysis should be collected immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples may be required.

Endpoint soil sample locations and depths will be biased towards the areas and depths of highest contaminant contamination identified during previous sampling events unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated.

Only NYSDOH environmental laboratory approval program (ELAP) certified labs will be used for documentation soil sample analyses. Lab results for endpoint soil sample analyses will be reported in the FER. The FER will provide a tabular and map summary of endpoint soil sample results. Endpoint soil samples will be analyzed for trigger analytes (those for which SCO exceedance are identified) utilizing the following methodology:

- VOCs by United States Environmental Protection Agency (USEPA) Method 8260;
- SVOCs by USEPA Method 8270;
- Pesticides/PCBs by USEPA Method 8081/8082; and
- Target Analyte List metals by USEPA Method 6010/7471

As per section 5.4 of DER-10, the frequency of endpoint soil sample collection within an excavation is based on one bottom sample for every 900 sq. feet of excavation area and one sidewall sample for every 30 linear feet of excavation perimeter. Sidewall endpoint samples will only be collected from excavations which exceed 13 feet bgs and do not extend to the property line.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "finger print analysis" and required regulatory reporting (i.e. spills hotline) will be performed.

5.2.2 Endpoint Soil Sampling Methodology

Endpoint soil samples will be collected at the identified locations when the limits of the remediation excavation have been reached. Samples collected for VOC analysis will be conducted by collecting a grab sample of soil within 24 hours of excavation exposure and placing it into laboratory supplied glassware. Endpoint samples will be submitted for laboratory analyses under

standard chain-of-custody protocol to an NYSDOH ELAP accredited laboratory to be determined. Samples will be analyzed according to the Full Part 375 list of VOCs, SVOCs, metals, PCBs, pesticides, and herbicides.

5.2.3 Reporting of Results

Data collected during the IRM and remedial action will be tabulated and reviewed. The criteria used to identify and quantify the analytes will be those specified for the applicable methods in the USEPA SW-846, or equivalent and subsequent updates. The data package provided by the laboratory will contain items specified in the USEPA SW-846 appropriate for the analyses to be performed and be reported in standard format. Data will also be submitted to NYSDEC's Environmental Information Management System in the standardized electronic data deliverable format. The FER will provide a tabular and map summary of post-excavation documentation soil sampling results and exceedances of UUSCOs.

5.2.4 QA/QC

Each set of samples will be analyzed concurrently with calibration standards, method blanks, matrix spikes (MS), matrix spike duplicates (MSD) or laboratory duplicates, and QC check samples (if required by the protocol). MS/MSD samples, as applicable, will be designated by ACT field personnel. QA/QC protocols are further detailed in the QAPP included as **Appendix L**.

5.2.5 Data Usability Summary Report

Data usability and validation are performed on analytical data sets, primarily to confirm that sampling and chain-of- custody documentation is complete, sample IDs can be tied to specific sampling locations, samples were analyzed within the required holding times, and analyses are reported in conformance to NYSDEC ASP, Category 2 data deliverable requirements as applicable to the method utilized.

Independent third-party data validation will be performed on 5% of the sample data, one sample from each sample delivery group. Data validation will be performed by a qualified subcontractor independent of the project and a Data Usability Summary Report will be included in the FER.

5.2.6 Material Removal Quantities

Soils in exceedance of UUSCOs will be removed from the Site to a depth of 13 feet bgs as part of the IRM. The total quantity of soil/fill to be removed from the Site under the Remedial Action and general construction activities is approximately 4,000 cubic yards.

5.3 Soil/Materials Management Plan (SMMP)

This section presents the approach to managing, disposing, and reusing soil, fill, and debris excavated from the Site. This plan is based on the current knowledge of Site conditions and will be augmented with the additional data collected during remediation. The RE will monitor and document the handling and transporting of material removed from the Site to a proper disposal facility as a regulated waste or as an unregulated waste, as applicable. The RE will assist the remedial contractor in identifying impacted materials during excavation, determining materials suitable for direct load out versus temporary on-Site stockpiling, selection of samples for waste characterization, and determining the proper off-Site disposal facility.

5.3.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional from either ACT or PWGC during remedial and development excavations into known or potentially contaminated material (Residual Contamination Zone). Soil screening will be performed regardless of when the intrusive work is planned and will be performed during all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the certificate of completion.

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

Screening will be performed by qualified environmental professionals. PWGC field personnel will be responsible for field screening (i.e. those representing the RE) of intrusive work involving unknown contaminant sources during remediation and development work.

5.3.2 Stockpile Methods

If stockpiling methods of soils are conducted, they will be in accordance with the following procedures:

- Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a log book and maintained at the Site and available for inspection by NYSDEC.
- Stockpiles will be kept covered with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.
- Soil stockpiles will be continuously encircled with silt fences. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

However, stockpiling is not anticipated due to the small size of the site and the contractor's preference to direct load material onto awaiting trucks to be sent off-Site to the appropriate soil disposal facility.

5.3.3 Materials Excavation and Load Out

The RE or a qualified environmental professional under his/her direct supervision shall oversee intrusive work and the excavation and load-out of excavated material. The Volunteer and its contractors are solely responsible for safe execution of intrusive and other work performed under this Plan.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and other applicable transportation requirements).

A truck wash and/or a stabilized stone construction entrance will be implemented during the remedial action excavation activities to allow truck tires to be knocked free of soil prior to leaving the Site. The RE will be responsible for ensuring that outbound trucks wheels will be cleared of loose soil by the above measures prior to leaving the Site for the duration of the remedial construction activities.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking. The RE will be responsible for ensuring that egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as-needed to maintain a clean condition with respect to Site-derived materials.

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

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

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

5.3.4 Materials Transport Off-Site

Transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Truck transport routes are as follows:

- Exit Site and make a right on Queens Boulevard and proceed southeast to 82nd Road.
- Make a right onto Kew Gardens Road.
- Make a right onto 80th Road.
- Make a left onto Queens Boulevard.
- Turn right onto Union Turnpike.
- Merge onto Van Wyck Expressway (I-678 N)

Proposed in-bound and out-bound truck routes for the Site are shown in **Figure 8.**

Trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes. Truck operators are responsible for obeying traffic signs and detours. Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Queuing of trucks will be performed adjacent to the Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development. Material transported by trucks exiting the Site will be secured with tarps. If loads contain wet material capable of producing free liquid, truck liners will be used. Trucks containing hazardous materials will have watertight tarps. Trucks will be washed, when not limited by Site constraints, prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

5.3.5 Materials Disposal Off-Site

The total quantity of hazardous soil expected to be disposed of at an off-Site hazardous waste facility during the remedial action is 100 cubic yards.

Soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be submitted to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

The following documentation has previously been obtained and reported by the RE prior to the implementation of the IRM for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws:

1. A letter from the RE or BCP Volunteer to the receiving facility describing the material being disposed of and a request for formal written acceptance of the material. This letter stated that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter provided the project identity and the name and phone number of the RE. The letter included as an attachment a summary of chemical data for the material being transported (including Site Characterization data); and
2. A letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

The above will also be required for new disposal facilities proposed during remedial construction activities.

Non-hazardous contaminated soils, including contaminated historic fill, taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2.

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

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

The FER will include an accounting of the destination of material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, including contaminated historic fill, solid waste, and hazardous waste, non-regulated material,

and fluids. Documentation associated with disposal of material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations. Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with applicable local, State and Federal regulations.

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

5.3.6 Materials Reuse On-Site

Materials reuse on-Site is not anticipated and must 1) be approved by the RE in advance and; 2) notification made to NYSDEC in advance of material reuse on-Site.

5.3.7 Fluids Management

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

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site. Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a SPDES permit.

5.3.8 Demarcation

After the completion of soil removal and other intrusive remedial activities and prior to backfilling, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange snow fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP, if a Track 1 cleanup is not pursued. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP, which will be prepared if a Track 1 cleanup is not pursued. A map showing the survey results will be included in the FER and the SMP if a Track 1 cleanup is not pursued.

5.3.9 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the RE and will comply with provisions in this RAWP prior to receipt at the Site. Backfill from off-Site sources is not currently anticipated for the Site.

Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site. If sampling of material imported to the Site is required, sampling will be conducted in accordance with DER-10 Section 5.4. The NYSDEC will be consulted prior to importation of fill material.

The FER will include the following certification by the RE: "I certify that import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan." A map detailing the locations of backfilled material will also be included in the FER.

Imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC-approved backfill or cover soil shall be virgin source material and meet the UUSCOs quality objectives. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

Solid waste will not be imported onto the Site. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this RAWP should be construed as an approval for this purpose.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

5.3.10 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during intrusive Site work will be promptly communicated to the NYSDEC Project Manager. Petroleum spills will be reported to the NYSDEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to NYSDEC. Chemical analytical testing will be performed for Full List volatiles and semi-volatiles, pesticides/PCBs, and TAL/TCLP metals, as appropriate.

5.3.11 Community Air Monitoring Plan

The CAMP provides measures for protection for on-Site workers and the downwind community (i.e., off-Site receptors including residences, businesses, and on-Site workers not directly involved in the remedial investigation) from potential airborne contaminant releases resulting from remedial activities at the Site.

Real-time monitoring that will be conducted within the work area and along the Site perimeter during intrusive activities, such as excavation, product recovery, manipulation of soil piles, extraction of sheet piling, etc. Air monitoring will consist of monitoring for VOCs and dust particulates hourly during intrusive activities using a MiniRAE 2000 PID and a PDR-1000 dust monitor, respectively. Before work begins, background concentrations will be measured. During intrusive activities, if concentrations are

greater than the background concentrations plus the action levels detailed in the in-line table below, appropriate actions will be taken as described in the table.

In-Line Table 3

Real-Time Air Monitoring Action Levels

AIR MONITORING INSTRUMENT	MONITORING LOCATION	ACTION LEVEL	SITE ACTION	REASON
PID	Breathing Zone	0-25 ppm, non-transient	None	Exposure below established exposure limits
PID	Breathing Zone	25-100 ppm, non-transient	Don APR	Based on potential exposure to VOCs
PID	Breathing Zone	>100 ppm, non-transient	Don ASR or SCBA, Institute vapor/odor suppression measures, Notify HSM.	Increased exposure to Site contaminants, potential for vapor release to public areas.
PID	Work Area Perimeter	< 1 ppm	None	Exposure below established exposure limits.
PID	Work Area Perimeter	> 1 ppm	Stop work and implement vapor release response plan until readings return to acceptable levels, Notify HSM.	Increased exposure to Site contaminants, potential for vapor release to public areas
Particulate (Dust, Mist or Aerosol) Meter	Work Area Perimeter	<150 µg/m^3	None	Exposure below established exposure limits.

AIR MONITORING INSTRUMENT	MONITORING LOCATION	ACTION LEVEL	SITE ACTION	REASON
Particulate (Dust, Mist or Aerosol) Meter	Work Area Perimeter	>150 µg/m^3	Stop work and immediately confirm the upwind background level. Implement dust suppression measures if the downwind PM-10 particulate level is 100 µg/m3 greater than the upwind background level for a 15-minute period or if airborne dust is observed leaving the work area. Work may continue with dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 µg/m3 above the upwind background level and provided that no visible dust is migrating from the work area. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m3 above the upwind background level, stop work and reevaluate activities. Work may resume if dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m3 of the upwind background level and visible dust migration is prevented.	Increased exposure to site contaminants.

The CAMP, in its entirety, is included as **Appendix J**.

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

5.3.12 Odor, Dust and Nuisance Control Plan

The FER will include the following certification by the Remedial Engineer: "I certify that intrusive work during the remediation and intrusive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

5.3.12.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-Site. Specific odor control methods to be used on a routine basis will include wetting soils to prevent off-Site migration, application of a foam suppressant on the source area, and/or covering the source area with a tarp. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until nuisance odors have been abated. NYSDEC and NYSDOH will be notified of odor events and of other complaints about the project. Implementation of odor controls, including the halt of work, will be the responsibility of the RE, who is responsible for certifying the FER.

Necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include:

(d) direct load-out of soils to trucks for off-Site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

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

5.3.12.2 Dust Control Plan

A dust suppression plan that addresses dust management during intrusive on-Site work, will include, at a minimum, the items listed below:

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

5.3.12.3 Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during remedial work. A plan will be developed and utilized by the contractor for remedial work and will conform, at a minimum, to NYCDEP noise control standards.

6.0 RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Since residual contaminated soil, groundwater, and soil vapor may exist beneath the Site after the remedy is complete, ECs and ICs are proposed as measures to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site-specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have 4 primary EC systems. These are: (1) a composite cover system consisting of concrete building slabs, (2) ISCO injections, (3) an SSDS, and (4) a vapor barrier installation.

The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances in in Track 1 and Track 4 SCOs.

7.0 ENGINEERING CONTROLS

The remedial action for the Site consists of excavation to approximately 13 feet bgs across the entire Site. The proposed remedy is expected to remove on-Site sources of potential groundwater and soil vapor contamination from beneath the Site after the remedy is complete. There is the potential that soil that exceeds the applicable UUSCOs may remain after the remedy is complete; therefore, ECs and ICs will be utilized to ensure the protection of human health and the environment under current and future conditions. Long-term management of EC/ICs will be executed under a Site-specific SMP and EE that will be developed and included in the FER. The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances of both Track 1 and Track 4 SCOs.

As part of the preferred remedy, source material, including material containing COCs at concentrations that exceed UUSCOs, will be removed from the Site. However, in order to ensure the protection of public health and the environment, ECs will be utilized to eliminate potential exposure pathways in connection with the migration of soil vapor into the occupied below and above-grade spaces of the building. The potential ECs may include the installation of a composite cover system incorporating a vapor barrier and SSDS. Should the proposed remedy fail to remove source material containing COCs at concentrations that exceed UUSCOs, additional measures, such as a SMMP, will be necessary to ensure the protection of human health and the environment.

Figure 11 presents the aerial distribution of each of the ECs to be implemented at the Site.

7.1 Composite Cover System

Soils containing COCs with concentrations above the UUSCOs to a depth of 13 feet bgs will be removed from the property. The cover system would prevent access to residual contamination below 13 feet bgs. However, on-Site groundwater contains dissolved-phase CAHs under current and, potentially future, conditions. As part of redevelopment, the entire property will be covered by a composite cover system, consisting of a concrete slab at least 18 inches thick throughout the entire proposed building area, and incorporating a vapor barrier and SSDS. There will be no exposed soil or landscaped areas. The composite cover system and SSDS are permanent ECs for the Site until asymptotic groundwater levels are achieved.

An SMMP will be included in the SMP and will outline the procedures to be followed if the composite cover system and/or underlying residual contamination, if any, is disturbed after the Remedial Action is complete. Maintenance of this composite cover system will be described in the SMP, which will be included as part of the FER for a Track 4 remedy.

7.2 Soil Vapor Extraction System and ISCO

7.2.1 Soil Vapor Extraction System

The remedial action to treat shallow impacted soils in the vadose zone below the finished basement slab will be treated with a low vacuum soil vapor extraction (SVE) system in an effort to reduce soil contamination at the two highest recorded concentration areas in the vicinity of MW-1 (approximately 300SF) and MW-5 (approximately 100SF).

SVEs are designed to scrub soils of compounds in a vapor phase from the unsaturated zone. SVEs utilize an in-situ process employing a network of sub-slab perforated well points a blower is utilized to create a negative pressure gradient that scrubs compounds of VOCs from unsaturated soils and causes movement of vapors toward the collection piping. The volatile

constituents are readily removed from the subsurface through the riser pipe collected to the network of collection pipes. The extracted volatile compounds are then discharged to the atmosphere or treated if concentrations exceed air emission requirements. The SVE is designed and will be installed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

The proposed SVE design consists of nine (9) SVE wells points manifolded together into one (1) galvanized steel header pipe connected to a 1.5HP SVE blower. Each well point will be 2" dia. x 10' long with 5' feet of woven steel screen on the bottom and a 5' solid riser pipe made of galvanized steel. Each SVE well point will utilize the 4" dia. PVC sleeves installed during the concrete slab pour for future ISCO injections. Six (6) SVE well points will be installed in the sleeves around MW-1 and three (3) SVE well points will be installed around MW-5. The exhaust from the SVE blower will pass through granular activated carbon before exhausting outside the building. If SVE influent concentrations are within allowable discharge limits as set forth in 6 NYCRR Part 212, the NYSDEC will be petitioned to allow the effluent to bypass carbon treatment.

Prior to SVE system start-up, the system will be inspected to ensure proper installation of the components. The system will be tested during the start-up phase to ensure proper operation and the influent and effluent vapor sampling ports will be sampled at a frequency of weekly for the first four weeks of operation, then monthly for the next two months. The sampling frequency will then be reduced to quarterly while the SVE system is operating.

System O&M requirements will include a visual inspection of the system and its components, identification and repair of leaks, periodic changing out the GAC units as appropriate, regularly servicing the blower(s), adjusting pressures and flow rates for optimal performance, collecting gauge readings, and collecting influent and effluent vapor samples.

The current SVE design documents are included in **Appendix U**. As-built drawings, diagrams, calculations, and manufacturer documentation for treatment systems will be presented in the FER.

7.2.2 Shallow In-situ Chemical Oxidation

Based on several SVE pilot tests, it was determined that a high vacuum SVE system would not be effective due to positive pressure under the slab from an off-site source. PWGC believes that a low vacuum multi-well point system will perform better. However, in the event the SVE system does not perform as designed, a contingency plan includes removal of the above grade SVE system and use the SVE wells for ISCO injections.

The anticipated oxidant to be used is PersulfOx®. PersulfOx® is an in ISCO reagent that destroys organic contaminants found in groundwater and soil through powerful yet controlled chemical reactions. PersulfOx® is a sodium persulfate-based technology that employs a patented catalyst to enhance the oxidative destruction of both hydrocarbons and chlorinated contaminants in the subsurface.

The first and potential additional rounds of injections and endpoint samples must be collected through the floor slab. A more detailed description of the ISCO injections, including volumes of injectables, will be submitted under separate cover.

Volume and density application rates for potassium permanganate or other applicable chemical oxidant will be based on the manufacturer's recommendations. A letter from the manufacturer stating recommended dosage rates will be provided to NYSDEC and will be included in the FER.

Design plans and a work schedule will be submitted to the NYSDEC for injection and reinjection of chemical oxidants. The need for additional rounds of chemical injections and injection locations will be determined based upon evaluation of the soil analytical results and in consultation with NYSDEC.

7.3 As-built drawings, diagrams, calculations, and manufacturer documentation for treatment systems will be presented in the FER. O&M for the ISCO injections will be limited to ensuring the permanent injection wells are properly secured with a J-plug and manhole cover and that the well screens are not fouled or clogged. If necessary, procedures for monitoring, operating, and maintaining the potential future ISCO injections will be provided in the OM&M Plan in Section 4 of the SMP. The OM&M Plan also addresses inspection procedures that must occur after severe weather condition has taken place that may affect on-Site ECs.In-Situ Chemical Oxidation

The remedial action will include ISCO injections in selected areas of the Site in an effort to address groundwater contamination at the property, reduce potential of plume migration past the property boundary, and potentially reduce the duration needed for a long-term SSDS operation.

The anticipated oxidant to be used is PersulfOx®. It is anticipated that the first and potential additional round of ISCO injections will be performed after the vapor barrier and floor slab are installed. Therefore, the first and potential additional rounds of injections and endpoint samples must be collected through the floor slab. Four-inch diameter sleeves will be installed in the concrete slab and capped with removable covers to allow for future access to the sub-surface without damage to the vapor barrier. The decision to install additional injection points will be discussed and approved by NYSDEC in advance. Proposed ISCO injection locations are provided on **Figure 10**. Groundwater quality within the center of the Site is not well characterized and sleeve locations may be utilized for additional injection wells or monitoring wells, as needed to meet the remedial objectives of the Site. A more detailed description of the ISCO injections, including volumes of injectables, will be submitted under separate cover.

Volume and density application rates for potassium permanganate or other applicable chemical oxidant will be based on the manufacturer's recommendations. A letter from the manufacturer stating recommended dosage rates will be provided to NYSDEC and will be included in the FER.

Design plans and a work schedule will be submitted to the NYSDEC for injection and reinjection of chemical oxidants. The need for additional rounds of chemical injections and injection locations will be determined based upon evaluation of the groundwater analytical results and in consultation with NYSDEC.

As-built drawings, diagrams, calculations, and manufacturer documentation for treatment systems will be presented in the FER. O&M for the ISCO injections will be limited to ensuring the permanent injection wells are properly secured with a J-plug and manhole cover and that the well screens are not fouled or clogged. If necessary, procedures for monitoring, operating, and maintaining the potential future ISCO injections will be provided in the OM&M Plan in Section 4 of the SMP. The OM&M Plan also addresses inspection procedures that must occur after severe weather condition has taken place that may affect on-Site ECs.

7.4 Sub-Slab Depressurization System

Groundwater containing dissolved-phase CAHs exist at the Site under current and, potentially future, conditions. Therefore, an SSDS will be installed below the concrete foundation slab to further protect against the potential for the infiltration of soil vapors into the proposed building and sub-grade parking garage regardless of whether this is a Track 1 or 4 remedy.

SSDSs are designed to vent volatile compounds in a vapor phase from the unsaturated zone. SSDS utilize an in-situ process employing a network of sub-slab perforated collection piping where a blower is utilized to create a negative pressure gradient that causes movement of vapors toward the collection piping. The volatile constituents are readily removed from the subsurface through the riser pipe collected to the network of collection pipes. The extracted volatile compounds are then discharged to the atmosphere or treated if concentrations exceed air emission requirements. The SSDS will be designed and installed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

SSDS piping will be constructed of 4-inch-diameter high density polyethylene (HDPE) and may be piped to GAC units stored on the building roof and then piped through the blower, and out an effluent stack. If SSDS influent concentrations are within allowable discharge limits as set forth in 6 NYCRR Part 212, the NYSDEC will be petitioned to allow the effluent to bypass carbon treatment.

Prior to SSDS system start-up, the system will be inspected to ensure proper installation of the components. The system will be tested during the start-up phase to ensure proper operation and the influent and effluent vapor sampling ports will be sampled at a frequency of weekly for the first four weeks of operation, then monthly for the next two months. The sampling frequency will then be reduced to quarterly while the SSDS system is operating.

System O&M requirements will include a visual inspection of the system and its components, identification and repair of leaks, periodic changing out the GAC units as appropriate, regularly servicing the blower(s), adjusting pressures and flow rates for optimal performance, collecting gauge readings, and collecting influent and effluent vapor samples.

The proposed SSDS collection piping locations are shown on **Figure 11**. The current SSDS design documents, which include vapor monitoring point locations, are included in **Appendix P**. As-built drawings, diagrams, calculations, and manufacturer documentation for treatment systems will be presented in the FER.

7.5 Vapor Barrier Installation

As a precaution against potential infiltration of soil vapors into the proposed building, a soil vapor barrier will be installed between the concrete foundation slab and underlying soil and gravel. The vapor barrier will be installed along the entire footprint of the Site beneath the foundation slab, and will extend along the sides of the foundation slab from the base of the excavation to surface grade level. The vapor barrier will be GCP Applied Technologies Model Preprufe® 300R for horizontal applications & 160R for vertical application and will be installed as a continuous sub-slab membrane as shown on the design plans provided in **Appendix P.** The vapor barrier is a permanent EC for the Site and will be certified for compatibility by the manufacturer.

7.6 Criteria for Completion/Termination of Remedial Systems

7.6.1 Composite Cover System

Groundwater containing dissolved-phase CAHs exists at the Site under current and, potentially future, conditions. The composite cover system is a permanent control and the quality and integrity of this system will be inspected as necessary as determined by the RE.

7.6.2 Soil Vapor Extraction System

7.6.2.1 Test Period

The SVE will require a three (3) month test period to determine whether or not the SVE is effective at removing VOCs from the sub-slab. The system shall be monitored weekly using a PID at the SVE exhaust between the blower and the GAC and a determination will be made by the engineer to collect a sub-slab vapor sample for analysis. Results of the monitoring shall be provided to the engineer who will work with the NYSDEC to make a determination of whether the SVE shall remain in service or be removed.

7.6.2.2 Normal Operation

Similar to the SSDS, the SVE will require routine maintenance and inspection to ensure that it is effectively mitigating potential sub-slab vapor intrusion exposures. The SVE should be inspected regularly and after major storm events and preventative maintenance should be performed as necessary. During routine inspection and maintenance, the following activities should be performed:

1. Visual inspection of the full system (i.e., piping, vacuum, labeling, warning devices, and the vent fan) for proper condition and operation;

2. Confirmation that there are no air intakes located in the vicinity of the SVE exhaust point(s);

3. Identification and repair of leaks in accordance with Section 4.3.1(a) of NYSDOH Guidance; and

4. Confirmation that a vacuum is maintained beneath the slab, through vacuum monitoring points installed;

A proposal to discontinue the SVE and connect to the SSDS may be submitted by the Volunteer after residual contamination concentrations in groundwater:

1. Are cleaned up to levels less than NYSDEC standards;

2. Have become asymptotic over an extended period of time as mandated by the NYSDEC and the NYSDOH; or

3. A proposal to discontinue the active SSDS may be submitted by the Volunteer based on confirmatory data that justifies such request. These sampling/monitoring activities will adhere to stipulations outlined in the Monitoring Plan section of the SMP.

7.6.3 Shallow In-Situ Chemical Oxidation

Soil monitoring activities to assess effectiveness of the ISCO injections will be performed and continue, as determined by NYSDOH and NYSDEC, until residual soil concentrations are found to be less than NYSDEC standards or have become asymptotic over an extended period. Utilizing the remaining 4" dia. PVC sleeves in the floor slab, routine soil samples shall be taken to determine if the ISCO injections are performing as designed. Monitoring will continue until permission to discontinue is granted in writing by NYSDEC and NYSDOH. Monitoring activities will be outlined in the Monitoring Plan of the SMP. Monitoring wells will need to be inspected, surveyed, and developed prior to the next groundwater sampling event.

7.6.4 In-Situ Chemical Oxidation

Groundwater monitoring activities to assess effectiveness of the ISCO injections will be performed and continue, as determined by NYSDOH and NYSDEC, until residual groundwater concentrations are found to be less than NYSDEC standards or have become asymptotic over an extended period. Monitoring will continue until permission to discontinue is granted in writing by NYSDEC and NYSDOH. Monitoring activities will be outlined in the Monitoring Plan of the SMP. Monitoring wells will need to be inspected, surveyed, and developed prior to the next groundwater sampling event.

7.6.5 Sub-Slab Depressurization System

The SSDS will require routine maintenance and inspection to ensure that it is effectively mitigating potential sub-slab vapor intrusion exposures. The SSDS should be inspected regularly and after major storm events and preventative maintenance should be performed as necessary. During routine inspection and maintenance, the following activities should be performed:

1. Visual inspection of the full system (i.e., piping, vacuum, labeling, warning devices, and the vent fan) for proper condition and operation;
2. Confirmation that there are no air intakes located in the vicinity of the SSDS exhaust point(s);
3. Identification and repair of leaks in accordance with Section 4.3.1(a) of NYSDOH Guidance; and
4. Confirmation that a vacuum is maintained beneath the slab, through vacuum monitoring points installed;

A proposal to discontinue the active SSDS and convert to a passive SSDS may be submitted by the Volunteer after residual contamination concentrations in groundwater:

1. Are cleaned up to levels less than NYSDEC standards;
2. Have become asymptotic over an extended period of time as mandated by the NYSDEC and the NYSDOH; or
3. A proposal to discontinue the active SSDS may be submitted by the Volunteer based on confirmatory data that justifies such request. These sampling/monitoring activities will adhere to stipulations outlined in the Monitoring Plan section of the SMP.

7.6.6 Vapor Barrier Installation

The vapor barrier is a permanent control and the quality and integrity of this system will be inspected during installation to ensure compliance with manufacturer's installation recommendations. Inspections will be made of the concrete slab to ensure that there are no cracks or holes that allow sub-slab vapors to enter the building.

CLIENT DRIVEN SOLUTIONS
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

8.0 INSTITUTIONAL CONTROLS

Should the results of compliance sampling indicate that the remedy has not successfully removed source material containing constituents of potential concern (COPCs) at concentrations that exceed UUSCOs, an EE and a SMP would be required to ensure continual and proper management of residual contamination in perpetuity to render the overall Site remedy protective of public health and the environment.

If necessary, a site-specific EE will be recorded with Queens County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the EE and the grantor's successors and assigns adhere to ECs/ICs placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for ECs and ICs.

The SMP would describe appropriate methods and procedures to ensure compliance with ECs and ICs that are required by the EE. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the EE and grantor's successors and assigns.

8.1 Environmental Easement (EE)

An EE, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. If the Site will have residual contamination after completion of Remedial Actions an EE approved by NYSDEC would be filed and recorded with the Queens County Clerk and submitted as part of the Final Engineering Report.

The EE renders the Site a Controlled Property. The EE must be recorded with the Queens County Clerk before the Certificate of Completion can be issued by NYSDEC. A series of ICs are required under such a remedy to implement, maintain, and monitor the applicable ECs, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site, as appropriate. These ICs are requirements or restrictions placed on the Site that are listed in, and required by, the EE. ICs can, generally, be subdivided between controls that support ECs, and those that place general restrictions on Site usage or other requirements. ICs in both of these groups are closely integrated with the SMP, which provides the methods and procedures to be followed to comply with this remedy.

The ICs that support ECs are:

- Compliance with the EE by the Grantee and the Grantee's successors and adherence of elements of the SMP is required,
- Operation and maintenance of ECs as specified in the SMP,
- Installation, maintenance, inspection, and certification of ECs as specified in the SMP, and
- Monitoring of environmental media, maintenance of environmental monitoring devices, and reporting of data and information as specified in the SMP.
- ECs may not be discontinued without an amendment or extinguishment of the EE.

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

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
- Future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;
- The Controlled Property may be used for restricted residential, commercial or industrial use only, provided the long-term ECs/ICs included in the SMP are employed;
- The Controlled Property may not be used for a higher level of use, such as unrestricted use without an amendment or extinguishment of this EE; and
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property in order to evaluate the continued maintenance of controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

8.2 Site Management Plan

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

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the Brownfields Cleanup Agreement (BCA) with the NYSDEC. This includes:

1. Development, implementation, and management of ECs/ICs;
2. Development and implementation of monitoring systems and a Monitoring Plan;
3. Development of a plan to operate and maintain treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an O&M Manual);
4. Submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and

5. Defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans:

1. An Engineering and Institutional Control Plan for implementation and management of EC/ICs;
2. A Monitoring Plan for implementation of Site Monitoring;
3. An O&M Plan for implementation of remedial collection, containment, treatment, and recovery systems; and
4. A Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC.

The SMP will be prepared in accordance with the requirements in NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually.

The SMP in the FER will include a monitoring plan for groundwater at the down-gradient Site perimeter to evaluate Site-wide performance of the remedy. Appropriately placed groundwater monitoring wells will also be installed immediately down-gradient of volatile organic carbon remediation areas for the purpose of evaluation of the effectiveness of the remedy that is implemented.

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

9.0 FINAL ENGINEERING REPORT

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

The FER will provide a summary of residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER. The FER will include both the quantities and destinations of material removed from the Site, including; excavated contaminated soil, contaminated historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of material must also include records and approvals for receipt of the material. The FER will also provide an account of the quantities, origin, and chemical quality of material imported onto the Site.

The FER will include an itemized tabular description of actual costs incurred during the Remedial Action. Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the SMP and EE. This determination will be made by NYSDEC in the context of the FER review.

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

9.1 Certifications

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

I,_____, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the [Remedial Action Work Plan or Remedial Design] was implemented and that construction activities were completed in substantial conformance with the Department-approved [Remedial Action Work Plan or Remedial Design].

The following certifications are only required for Final Engineering Reports, and are not applicable to Construction Completion Reports:

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the [Remedial Action Work Plan or Remedial Design] and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy. *[in the work plan (or Remedial Design or Plans and Specifications).*"]

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an EE created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

If financial assurance is required, this certification will also include the following sentence:

I certify that any financial assurance mechanisms required by the Department pursuant to Environmental Conservation Law have been executed.

For all certifications, both CCRs and FERs, include the following:

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

For reports submitted after July 1, 2011, also include the following:

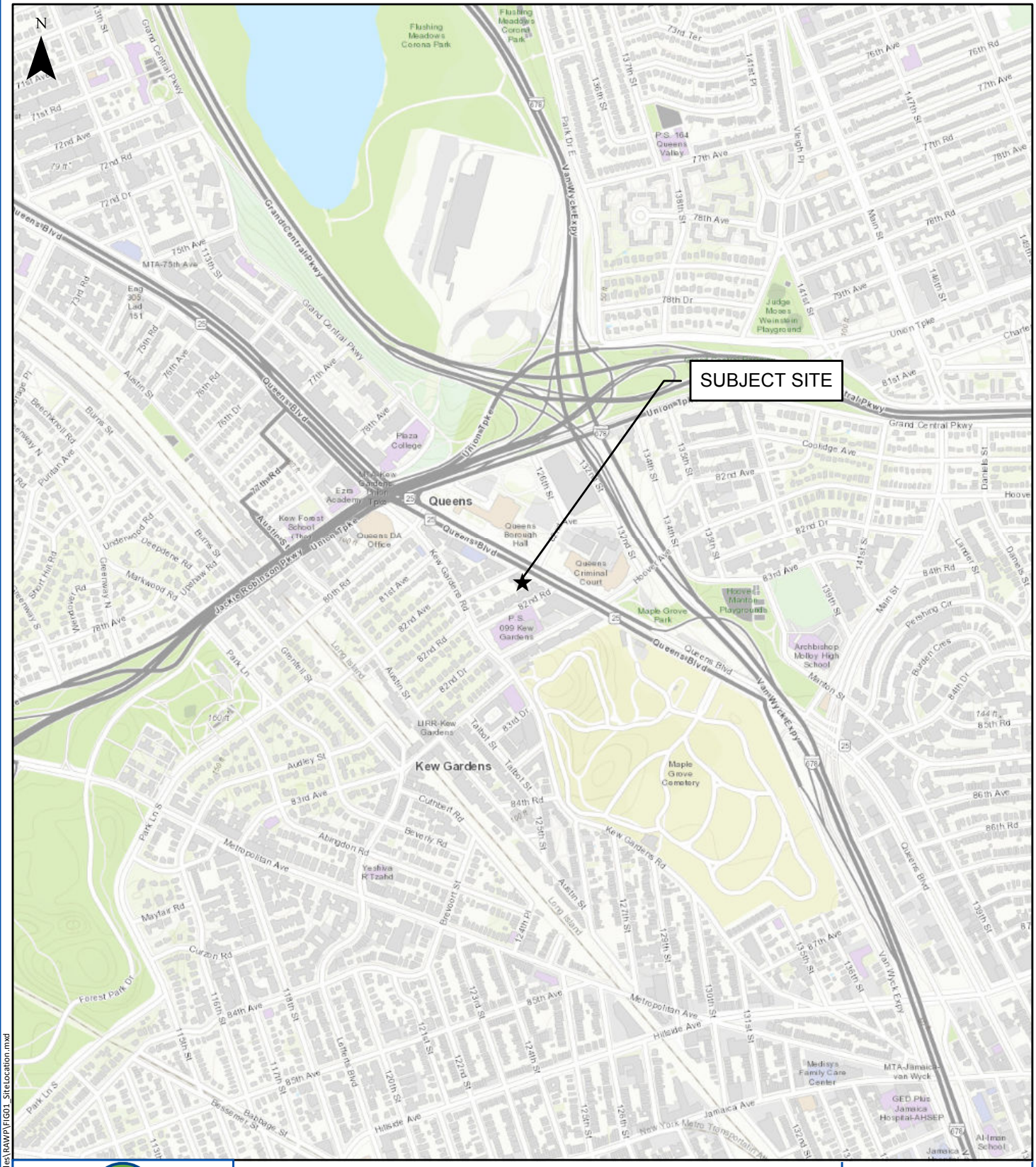
I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Owner's Designated Site Representative (and if the site consists of multiple properties): [and I have been authorized and designated by all site owners to sign this certification] for the site.

10.0 SCHEDULE

A schedule of remedial actions, including estimated dates for performance of work and deliverables, has been included as **Table 12**.

CLIENT DRIVEN SOLUTIONS PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON



SITE LOCATION

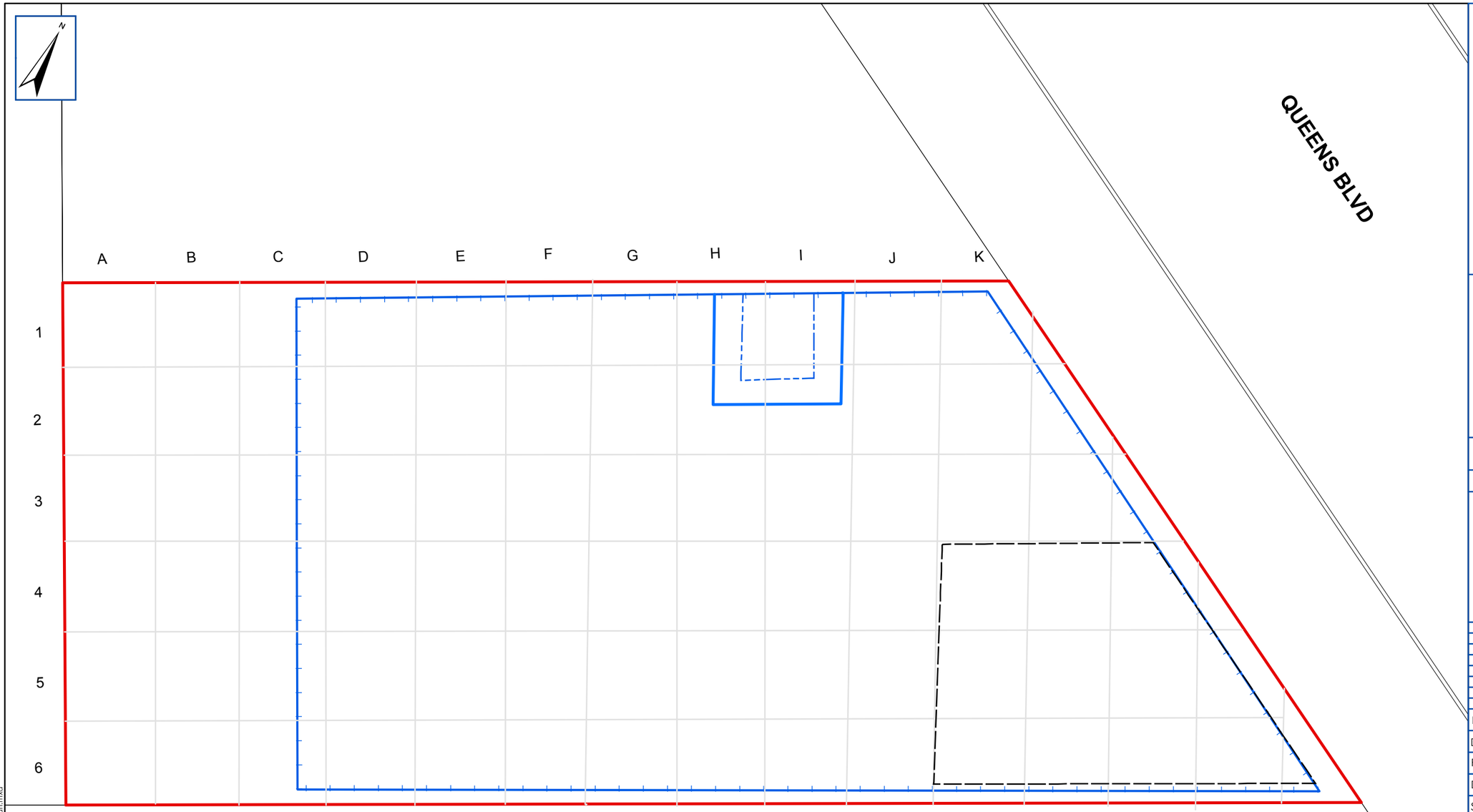
124-22 QUEENS BLVD
KEW GARDENS, NY

Miles
0 ¼ ½
1 inch = 1,000 feet

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

Project:	ACT1701
Date:	7/25/2019
Designed by:	JP
Drawn by:	TS
Approved by:	JP
Figure No:	1

Document Path: W:\Projects\A-D\ACT1701\map files\RAW\FIG01_SiteLocation.mxd



Document Path: W:\Projects\A-D\ACT\1701\mxd files\RAWP-FIG02-SitePlan.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

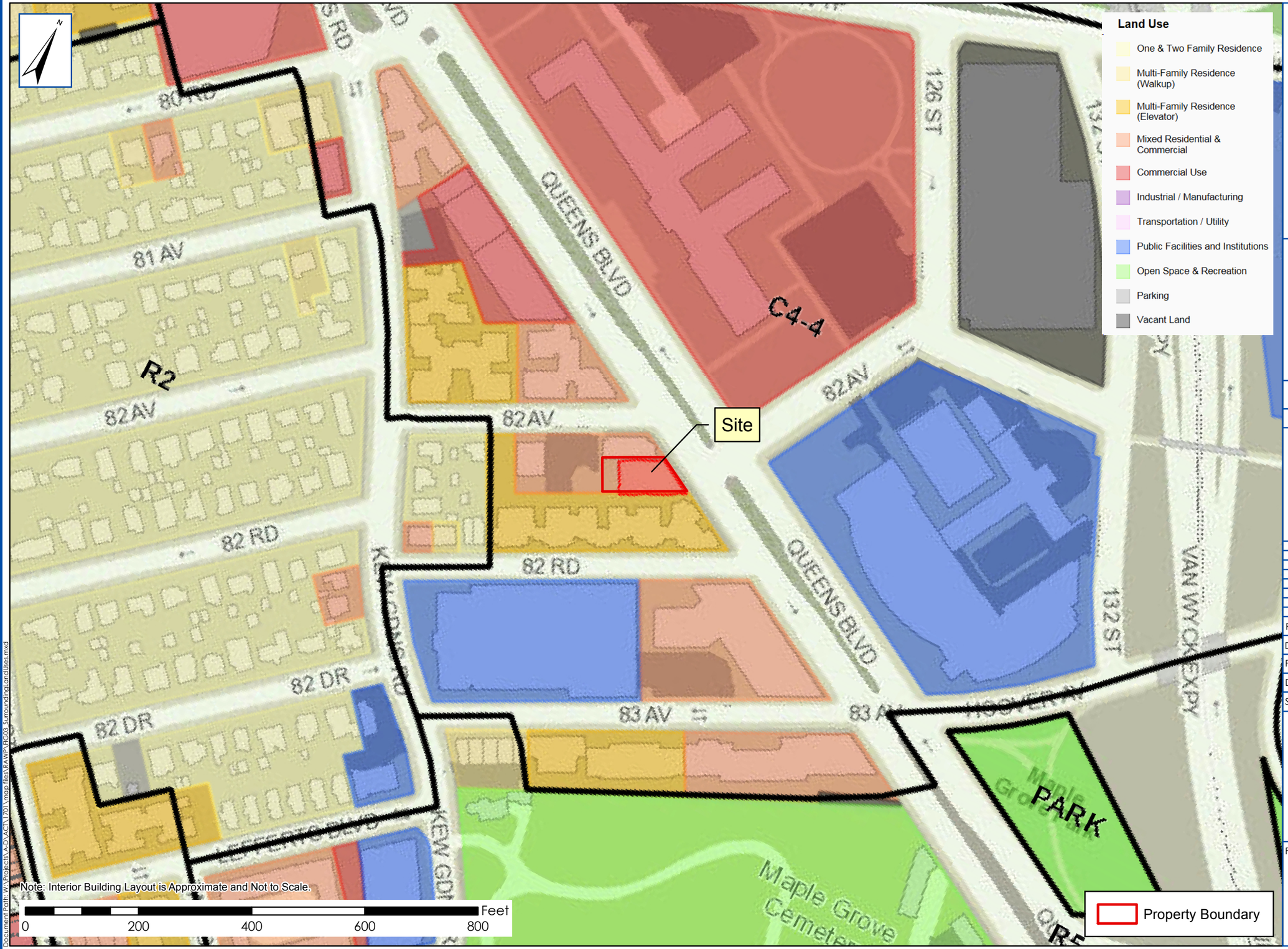
Project:	ACT1701	Designed by:	JP
Date:	3/5/2018	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	JP

SITE PLAN

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:

2



PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JP
Date:	2/28/2018	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	JP

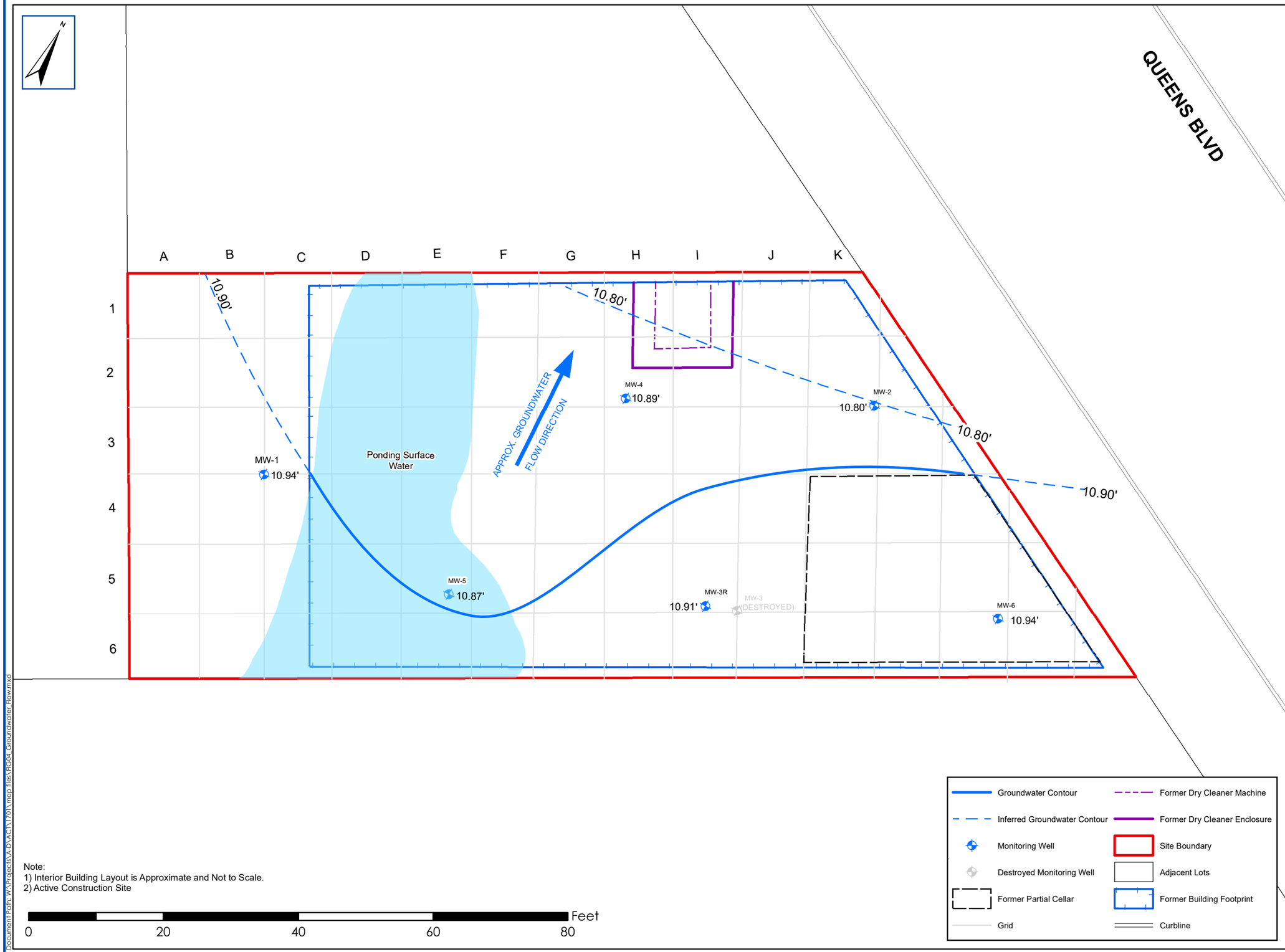
SURROUNDING LAND USES

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:

3

Document Path: W:\Projects\A-D\ACT\1701\mxd\Fig\RAWP\FIG03_SurroundingLandUses.mxd



Note:
1) Interior Building Layout is Approximate and Not to Scale.
2) Active Construction Site

0 20 40 60 80 Feet

Document Path: W:\Projects\ACT\ACT1701\map files\FIG04 Groundwater Flow.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JE
Date:	1/23/2019	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	JE

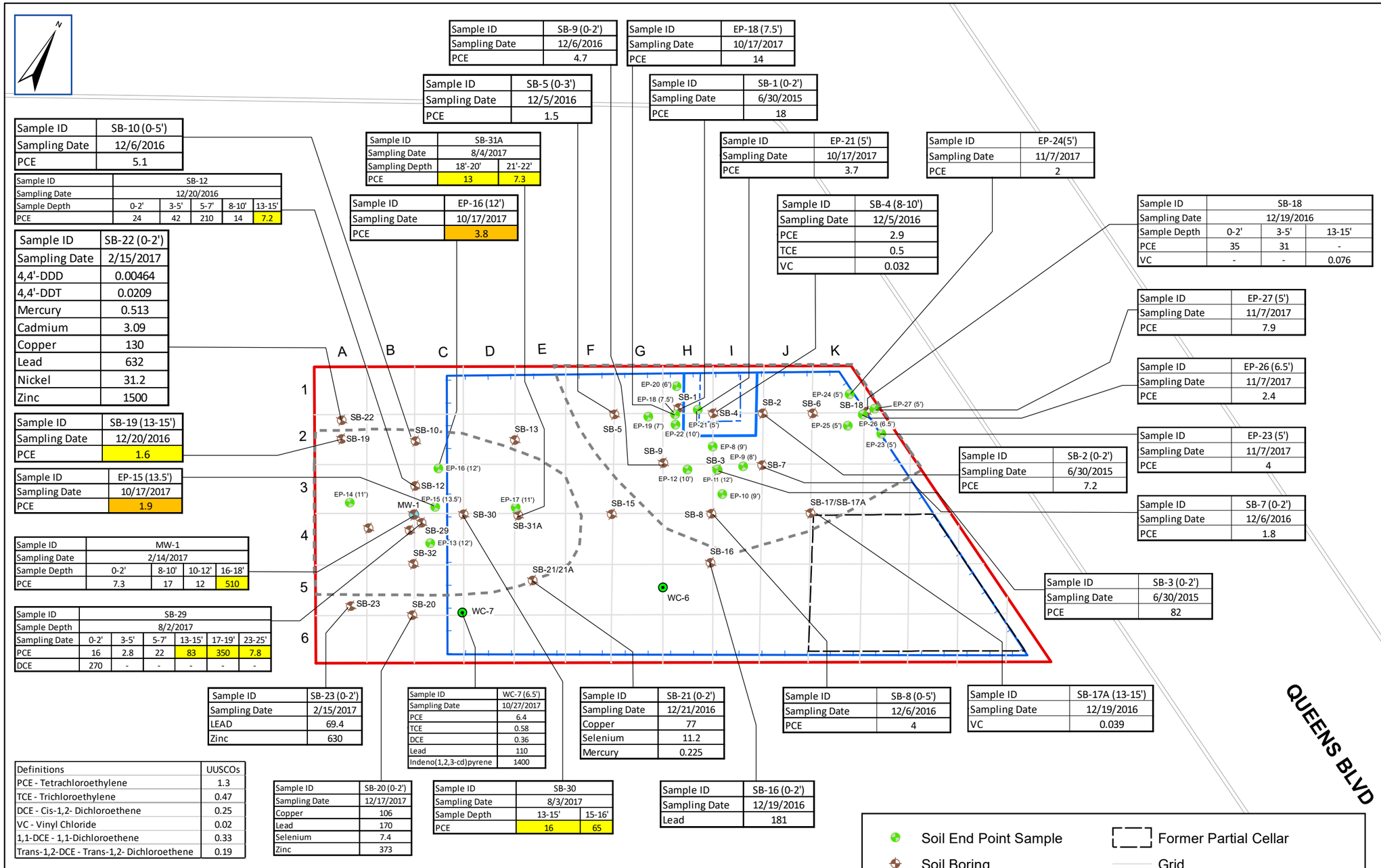
Groundwater Flow

August 10, 2018

124-22 Queens BLVD
Kew Gardens, NY

FIGURE NO:

4



Sample ID	SB-9 (0-2')
Sampling Date	12/6/2016
PCE	4.7

Sample ID	EP-18 (7.5')
Sampling Date	10/17/2017
PCE	14

Sample ID	SB-5 (0-3')
Sampling Date	12/5/2016
PCE	1.5

Sample ID	SB-1 (0-2')
Sampling Date	6/30/2015
PCE	18

Sample ID	SB-10 (0-5')
Sampling Date	12/6/2016
PCE	5.1

Sample ID	SB-31A	
Sampling Date	8/4/2017	
Sampling Depth	18'-20'	21'-22'
PCE	13	7.3

Sample ID	EP-21 (5')
Sampling Date	10/17/2017
PCE	3.7

Sample ID	EP-24(5')
Sampling Date	11/7/2017
PCE	2

Sample ID	SB-12				
Sampling Date	12/20/2016				
Sample Depth	0-2'	3-5'	5-7'	8-10'	13-15'
PCE	24	42	210	14	7.2

Sample ID	EP-16 (12')
Sampling Date	10/17/2017
PCE	3.8

Sample ID	SB-4 (8-10')
Sampling Date	12/5/2016
PCE	2.9
TCE	0.5
VC	0.032

Sample ID	SB-18		
Sampling Date	12/19/2016		
Sample Depth	0-2'	3-5'	13-15'
PCE	35	31	-
VC	-	-	0.076

Sample ID	SB-22 (0-2')
Sampling Date	2/15/2017
4,4'-DDD	0.00464
4,4'-DDT	0.0209
Mercury	0.513
Cadmium	3.09
Copper	130
Lead	632
Nickel	31.2
Zinc	1500

Sample ID	EP-27 (5')
Sampling Date	11/7/2017
PCE	7.9

Sample ID	EP-26 (6.5')
Sampling Date	11/7/2017
PCE	2.4

Sample ID	SB-19 (13-15')
Sampling Date	12/20/2016
PCE	1.6

Sample ID	EP-23 (5')
Sampling Date	11/7/2017
PCE	4

Sample ID	SB-2 (0-2')
Sampling Date	6/30/2015
PCE	7.2

Sample ID	EP-15 (13.5')
Sampling Date	10/17/2017
PCE	1.9

Sample ID	SB-7 (0-2')
Sampling Date	12/6/2016
PCE	1.8

Sample ID	MW-1			
Sampling Date	2/14/2017			
Sample Depth	0-2'	8-10'	10-12'	16-18'
PCE	7.3	17	12	510

Sample ID	SB-3 (0-2')
Sampling Date	6/30/2015
PCE	82

Sample ID	SB-29					
Sample Depth	8/2/2017					
Sampling Date	0-2'	3-5'	5-7'	13-15'	17-19'	23-25'
PCE	16	2.8	22	83	350	7.8
DCE	270	-	-	-	-	-

Sample ID	SB-23 (0-2')
Sampling Date	2/15/2017
LEAD	69.4
Zinc	630

Sample ID	WC-7 (6.5')
Sampling Date	10/27/2017
PCE	6.4
TCE	0.58
DCE	0.36
Lead	110
Indeno(1,2,3-cd)pyrene	1400

Sample ID	SB-21 (0-2')
Sampling Date	12/21/2016
Copper	77
Selenium	11.2
Mercury	0.225

Sample ID	SB-8 (0-5')
Sampling Date	12/6/2016
PCE	4

Sample ID	SB-17A (13-15')
Sampling Date	12/19/2016
VC	0.039

Definitions	UUSCOs
PCE - Tetrachloroethylene	1.3
TCE - Trichloroethylene	0.47
DCE - Cis-1,2- Dichloroethene	0.25
VC - Vinyl Chloride	0.02
1,1-DCE - 1,1-Dichloroethene	0.33
Trans-1,2-DCE - Trans-1,2- Dichloroethene	0.19

Sample ID	SB-20 (0-2')
Sampling Date	12/17/2017
Copper	106
Lead	170
Selenium	7.4
Zinc	373

Sample ID	SB-30	
Sampling Date	8/3/2017	
Sample Depth	13-15'	15-16'
PCE	16	65

Sample ID	SB-16 (0-2')
Sampling Date	12/19/2016
Lead	181

Notes:
1) Interior Building Layout is Approximate and Not to Scale.
2) All Sample Locations, data and information shown were provided by Advanced Cleanup Technologies, Inc.
3) All results are reported in parts per million (ppm).
4) Analytes displayed are in exceedance of the Unrestricted Use Soil Cleanup Objective (UUSCO).
5) Yellow highlighted results represent soil exceedances of the UUSCOs remaining after IRM excavation.
6) Orange highlighted results represent endpoint samples that remain in exceedance of the UUSCOs after IRM excavation.

0 30 60 90 120 Feet

- Soil End Point Sample
- Soil Boring
- Soil and Groundwater Boring
- Waste Classification Sample
- AOC
- Former Partial Cellar
- Grid
- Former Dry Cleaner Machine
- Former Dry Cleaner Enclosure
- Site Boundary
- Former Building Footprint
- Curbline

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JP
Date:	1/23/2019	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	JP

SOIL ANALYTICAL RESULTS

124-122 QUEENS BLVD
KEW GARDENS , NY

FIGURE NO:

5

Document Path: W:\Projects\A-D\ACT\1701\map files\RAWP\FIG07_SoilAnalyticalResults_VOCs-SVOCs.mxd

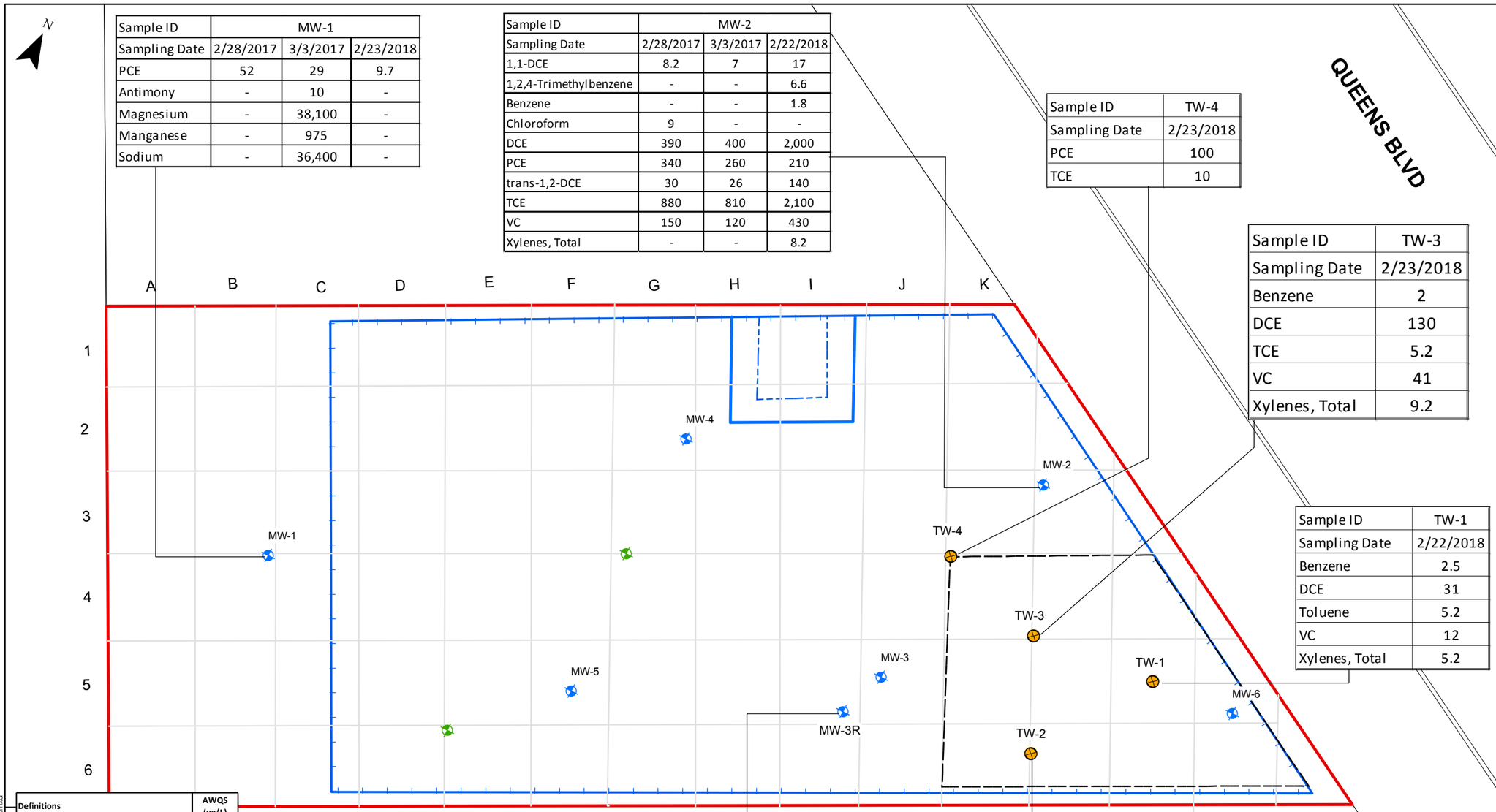
Sample ID	MW-1		
Sampling Date	2/28/2017	3/3/2017	2/23/2018
PCE	52	29	9.7
Antimony	-	10	-
Magnesium	-	38,100	-
Manganese	-	975	-
Sodium	-	36,400	-

Sample ID	MW-2		
Sampling Date	2/28/2017	3/3/2017	2/22/2018
1,1-DCE	8.2	7	17
1,2,4-Trimethylbenzene	-	-	6.6
Benzene	-	-	1.8
Chloroform	9	-	-
DCE	390	400	2,000
PCE	340	260	210
trans-1,2-DCE	30	26	140
TCE	880	810	2,100
VC	150	120	430
Xylenes, Total	-	-	8.2

Sample ID	TW-4
Sampling Date	2/23/2018
PCE	100
TCE	10

Sample ID	TW-3
Sampling Date	2/23/2018
Benzene	2
DCE	130
TCE	5.2
VC	41
Xylenes, Total	9.2

Sample ID	TW-1
Sampling Date	2/22/2018
Benzene	2.5
DCE	31
Toluene	5.2
VC	12
Xylenes, Total	5.2



Sample ID	MW-3	
Sampling Date	3/3/2017	2/23/2018
1,1-DCE	6.1	14
DCE	180	1500
PCE	1100	1300
trans-1,2-DCE	12	71
TCE	790	2500
VC	76	79

Sample ID	TW-2
Sampling Date	2/22/2018
1,2,4-Trimethylbenzene	6.7
Benzene	3.2
DCE	130
p- & m- Xylenes	7.1
VC	6.3
Xylenes, Total	11

Definitions	AWQS (µg/L)
1,1-DCE - 1,1-Dichloroethylene	5
1,2,4-Trimethylbenzene	5
Chloroform	7
Benzene	1
DCE - cis-1,2-Dichloroethylene	5
p- & m- Xylenes	5
PCE - Tetrachloroethylene	5
Toluene	5
trans-1,2-DCE - trans-1,2-Dichloroethylene	5
TCE - Trichloroethylene	5
VC - Vinyl Chloride	2
Xylenes, Total	5

Note:
1) Interior Building Layout is Approximate and Not to Scale.
2) All Sample Locations, data and information shown were provided by Advanced Cleanup Technologies, Inc.
3) All results are reported in ug/L.
4) Analytes displayed are in exceedence of their applicable NYSDEC Ambient Water Quality Class GA Standard (AWQS).
5) Current permanent monitoring wells (MW-1 - MW-3) must be inspected following IRM Construction to confirm they are not damaged as suspected, All damaged wells will be replaced in-kind.

0 10 20 30 40 Feet

- Temporary Well
- Proposed Monitoring Well
- Monitoring Well
- Former Partial Cellar
- Grid
- Former Dry Cleaner Machine
- Former Dry Cleaner Enclosure
- Site Boundary
- Adjacent Lots
- Former Building Footprint
- Curbline

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JE
Date:	3/29/2019	Drawn by:	UC
Scale:	AS SHOWN	Approved by:	JE

GROUNDWATER ANALYTICAL RESULTS

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:
6

Document Path: W:\Projects\A-D\ACT\1701\mxds\Fig06_Groundwater_Results.mxd

Sample:	SV-2
Date:	2/14/17
PCE	16,000
TCE	62
DCE	9.9

Sample:	SS-2
Date:	4/2/15
PCE	240,000
TCE	1,500
DCE	< 8.3
VC	< 1.3

Sample:	SV-3
Date:	2/14/17
PCE	250,000
TCE	1,100

Sample:	SS-1
Date:	4/2/15
PCE	45,000
TCE	1,100
DCE	26
VC	< 1.3

Sample:	SV-1A
Date:	3/3/17
PCE	4,300

Sample:	SV-8
Date:	2/14/17
PCE	9,000
TCE	4,300
DCE	530

Sample:	SS-3
Date:	4/2/15
PCE	14,000
TCE	360
DCE	170
VC	< 1.2

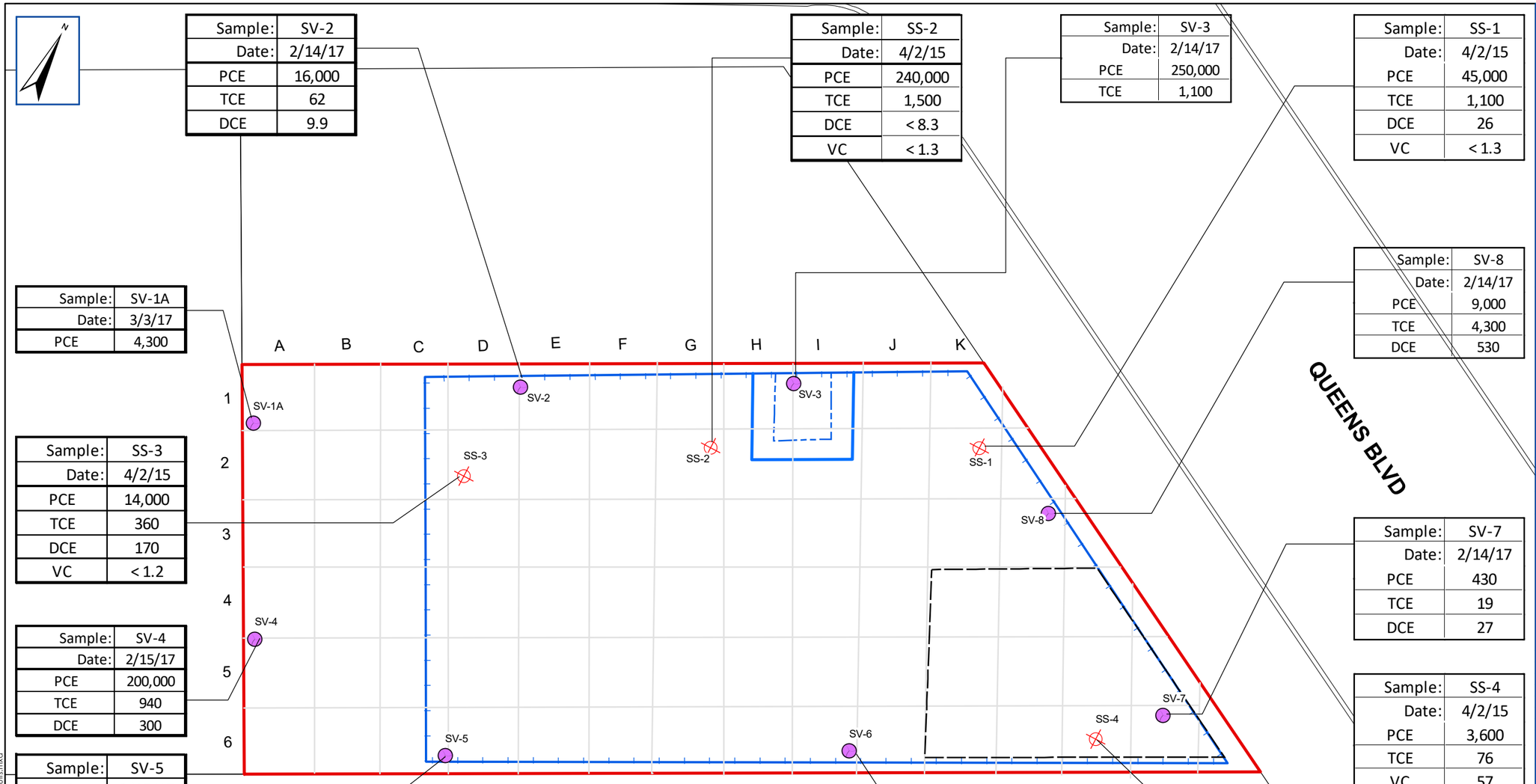
Sample:	SV-7
Date:	2/14/17
PCE	430
TCE	19
DCE	27

Sample:	SV-4
Date:	2/15/17
PCE	200,000
TCE	940
DCE	300

Sample:	SS-4
Date:	4/2/15
PCE	3,600
TCE	76
VC	57
DCE	150

Sample:	SV-5
Date:	2/15/17
PCE	4,300
TCE	30
DCE	48

Sample:	SV-6
Date:	2/15/17
PCE	3,400
TCE	73
DCE	39



Definitions:	*NYSDOH Indoor Air Guideline (5/2017)*	*NYSDOH Soil Vapor Sceening Level (5/2017)*
PCE - Tetrachloroethylene	10	100
TCE - Trichloroethylene	1	6
DCE - Cis-1,2- Dichloroethene	1	6
VC - Vinyl Chloride	0.2	6

Notes:
1) Interior Building Layout is Approximate and Not to Scale.
2) All Sample Locations, data and information shown were provided by Advanced Cleanup Technologies, Inc.
3) All results are reported in µg/m^3
4) Analytes displayed for Sub-slab Vapor Samples (SS-1 - SS-4) are in exceedance of their applicable May 2017 NYSDOH indoor air guideline values.
5) Analytes displayed for Soil Vapor Samples (SV-1A - SV-8) are in exceedance of their applicable May 2017 NYSDOH soil vapor screening levels.

0 20 40 60 80 Feet

- Sub-slab Vapor Sample
- Soil Vapor Sample
- Former Partial Cellar
- Grid
- Former Dry Cleaner Machine
- Former Dry Cleaner Enclosure
- Former Building Footprint
- Curbline
- Site Boundary

Document Path: W:\Projects\A-D\ACT\1701\map files\KAMPA\FIG09_SoilVaporAnalyticalResults.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

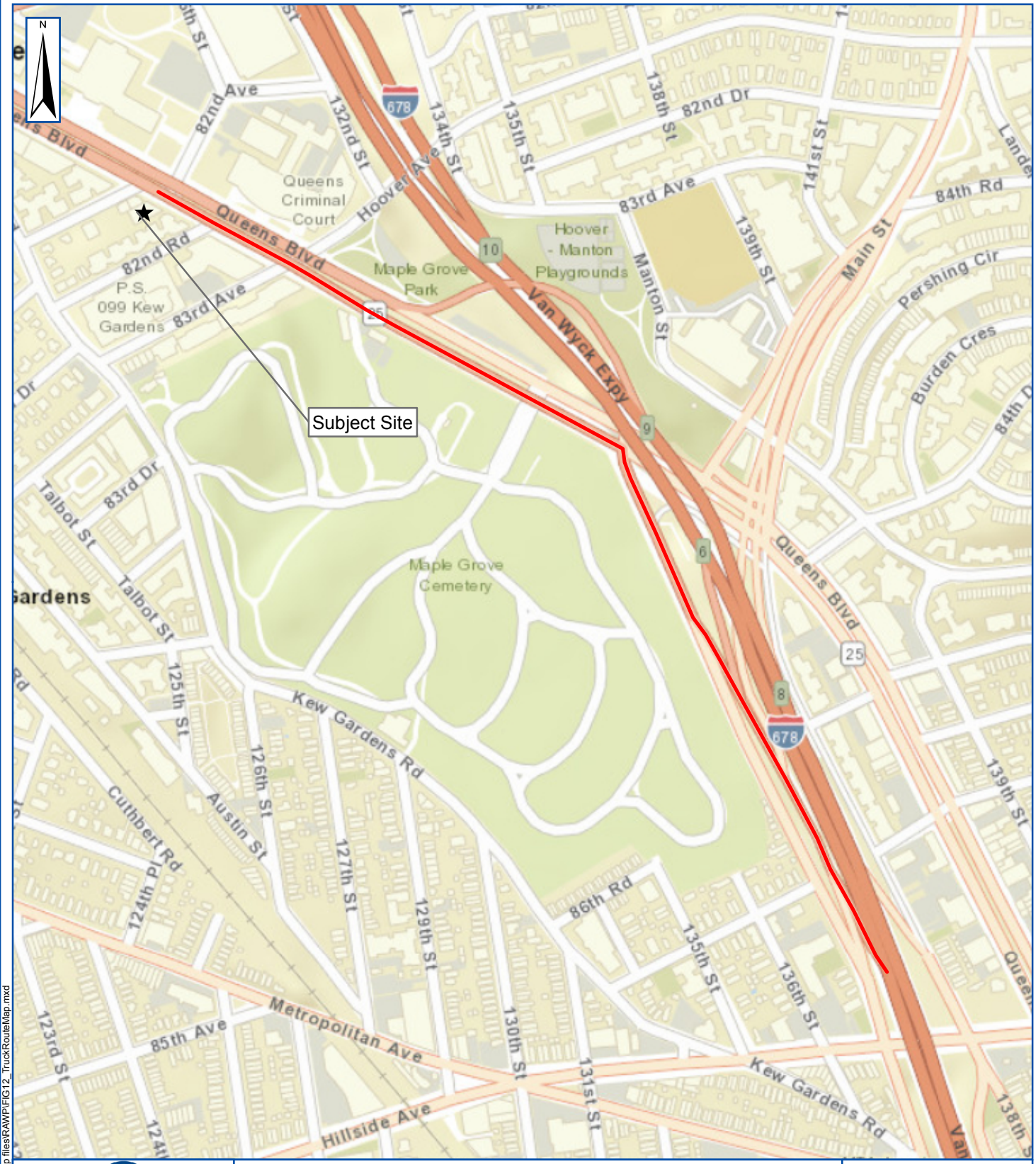
Project:	ACT1701	Designed by:	JP
Date:	1/23/2019	Drawn by:	JCG
Scale:	AS SHOWN	Approved by:	JP

SOIL VAPOR ANALYTICAL RESULTS

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:

7



Document Path: W:\Projects\A-D\ACT\1701\map files\RAW\FIG12_TruckRouteMap.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

TRUCK ROUTE MAP

124-22 QUEENS BLVD
KEW GARDENS, NY

0 500 1,000 1,500 2,000 Feet

Project:	ACT1701
Date:	3/28/2019
Designed by:	JP
Drawn by:	JCG
Approved by:	JP
Figure No:	8

Client Sample ID	EP-15
Sampling Date	10/17/2017
Sample Depth	13.5'
PCE	1,900

Client Sample ID	EP-4
Sampling Date	7/13/2018
Sample Depth	13'
PCE	45

Client Sample ID	EP-7
Sampling Date	7/13/2018
Sample Depth	13'
PCE	62

Client Sample ID	MW-4	
Sampling Date	2/14/2017	
Sample Depth	43-45'	53-55'
PCE	11,000	1,300
TCE	46	29

Client Sample ID	EP-3
Sampling Date	7/13/2018
Sample Depth	13'
PCE	54

Client Sample ID	EP-6
Sampling Date	7/13/2018
Sample Depth	13'
PCE	47

Client Sample ID	SB-31A	
Sampling Date	8/4/2017	
Sample Depth	18-20'	21-22'
PCE	13,000	7,300

Client Sample ID	SB-19
Sampling Date	12/20/2016
Sample Depth	13-15'
PCE	1,600

Client Sample ID	SB-12
Sampling Date	12/20/2016
Sample Depth	13-15'
PCE	7,200

Client Sample ID	MW-1
Sampling Date	2/14/2017
Sample Depth	16-18'
PCE	510,000

Client Sample ID	EP-2
Sampling Date	7/13/2018
Sample Depth	13'
PCE	130

Client Sample ID	SB-33		
Sampling Date	9/6/2018		
Sample Depth	13-15'	15-17'	17-19'
PCE	1,800	400	380

Client Sample ID	SB-32			
Sampling Date	9/6/2018			
Sample Depth	13-15'	17-19'	21-23'	23-25'
PCE	27,000	61,000	23,000	14,000

Client Sample ID	EP-9
Sampling Date	7/13/2018
Sample Depth	13'
PCE	660,000

Client Sample ID	EP-1
Sampling Date	7/13/2018
Sample Depth	13'
PCE	43

Client Sample ID	EP-5
Sampling Date	7/13/2018
Sample Depth	13'
PCE	41

Client Sample ID	SB-18
Sampling Date	12/19/2016
Sample Depth	13-15'
PCE	ND
VC	76

Client Sample ID	MW-6	
Sampling Date	4/30/2018	
Sample Depth	33-35'	62-64'
PCE	ND	ND

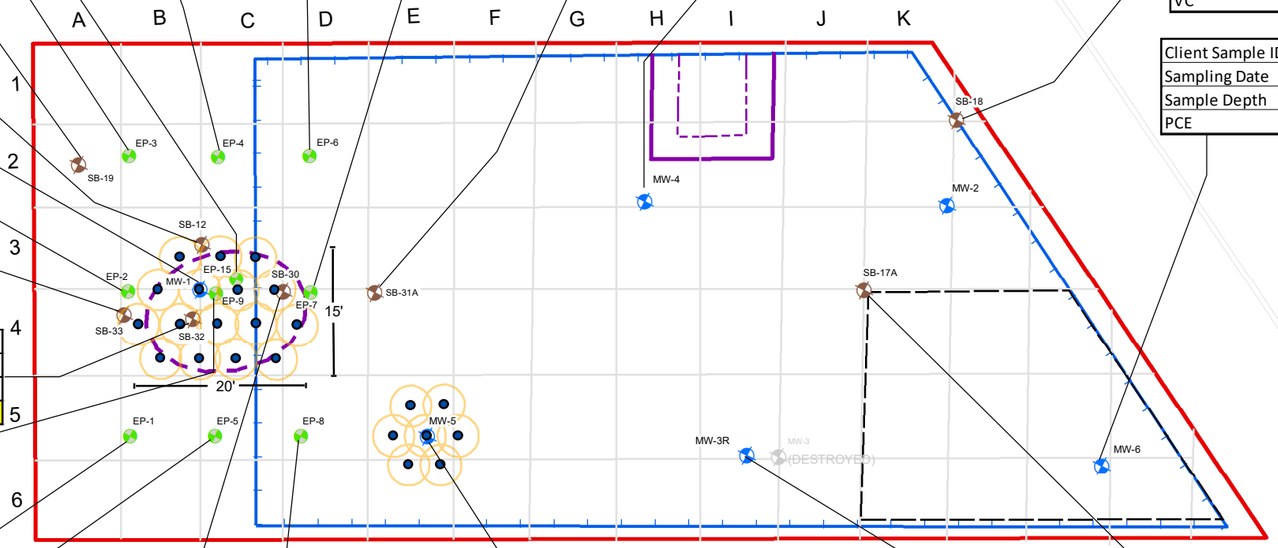
Client Sample ID	SB-30	
Sampling Date	8/3/2017	
Sample Depth	13-15'	15-16'
PCE	16,000	65,000

Client Sample ID	EP-8
Sampling Date	7/13/2018
Sample Depth	13'
PCE	550

Client Sample ID	MW-5	
Sampling Date	2/14/2017	
Sample Depth	16-18'	48-50'
DCE	11	4
PCE	21,000	130
TCE	42	ND
VC	3.6	ND

Client Sample ID	MW-3R
Sampling Date	2/14/2017
Sample Depth	63-65'
PCE	9.6
TCE	3.5

Client Sample ID	SB-17A
Sampling Date	12/19/2016
Sample Depth	13-15'
VC	39



Note:
1) Interior Building Layout is Approximate and Not to Scale.
2) All results are reported in ug/kg.
3) Analytes displayed are in exceedance of the Unrestricted Use Soil Cleanup Objective (UUSCO).
4) Yellow highlighted results represent soil exceedances of the UUSCOs remaining after IRM excavation.
5) Orange highlighted results represent soil exceedances of the Restricted Residential Soil Cleanup Objective (RRSCO).

Feet
0 25 50 75 100

- Proposed Injection Points
- Soil End Point Sample
- Monitoring Well
- Destroyed Monitoring Well
- Soil Boring
- Former Partial Cellar
- Grid
- Former Dry Cleaner Machine
- Former Dry Cleaner Enclosure
- Proposed Limits of Excavation
- Site Boundary
- Former Building Footprint
- Curbline

Document Path: W:\Projects\A-D\ACT\1701\map files\Fig_Chemical_Injections_Hotspot.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

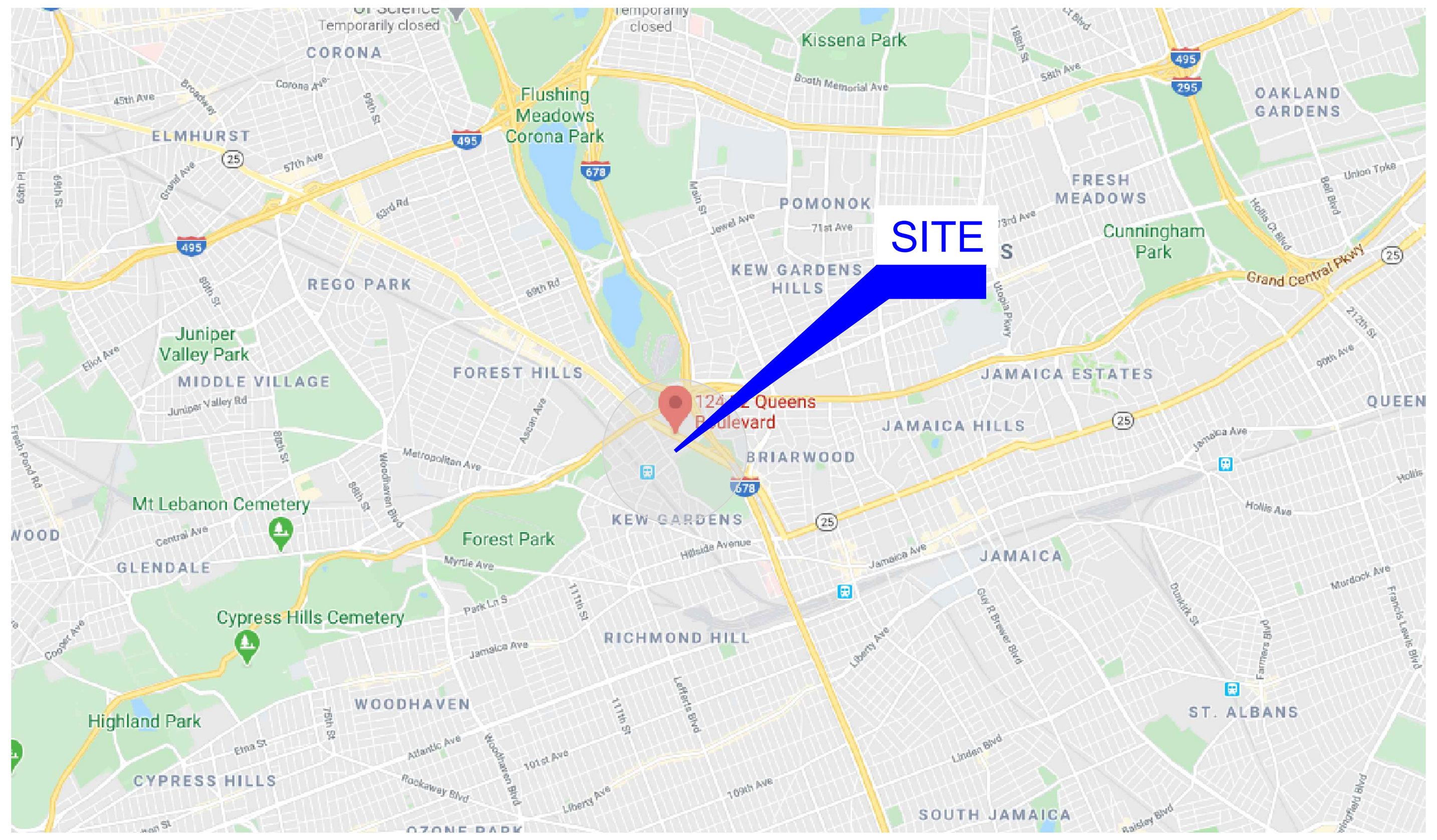
Project:	ACT1701	Designed by:	JE
Date:	1/23/2019	Drawn by:	UC
Scale:	AS SHOWN	Approved by:	JE

SOIL TREATMENT PROPOSED INJECTION POINTS

124-22 Queens Blvd
Kew Gardens, NY

FIGURE NO:

9



VICINITY MAP

SCALE: NOT TO SCALE

SCOPE OF WORK

INSTALLATION OF SOIL VAPOR EXTRACTION (SVE) SYSTEM AT 124-22 QUEENS BOULEVARD QUEENS, KEW GARDENS 11415 AS SHOWN ON THESE PLANS.

PROJECT BACKGROUND:

1. DURING CONSTRUCTION OF THE BUILDING FOOTPRINT 4" DIA. PVC SLEEVES WERE INSTALLED IN THE CONCRETE SLAB. THE SLEEVES WERE INSTALLED SO THAT FUTURE WORK RELATED TO THE INSTALLATION OF AN SVE SYSTEM OR IN-SITU CHEMICAL INJECTION SYSTEM COULD BE DONE WITHOUT NEEDING TO CORE-DRILL THE CONCRETE SLAB.
2. THIS PROJECT IS INSTALL AN SVE SYSTEM UTILIZING THESE PVC SLEEVES.
3. THERE ARE TWO AREAS TO NOTE. MW-1 WHICH IS SURROUNDED BY 15 PVC SLEEVES AND MW-5 WHICH IS SURROUND BY 6 PVC SLEEVES ALL WITH 5' SPACING.
4. THIS SVE SYSTEM IS TO BE CONSIDERED TEMPORARY AS PART OF A PILOT TEST PER THE REMEDIAL ACTION WORK PLAN (RAWP). IN THE EVENT THE SYSTEM PROVES EFFECTIVE THE SYSTEM WILL BE CHANGED TO A PERMANENT SVE SYSTEM.

THE WORK INCLUDES:

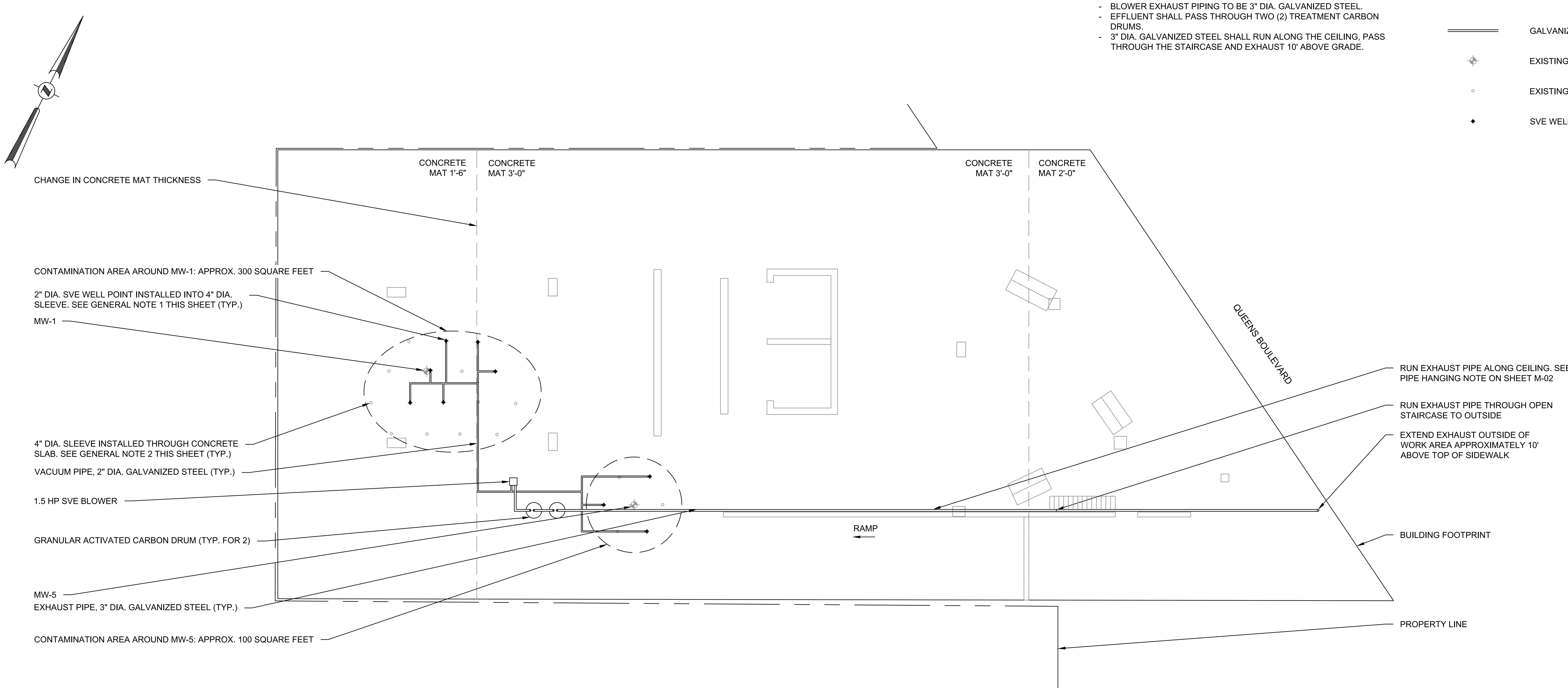
1. INSTALLATION OF SOIL VAPOR EXTRACTION (SVE) SYSTEM. THE SVE SYSTEM IS DIVIDED INTO TWO SECTIONS, ONE PART FOR THE AREA AROUND MW-1 AND THE OTHER PART FOR THE AREA AROUND MW-5 AS SHOWN ON THESE PLANS. EACH SECTION IS CONNECTED TO A SINGLE 1.5 HP BLOWER.
2. MW-1
   - SIX (6) 2" DIA. SVE WELL POINTS TO TEN (10) FEET BELOW THE CONCRETE SLAB. EACH WELL IS TO BE 5' OF SOLID GALVANIZED STEEL ON TOP AND 5' OF SLOTTED SCREEN WOVEN STEEL - SLOT SIZE 010.
   - EACH SVE WELL POINT IS TO MANIFOLD TOGETHER INTO A 2" DIA. GALVANIZED STEEL HEADER PIPE. THE HEADER PIPE SHALL CONNECT TO THE MW-5 HEADER PIPE AT THE SVE BLOWER.
3. MW-5
   - THREE (3) 2" DIA. SVE WELL POINTS TO TEN (10) FEET BELOW THE CONCRETE SLAB. EACH WELL IS TO BE 5' OF SOLID GALVANIZED STEEL ON TOP AND 5' OF SLOTTED SCREEN WOVEN STEEL - SLOT SIZE 010.
   - EACH SVE WELL POINT IS TO MANIFOLD TOGETHER INTO A 2" DIA. GALVANIZED STEEL HEADER PIPE. THE HEADER PIPE SHALL CONNECT TO THE MW-1 HEADER PIPE AT THE SVE BLOWER.
4. SVE SYSTEM
   - MW-1 AND MW-5 HEADER PIPES MANIFOLD AT SVE BLOWER INLET.
   - BLOWER EXHAUST PIPING TO BE 3" DIA. GALVANIZED STEEL.
   - EFFLUENT SHALL PASS THROUGH TWO (2) TREATMENT CARBON DRUMS.
   - 3" DIA. GALVANIZED STEEL SHALL RUN ALONG THE CEILING, PASS THROUGH THE STAIRCASE AND EXHAUST 10' ABOVE GRADE.

GENERAL NOTES

1. 9 OF 21 EXISTING 4" DIA. PVC SLEEVES SHALL BE UTILIZED FOR THE PROPOSED SVE SYSTEM. SVE WELL POINTS COMPRISED OF 2" DIA. STEEL WOVEN WELL SCREEN AND GALVANIZED STEEL RISERS. WELLS SHALL BE PUSH DRIVEN INTO THE EXISTING SLEEVES. THE VOID SPACE BETWEEN THE SLEEVE AND THE WELL POINT SHALL BE FILLED WITH GROUT. SEE DETAIL ON M-02.
2. THE REMAINING 12 EXISTING 4" DIA. PVC SLEEVES SHALL PLUGGED WITH SCH 40 PVC PLUG.
3. ALL LATERAL PIPING UPSTREAM OF THE SVE TO SLOPE DOWN TOWARDS WELL POINTS AT 1/8" PER FOOT (1% SLOPE).
4. ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN.
5. ALL MATERIALS TO BE REMOVED ARE TO BE LEGALLY DISPOSED OF.

LEGEND

(double line)	GALVANIZED STEEL PIPE
(symbol)	EXISTING MONITORING WELL
(symbol)	EXISTING SLEEVE
(symbol)	SVE WELL POINT



REFERENCE DOCUMENTS:

S-101.01
TAN ARCHITECT P.C.
11/11/2016

SVE SITE PLAN

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

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.

630 Johnson Avenue. • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1		

Designed By	GMG	Date Submitted	06/03/2020
Drawn By	GMG	Date Created	04/29/2020
Approved By	PKB	Scale	AS SHOWN

Client:
ADVANCED CLEANUP TECHNOLOGIES
110 MAIN STREET, STE 103
PORT WASHINGTON, NY 11050

Project:
SOIL VAPOR EXTRACTION SYSTEM

Project Address:
124-22 QUEENS BLVD
KEW GARDENS, NY 11415

County Tax Map Number:

Contract Number:

Regulatory Reference Number:

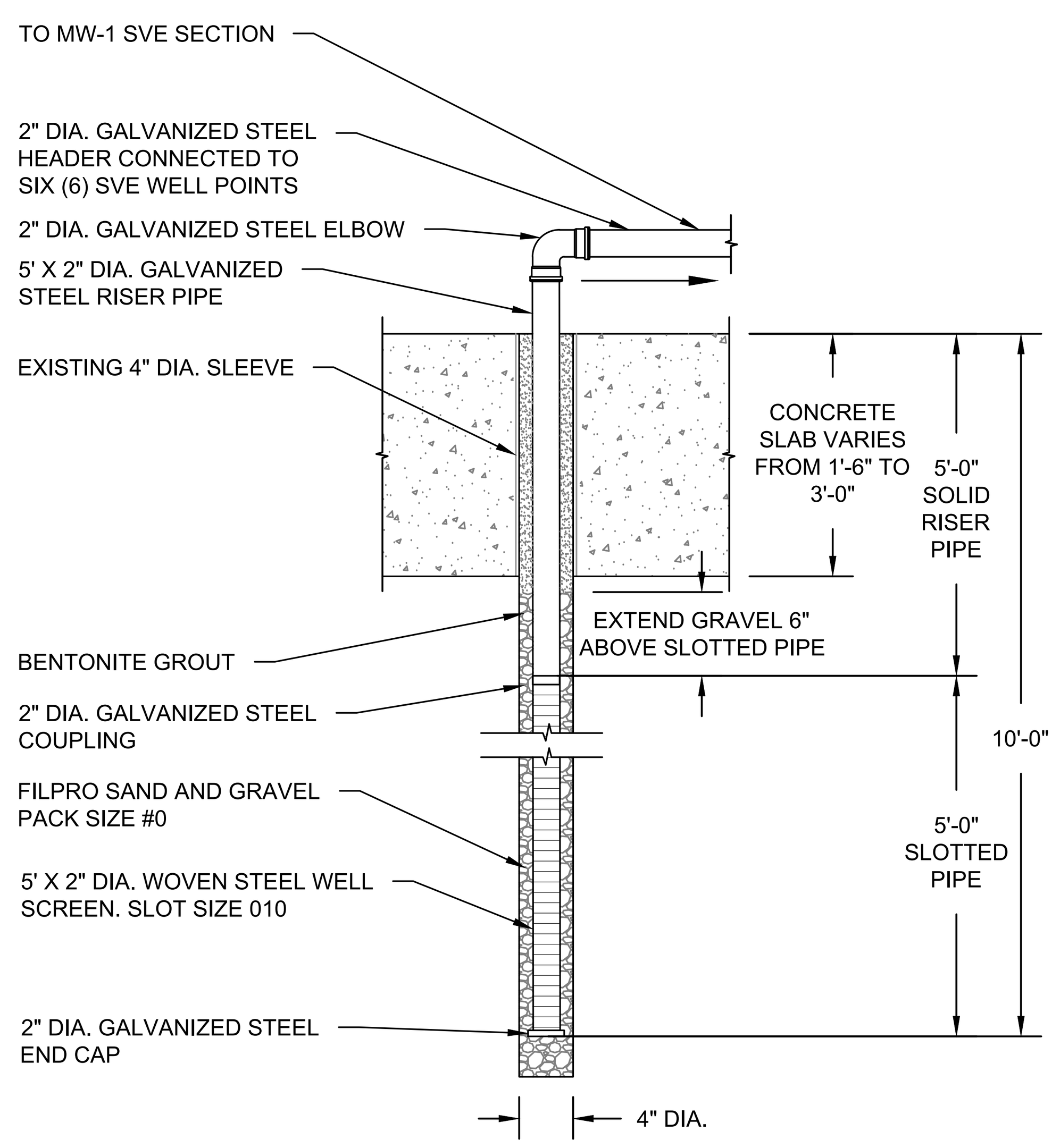
Title of Drawing:
SITE PLAN

Drawing Number: **M-01**

Sheet 1 of 2

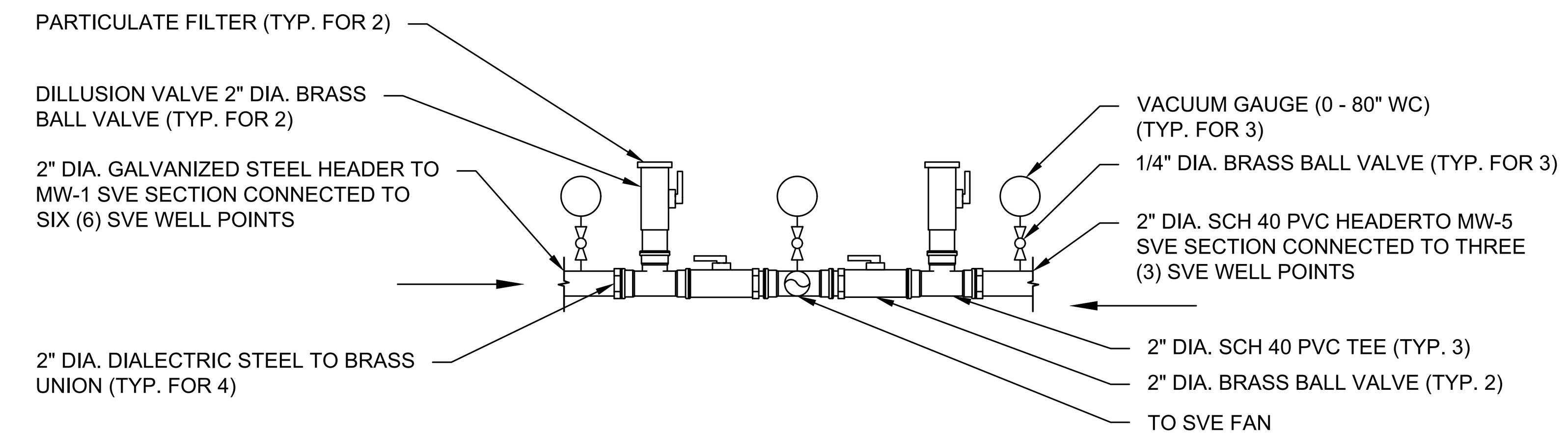
PWGC Project Number: ACT1701

PWGC FILE NAME: J:\Projects A-D\ACT\1701\CAD\SVE and ISCO Design\ACT1701 - SVE - 004.dwg (M-01)
PLOT DATE/TIME: Jun 03, 2020-1:45pm By: ggobillot



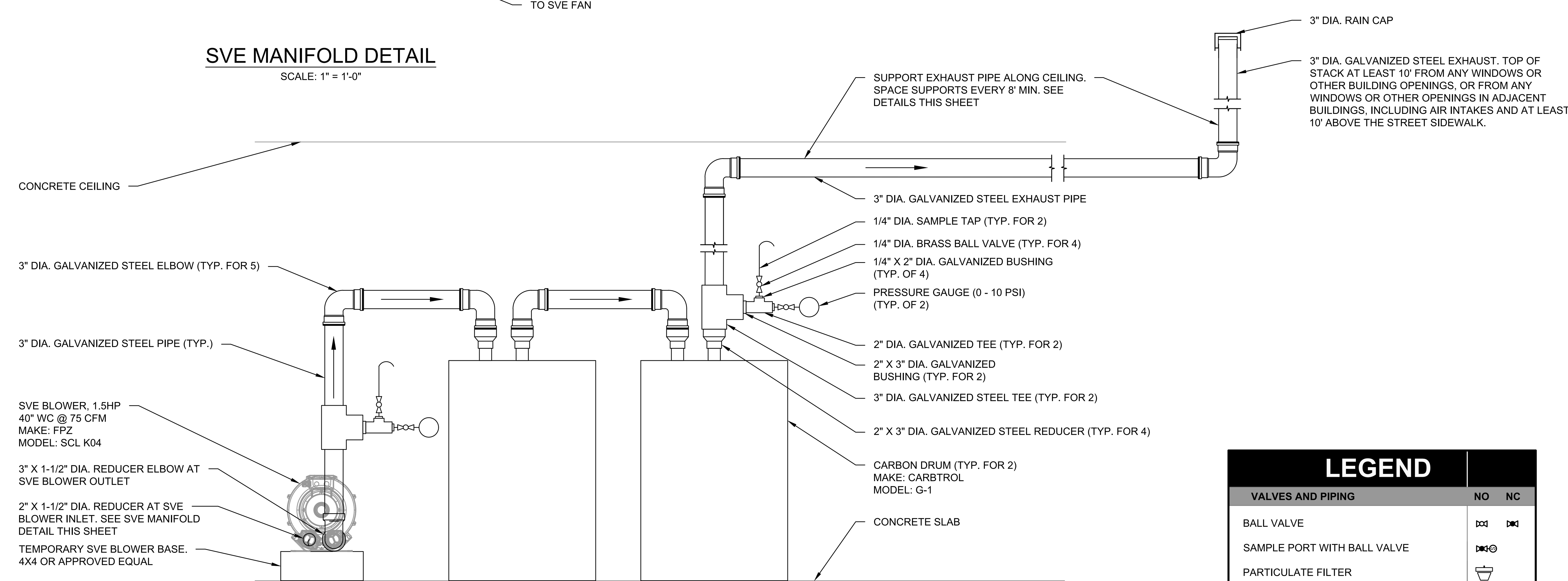
SVE WELL POINT DETAIL (TYP. FOR 9)

SCALE: 1" = 1'-0"



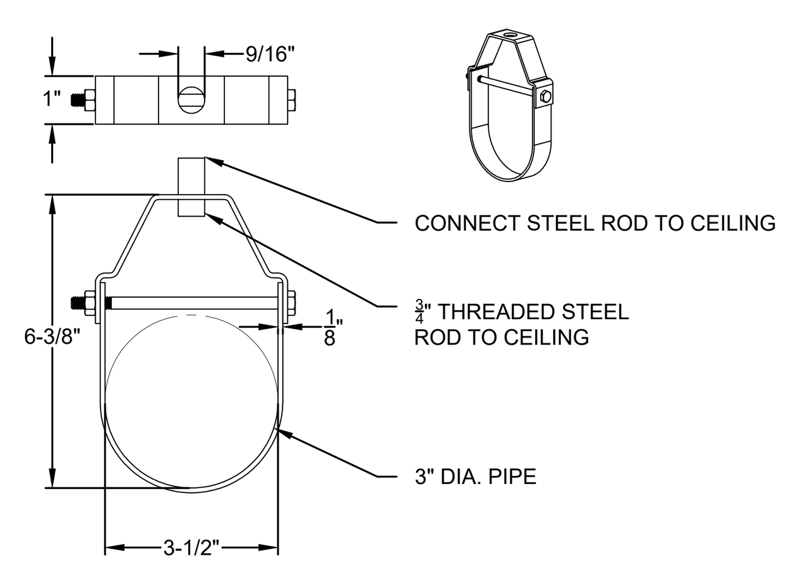
SVE MANIFOLD DETAIL

SCALE: 1" = 1'-0"



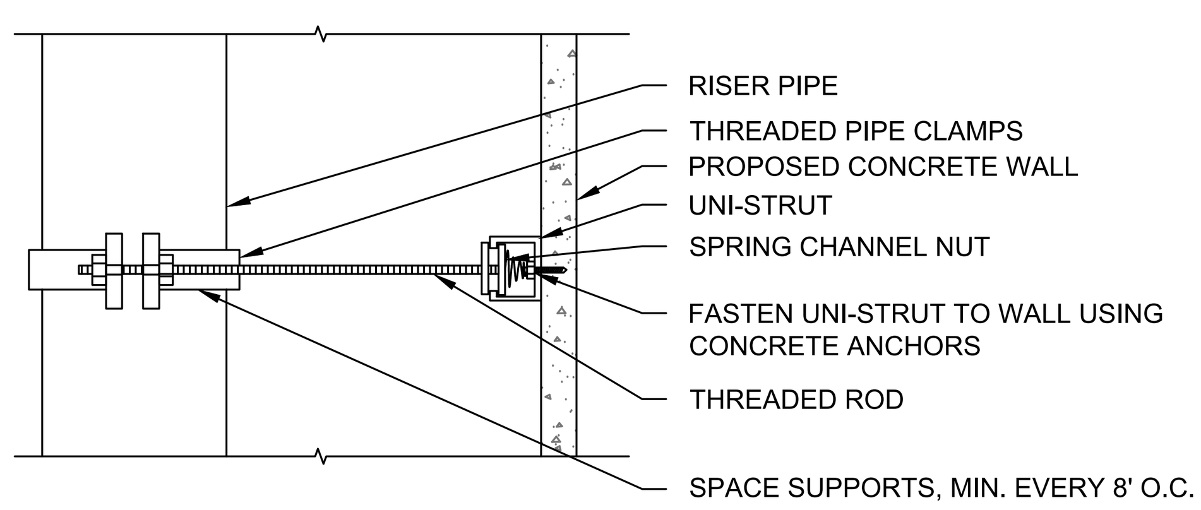
SVE SYSTEM DETAIL DETAIL

SCALE: 1" = 1'-0"



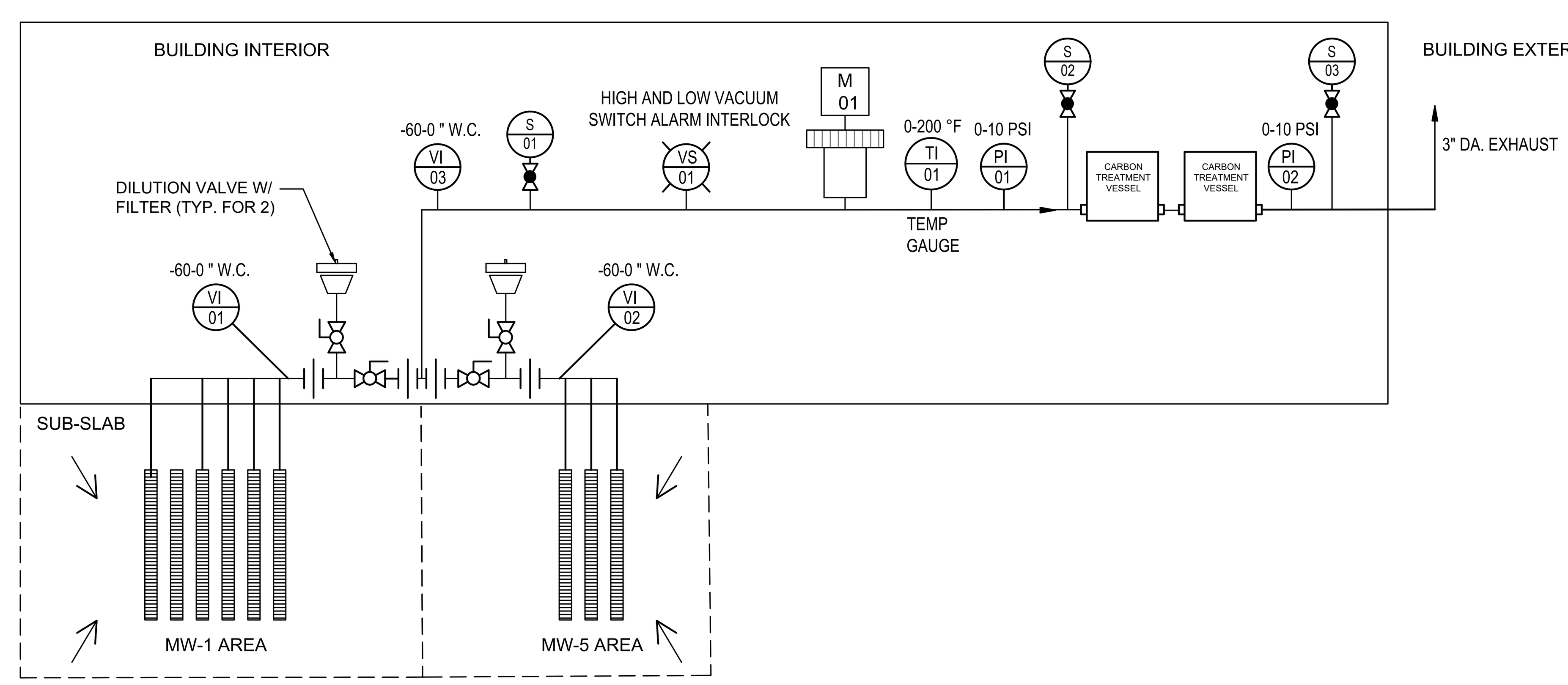
TYPICAL HORIZONTAL PIPE HANGING SUPPORT DETAIL

SCALE: NOT TO SCALE



TYPICAL VERTICAL PIPE HANGING SUPPORT DETAIL

SCALE: NOT TO SCALE



PROCESS & INSTRUMENTATION DIAGRAM

SCALE: NOT TO SCALE

ALARM INTERLOCK TABLE

ALARM INTERLOCK	ALARM DESCRIPTION	SYSTEM RESPONSE	NOTES
1	VACUUM HIGH	CRITICAL ALARM SYSTEM SHUT DOWN	VACUUM ABOVE 60" W.C.
2	VACUUM LOW	CRITICAL ALARM SYSTEM SHUT DOWN	VACUUM BELOW 10" W.C.

LEGEND

VALVES AND PIPING — NO / NC

- BALL VALVE
- SAMPLE PORT WITH BALL VALVE
- PARTICULATE FILTER
- CARBON VESSEL
- MOISTURE SEPARATOR (NOT USED)
- LIQUID LEVEL ALARM (NOT USED)
- VACUUM SWITCH (VS 01)

INSTRUMENT IDENTIFICATION

- INDICATING INSTRUMENT (LOCAL)
- ALARM

EXAMPLE: SETPOINT OF INSTRUMENT; INSTRUMENT DESIGNATION (PRESSURE SWITCH); INSTRUMENT TYPE; SYSTEM POSITION NUMBER

EQUIPMENT

- CENTRIFUGAL, REGENERATIVE BLOWER

EQUIPMENT ABBREVIATIONS

FI - FLOW INDICATOR
M - MOTOR
PI - PRESSURE INDICATOR
TI - TEMPERATURE INDICATOR
VA - VACUUM ALARM
VI - VACUUM INDICATOR
S - SAMPLE PORT

SYSTEM POSITION DESIGNATION

PROPOSED

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.
630 Johnson Avenue. • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

GMG		06/03/2020
GMG		04/29/2020
PKB		AS SHOWN

ADVANCED CLEANUP TECHNOLOGIES
110 MAIN STREET, STE 103
PORT WASHINGTON, NY 11050

SOIL VAPOR EXTRACTION SYSTEM

124-22 QUEENS BLVD
KEW GARDENS, NY 11415

DETAILS AND P&ID

M-02

2 2

ACT1701

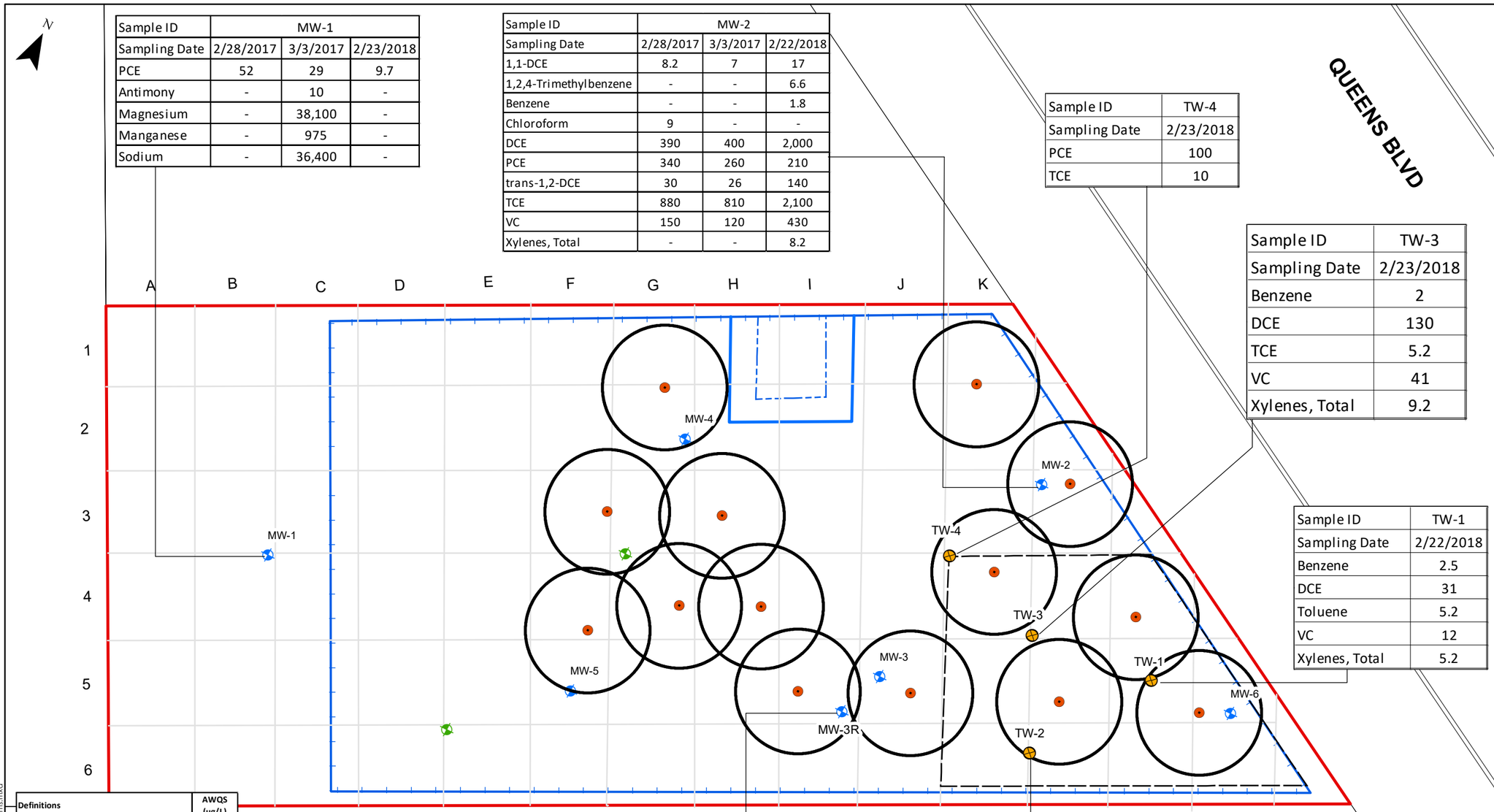
Sample ID	MW-1		
Sampling Date	2/28/2017	3/3/2017	2/23/2018
PCE	52	29	9.7
Antimony	-	10	-
Magnesium	-	38,100	-
Manganese	-	975	-
Sodium	-	36,400	-

Sample ID	MW-2		
Sampling Date	2/28/2017	3/3/2017	2/22/2018
1,1-DCE	8.2	7	17
1,2,4-Trimethylbenzene	-	-	6.6
Benzene	-	-	1.8
Chloroform	9	-	-
DCE	390	400	2,000
PCE	340	260	210
trans-1,2-DCE	30	26	140
TCE	880	810	2,100
VC	150	120	430
Xylenes, Total	-	-	8.2

Sample ID	TW-4
Sampling Date	2/23/2018
PCE	100
TCE	10

Sample ID	TW-3
Sampling Date	2/23/2018
Benzene	2
DCE	130
TCE	5.2
VC	41
Xylenes, Total	9.2

Sample ID	TW-1
Sampling Date	2/22/2018
Benzene	2.5
DCE	31
Toluene	5.2
VC	12
Xylenes, Total	5.2



Definitions	AWQS (µg/L)
1,1-DCE - 1,1-Dichloroethylene	5
1,2,4-Trimethylbenzene	5
Chloroform	7
Benzene	1
DCE - cis-1,2-Dichloroethylene	5
p- & m- Xylenes	5
PCE - Tetrachloroethylene	5
Toluene	5
trans-1,2-DCE - trans-1,2-Dichloroethylene	5
TCE - Trichloroethylene	5
VC - Vinyl Chloride	2
Xylenes, Total	5

Sample ID	MW-3	
Sampling Date	3/3/2017	2/23/2018
1,1-DCE	6.1	14
DCE	180	1500
PCE	1100	1300
trans-1,2-DCE	12	71
TCE	790	2500
VC	76	79

Sample ID	TW-2
Sampling Date	2/22/2018
1,2,4-Trimethylbenzene	6.7
Benzene	3.2
DCE	130
p- & m- Xylenes	7.1
VC	6.3
Xylenes, Total	11

Note:
1) Interior Building Layout is Approximate and Not to Scale.
2) All Sample Locations, data and information shown were provided by Advanced Cleanup Technologies, Inc.
3) All results are reported in ug/L.
4) Analytes displayed are in exceedence of their applicable NYSDEC Ambient Water Quality Class GA Standard (AWQS).
5) Current permanent monitoring wells (MW-1 - MW-3) must be inspected following IRM Construction to confirm they are not damaged as suspected, All damaged wells will be replaced in-kind.

0 10 20 30 40 Feet

Injection Well
Temporary Well
Proposed Monitoring Well
Injection Well 7.5' Buffer
Monitoring Well
Former Partial Cellar
Grid
Former Dry Cleaner Machine
Former Dry Cleaner Enclosure
Site Boundary
Adjacent Lots
Former Building Footprint
Curbline

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JE
Date:	2/4/2019	Drawn by:	UC
Scale:	AS SHOWN	Approved by:	JE

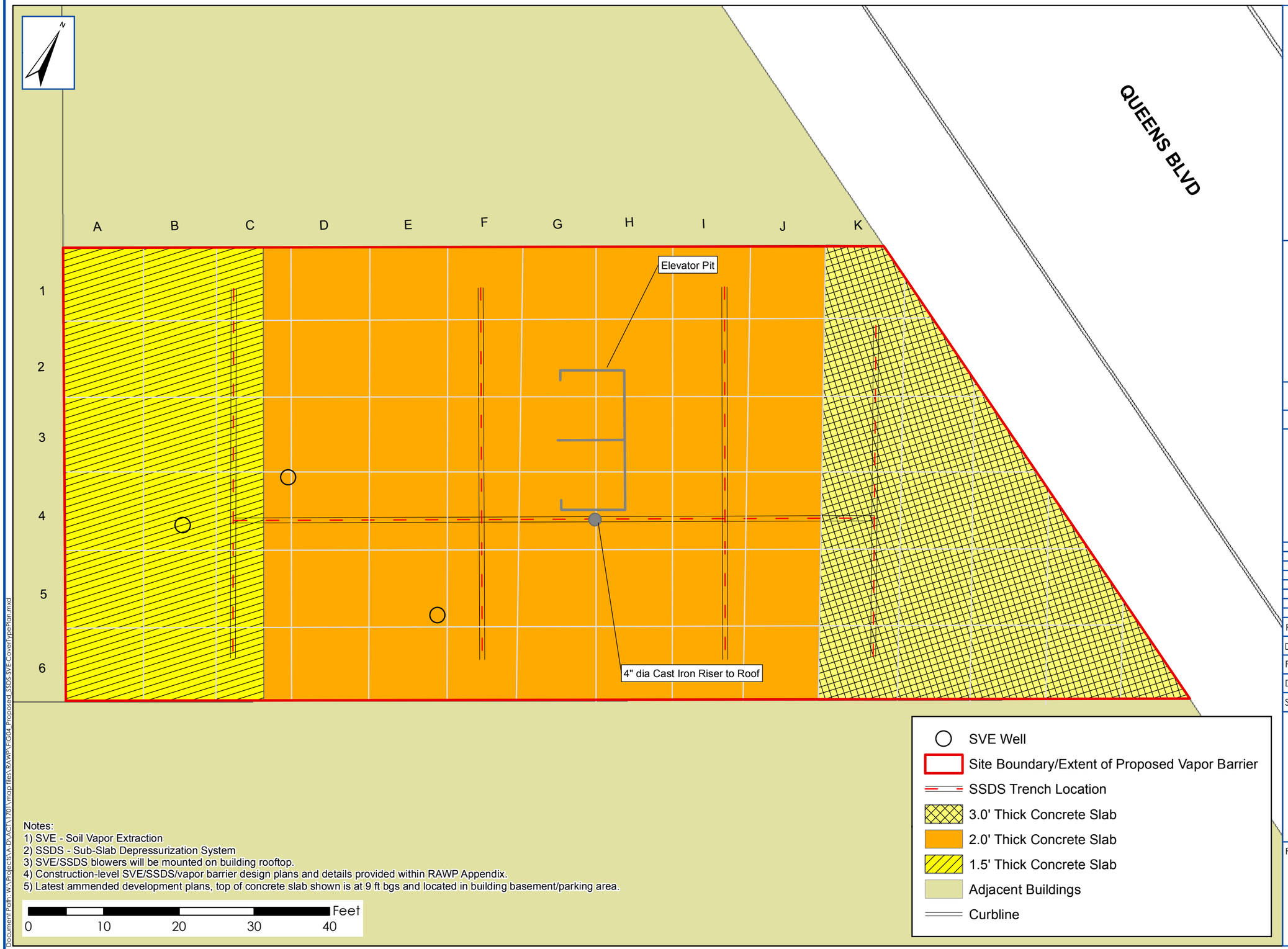
GROUNDWATER TREATMENT

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:

10

Document Path: W:\Projects\A-D\ACT\1701\mxds\FIG01_ProposedInjectionPoints.mxd



Notes:
1) SVE - Soil Vapor Extraction
2) SSDS - Sub-Slab Depressurization System
3) SVE/SSDS blowers will be mounted on building rooftop.
4) Construction-level SVE/SSDS/vapor barrier design plans and details provided within RAWP Appendix.
5) Latest ammended development plans, top of concrete slab shown is at 9 ft bgs and located in building basement/parking area.

Document Path: W:\Projects\A-D\ACT\1701\mxd files\RAWP\FIG04_Proposed SSDS-SVE-CoverTypePlan.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

Luciano, LLC
25 Aldgate Drive East
Manhasset, New York 11030
&
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	ACT1701	Designed by:	JE
Date:	7/25/2019	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	JE

Proposed SSDS/SVE, Vapor Barrier, and Cover Type Plan

124-22 QUEENS BLVD
KEW GARDENS, NY

FIGURE NO:

4

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NYSDEC Unrestricted Use SCOs [1]	NYSDEC Restricted Residential Use SCOs [1]
Volatile Organic Compounds by 8260 in µg/kg		
1,1,1,2-Tetrachloroethane	NS	NS
1,1,1-Trichloroethane [f]	680	100,000
1,1,2,2-Tetrachloroethane	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	NS
1,1,2-Trichloroethane	NS	NS
1,1-Dichloroethane [c]	270	26,000
1,1-Dichloroethylene [f]	330	100,000
1,1-Dichloropropene	NS	NS
1,2,3-Trichlorobenzene	NS	NS
1,2,3-Trichloropropane	NS	NS
1,2,4,5-Tetramethylbenzene	NS	NS
1,2,4-Trichlorobenzene	NS	NS
1,2,4-Trimethylbenzene [f]	3600	52,000
1,2-Dibromo-3-chloropropane	NS	NS
1,2-Dibromoethane	NS	NS
1,2-Dichlorobenzene [c]	1,100	100,000
1,2-Dichloroethane [c]	20	3,100
1,2-Dichloroethane-d4	NS	NS
1,2-Dichloropropane	NS	NS
1,3,5-Trimethylbenzene [f]	8,400	52,000
1,3-Dichlorobenzene [c]	2,400	49,000
1,3-Dichloropropane	NS	NS
1,4-Dichlorobenzene	1,800	13,000
1,4-Diethylbenzene	NS	NS
1,4-Dioxane [e]	100	13,000
2,2-Dichloropropane	NS	NS
2-Butanone (Methyl ethyl ketone)	120	100,000
2-Hexanone	NS	NS
4-Ethyltoluene	NS	NS
4-Methyl-2-pentanone	NS	NS
Acetone	50	100,000
Acrolein	NS	NS
Acrylonitrile	NS	NS
Benzene	60	4,800
Bromobenzene	NS	NS
Bromochloromethane	NS	NS
Bromodichloromethane	NS	NS
Bromoform	NS	NS
Bromomethane	NS	NS
Carbon disulfide	NS	NS
Carbon tetrachloride [c]	760	2,400
Chlorobenzene	1,100	100,000
Chloroethane	NS	NS
Chloroform	370	49,000
Chloromethane	NS	NS
cis-1,2-Dichloroethylene [c]	250	100,000
cis-1,3-Dichloropropylene	NS	NS
Cyclohexane	NS	NS
Dibromochloromethane	NS	NS
Dibromomethane	NS	NS
Dichlorodifluoromethane	NS	NS
Diethy ether	NS	NS
Ethyl Benzene	1,000	41,000
Hexachlorobutadiene	NS	NS
Isopropylbenzene	NS	NS
Methyl acetate	NS	NS
Methyl tert-butyl ether (MTBE) [f]	930	100000
Methylcyclohexane	NS	NS
Methylene chloride	50	100,000
n-Butylbenzene [f]	12,000	100,000
n-Propylbenzene [f]	3,900	100,000
o-Xylene	NS	NS
p-& m-Xylenes	NS	NS
p-Bromofluorobenzene	NS	NS
p-Isopropyltoluene	NS	NS
sec-Butylbenzene [f]	11,000	100,000
Styrene	NS	NS
tert-Butyl alcohol (TBA)	NS	NS
Tert-Butylbenzene [f]	5,900	100,000
Tetrachloroethylene	1,300	19,000
Toluene	700	100,000
Toluene-d8	NS	NS
trans-1,2-Dichloroethylene [f]	190	100,000
trans-1,3-Dichloropropylene	NS	NS
trans-1,4-Dichloro-2-butene	NS	NS
Trichloroethylene	470	21,000
Trichlorofluoromethane	NS	NS
Vinyl acetate	NS	NS
Vinyl Chloride [c]	20	900
Xylenes, Total	260	100000

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Soil Cleanup Objectives per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

a - The SCOs for unrestricted use were capped at a maximum value of 100 ppm.

b - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO.

c - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentrations used as the Track1 SCO value for this use of the site.

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-1		SB-1		SB-2		SB-2		SB-3		SB-3		SB-4		SB-4		SB-4		SB-4	
Sample Depth:		(0-2')		(7')		(0-2')		(10-11')		(0-2')		(10-11')		(0-3')		(3-5')		(8-10')		(13-15')	
Laboratory ID:		15G0084-01		15G0084-02		15G0084-03		15G0084-04		15G0084-05		15G0084-03		16L0165-01		16L0165-02		16L0165-03		16L0165-04	
Sampling Date:		6/30/2015		6/30/2015		6/30/2015		6/30/2015		6/30/2015		6/30/2015		12/5/2016		12/5/2016		12/5/2016		12/5/2016	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [e]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [e]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [e]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	71		ND	U	ND	U	ND	U	ND	U	5.7		ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	43		ND	U	ND	U	ND	U	ND	U	3.4	J	ND	U
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [d]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	23		ND	U	2.1	J	ND	U	ND	U	30		3.8	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	66		6.9	J	6.7	J	26		ND	U	110		22	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	7.8		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon Tetrachloride [e]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [e]	250	ND	U	ND	U	ND	U	ND	U	ND	U	8.7		ND	U	ND	U	94		ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	30		ND	U	ND	U	ND	U	ND	U	22		ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	75		ND	U	ND	U	ND	U	ND	U	2.7	J	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	7.6		ND	U	ND	U	ND	U	ND	U	12		ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [e]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	94		ND	U	6.3		ND	U	ND	U	71		ND	U
Methylene chloride	50	11		ND	U	ND	U	ND	U	16		ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	51		ND	U	4.7		ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	91		ND	U	ND	U	ND	U	ND	U	11		ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	20		ND	U	ND	U	ND	U	ND	U	2.4	J	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	25		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	67.8		50.2		64.5		64.1		61.3		53.1		48.2		44.9		65.5		48.2	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	15		ND	U	ND	U	ND	U	ND	U	2.2	J	ND	
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	63		ND	U	6.1		ND	U	ND	U	24		ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	12		ND	U	ND	U	ND	U	ND	U	6.3		ND	U
Tetrachloroethylene	1,300	18,000	D	50		7,200	D	6	J	82,000	D	96		2,900	D	300	JD	2,900	D	ND	U
Toluene	700	ND	U	ND	U	ND	U	4.7	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	D
trans-1,2-Dichloroethylene [e]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	
Trichloroethylene	470	5.2	J	ND	U	18		ND	U	5.9	J	3.5	J	11		ND	U	500	D	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [e]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	32		ND	
Xylenes, Total	NS	ND	U	ND	U	ND	U	45		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.

a - The SCOs for unrestricted use were capped at a maximum value of 100 ppm.

b - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO.

c - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentrations used as the Track1 SCO value for this use of t

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) wish "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological re

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use SCOs

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-5 (0-3')		SB-5 (3-5')		SB-5 (8-10')		SB-5 (13-15')		SB-6 (0-5')		SB-6 (8-10')		SB-6 (10-13')		SB-6 (13-15')		SB-7 (0-2')		SB-7 (3-5')	
Laboratory ID:		16L0165-06		16L0165-07		16L0165-08		16L0165-09		16L0165-10		16L0165-11		16L0165-12		16L0165-13		16L0216-01		16L0216-02	
Sampling Date:		12/5/2016		12/5/2016		12/5/2016		12/5/2016		12/5/2016		12/5/2016		12/5/2016		12/5/2016		12/6/2016		12/6/2016	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	11	
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	110		6.9	J	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	95		ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [d]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	17		4	J	ND	U	ND	U	20		20		ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	7.4	J	41		34		6.5	J	65	J	61		96		8.6	J	3.9	J
Acrolein	NS	ND	U	ND	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	4.4	J	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon Tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	ND	U	48		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	200		84		ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	200		71		ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	420		100		ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	1600		3700	D	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND		ND	U	ND	U	ND	U	940		140		ND	U	ND	U	ND	U
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	840		150		ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	75		17		ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	20		ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	50.7		44.6	U	53		44		44.2		39.8		52.7		46.3		46.2		50.1	
p-Isopropyltoluene	NS	ND	U	ND		ND	U	ND	U	ND	U	70		6.7	J	ND	U	ND	U	ND	U
sec-Butylbenzene [b]	11,000	ND	U	ND		ND	U	ND	U	ND	U	750		140		ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	17		ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	1,500	D	25	U	120		ND	U	1,100	D	960		40		ND	U	1,800	D	490	D
Toluene	700	6.1		ND	U	ND	U	ND	U	ND	U	ND	U	4.6	J	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND		25		ND	U	6.9		ND	U	ND	U	ND	U	4.1	J	9.1	
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [e]	20	ND	U	ND	U	6		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	J	ND	U	ND	U	ND	U	98	J	37		ND	U	ND	U	ND	U

Notes:
All concentrations are ug/Kg (ppb), unless otherwise specified.
(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec
B - Analyte is found in the associated analysis batch blank. For volatiles, meth
J - Detected below the Reporting Limit but greater than or equal to the Met
NA - Not analyzed
ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC
NS - No standard established
U - The analyte was analyzed for, but was not detected above the reported
a - The SCOs for unrestricted use were capped at a maximum value of 100 p
b - For constituents where the calculated SCO was lower than the contract r
c - For constituents where the calculated SCO was lower than the rural soil bthe site.
d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.
e - The SCO for this specific compound (or family of compounds) is considere
f - Protection of ecological resources SCOs were not developed for contamiesources SCO according to the TSD.
Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-7		SB-7		SB-8		SB-8		SB-8		SB-8		SB-9		SB-9		SB-9		SB-9	
Sample Depth:	Unrestricted	(8-10')		(13-15')		(0-5')		(7-10')		(10-13')		(13-15')		(0-2')		(3-5')		(10-13')		(13-15')	
Laboratory ID:	Use SCOs [1]	16L0216-03		16L0216-04		16L0216-05		16L0216-06		16L0216-07		16L0216-08		16L0216-09		16L0216-10		16L0216-11		16L0216-12	
Sampling Date:		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016		12/6/2016	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	4	J	ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	42		ND	U	ND	U	ND	U	420		ND	U	ND	U	66		3.3	J
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	130		ND	U	ND	U	8.8		ND	U	19		ND	U	190		26	
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	7,600	D	ND	U	ND	U	ND	U	13	J	ND	U	ND	U	23		ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	3.8	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	4.4	J	ND	U	350	JD	ND	U	ND	U	ND	U	ND	U	6.1	J	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	46		49.1		43		44.6		49.5		83.4		53.3		47.9		49.1		44.1	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [b]	11,000	ND	U	ND	U	ND	U	800	D	7.2		ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	650	D	31		4,000	D	ND	U	71		ND	U	4,700	D	150		ND	U	ND	U
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	28		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	4.8		24		ND	U	ND	U	9		ND	U	ND	U	ND	U	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [b]	20	ND	U	79		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	14		ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-10		SB-10		SB-10		SB-11		SB-12		SB-12		SB-12		SB-12		SB-12		SB-13	
Sample Depth:		(0-5')		(8-10')		(13-15')		(8-10')		(0-2')		(3-5')		(5-7')		(8-10')		(13-15')		(0-2')	
Laboratory ID:		16L0216-13		16L0216-14		16L0216-15		16L0216-16		16L0842-01		16L0842-02		16L0842-03		16L0842-04		16L0842-05		16L0842-06	
Sampling Date:		12/4/2016		12/6/2016		12/6/2016		12/4/2016		12/20/2016		12/20/2016		12/20/2016		12/20/2016		12/20/2016		12/20/2016	
Volatile Organic Compounds by 8260 in ug/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [f]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	31		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [f]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [f]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene [f]	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [b]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	32		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	100		ND	U	ND	U	ND	U	41		18		33	
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [f]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [f]	250	4.6	J	2.5	J	3.1	J	ND	U	ND	U	ND	U	ND	U	35		20		ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	1500	D	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [f]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	52.4		44.8		44.2		45.3		41.2		42.8		41.3		41.2		40.9		49	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	5,100	D	820	D	180		ND	U	24,000	D	42,000	D	210,000	D	14,000	D	7,200	D	4	J
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	2.3	J	ND	U	ND	U
trans-1,2-Dichloroethylene [f]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	12		2.1	J	ND	U	ND	U	ND	U	ND	U	ND	U	24		12		ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [f]	20	ND	U	ND	U	ND	U	7.5	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, metl

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-13		SB-13		SB-13		SB-15		SB-15		SB-15		SB-15		SB-16		SB-16		SB-16	
Sample Depth:		(3-5')		(8-10')		(13-15')		(0-2')		(3-5')		(8-10')		(13-15')		(0-2')		(3-5')		(8-10')	
Laboratory ID:		16L0842-07		16L0842-08		16L0842-09		16L0786-01		16L0786-02		16L0786-03		16L0786-04		16L0786-05		16L0786-06		16L0786-07	
Sampling Date:		12/20/2016		12/20/2016		12/20/2016		12/19/2016		12/19/2016		12/19/2016		12/19/2016		12/19/2016		12/19/2016		12/19/2016	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	2.5	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	.26	
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	.81		18		.51		ND	U	ND	U	10	JB	18	B	ND	U	ND	U	.85	B
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	4.3	J	24		3.1	J	ND	U	ND	U	ND	U	ND	U	ND	U	32	
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	43.3		40.6		42		47.2		45		47		46.1		46		46.6		46.5	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [b]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	39		47		6		66		9		ND	U	9		67		26		ND	U
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	9.8	
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	4.2	J	5.7		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	37	
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: / Sample Depth: / Laboratory ID: / Sampling Date:	NYSDEC Unrestricted Use SCOs [1]	SB-16 (13-15') 1610786-08 12/19/2016		SB-17 (0-2') 1610786-09 12/19/2016		SB-17 (3-5') 1610786-10 12/19/2016		SB-17A (8-10') 1610786-11 12/19/2016		SB-17A (11-13') 1610786-12 12/19/2016		SB-17A (13-15') 1610786-13 12/19/2016		SB-18 (0-2') 1610786-14 12/19/2016		SB-18 (3-5') 1610786-15 12/19/2016		SB-18 (8-10') 1610786-16 12/19/2016		SB-18 (11-13') 1610786-17 12/19/2016	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	47		ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	3.1	J	7.3	
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	3.8	J
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	2.6	J	ND	U	ND	U	ND	U	ND	U	190		ND	U	ND	U	16		28	
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	15	B	ND	U	ND	U	13	B	29	B	730	B	ND	U	47		57		110	
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	4.2	J
Carbon Tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	ND	U	ND	U	6.5		ND	U	50		ND	U	11		ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	65		ND	U	ND	U	ND	U	ND	U	5.8	J
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	56		ND	U	ND	U	ND	U	ND	U	3.4	J
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	110		ND	U	ND	U	ND	U	9.7		15	
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	4500	D	ND	U	ND	U	3.3	J
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	890	D	ND	U	ND	U	ND	U	10		28	
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND	U	ND	U	ND	U	150		ND	U	ND	U	ND	U	42		44	
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	220		ND	U	ND	U	ND	U	14		17	
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	26		ND	U	ND	U	ND	U	3.7	J	5.4	J
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	46.4		46.3		45.9		45.4		47.9		51.8		48.8		46.2		47.5		47.6	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	69		ND	U	ND	U	ND	U	ND	U	21	
sec-Butylbenzene [b]	11,000	ND	U	ND	U	ND	U	ND	U	170		ND	U	ND	U	ND	U	34		41	
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	29		ND	U	ND	U	ND	U	6		7.8	
Tetrachloroethylene	1,300	ND	U	43		57		ND	U	ND	U	ND	U	35,000	D	31,000	D	240	JD	62	
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	340	JD	94		3.6	J	4.2	J
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	39		ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	26		ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-18		SB-19		SB-19		SB-19		SB-19		SB-20		SB-20		SB-20		SB-20		SB-21	
Sample Depth:	Unrestricted	(13-15')		(0-2')		(3-5')		(8-10')		(13-15')		(0-2')		(4-5')		(8-10')		(13-15')		(0-2')	
Laboratory ID:	Use SCOs [1]	1610786-18		1610842-11		1610842-12		1610842-13		1610842-14		1780497-01		1780497-02		1780497-03		1780497-04		1780749-01	
Sampling Date:		12/19/2016		12/20/2016		12/20/2016		12/20/2016		12/20/2016		2/17/2017		2/17/2017		2/17/2017		2/17/2017		2/21/2017	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	5.7	J	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [b]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	5.7	J	ND	U	ND	U	ND	U	3.8	J	53		ND	U	ND	U	ND	U	14	
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	32		22		130		10		96		740	JD	ND	U	10		15		64	
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	13		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	33		ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	7.8		ND	U	6.8		ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	68		ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	140		ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	49		51.7		44		42.4		48		53.5		47.2		45.2		47.1		50	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	12	J	ND	U	ND	U	ND	U	ND	U	8.2		ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	ND	U	570	D	87		42		1,600	D	19		61		6		7		7	
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [a]	20	76		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	210		ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-21a		SB-21a		SB-21a		SB-22		SB-23		SB-24		SB-25		SB-26		SB-29		SB-29	
Sample Depth:	Unrestricted	(4-5')		(8-10')		(14-16')		(0-2')		(0-2')		(8-10')		(4-5')		(4-5')		(0-2')		(3-5')	
Laboratory ID:	Use SCOs [1]	1780749-02		1780749-03		1780749-04		1780583-06		1780583-05		1780583-07		1780697-05		1780749-05		17H0215-10		17H0215-11	
Sampling Date:		2/21/2017		2/21/2017		2/21/2017		2/15/2017		2/15/2017		2/14/2017		2/17/2017		2/21/2017		8/2/2017		8/2/2017	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [d]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	6.4	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	15		34		30		28		26		5.3	J	8.8	J	15	J	ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	ND	U	15		ND	U	ND	U	700	D	ND	U	4.9	J	270	JD	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	49.5		48.6		50.2		50		52.1		47.9		51.9		52.8		45.9		46.4	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [b]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	ND	U	ND	U	970	D	ND	U	12		13,000	D	60		ND	U	16,000	D	2,800	D
Toluene	700	ND	U	ND	U	2	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	71		ND	U	ND	U	76		ND	U	ND	U	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [e]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs[1]	SB-29		SB-29		SB-29		SB-29		SB-29		SB-30		SB-30		SB-30		SB-30		SB-30	
Sample Depth:		(5-7')		(8-10')		(13-15')		(17-19')		(23-25')		(0-2')		(3-5')		(8-10')		(13-15')		(15-16')	
Laboratory ID:		17H0215-14		17H0215-12		17H0215-13		17H0215-15		17H0215-16		17H0215-01		17H0215-02		17H0215-03		17H0215-04		17H0215-05	
Sampling Date:		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/2/2017	
Volatile Organic Compounds by 8260 in ug/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [f]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [c]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [c]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene [c]	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U	39		ND	U	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	ND	U	ND	U	8.8	J	ND	U	8.4	J	ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [c]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [c]	250	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	15		ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [c]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	46.6		46		46.8		47.3		45		54.9		52.8		45.3		45.7		46.8	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	22,000	D	730	D	83,000	D	350,000	D	7,800	D	120		200		110		16,000	D	65,000	D
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,2-DichloroEthylene [c]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	3.8	J	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (L

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contami

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-31a		SB-31a		SB-31a		SB-31a		SB-32		SB-32		SB-32		SB-32		SB-32		SB-32	
Sample Depth:	Unrestricted	(0-2')		(3-5')		(8-10')		(10-15')		(0-2')		(3-5')		(8-10')		(13-15')		(18-20')		(21-22')	
Laboratory ID:	Use SCOs [1]	17H0215-06		17H0215-07		17H0215-08		17H0215-09		17H0254-03		17H0254-04		17H0254-05		17H0254-06		17H0254-07		17H0254-08	
Sampling Date:		8/2/2017		8/2/2017		8/2/2017		8/2/2017		8/4/2017		8/4/2017		8/4/2017		8/4/2017		8/4/2017		8/4/2017	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [e]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [e]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [e]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [e]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [e]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [e]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [d]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	3.2	J	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	15		9.3		ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon Tetrachloride [e]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [e]	250	ND	U	ND	U	ND	U	ND	U	26		9.1		ND	U	8.1		ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [e]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [e]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [e]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	49.3		47.8		46.2		46		45.1		45.5		45.1		44.7		44.5		44.9	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [e]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [e]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	110		29		32		17		76		48		37		480	D	13,000	D	7,300	D
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,2-Dichloroethylene [e]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	3.3	J	ND	U	ND	U	ND	U	5.5	J	2.2	J	5.4		28		ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [e]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs[1]	MW-1		MW-1		MW-1		MW-1		MW-1		MW-1		WL-06		WL-06	
Sample Depth:		(0-2')		(3-5')		(8-10')		(10-12')		(13-15')		(16-18')		(3')		(7')	
Laboratory ID:		1780583-10		1780583-11		1780583-01		1780583-02		1780583-03		1780583-04		AD00867-003		AD00867-004	
Sampling Date:		2/14/2017		2/14/2017		2/14/2017		2/14/2017		2/14/2017		2/14/2017		10/27/2017		10/27/2017	
Volatile Organic Compounds by 8260 in µg/kg																	
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
1,1,1-Trichloroethane [f]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [f]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [f]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene [f]	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	5.5	J	4.3	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [f]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [f]	250	35		37		1100	D	480	JD	50		ND	U	ND	U	ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [f]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	47.6		46.7		51.7		50.7		49.3		53.2		NA		NA	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	NA		NA	
Tetrachloroethylene	1,300	19,000	D	7,300	D	17,000	D	12,000	D	270	JD	510,000	D	360		970	
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [f]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	22		29		240	JD	ND	U	12		ND	U	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [f]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, metl

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	WL-06 (11')		WL-06 (12')		WL-07 (3')		WL-07 (4.5')		WL-07 (12')		EP-8 (9')		EP-9 (8')		EP-10 (9')		EP-11 (12')		EP-12 (10')	
Sample Depth:	Unrestricted																				
Laboratory ID:	Use SCOs [1]	AD00867-005		AD00867-006		AD00867-008		AD00867-009		AD00867-010		17J0710-01		17J0710-02		17J0713-03		17J0710-04		17J0710-05	
Sampling Date:		10/27/2017		10/27/2017		10/27/2017		10/27/2017		10/27/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [a]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [a]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [a]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [a]	3,600	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [a]	8,400	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [a]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U	4.6	J	3.6	J	ND	U	190		ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	ND	U	ND	U	28		17		ND	U	ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon Tetrachloride [a]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [a]	250	ND	U	ND	U	ND	U	360		ND	U	ND	U	ND	U	ND	U	31		ND	U
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	2000		320		320		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [a]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [a]	12,000	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [a]	3,900	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	NA		NA		NA		NA		NA		46.2		45.7		48.4		59.4		45.9	
p-Isopropyltoluene	NS	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [a]	11,000	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [a]	5,900	NA		NA		NA		NA		NA		ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	ND	U	ND	U	170		6,400		ND	U	180		150		ND	U	19		ND	U
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,2-Dichloroethylene [a]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	ND	U	580		ND	U	2.9	J	2.8	J	ND	U	ND	U	ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [a]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	9.3	J	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	EP-13 (12')		EP-14 (11')		EP-15 (13.5')		EP-16 (12')		EP-17 (11')		EP-18 (7.5')		EP-19 (7')		EP-20 (6')		EP-21 (5')		EP-22 (10')	
Laboratory ID:		17J0710-06		17J0710-07		17J0710-08		17J0710-09		17J0710-10		17J0710-11		17J0710-12		17J0710-13		17J0710-14		17J0710-09	
Sampling Date:		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017	
Volatile Organic Compounds by 8260 in µg/kg																					
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [b]	680	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [b]	270	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [b]	330	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [b]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	34	
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [b]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	26	
1,3-Dichlorobenzene [b]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [d]	100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	110	
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	4.7	J	14		ND	U	ND	U	ND	U	ND	U	ND	U	240	
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [b]	760	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [b]	250	ND	U	ND	U	85		27		3.4	J	ND	U	ND	U	ND	U	ND	U	7.0	J
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	21	
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	7.8	J
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	10	
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [b]	930	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	31	
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [b]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [b]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	21	
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	46.6		46.4		45.5		46.5		47.9		47.4		48		47.6		46.8		54.3	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [b]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [b]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	36		180		1,900	D	3,800	D	28		14,000	D	93		1,100	D	3,700	D	ND	U
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [b]	190	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	ND	U	ND	U	31		4.7	J	ND	U	12		ND	U	ND	U	9.8		ND	U
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [e]	20	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	30	J

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, meth

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LC

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamir

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 2

Soil Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	EP-23		EP-24		EP-25		EP-26		EP-27	
Sample Depth:	Unrestricted	(5')		(5')		(5')		(6.5')		(5')	
Laboratory ID:	Use SCOs [1]	17J0710-10		17J0710-11		17J0710-12		17J0710-13		17J0710-14	
Sampling Date:		10/17/2017		10/17/2017		10/17/2017		10/17/2017		10/17/2017	
Volatile Organic Compounds by 8260 in µg/kg											
1,1,1,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane [f]	680	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2,2-Tetrachloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane [f]	270	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethylene [f]	330	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,3-Trichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trimethylbenzene [f]	3,600	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromo-3-chloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichlorobenzene [f]	1,100	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloroethane [c]	20	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dichloropropane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
1,3,5-Trimethylbenzene [f]	8,400	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene [f]	2,400	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dichlorobenzene	1,800	ND	U	ND	U	ND	U	ND	U	ND	U
1,4-Dioxane [e]	100	ND	U	ND	U	ND	U	ND	U	ND	U
2-Butanone (Methyl ethyl ketone)	120	ND	U	ND	U	ND	U	ND	U	ND	U
2-Hexanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Acetone	50	ND	U	ND	U	ND	U	ND	U	ND	U
Acrolein	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Acrylonitrile	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Benzene	60	ND	U	ND	U	ND	U	ND	U	ND	U
Bromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon tetrachloride [f]	760	ND	U	ND	U	ND	U	ND	U	ND	U
Chlorobenzene	1,100	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroform	370	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethylene [f]	250	ND	U	ND	U	ND	U	ND	U	4.4	J
cis-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Cyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromomethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Dichlorodifluoromethane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Ethyl Benzene	1,000	ND	U	ND	U	ND	U	ND	U	ND	U
Hexachlorobutadiene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl acetate	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl tert-butyl ether (MTBE) [f]	930	ND	U	ND	U	ND	U	ND	U	ND	U
Methylcyclohexane	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene chloride	50	ND	U	ND	U	ND	U	ND	U	ND	U
n-Butylbenzene [f]	12,000	ND	U	ND	U	ND	U	ND	U	ND	U
n-Propylbenzene [f]	3,900	ND	U	ND	U	ND	U	ND	U	ND	U
o-Xylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
p- & m- Xylenes	NS	ND	U	ND	U	ND	U	ND	U	ND	U
p-Bromofluorobenzene	NS	48.6		53.1		52.5		52.7		50.6	
p-Isopropyltoluene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
sec-Butylbenzene [f]	11,000	ND	U	ND	U	ND	U	ND	U	ND	U
Styrene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butyl alcohol (TBA)	NS	ND	U	ND	U	ND	U	ND	U	ND	U
tert-Butylbenzene [f]	5,900	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethylene	1,300	4,000	D	2,000	D	150		2,400	D	7,900	D
Toluene	700	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethylene [f]	190	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,3-Dichloropropylene	NS	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethylene	470	7.8		9.3		3.2	J	6.1	J	21	
Trichlorofluoromethane	0	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride [f]	20	ND	U	ND	U	ND	U	ND	U	ND	U
Xylenes, Total	NS	ND	U	ND	U	ND	U	ND	U	ND	U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objec

B - Analyte is found in the associated analysis batch blank. For volatiles, met

J - Detected below the Reporting Limit but greater than or equal to the Met

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LO

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 p

b - For constituents where the calculated SCO was lower than the contract r

c - For constituents where the calculated SCO was lower than the rural soil b

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considere

f - Protection of ecological resources SCOs were not developed for contamin

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use

Table 3

Soil Analytical Data
SVOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-4	SB-5	SB-6	SB-9	SB-10	SB-13	SB-15
Sample Depth:	Unrestricted	(13-15')	(3-5')	(0-5')	(3-5')	(8-10')	(0-2')	(0-2')
Laboratory ID:	Use SCOs [1]	16L0165-05	16L0165-07	16L0165-10	16L0216-10	16L0216-14	16L0842-16	16L0786-01
Sampling Date:		12/5/2016	12/5/2016	12/5/2016	12/6/2016	12/6/2016	12/20/2016	12/19/2016
Semi-Volatile Organic Compounds by 8270 in µg/kg								
1,1-Biphenyl	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4,5-Tetrachlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Diphenylhydrazine (as Azobenzene)	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,3,4,6-Tetrachlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4,5-Trichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4,6-Tribromophenol	NS	1,600	1,290	2,760	1,580	1,410	1,940	1,750
2,4,6-Trichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dimethylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dinitrophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dinitrotoluene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,6-Dinitrotoluene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Chloronaphthalene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Chlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Fluorobiphenyl	NS	1,050	908	1,980	700	944	1,020	1,030
2-Fluorophenol	NS	1,180	934	2,090	1,110	1,290	1,630	1,580
2-Methylnaphthalene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Methylphenol (o-Cresol) [c]	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Nitrophenol	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3- & 4-Methylphenols	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3,3-Dichlorobenzidine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,6-Dinitro-2-methylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Bromophenyl phenyl ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chloro-3-methylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chloroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chlorophenyl phenyl ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Nitrophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Acenaphthene	20,000	ND U	ND U	ND U	ND U	ND U	118 D	ND U
Acenaphthylene [c]	100,000	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Acetophenone	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Anthracene [c]	100,000	ND U	ND U	ND U	ND U	ND U	527 D	ND U
Atrazine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzaldehyde	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzidine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzo(a)anthracene [c,f]	1,000	ND U	ND U	ND U	ND U	ND U	660 D	91 JD
Benzo(a)pyrene [c]	1,000	ND U	ND U	ND U	ND U	ND U	367 D	112 D
Benzo(b)fluoranthene [c,f]	1,000	ND U	ND U	ND U	ND U	ND U	336 D	106 D
Benzo(g,h,i)perylene [c]	100,000	ND U	ND U	ND U	ND U	ND U	126 D	64 JD
Benzo(k)fluoranthene [c,f]	800	ND U	ND U	ND U	ND U	ND U	306 D	126 D
Benzoic acid	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzyl alcohol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzyl butyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-chloroethoxy)methane	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-chloroethyl)ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-chloroisopropyl)ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-ethylhexyl)phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Caprolactam	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbazole	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chrysene [c,f]	1,000	ND U	ND U	ND U	ND U	ND U	645 D	115 D
Dibenzo(a,h)anthracene [c,f]	330	ND U	ND U	ND U	ND U	ND U	74 JD	ND U
Dibenzofuran [f]	7,000	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Diethyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dimethyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Di-n-butyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Di-n-octyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Fluoranthene [c]	100,000	ND U	ND U	ND U	ND U	ND U	1,200 D	126 D
Fluorene	30,000	ND U	ND U	ND U	ND U	ND U	140 D	ND U
Hexachlorobenzene	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Hexachlorobutadiene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Hexachlorocyclopentadiene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Hexachloroethane	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Indeno(1,2,3-cd)pyrene [c,f]	500	ND U	ND U	ND U	ND U	ND U	111 D	57 JD
Isophorone	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Naphthalene [c,f]	12,000	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nitrobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-Nitrosodimethylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-nitroso-di-n-propylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-Nitrosodiphenylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Pentachlorophenol [b]	800	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Phenanthrene [f]	100,000	ND U	ND U	ND U	ND U	ND U	1,990 D	ND U
Phenol [c]	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Pyrene	100,000	ND U	ND U	ND U	ND U	ND U	1,410 D	130 D

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

a - The SCOs for unrestricted use were capped at a maximum value of 100 ppm.

b - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO.

c - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil backgrounc

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) wish "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be requirec

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use SCOs

Table 3

Soil Analytical Data
SVOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC	SB-16	SB-20	SB-21	SB-22	SB-23	WL-06	WL-07
Sample Depth:	Unrestricted	(0-2')	(0-2')	(0-2')	(0-2')	(0-2')	(0-13')	(0-13')
Laboratory ID:	Use SCOs [1]	16L0786-05	17B0697-01	17B0749-01	17B0583-06	17B0583-05	AD00867-002	AD00867-007
Sampling Date:		12/19/2016	2/17/2017	2/21/2017	2/15/2017	2/15/2017	10/27/2017	10/27/2017
Semi-Volatile Organic Compounds by 8270 in µg/kg								
1,1-Biphenyl	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4,5-Tetrachlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Diphenylhydrazine (as Azobenzene)	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,3,4,6-Tetrachlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4,5-Trichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4,6-Tribromophenol	NS	1,250	1,410	2,070	3,130	1,980	ND U	ND U
2,4,6-Trichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dichlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dimethylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dinitrophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,4-Dinitrotoluene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2,6-Dinitrotoluene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Chloronaphthalene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Chlorophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Fluorobiphenyl	NS	976	1,370	1,510	2,230	1,490	ND U	ND U
2-Fluorophenol	NS	1,520	1,780	2,070	3,140	1,990	ND U	ND U
2-Methylnaphthalene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Methylphenol (o-Cresol) [c]	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Nitrophenol	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3- & 4-Methylphenols	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3,3-Dichlorobenzidine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
3-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,6-Dinitro-2-methylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Bromophenyl phenyl ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chloro-3-methylphenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chloroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Chlorophenyl phenyl ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Nitroaniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Nitrophenol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Acenaphthene	20,000	ND U	ND U	ND U	ND U	ND U	ND U	97
Acenaphthylene [a]	100,000	ND U	ND U	ND U	ND U	ND U	ND U	0 U
Acetophenone	NS	ND U	ND U	ND U	ND U	ND U	ND U	0 U
Aniline	NS	ND U	ND U	ND U	ND U	ND U	ND U	0 U
Anthracene [a]	100,000	ND U	ND U	ND U	ND U	49 JD	ND U	23
Atrazine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzaldehyde	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzidine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzo(a)anthracene [c,f]	1,000	98 JD	ND U	157 D	ND U	74 JD	ND U	520
Benzo(a)pyrene [c]	1,000	82 JD	ND U	73 JD	ND U	62 JD	ND U	370
Benzo(b)fluoranthene [c,f]	1,000	94 JD	ND U	ND U	ND U	60 JD	ND U	390
Benzo(g,h,i)perylene [c]	100,000	ND U	ND U	ND U	ND U	ND U	ND U	180
Benzo(k)fluoranthene [c,f]	800	98 JD	ND U	103 JD	ND U	58 JD	ND U	98
Benzoic acid	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzyl alcohol	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzyl butyl phthalate	NS	ND U	ND U	96 JD	ND U	ND U	ND U	ND U
Bis(2-chloroethoxy)methane	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-chloroethyl)ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-chloroisopropyl)ether	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bis(2-ethylhexyl)phthalate	NS	ND U	118 D	213 D	ND U	ND U	ND U	1
Caprolactam	NS	ND U	ND U	ND U	ND U	ND U	ND U	0
Carbazole	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND
Chrysene [c,f]	1,000	116 D	59 JD	198 D	ND U	76 JD	ND U	630
Dibenzo(a,h)anthracene [c]	330	ND U	ND U	ND U	ND U	ND U	ND U	57
Dibenzofuran [f]	7,000	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Diethyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	0
Dimethyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Di-n-butyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	970	ND U
Di-n-octyl phthalate	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Fluoranthene [a]	100,000	164 D	111 JD	316 D	ND U	144 D	ND U	750
Fluorene	30,000	ND U	ND U	ND U	ND U	ND U	ND U	91
Hexachlorobenzene	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Hexachlorobutadiene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Hexachlorocyclopentadiene	NS	ND U	ND U	ND U	ND U	ND U	ND U	1
Hexachloroethane	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Indeno(1,2,3-cd)pyrene [c,f]	500	ND U	ND U	ND U	ND U	ND U	ND U	1,400
Isophorone	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Naphthalene [a,f]	12,000	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nitrobenzene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-Nitrosodimethylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-nitroso-di-n-propylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
N-Nitrosodiphenylamine	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Pentachlorophenol [b]	800	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Phenanthrene [f]	100,000	94 JD	68 JD	230 D	ND U	192 D	ND U	ND U
Phenol [c]	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Pyrene	100,000	176 D	74 JD	359 D	ND U	137 D	ND U	ND U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Obje

B - Analyte is found in the associated analysis batch blank. For volatiles, me

J - Detected below the Reporting Limit but greater than or equal to the Me

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (L

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported

a - The SCOs for unrestricted use were capped at a maximum value of 100 f

b - For constituents where the calculated SCO was lower than the contract

c - For constituents where the calculated SCO was lower than the rural soil bl concentrations used as the Track1 SCO value for this use of the site.

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is consider

f - Protection of ecological resources SCOs were not developed for contamd by the Department to calculate a protection of ecological resources SCO according to the TSD.

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Us

Table 4

Soil Analytical Data
PCBs and Pesticides
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: / Sample Depth: / Laboratory ID: / Sampling Date:	NYSDEC Unrestricted Use SCOs [1]	SB-4 (13-15') 16L0165-05 12/5/2016	SB-5 (3-5') 16L0165-07 12/5/2016	SB-6 (0-5') 16L0165-10 12/5/2016	SB-9 (3-5') 16L0216-10 12/6/2016	SB-10 (8-10') 16L0216-14 12/6/2016	SB-13 (0-2') 16L0842-16 12/20/2016	SB-15 (0-2') 16L0786-01 12/19/2016
Pesticides by 8081 in µg/kg								
4,4'-DDD [b]	3.3	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE [b]	3.3	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT [b]	3.3	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin [c]	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-BHC	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-Chlordane	94	ND U	ND U	ND U	ND U	ND U	ND U	ND U
beta-BHC	36	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane, total	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane, total (alpha, gamma)	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Decachlorobiphenyl	NS	76.7	56	79.6	59.1	65.3	56	61.2
delta-BHC [g]	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin [c]	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan I [d,]	2,400	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II [d,]	2,400	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan sulfate [d,]	2,400	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	14	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin aldehyde	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin ketone	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC (Lindane)	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-Chlordane	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor	42	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor epoxide	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloro-m-xylene	NS	77.7	64.2	76.3	73.4	73.9	51.5	59.6
Toxaphene	NS	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Polychorinated Byphenols (PCBs) by 8081 in mg/kg								
Aroclor 1016	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1221	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1232	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1242	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1248	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1254	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aroclor 1260	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Decachlorobiphenyl	NS	0.0443	0.0338	0.0463	0.0347	0.0364	0.0606	0.0708
Tetrachloro-m-xylene	NS	0.0487	0.0411	0.0478	0.0434	0.0433	0.0555	0.0598
Total PCBs	0.1	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Notes:

All concentrations are ug/Kg (ppb), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

a - The SCOs for unrestricted use were capped at a maximum value of 100 ppm.

b - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO.

c - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background cor

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) wish "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be required by th

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use SCOs

Table 4

Soil Analytical Data
PCBs and Pesticides
124-22 Queens Blvd., Kew Gardens, New York

SB-16 (0-2') 16L0786-05 12/19/2016		SB-20 (0-2') 17B0697-01 2/17/2017		SB-21 (0-2') 17B0749-01 2/21/2017		SB-22 (0-2') 17B0583-06 2/15/2017		SB-23 (0-2') 17B0583-05 2/15/2017		WL-06 (0-13') AD00867-002 10/27/2017		WL-07 (0-13') AD00867-007 10/27/2017	
ND	U	ND	U	ND	U	4.64	D	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	20.9	D	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	6.56	D	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	10.7	D	ND	U	ND	U	ND	U
62.7		20.8		25.2		29.1		23.1		ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	4.15	D	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
61.5		28.5		25.9		26		21.3		ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
0.0727		0.0282		0.0293		0.0398		0.0316		ND	U	ND	U
0.0629		0.0355		0.0318		0.0367		0.0349		ND	U	ND	U
ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

ıcentrations used as the Track1 SCO value for this use of the site.

ne Department to calculate a protection of ecological resources SCO according to the TSD.

Table 5

Soil Analytical Data
Metals
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-4		SB-5		SB-6		SB-9		SB-10		SB-13		SB-15	
Sample Depth:		(13-15')		(3-5')		(0-5')		(3-5')		(8-10')		(0-2')		(0-2')	
Laboratory ID:		16L0165-05		16L0165-07		16L0165-10		16L0216-10		16L0216-14		16L0842-16		16L0786-01	
Sampling Date:		12/5/2016		12/5/2016		12/5/2016		12/6/2016		12/6/2016		12/20/2016		12/19/2016	
Metals by 6010 in mg/kg															
Aluminum	NS	10,000		6,810		7,160		7,510		6,660		5,810	B	7,100	
Antimony	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Arsenic [c]	13	1.36		2.68		2.11		2.41		1.2		ND	U	ND	U
Barium [c]	350	70		38.1		41.6		29.8		51.8		31.7		36.8	
Beryllium	7.2	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Cadmium [c]	2.5	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Calcium	NS	876		360		643		372		658		520		858	
Chromium [b,c,e]	NS	15		24.3		16.6		17.8		16.8		13.5		15.7	
Cobalt	NS	3.9		8.32		7.81		8.58		10.7		6.09		7.44	
Copper	50	16.7		13.1		14.1		10.6		12.1		9.62		11.6	
Iron	NS	6,020		21,300		17,700		17,200		11,400		14,400		13,600	
Lead [c]	63	5.81		5.08		5.22		5.26		3.71		2.33		14.9	
Magnesium	NS	1,940		1,530		1,640		1,410		1,620		1,520		1,410	
Manganese	1,600	59.5		391		321		441		224		273		156	
Nickel	30	10.8		15.3		13.8		11.9		13.2		11.8		10.5	
Potassium	NS	524		755		895		684		842		768		566	
Selenium [c]	3.9	ND	U	2.78		2.24		2.03		1.12		2.45		2.49	
Silver	2	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	NS	147		125		115		116		171		101		206	
Thallium	NS	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vanadium	NS	14		24.7		22.5		22.4		25.4		18.8		22.4	
Zinc [c]	109	38.2		22.2		23.8		19.3		18.8		19.1		25.2	
Mercury by 7473 in mg/kg															
Mercury	0.18	0.0372		ND	U	ND	U	ND	U	ND	U	ND	U	0.0723	
Total Cyanide by 9010/9014 in mg/kg															
Total Cyanide [d]	27														

Notes:

All concentrations are mg/Kg (ppm), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanup Objectives per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

a - The SCOs for unrestricted use were capped at a maximum value of 100 ppm.

b - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO.

c - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil backgro

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e - The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) wish "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be requi

Highlighted text denotes concentrations exceeding NYSDEC Unrestricted Use SCOs

Table 5

Soil Analytical Data
Metals
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC Unrestricted Use SCOs [1]	SB-16	SB-20	SB-21	SB-22	SB-23	WL-06	WL-
Sample Depth:		(0-2')	(0-2')	(0-2')	(0-2')	(0-2')	(0-13')	(0-1
Laboratory ID:		16L0786-05	17B0697-01	17B0749-01	17B0583-06	17B0583-05	AD00867-002	AD008
Sampling Date:		12/19/2016	2/17/2017	2/21/2017	2/15/2017	2/15/2017	10/27/2017	10/27/
Metals by 6010 in mg/kg								
Aluminum	NS	5,630	7,180	13,200	5,590 B	9,360	10,000	15,000
Antimony	NS	ND U	ND U	ND U	1.43	ND U	ND	ND
Arsenic [c]	13	3.65	9.44	3.81	3.67	2.29	1.3	2.4
Barium [c]	350	66.5	180	76.5	156	160	63	67
Beryllium	7.2	0.16	0.607	0.328	0.223	0.126	ND	0.3
Cadmium [c]	2.5	ND U	ND U	ND U	3.09	0.38	ND	ND
Calcium	NS	5,980	17,700	6,250	20,000	15,900	ND	ND
Chromium [b,c,e]	NS	11.2	24.2	38.7	51.6	17.9	22	35
Cobalt	NS	5.67	8.3	9.7	5.59	7.5	6.5	5.6
Copper	50	25.6	106	77	130	19.7	16	28
Iron	NS	8,310	35,800	56,800 D	17,400	14,900	19,000	25,000
Lead [c]	63	181	170	36.9	632	69.4	7.9	110
Magnesium	NS	1,250	4,950	2,750	1,830	2,630	2,200	2,700
Manganese	1,600	147	411	350	229	384	470	200
Nickel	30	11.8	19.1	26.9	31.2 B	16	13	15
Potassium	NS	898	716	1,200	609 B	934 B	790	980
Selenium [c]	3.9	1.4	7.43	11.2	2.27	2.38	ND	ND
Silver	2	ND U	ND U	ND U	ND U	ND U	ND	ND
Sodium	NS	296	144	192	349	128	ND	ND
Thallium	NS	ND U	ND U	ND U	ND U	ND U	ND	ND
Vanadium	NS	19.9	48.4	30.4	36.6	28	25	47
Zinc [c]	109	90.2	373	88.7	1,500 B	630	25	52
Mercury by 7473 in mg/kg								
Mercury	0.18	0.0901	0.0777	0.225	0.513	ND U	ND U	ND
Total Cyanide by 9010/9014 in mg/kg								
Total Cyanide [d]	27				ND U	ND U	ND U	ND

Notes:

All concentrations are mg/Kg (ppm), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanu

B - Analyte is found in the associated analysis batch blank. For volatil

J - Detected below the Reporting Limit but greater than or equal to

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to

NS - No standard established

U - The analyte was analyzed for, but was not detected above the r

a - The SCOs for unrestricted use were capped at a maximum value

b - For constituents where the calculated SCO was lower than the c

c - For constituents where the calculated SCO was lower than the ruund concentrations used as the Track1 SCO value for this use of the site.

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfc

e - The SCO for this specific compound (or family of compounds) is c

f - Protection of ecological resources SCOs were not developed for ired by the Department to calculate a protection of ecological resources SCO according to the TSD.

Highlighted text denotes concentrations exceeding NYSDEC Unrestri

Table 5

Soil Analytical Data
Metals
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NYSDEC Unrestricted Use SCOs [1]	07 3') 7-007 2017
Metals by 6010 in mg/kg		
Aluminum	NS	
Antimony	NS	
Arsenic [c]	13	
Barium [c]	350	
Beryllium	7.2	
Cadmium [c]	2.5	
Calcium	NS	
Chromium [b,c,e]	NS	
Cobalt	NS	
Copper	50	
Iron	NS	
Lead [c]	63	
Magnesium	NS	
Manganese	1,600	
Nickel	30	
Potassium	NS	
Selenium [c]	3.9	
Silver	2	
Sodium	NS	
Thallium	NS	
Vanadium	NS	
Zinc [c]	109	
Mercury by 7473 in mg/kg		
Mercury	0.18	U
Total Cyanide by 9010/9014 in mg/kg		
Total Cyanide [d]	27	U

Notes:

All concentrations are mg/Kg (ppm), unless otherwise specified.

(1) New York 6 NYCRR Part 375 New York Unrestricted Use Soil Cleanu

B - Analyte is found in the associated analysis batch blank. For volatil

J - Detected below the Reporting Limit but greater than or equal to

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to

NS - No standard established

U - The analyte was analyzed for, but was not detected above the r

a - The SCOs for unrestricted use were capped at a maximum value

b - For constituents where the calculated SCO was lower than the c

c - For constituents where the calculated SCO was lower than the ru

d - SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfc

e - The SCO for this specific compound (or family of compounds) is c

f - Protection of ecological resources SCOs were not developed for

Highlighted text denotes concentrations exceeding NYSDEC Unrestri

Table 6

Groundwater Analytical Data
VOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID:	NYSDEC AWQS/G Vs- GA [1]	MW-1	MW-2	MW-1	MW-2	MW-2	MW-1	MW-2	MW-3	TW-1	TW-2	TW-3	TW-4
Sample Depth:													
Sampling Date:		2/28/2017	2/28/2017	3/3/2017	3/3/2017	3/3/2017	2/23/2018	2/22/2018	2/23/2018	2/22/2018	2/22/2018	2/23/2018	2/23/2018
Laboratory ID:		17C0009-01	17C0009-02	17C0213-01	17C0213-02	17C0213-03	18B0961-05	18B0961-06	18B0961-07	18B0961-01	18B0961-02	18B0961-03	18B0961-04
Volatile Organic Compounds by 8260 in µg/L													
1,1,1,2-Tetrachloroethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1,1-Trichloroethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1,2-Trichloroethane	1	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1-Dichloroethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,1-Dichloroethylene	5	ND U	8.2	ND U	7.0	6.1	0.2 U	17 D	14 D	0.2 U	0.2 U	1 U	1 U
1,2,3-Trichlorobenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2,3-Trichloropropane	0.04	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2,4-Trichlorobenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2,4-Trimethylbenzene	5	ND U	1.6	ND U	1.9	1.7	0.2 U	6.6 D	1 U	2.5	6.7	5 D	1 U
1,2-Dibromo-3-chloropropane	0.04	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2-Dibromoethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2-Dichlorobenzene	3	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2-Dichloroethane	0.6	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2-Dichloropropane	1	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,3,5-Trimethylbenzene	5	ND U	0.48 J	ND U	0.56	0.40 J	0.2 U	1.7 JD	1 U	1.2	2.1	1.3 JD	1 U
1,3-Dichlorobenzene	3	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,4-Dichlorobenzene	3	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,4-Dioxane	NS	ND U	ND U	ND U	ND U	ND U	40 U	200 U	200 U	40 U	40 U	200 U	200 U
2-Butanone	50	0.39 J	ND U	ND U	ND U	17	0.2 U	1 U	1 U	9.7	35	18 D	7.4 D
2-Hexanone	50	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.97	2.4	1 U	1 U
4-Methyl-2-pentanone	NS	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	1.5	1 U	1 U
Acetone	50	1.7 J	4.4	1.4 J	2.4	2.1	1.6 J	5 U	5 U	20	54	40 D	25 D
Acrolein	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Acrylonitrile	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Benzene	1	ND U	0.59	ND U	0.54	0.56	0.2 U	1.8 JD	1 U	2.5	3.2	2 JD	1 U
Bromochloromethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Bromodichloromethane	50	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Bromoform	50	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Bromomethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Carbon disulfide	NS	ND U	ND U	ND U	ND U	0.63	0.2 U	1 U	1 U	0.2 U	0.2 U	1.3 JD	1 U
Carbon tetrachloride	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Chlorobenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Chloroethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Chloroform	7	0.59	9	ND U	6.0	7.0	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Chloromethane	NS	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
cis-1,2-Dichloroethylene	5	0.4 J	390 D	0.22 J	400 D	180 D	0.32 J	2000 D	1500 D	31	130	130 D	2.9 D
cis-1,3-Dichloropropylene	0.4	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Cyclohexane	NS	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.54	1.2	1 U	1 U
Dibromochloromethane	50	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Dibromomethane	5	ND U	ND U	ND U	ND U	ND U	0 U	1 U	1 U	0 U	0 U	1 U	1 U
Dichlorodifluoromethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Ethyl Benzene	5	ND U	0.89	ND U	0.89	0.74	0.2 U	3.4 D	1 U	1.2	3.4	1.6 JD	1 U
Hexachlorobutadiene	0.5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Isopropylbenzene	5	ND U	ND U	ND U	ND U	0.23 J	0.2 U	1 U	1 U	0.31 J	2.3	1.8 JD	1 U
Methyl acetate	NS	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	10	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Methylcyclohexane	NS	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.52	2	2.2 JD	1 U
Methylene chloride	5	ND U	ND U	ND U	ND U	ND U	1 U	5 U	5 U	1 U	1 U	5 U	5 U
n-Butylbenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 J	2.4	1.2 JD	1 U
n-Propylbenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.43 J	3.5	2.4 JD	1 U
o-Xylene	5	ND U	0.74	ND U	0.76	0.86	0.2 U	3.4 D	1 U	2	3.5	4.8 D	1 U
p- &m- Xylenes	5	ND U	1.5	ND U	1.6	1.3	0.5 U	4.9 JD	2.5 U	3.2	7.1	4.4 JD	2.5 U
p-Bromofluorobenzene	NS	10	10.1	10.5	10.3	10.1	NA	NA		NA	NA	NA	NA
p-Isopropyltoluene	5	ND U	ND U	ND U	0.32 J	ND U	0.2 U	1 U	1 U	0.31 J	0.38 J	1 U	1 U
sec-Butylbenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.33 J	2.3	1.6 JD	1 U
Styrene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
tert-Butyl alcohol (TBA)	NS	1.4 J	2.5	2.1	ND U	ND U	0.5 U	2.5 U	2.5 U	0.5 U	0.5 U	2.5 U	2.5 U
tert-Butylbenzene	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.48 J	1 U	1 U
Tetrachloroethylene	5	52 D	340 D	29	260 D	1100 D	9.7	210 D	1300 D	3.4	1.6	1.4 JD	100 D
Toluene	5	ND U	1.1	ND U	1.0	1.1	0.2 U	3.7 D	1.2 JD	5.2	3.1	2.6 D	1 U
trans-1,2-Dichloroethylene	5	ND U	30	ND U	26	12	0.2 U	140 D	71 D	0.57	0.43 J	1.1 JD	1 U
trans-1,3-Dichloropropylene	0.4	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Trichloroethylene	5	0.78	880 D	0.47 J	810 D	790 D	0.42 J	2100 D	2500 D	0.56	1	5.2 D	10 D
Trichlorofluoromethane	5	ND U	ND U	ND U	ND U	ND U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U
Vinyl Chloride	2	ND U	150 D	ND U	120 D	76 D	0.2 U	430 D	79 D	12	6.3	41 D	1 U
Xylenes, Total	5	ND U	2.2	ND U	2.3	2.2	0.6 U	8.2 D	3 U	5.2	11	9.2 D	3 U

Notes:

All concentrations are ug/L (ppb), unless otherwise specified.

(1) NYSDEC TOGS 1.1.1 - Ambient Water Quality Standards (AWQS) & Guidance Values (GVs) & Groundwater Effluent Limitations for Water Class GA, Type H(WS).

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS or GVs for Water Class GA, Type H(WS).

Table 7

Groundwater Analytical Data
SVOCs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: Sample Depth: Sampling Date: Laboratory ID:	NYSDEC AWQS/G Vs- GA [1]	MW-1 3/3/2017 17C0213	
Semi-Volatile Organic Compounds by 8270 in µg/L			
1,1-Biphenyl	5	2.5	U
1,2,4,5-Tetrachlorobenzene	5	2.5	U
1,2,4-Trichlorobenzene	5	2.5	U
1,2-Dichlorobenzene	3	2.5	U
1,2-Diphenylhydrazine (as Azobenzene)	NS	2.5	U
1,3-Dichlorobenzene	3	2.5	U
1,4-Dichlorobenzene	3	2.5	U
2,3,4,6-Tetrachlorophenol	NS	2.5	U
2,4,5-Trichlorophenol	1	2.5	U
2,4,6-Tribromophenol	NS	77.1	U
2,4,6-Trichlorophenol	1	2.5	U
2,4-Dichlorophenol	5	2.5	U
2,4-Dimethylphenol	50	2.5	U
2,4-Dinitrophenol	10	2.5	U
2,4-Dinitrotoluene	5	2.5	U
2,6-Dinitrotoluene	5	2.5	U
2-Chloronaphthalene	10	2.5	U
2-Chlorophenol	1	2.5	U
2-Fluorobiphenyl	NS	33	
2-Fluorophenol	NS	21.3	
2-Methylnaphthalene	NS	2.5	U
2-Methylphenol	1	2.5	U
2-Nitroaniline	5	2.5	U
2-Nitrophenol	1	2.5	U
3- & 4-Methylphenols	NS	2.5	U
3,3-Dichlorobenzidine	5	2.5	U
3-Nitroaniline	5	2.5	U
4,6-Dinitro-2-methylphenol	NS	2.5	U
4-Bromophenyl phenyl ether	NS	2.5	U
4-Chloro-3-methylphenol	1	2.5	U
4-Chloroaniline	5	2.5	U
4-Chlorophenyl phenyl ether	NS	2.5	U
4-Nitroaniline	5	2.5	U
4-Nitrophenol	1	2.5	U
Acenaphthene	20	0.05	U
Acenaphthylene	NS	0.05	U
Acetophenone	NS	2.5	U
Aniline	5	2.5	U
Anthracene	50	0.05	U
Atrazine	7.5	0.5	U
Benzaldehyde	NS	2.5	U
Benzidine	5	10	U
Benzo(a)anthracene	0.002	0.05	U
Benzo(a)pyrene	NS	0.05	U
Benzo(b)fluoranthene	0.002	0.05	U
Benzo(g,h,i)perylene	NS	0.05	U
Benzo(k)fluoranthene	0.002	0.05	U
Benzoic acid	NS	25	U
Benzyl alcohol	NS	2.5	U
Benzyl butyl phthalate	50	2.5	U
Bis(2-chloroethoxy)methane	5	2.5	U
Bis(2-chloroethyl)ether	1	2.5	U
Bis(2-chloroisopropyl)ether	5	2.5	U
Bis(2-ethylhexyl)phthalate	5	0.5	U
Caprolactam	NS	2.5	U
Carbazole	NS	2.5	U
Chrysene	0.002	0.05	U
Dibenzo(a,h)anthracene	NS	0.05	U
Diethyl phthalate	50	2.5	U
Dimethyl phthalate	50	2.5	U
Di-n-butyl phthalate	50	2.5	U
Di-n-octyl phthalate	50	2.5	U
Fluoranthene	50	0.05	U
Fluorene	50	0.05	U
Hexachlorobenzene	0.04	0.02	U
Hexachlorobutadiene	0.5	0.5	U
Hexachlorocyclopentadiene	5	2.5	U
Hexachloroethane	5	0.5	U
Indeno(1,2,3-cd)pyrene	0.002	0.05	U
Isophorone	50	2.5	U
Naphthalene	10	0.05	U
Nitrobenzene	0.4	0.25	U
N-Nitrosodimethylamine	NS	0.5	U
N-nitroso-di-n-propylamine	NS	2.5	U
N-Nitrosodiphenylamine	50	2.5	U
Pentachlorophenol	1	0.25	U
Phenanthrene	50	0.05	U
Phenol	1	2.5	U
Pyrene	50	0.05	U

Notes:

All concentrations are ug/L (ppb), unless otherwise specified.

(1) NYSDEC TOGS 1.1.1 - Ambient Water Quality Standards (AWQS) & Guidance Values (GVs) & Groundwater Effluent Limitations for Water Class GA, Type H(WS).

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS or GVs for Water Class GA, Type H(WS).

Table 8

Groundwater Analytical Data
Pesticides/PCBs
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: Sample Depth: Sampling Date: Laboratory ID:	NYSDEC AWQS/G Vs- GA [1]	MW-1 3/3/2017 17C0213	
Pesticides by 8081 in µg/L			
4,4'-DDD	0.3	0.004	U
4,4'-DDE	0.2	0.004	U
4,4'-DDT	0.2	0.004	U
Aldrin	NS	0.004	U
Alpha-BHC	0.01	0.004	U
Alpha-Chlordane	NS	0.004	U
Beta-BHC	0.04	0.004	U
Chordane, total	0.05	0.02	U
Chordane, total (alpha, gamma)	NS	0.01	U
Delta-BHC[9]	0.04	0.004	U
Dieldrin	0.004	0.002	U
Endosulfan I[9,1]	NS	0.004	U
Endosulfan II[9,1]	NS	0.004	U
Endosulfan sulfate[9,1]	NS	0.004	U
Endrin	NS	0.004	U
Endrin aldehyde	5	0.01	U
Endrin ketone	5	0.01	U
Gamma-BHC (Lindane)	0.05	0.004	U
gamma-Chlordane	NS	0.01	U
Heptachlor	0.04	0.004	U
Heptachlor epoxide	0.03	0.004	U
Methoxychlor	35	0.004	U
Toxaphene	0.06	0.1	U
Polychlorinated Biphenyls (PCBs) by 8082 in µg/L			
Aroclor 1016	NS	ND	U
Aroclor 1221	NS	ND	U
Aroclor 1232	NS	ND	U
Aroclor 1242	NS	ND	U
Aroclor 1248	NS	ND	U
Aroclor 1254	NS	ND	U
Aroclor 1260	NS	ND	U
Aroclor 1262	NS	ND	U
Aroclor 1268	NS	ND	U
Total PCBs	0.09	ND	U

Notes:

All concentrations are ug/L (ppb), unless otherwise specified.

(1) NYSDEC TOGS 1.1.1 - Ambient Water Quality Standards (AWQS) & Guidance Values (GVs) & Groundwater Effluent Limitations for Water Class GA, Type H(WS).

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS or GVs for Water Class GA, Type H(WS).

Table 9

Groundwater Analytical Data
Metals
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID: / Sample Depth: / Sampling Date: / Laboratory ID:	NYSDEC AWQS/GVs- GA [1]	MW-1 3/3/2017 17LC0213-01	
Metals by 6010 & 7470 (mg/L)			
Aluminum	NS	0.00614	
Antimony	3	0.000006	
Arsenic	25	ND	U
Barium	1,000	0.000128	
Beryllium	3	ND	U
Cadmium	5	ND	U
Calcium	NS	0.0817	
Chromium	50	0.000025	
Cobalt	NS	0.000006	
Copper	200	0.000029	
Iron	NS	0.00859	
Lead	25	ND	U
Magnesium	35,000	0.0317	
Manganese	300	0.000877	
Mercury	0.7	ND	
Nickel	100	0.000025	
Potassium	NS	0.00557	
Selenium	10	ND	U
Silver	50	ND	U
Sodium	20,000	0.0287	
Thallium	0.5	ND	U
Vanadium	NS	0.000013	
Zinc	2,000	0.000039	

Notes:

All concentrations are ug/L (ppb), unless otherwise specified.

(1) NYSDEC TOGS 1.1.1 - Ambient Water Quality Standards (AWQS) & Guidance Values (GVs) & Groundwater Effluent Limitations for Water Class GA, Type H(WS).

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS or GVs for Water Class GA, Type H(WS).

Table 10

Soil Vapor Analytical Data
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID Sample Depth: Laboratory ID Sampling Date	NYSDOH Indoor Air Guideline Values (1)	NYSDOH Soil Vapor Screening Level (2)	SS-1 6' 15D0186-01 4/2/2015	SS-2 6' 15D0186-02 4/2/2015	SS-3 6' 15D0186-03 4/2/2015	SS-4 6' 15D0186-04 4/2/2015	SV-2 6' 17B0582-01 2/14/2017	SV-3 6' 17B0582-02 2/14/2017
VOCs by TO-15 in µg/m³								
1,1,1,2-Tetrachloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	10	100	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethylene	1	6	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trimethylbenzene	NS	NS	11 D	11 D	ND U	ND U	ND U	ND U
1,2-Dibromoethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorotetrafluoroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3,5-Trimethylbenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Butadiene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichloropropane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dioxane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	NS	NS	7.1 D	ND U	ND U	11 D	ND U	ND U
2-Hexanone	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
3-Chloropropene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-pentanone	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Acetone	NS	NS	65 D	27 D	16 D	190 D	16 D	23 D
Acrylonitrile	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	NS	NS	ND U	8.1 D	ND U	ND U	ND U	ND U
Benzyl chloride	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromodichloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	NS	NS	72 D	ND U	11 D	ND U	ND U	ND U
Carbon tetrachloride	1	6	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	NS	NS	31 D	33 D	ND U	ND U	20 D	11 D
Chloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethylene	1	6	26 D	ND U	170 D	150 D	9.9 D	ND U
cis-1,3-Dichloropropylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Cyclohexane	NS	NS	26 D	ND U	ND U	150 D	ND U	ND U
Dibromochloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Dichlorodifluoromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Ethyl acetate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Ethyl Benzene	NS	NS	17 D	14 D	ND U	11 D	ND U	ND U
Hexachlorobutadiene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Isopropanol	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methyl Methacrylate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methyl tert-butyl ether (MTBE)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methylene chloride	10	100	ND U	ND U	ND U	56 D	ND U	ND U
n-Heptane	NS	NS	ND U	34 D	ND U	ND U	ND U	ND U
n-Hexane	NS	NS	ND U	50 D	ND U	30 D	ND U	ND U
o-Xylene	NS	NS	19 D	15 D	ND U	ND U	ND U	ND U
p- & m- Xylenes	NS	NS	56 D	56 D	23 D	41 D	ND U	ND U
p-Bromofluorobenzene	NS	NS	10.4	NA	10.4	NA	9.54	8.85
p-Ethyltoluene	NS	NS	12 D	11 D	ND U	11 D	ND U	ND U
Propylene	NS	NS	ND U	ND U	ND U	ND U	32 D	13 D
Styrene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethylene	10	100	45,000 D	240,000 D	14,000 D	3,600 D	16,000 D	250,000 D
Tetrahydrofuran	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	NS	NS	44 D	64 D	27 D	40 D	ND U	ND U
trans-1,2-Dichloroethylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethylene	1	6	1,100 D	1,500 D	360 D	76 D	62 D	1,100 D
Trichlorofluoromethane (Freon 11)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl bromide	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl Chloride	0.2	6	ND U	ND U	ND U	57 D	ND U	ND U

Notes:

(1) New York State Department of Health Indoor Air Guidance Values per May 2017 Soil Vapor/Indoor Air Matricies. Values are based on minimum sub-slab vapor concentration that may trigger mitigation.

(2) New York State Department of Health Soil Vapor Screening Levels per May 2017 Soil Vapor/Indoor Air Matricies.

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, theresult is an estimated concentration.

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.

Highlighted values indicate exceedance higher than NYSDOH Soil Vapor Screening Level

Table 10

Soil Vapor Analytical Data
124-22 Queens Blvd., Kew Gardens, New York

Client Sample ID Sample Depth: Laboratory ID Sampling Date	NYSDOH Indoor Air Guideline Values [1]	NYSDOH Soil Vapor Screening Level [2]	SV-4 6' 17B0582-03 2/14/2017	SV-5 6' 17B0582-04 2/14/2017	SV-6 6' 17B0582-05 2/14/2017	SV-7 6' 17B0582-06 2/14/2017	SV-8 6' 17B0582-07 2/14/2017	SV-1a 6' 17c0210-01 2/14/2017
VOCs by TO-15 in µg/m³								
1,1,1,2-Tetrachloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	10	100	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethylene	1	6	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2,4-Trimethylbenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorotetrafluoroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3,5-Trimethylbenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Butadiene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,3-Dichloropropane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dioxane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
3-Chloropropene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-pentanone	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Acetone	NS	NS	30 D	16 D	14 D	14 D	25 D	35 D
Acrylonitrile	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	NS	NS	ND U	ND U	6.2 D	110 D	ND U	ND U
Benzyl chloride	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromodichloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	NS	NS	ND U	ND U	ND U	ND U	40 D	ND U
Carbon tetrachloride	1	6	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	NS	NS	ND U	ND U	ND U	ND U	23 D	ND U
Chloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethylene	1	6	300 D	48 D	39 D	27 D	530 D	ND U
cis-1,3-Dichloropropylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Cyclohexane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Dibromochloromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Dichlorodifluoromethane	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Ethyl acetate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Ethyl Benzene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Hexachlorobutadiene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Isopropanol	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methyl Methacrylate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methyl tert-butyl ether (MTBE)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Methylene chloride	10	100	ND U	ND U	ND U	ND U	ND U	ND U
n-Heptane	NS	NS	ND U	ND U	30 D	ND U	ND U	ND U
n-Hexane	NS	NS	ND U	ND U	71 D	ND U	ND U	ND U
o-Xylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
p- & m- Xylenes	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
p-Bromofluorobenzene	NS	NS	8.98	9.94	9.5	9.44	9.79	9.36
p-Ethyltoluene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Propylene	NS	NS	13 D	15 D	68 D	29 D	63 D	ND U
Styrene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethylene	10	100	200,000 D	4,300 D	3,400 D	430 D	9,000 D	4,300 D
Tetrahydrofuran	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropylene	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethylene	1	6	940 D	30 D	73 D	19 D	4,300 D	ND U
Trichlorofluoromethane (Freon 11)	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl bromide	NS	NS	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl Chloride	0.2	6	ND U	ND U	ND U	ND U	ND U	ND U

Notes:

(1) New York State Department of Health Indoor Air Guidance Values per May 2017 Soil Va

(2) New York State Department of Health Soil Vapor Screening Levels per May 2017 Soil Va

B - Analyte is found in the associated analysis batch blank. For volatiles, methylene chloric

J - Detected below the Reporting Limit but greater than or equal to the Method Detectio

NA - Not analyzed

ND - NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD

NS - No standard established

U - The analyte was analyzed for, but was not detected above the reported sample quan

Highlighted values indicate exceedance higher than NYSDOH Soil Vapor Screening Leve

Table 11

Monitoring Well Groundwater Elevations
August 10, 2018
124-22 Queens Boulevard

Well Location	Siting	Casing Elevation	Depth to Water	Groundwater Elevation
MW-1	13.71	66.29	55.35	**10.94**
MW-2	4.22	75.78	64.98	**10.80**
MW-3R	3.87	76.13	65.22	**10.91**
MW-4	7.38	72.62	61.73	**10.89**
MW-5	10.59	69.41	58.54	**10.87**
MW-6	0.84	79.16	68.22	**10.94**

Notes:
Elevations based on estimated scope elevation of 80'.
Units in feet.

Table 12

Remedial Schedule
124-22 Queens Blvd., Kew Gardens, New York

Date	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Task	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
IRM Remedial Activities Continue											
Submission of IRM Construction Completion Report											
DEC Review of IRM Construction Completion Report											
Submission of RAWP											
DEC Initial Review of RAWP											
RAWP Revisions and Resubmission											
DEC Review and Approval of RAWP for Public Comment											
Public Comment Period											
Additional Design Investigation											
Completion of Remedial Design											
DEC Review of Remedial Design											
Site Remediation Construction (Excavation, Capping, and Vapor Barrier Install)											
Remainder of Building Construction (Completion of SSDS)											
Filing of Environmental Easement											
Submission of FER and SMP											
NYSDEC Review and Approval of FER and SMP											
Issuance of COC											
Operation and Maintenance (ISCO Injections, SSDS Testing, Groundwater Monitoring, and Reporting)											

Table 12

Remedial Schedule
124-22 Queens Blvd., Kew Gardens, New York

Date	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Task	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22
IRM Remedial Activities Continue											
Submission of IRM Construction Completion Report											
DEC Review of IRM Construction Completion Report											
Submission of RAWP											
DEC Initial Review of RAWP											
RAWP Revisions and Resubmission											
DEC Review and Approval of RAWP for Public Comment											
Public Comment Period											
Additional Design Investigation											
Completion of Remedial Design											
DEC Review of Remedial Design											
Site Remediation Construction (Excavation, Capping, and Vapor Barrier Install)											
Remainder of Building Construction (Completion of SSDS)											
Filing of Environmental Easement											
Submission of FER and SMP											
NYSDEC Review and Approval of FER and SMP											
Issuance of COC											
Operation and Maintenance (ISCO Injections, SSDS Testing, Groundwater Monitoring, and Reporting)											

Table 13

Emergency Contact Numbers
124-22 Queens Blvd., Kew Gardens, New York

Contact	Firm or Agency	Telephone Number
Police		911
Fire		911
Ambulance		911
Hospital	Jamaica Hospital Medical Center	(718) 206-6000
Project Manager	John Eichler	(631)589-6353
Health and Safety Officer	Usman Chaudhry	(631) 589-6353
NYSDEC Site Contact	Sadique Ahmed	(518) 402-9656
Poison Control Center		(800) 962-1253
Chemtrec		(800) 424-9300