HALEY ALDRICH

www.haleyaldrich.com

DRAFT REMEDIAL INVESTIGATION WORK PLAN
FORMER JAMAICA TRUCK PARTS SITE
NYSDEC BCP SITE NO. TBD
145-11 LIBERTY AVENUE
QUEENS, NEW YORK

by
H & A of New York Engineering and Geology, LLP
New York, New York

for
GRUN JAMAICA 1 LLC
Brooklyn, New York

File No. 0215824
July 2026



H & A OF NEW YORK ENGINEERING
AND GEOLOGY, LLP
213 W. 35th St
7th Floor
New York, NY 10001
646.277.5685

July 28, 2026
File No. 0215824

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

Attention: Jane O'Connell

Subject: Draft Remedial Investigation Work Plan
Former Jamaica Truck Parts Site
NYSDEC BCP Site No. TBD
145-11 Liberty Avenue & 10208 Brisbin Street
Queens, New York

Dear Ms. O'Connell:

H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York), on behalf GRUN JAMAICA 1 LLC, is submitting for the review and approval of the New York State Department of Environmental Conservation (NYSDEC) this draft Remedial Investigation Work Plan (RIWP) for the proposed redevelopment located at 145-11 Liberty Avenue & 10208 Brisbin Street in Queens, New York (Site). This document was submitted as part of the Brownfield Cleanup Program Application for the Site. This RIWP has been developed based on the NYSDEC's "Technical Guidance for Site Investigation and Remediation" (Division of Environmental Remediation [DER]-10 dated May 2010).

Sincerely yours,
H & A OF NEW YORK ENGINEERING AND GEOLOGY LLP

Matthew Levy
Senior Project Manager

James Bellew
Principal

CC: Moshe Friedlander (GRUN JAMAICA 1 LLC) Email: moshe@grungrp.com
Scott Deyette (NYSDEC) Email: scott.deyette@dec.ny.gov
NYSDEC PM Email: TBD
NYSDOH PM (TBD) Email: TBD

Professional Certification

I, James M. Bellew, certify that I am currently a Qualified Environmental Professional as defined in Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375 and that this Remedial Investigation Work Plan was prepared in accordance with the applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10).

Final to be certified

James M. Bellew *Date*

Table of Contents

Page

Professional Certification i

List of Tables iv
List of Figures iv
List of Appendices v
List of Acronyms and Abbreviations vi

1. Introduction 1

1.1 PURPOSE 1

2. Background 2

2.1 CURRENT LAND USE 2
2.2 SITE HISTORY 2
2.3 SURROUNDING LAND USE 2
2.4 SURROUNDING LAND USE HISTORY 3
2.5 PREVIOUS INVESTIGATIONS 3
2.5.1 *Phase I Environmental Site Assessment, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017* 3
2.5.2 *Phase II Site Investigation Report, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017.* 4
2.5.3 *Phase II Subsurface Investigation Report, prepared by Brussee Environmental, prepared for GFL NYC LLC, dated May 2026.* 4

3. Remedial Investigation 6

3.1 UTILITY MARKOUT 6
3.2 DEMOLITION & TANK CLEANING 6
3.3 SOIL SAMPLING 6
3.4 GROUNDWATER SAMPLING 7
3.5 INVESTIGATION-DERIVED WASTE 9
3.6 SOIL VAPOR SAMPLING 9
3.7 PROPOSED SAMPLING RATIONALE 9

4. Green and Sustainable Remediation and Climate Resiliency 11

4.1 BEST PRACTICES AND TECHNIQUES 11
4.2 REPORTING 12
4.3 CLIMATE RESILIENCY EVALUATION 12
4.4 ENVIRONMENTAL FOOTPRINT ANALYSIS 12

5. Quality Assurance and Quality Control 13

6. Data Use 14

6.1 DATA SUBMITTAL 14
6.2 DATA VALIDATION 14

7. Project Organization 15

8. Health and Safety 16

8.1 HEALTH AND SAFETY PLAN 16
8.2 COMMUNITY AIR MONITORING PLAN 16
8.3 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT 17

9. Reporting 18

9.1 DAILY REPORTING 18
9.2 REMEDIAL INVESTIGATION REPORT 18

10. Schedule 19

References 20

List of Tables

Table No.	Title
1	Sampling and Analysis Plan

List of Figures

Figure No.	Title
1	Project Locus
2	Surrounding Land Use and Sensitive Receptors Map
3	Disadvantaged Communities Map
4	Map of Soil Chemistry
5	Map of Soil Vapor Chemistry
6	Map of Groundwater Chemistry
7	Proposed Sampling Plan

List of Appendices

Appendix	Title
A	Previous Reports
B	Field Sampling Plan
C	Quality Assurance Project Plan
D	Sampling, Analysis, and Assessment of Per- And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs
E	Climate Screening Checklist
F	Green & Sustainable Remediation Analysis
G	Health & Safety Plan
H	New York State Department of Health Generic Community Air Monitoring Plan

List of Acronyms and Abbreviations

A	
Applicant	GRUN JAMAICA 1 LLC
ASP	Analytical Services Protocol
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AWQS	Ambient Water Quality Standards
B	
BCP	Brownfield Cleanup Program
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
C	
CAMP	Community Air Monitoring Plan
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
COC	Contaminants of Concern
CVOC	chlorinated volatile organic compound
D	
DER-10	Division of Environmental Remediation-10 *(specifically "May 2010 NYSDEC Technical Guidance for Site Investigation and Remediation")*
DUSR	Data Usability Summary Report
E	
EA	Exposure Assessment
EDD	Electronic Data Deliverable
ESI	Environmental Site Investigation
ELAP	Environmental Laboratory Approval Program
ESA	Environmental Site Assessment
F	
ft	foot/feet
FSP	Field Sampling Plan
G	
GPR	ground-penetrating radar
H	
Haley & Aldrich of New York	H & A of New York Engineering and Geology, LLP
HASP	Health and Safety Plan
HREC	Historical Recognized Environmental Condition

List of Acronyms and Abbreviations (continued)

I	
IDW	Investigation-Derived Waste
L	
Lakewood	Lakewood Environmental Services Corp
N	
NOVA	NOVA Geophysical Engineering
NTU	Nephelometric turbidity unit
NYCDOB	New York City Department of Buildings
NYCOER	New York City Office of Environmental Remediation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
O	
OSHA	Occupational Safety and Health Administration
P	
PACE	Pace Analytical Services, LLC
PAH	polycyclic aromatic hydrocarbons
PBS	Petroleum Bulk Storage
PCB	polychlorinated biphenyl
PCE	perchloroethylene/tetrachloroethene
PFAS	per- and polyfluoroalkyl substances
PID	photoionization detector
PM_{10}	particulate matter less than 10 micrometers in size
ppb	parts per billion
ppm	parts per million
PVC	polyvinyl chloride
Q	
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
R	
RAWP	Remedial Action Work Plan
REC	Recognized Environmental Condition
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RSCOs	Residential Soil Cleanup Objectives

RRSCOs	Restricted-Residential Soil Cleanup Objectives
S	
SCO	Soil Cleanup Objective
Site	The property located at 145-11 Liberty Avenue & 10208 Brisbin Street, Queens, New York
sq ft	square feet/square foot
SVOC	semi-volatile organic compound
T	
TAL	Target Analyte List
TCL	Target Compound List
TICS	tentatively identified compounds
TOGS	Technical and Operational Guidance Series
U	
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UUSCOs	Unrestricted Use Soil Cleanup Objectives
V	
VOCs	volatile organic compounds

1. Introduction

On behalf of the Applicant, GRUN JAMAICA 1 LLC, H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) has prepared this Remedial Investigation Work Plan (RIWP) for the Former Jamaica Truck Parts Site in Queens, New York (the "Site"). This RIWP was prepared in accordance with the regulations and guidance applicable to the Brownfield Cleanup Program (BCP).

The Site, located in the Jamaica section of Queens, New York, is identified as Block 10019, Lot 39 (Formerly Lots 38 and 39) on the New York City tax map. The Site is approximately 0.38 acres in total (approximately 16,750 square feet [sq ft]). The Site is developed with a one- and two-story brick manufacturing building currently occupied by Almeida Concrete Equipment, Inc. and the former Lot 38 portion of the Site is undeveloped, capped with concrete, and used as a parking area. The Site is bounded to the north by two two-story single-family residential buildings, followed by 102nd Avenue; to the east by Brisbin Street, followed by a single-story commercial building; to the south by Liberty Avenue, followed by two-story mixed-use commercial and residential buildings and a single-story auto parts garage; and to the west by St. Marks Missionary Baptist Church, followed by three-story single-family residential buildings.

According to the New York City Planning Commission Zoning Map 14d, the Site is within the Special Downtown Jamaica (DJ) District with R7X residential zoning and a C2-4 overlay. Lot 39 is identified with an E-Designation, E-842, for noise and hazardous materials (CEQR number 24DCP132Q) under the Jamaica Neighborhood Plan rezoning in 2025. Under the E-Designation, a full Remedial Investigation (RI) and Remedial Action must be completed to satisfy the Hazmat Requirement. The Site location is shown on Figure 1.

While the development plans are pending at this time, preliminary plans include two slab-on-grade, 98-unit buildings with an affordable housing component. Final plans may also include a commercial unit on the ground level.

1.1 PURPOSE

The objective of the RI is to characterize the nature and extent of environmental impacts at the Site and to provide sufficient information to evaluate remedial alternatives, as required. A Phase II Subsurface Investigation was performed at the Site in May 2026 to investigate the anticipated contaminants of concern (COCs) identified based on former uses of the Site as a truck repair facility. While the Phase II Subsurface Investigation sampling event provided preliminary Site characterization data identifying COCs at the Site, it did not fully determine the nature and extent of contamination at the Site.

The Site characterization did not comprehensively delineate the extent of contamination at the Site; therefore, additional targeted soil, groundwater, and soil vapor sampling are proposed. The RI will be implemented upon approval of this RIWP. Results of the additional sample analyses will be used to confirm the results of the previous Site characterization activities, delineate any on-Site source(s), and determine a course for Remedial Action. In addition, a Qualitative Human Health Exposure Assessment (QHHEA) will be conducted and will consider the nature of populations currently exposed or that have the

potential to be exposed to Site-related contaminants both on and off Site, along with describing the reasonably anticipated future land use of the Site and affected off-Site areas.

2. Background

2.1 CURRENT LAND USE

The Site is currently occupied by Almeida Concrete Equipment, with a parking area extending around the side and rear of the building. The Site is located within a mixed-use area characterized mainly by one- to two-story commercial and industrial buildings, multi-story mixed residential and commercial buildings, one- and two-family residential buildings, and walk-up apartments.

2.2 SITE HISTORY

Based on review of available records, former Lot 39 (145-11 Liberty Avenue) was developed between 1951 and 1963 with the existing two-story brick building, which was used as a wire rope warehouse from at least 1963 through 1967. Based on City Directory records between 1970 and 2008, operators at 145-11 Liberty Avenue included Burke Theo J & Son Inc. Construction Equipment in 1970; Jamaica Truck Parts Inc. in 1976; Jamaica Mack Inc. in 1983; and EWG Recycling and Liberty Truck Repair Corp in 2005 and 2008, respectively. Between at least 1976 and 2017, the building was associated with truck parts and repair operations. Former Lot 38 (102-08 Brisbin Street) was developed prior to 1911 with a three-story residential building that was demolished between 1967 and 1981, and it has been capped with concrete since at least 2003. The Site currently operates as a concrete equipment warehouse with an accessory parking lot.

The Site is listed under NYSDEC's petroleum bulk storage database (PBS) facility number 2-612768 and associated with one 550-gallon waste oil underground storage tank (UST) with an installation date in 1990. Three 275-gallon aboveground storage tanks (ASTs) storing motor oil, hydraulic oil, and waste oil (respectively) are also associated with the Site, each listed with installation dates in 2017. A February 2017 phase I ESA identified evidence of a 550-gallon waste oil UST, noted previous documentation of three floor drains and a waste oil pit presumably discharging to the UST, and observed a 275-gallon motor oil AST and numerous bulk storage containers of petroleum products (including motor oil, hydraulic oil, and transmission fluids) in the building. Based on the findings from a May 2026 Phase II Subsurface Investigation Report completed by Brussee Environmental Corp. (BEC), H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) reported the apparent release to the New York Department of Environmental Conservation (NYSDEC) on June 23, 2026. Spill Record No. 2602737 documents a suspected release from the waste-oil underground storage tank (UST) that may have affected an unknown volume of soil.

2.3 SURROUNDING LAND USE

The Site is located in the Jamaica section of Queens, New York, within the Special Downtown Jamaica District. The Site is located within a R7X residential zoning district with a C2-4 overlay, characterized as a medium-density, predominantly residential commercial district along a major thoroughfare. The Site is

bounded to the north by a 2.5-story residential building; to the east by Brisbin Street, followed by a one-story commercial building; to the south by Liberty Avenue, followed by a two-story mixed-use residential and commercial buildings including Central Auto Parts and Splish Splash Laundromat; and to the west by St. Marks Missionary Baptist Church and a three-story residential building.

The area surrounding the Site consists of residential, commercial, and industrial-use properties. There are two sensitive receptors within a 500-ft radius of the Site, listed below and shown on Figure 2.

- Concerned Parents of Jamaica Early Learning Center, located at 143-04 101 Avenue, Jamaica, NY, listed as a day care and pre-kindergarten.
- Talfourd Lawn Elementary School (P.S. 050), located at 143-26 101 Avenue, Jamaica, NY, listed as a K-12 school.

The Site is located in a disadvantaged community, shown on Figure 3.

2.4 SURROUNDING LAND USE HISTORY

In 1925 to present day, the north and west of Site were improved with several multi-story residential and commercial buildings. In 1963, the south of Site was improved with an auto repair facility, steel supply store, and several manufacturing facilities and continue operation through present day. In 2001, the east of Site was improved with a warehouse which now operates as a one-story commercial space.

2.5 PREVIOUS INVESTIGATIONS

To date, the following investigations have been completed for the Site, and the following reports have been prepared detailing those investigations:

1. *Phase I Environmental Site Assessment Report, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017.*
2. *Phase II Site Investigation Report, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017.*
3. *Phase II Subsurface Investigation Report, prepared by Brussee Environmental, prepared for GFL NYC LLC, dated May 2026.*

Previous reports are included in Appendix A.

2.5.1 *Phase I Environmental Site Assessment, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017*

A February 2017 Phase I ESA performed by Atlantic Environmental Solutions, Inc (AESI) identified the following recognized environmental conditions (RECs):

- Two fill ports, one access cover, and one vent pipe associated with a 550-gallon waste oil UST.
- Documentation of three floor drains and a waste oil pit (identified in an earlier ESA), presumed to discharge into the waste oil UST via a waste oil separator. The waste oil pit and floor drains were

DRAFT

not located during the February 2017 site visit and it was unclear if the pit has since been sealed.

- Multiple bulk storage containers of petroleum products (motor oil, hydraulic oil, and transmission fluids) throughout the building, as well as a 275-gallon motor oil AST. An earlier ESA indicated the presence of two ASTs, one containing fresh motor oil and the other containing hydraulic oil. No evidence of discharge was observed.

2.5.2 *Phase II Site Investigation Report, prepared by Atlantic Environmental Solutions, Inc., prepared for Almeida Concrete Pumping and Equipment, Inc., dated February 2017.*

On February 7, 2017, AESI performed a Phase II Site investigation consisting of four soil borings advanced to refusal (encountered between 10 and 12 ft below ground surface [bgs]). One sample was collected from each soil boring at the six-inch interval above refusal and analyzed for metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and total petroleum hydrocarbons. Elevated lead above Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives (USUCOs) was detected in one soil sample (at a concentration of 187 mg/kg). This investigation did not include the collection of soil vapor or groundwater samples.

2.5.3 *Phase II Subsurface Investigation Report, prepared by Brussee Environmental, prepared for GFL NYC LLC, dated May 2026.*

On May 4, 2026, Brussee Environmental performed a Phase II Site investigation consisting of six soil borings advanced to 15 ft bgs (or refusal), installation of one temporary groundwater monitoring well in the western portion of the Site, and installation of five soil vapor probes to a depth of 8 ft bgs. One soil boring in the southeast portion of the Site encountered refusal at 5 ft bgs. Groundwater was encountered at 29 ft bgs. Five soil samples were collected from the shallow interval below the ground surface (0-2 ft bgs) and analyzed for metals, VOCs, and SVOCs. A petroleum-like odor and slight PID readings (up to 3.5 ppm) were noted in soil recovered from the boring located within the existing building. An additional sample was collected from the 2-4 ft bgs interval at this location.

Soil laboratory results showed elevated concentrations of VOCs, SVOCs (specifically PAHs), and lead in shallow soil immediately below ground surface. The highest soil VOC concentrations were associated with the soil boring performed within the existing building. One VOC, vinyl chloride, was measured at a concentration of 230 µg/kg, exceeding Part 375-6.8(a) Residential Soil Cleanup Objectives (RSCOs). An additional five VOC measurements exceeded UUSCOs, including tetrachloroethene (PCE) (at a maximum concentration of 2,700 µg/kg), 1,3,5-Trimethylbenzene (at a concentration of 3,100 µg/kg), cis-1,2-Dichloroethene (at a concentration of 440 µg/kg), ethylbenzene (at a concentration of 1,100 µg/kg), and total xylenes (at a concentration of 3,200 µg/kg).

Soil SVOC measurements were highest in the northern and central portion of the Site. Two SVOCs were measured at concentrations exceeding Part 375-6.8(a) Restricted Residential Soil Cleanup Objectives (RRSCOs) in soil samples collected immediately below ground surface: benzo(a)pyrene (at a maximum concentration of 1,300 µg/kg) and benzo(b)fluoranthene (at a maximum concentration of 1,500 µg/kg). Measured concentrations of indeno(1,2,3-cd)pyrene (maximum of 990 µg/kg) and phenanthrene (2,000 µg/kg) exceeded RSCOS, and the measured concentration of benzo(g,h,i)perylene (830 µg/kg) exceeded

UUSCOs. Elevated lead was measured in shallow soil throughout the Site. The highest measured concentrations of lead were found in the northern portion of the site at a maximum concentration of 1,420 mg/kg, exceeding RRSCOs. Locations of soil borings completed during the Phase II SSI, as well as any exceedances in measured parameters, are provided in Figure 4.

Soil vapor laboratory results showed elevated concentrations of VOCs including tetrachloroethene (PCE) and trichloroethene (TCE) across the Site. PCE was measured at a maximum concentration of 16,900 µg/m^3, and TCE was measured at a concentration of 145 µg/m^3. Other VOCs exceeding sub-slab guidance levels set by NYSDOH Soil Vapor Intrusion Matrices A, B, C, D, E & F include: carbon tetrachloride (at a maximum concentration of 20.9 µg/m^3), cis-1,2-Dichloroethene (at a maximum concentration of 241 µg/m^3), ethylbenzene (at a maximum concentration of 185 µg/m^3), m,p-xylene (at a maximum concentration of 673 µg/m^3), and o-xylene (at a maximum concentration of 226 µg/m^3). Soil vapor probe locations and corresponding VOC measurements are provided in Figure 5.

PCE was detected in the groundwater sample at a concentration of 3.2 µg/L. Summarized analytical results for this groundwater sample are displayed in Figure 6.

DRAFT

3. Remedial Investigation

This section describes the field activities to be conducted during the RI and provides the sampling scope, objectives, methods, anticipated number of samples, and sample locations. As mentioned above, previous limited environmental investigations were conducted at the Site that have identified, but not delineated, contamination at the Site. A summary of the sampling and analysis plan is provided in Table 1 and Figure 7. The following activities will be conducted to fill data gaps and determine the nature and extent of contamination at the Site.

3.1 UTILITY MARKOUT

A geophysical survey was performed by Coastal Environmental Solutions, Inc. (Coastal) to clear drilling locations on May 4, 2026, as part of the Phase II Subsurface Investigation Report. The geophysical findings report is provided as Appendix C of the May 2026 Phase II Subsurface Investigation Report, found in Appendix A of this work plan.

A Site-wide ground-penetrating radar (GPR) scan will be performed prior to the commencement of any ground-intrusive activities under this RIWP. The GPR scan will potentially identify any underground structures, including but not limited to utilities and USTs, in preparation for the proposed sampling work. It is noted that the borings may be adjusted based on the results of the GPR scan, and any adjustments to the locations presented below will be communicated to the NYSDEC. Field personnel will mobilize to the Site to mark out (with flagging or paint) the proposed soil sample locations. Prior to mobilization, 811-Dig Safe New York will be contacted to mark public underground utilities. If necessary, the adjacent property owners and/or private vendors will be contacted for assistance with the marking out of utilities. Once the utilities are marked, field equipment and personnel will be mobilized to the Site.

3.2 DEMOLITION & TANK CLEANING

Prior to the RI, the on-Site structure will be vacated, and selective or complete demolition of above-grade structures will be completed, as needed, to facilitate the RI. Cement paving and existing foundation slabs will remain in place as an engineering control until a Remedial Action Work Plan (RAWP) is approved and implemented. Due to current Site operations, one UST is located on the Site. This UST will not be removed; however, if necessary, the contents of the tank will be removed and disposed of prior to commencing the RI.

3.3 SOIL SAMPLING

To further characterize surface soil conditions, additional on-Site soil samples will be collected at the Site to meet NYSDEC Division of Environmental Remediation (DER)-10 requirements for RIs. The sampling and analysis plan is summarized in Table 1. Proposed sampling locations are presented on Figure 7.

A total of eight soil borings will be advanced to and beneath the observed groundwater interface (anticipated 26 to 28 ft bgs) using a track-mounted direct-push drill rig (Geoprobe®) operated by a licensed operator. Soil samples will be collected from dedicated liners using a stainless-steel trowel or sampling

DRAFT

spoon. Samples will be collected using laboratory-provided clean bottle ware. VOC grab samples will be collected using terra cores or encores.

Soils will be logged continuously by a geologist or engineer using a modified Burmister system. The presence of staining, odors, and PID response will be noted. VOC grab samples will be collected using encores or terra cores. Sampling methods are described in the Field Sampling Plan (FSP) provided as Appendix B. A Quality Assurance Project Plan (QAPP) is provided as Appendix C. Laboratory data will be reported in Analytical Services Protocol (ASP) Category B deliverable format.

Soil samples representative of Site conditions will be collected at eight locations widely distributed across the Site, as shown in Figure 7. At each boring location, soil samples will be collected immediately below soil cover (0 to 2 ft bgs), at the observed base of urban fill, and at the proposed development depth (approximately 13 to 15 ft bgs) A fourth sample will be collected at the groundwater interface (to be determined in the field, but anticipated to be approximately 26 to 28 ft bgs) from the four boring locations where monitoring wells will be installed. Additional samples will be collected at any interval exhibiting elevated PID readings or visual and olfactory impacts. If petroleum impacts are identified at the deepest sampling interval in any boring location, soil exploration and sampling would continue beyond the depth to achieve vertical delineation. Soil samples will be analyzed for:

- Target Compound List (TCL) VOCs using U.S. Environmental Protection Agency (USEPA) Method 8260D/5035;
- TCL SVOCs using USEPA Method 8270E;
- Total Analyte List (TAL) Metals using USEPA Method 6010D;
- Polychlorinated biphenyls (PCBs) using USEPA Method 8082A;
- TCL Pesticides using USEPA Method 8081B;
- Per- and polyfluoroalkyl substances (PFAS) using USEPA Method 1633; and
- 1,4-dioxane by USEPA Method 8270E.

Soil analytical results will be compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and RRSCOs.

Samples to be analyzed for PFAS and 1,4-dioxane will be collected and analyzed in accordance with the NYSDEC-issued April 2023 “Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC’s Part 375 Remedial Programs.”

3.4 GROUNDWATER SAMPLING

The purpose of the groundwater sampling is to obtain current groundwater data and to analyze for additional parameters to meet NYSDEC DER-10 requirements for RIs. Groundwater at the Site was encountered at approximately 29 ft bgs during the Phase II Subsurface Investigation activities. Groundwater is anticipated to flow toward the south towards Jamaica Bay.

DRAFT

Four 2-inch permanent monitoring wells will be installed to at least 5 ft below the groundwater interface (expected to be approximately 34 ft bgs).

Monitoring wells will be installed with a solid 2-inch polyvinyl chloride (PVC) riser and PVC with a slotted screen for the screened interval. Wells will be screened to straddle the groundwater table. The screen pack will consist of No. 0 certified clean sand filled to a depth of 2 ft above the screen. A bentonite seal will be placed above the sand pack for each monitoring well, and the remainder of the borehole will be filled with bentonite grout. Each monitoring well will be completed using a flush-mount well cover. Monitoring wells will have the appropriate 2-inch annular space and will be installed according to NYSDEC guidelines. Previous investigations have identified groundwater at depths at approximately 29 ft bgs. Observations will be communicated with NYSDEC daily in field reports, further detailed in Section 9.1.

Monitoring wells will be developed by surging a pump in the well several times to pull fine-grained material from the well. Development will be completed until the water turbidity is 50 nephelometric turbidity units (NTU) or less, or 10 well volumes are removed, if possible. Groundwater sampling will occur at a minimum of one week after monitoring well development. The well casings will be surveyed by a New York State-licensed surveyor and gauged during a round of synoptic groundwater depth readings to facilitate the preparation of a groundwater contour map and to determine the direction of groundwater flow.

The sampling and analysis plan is summarized in Table 1. The minimum reporting limits are provided in Table 2 of Appendix C. Proposed groundwater monitoring well locations are displayed in Figure 7.

The proposed four monitoring wells will be sampled and analyzed for:

- TCL VOCs + tentatively identified compounds (TICs) (10 VOCs with the highest concentrations of TICs) using USEPA Method 8260C;
- TCL SVOCs + TICs (20 SVOCs with the highest concentrations of TICs) using USEPA Method 8270D;
- Total and dissolved metals using USEPA Methods 6010/6020;
- PCBs using USEPA Method 8082;
- TCL pesticides using USEPA Method 8081B;
- PFAS using USEPA Method 1633A; and
- 1,4-dioxane using USEPA Method 8270D SIM isotope dilution.

PFAS and 1,4-dioxane samples will be collected and analyzed in accordance with the NYSDEC April 2023 “Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under the NYSDEC’s Remedial Programs.” All PFAS samples collected after July 15, 2025, will be analyzed using USEPA Method 1633A.

Groundwater wells will be sampled using low-flow sampling methods described in the FSP. Following the low-flow purge, samples will be collected from monitoring wells for analysis of the analytes mentioned above. Groundwater sampling will be conducted at least one week after monitoring well development.

DRAFT

The FSP presented in Appendix B details field procedures and protocols that will be followed during the field activities. The QAPP presented in Appendix C details the analytical methods and procedures that will be used to analyze samples collected during the field activities. PFAS sampling at each monitoring well will be conducted following the purge and sampling method detailed in the NYSDEC guidance documents (see Appendix D).

Groundwater analytical results will be compared to 6 NYCRR Part 703.5, NYSDEC TOGS 1.1.1 AWQS, and Guidance Values.

3.5 INVESTIGATION-DERIVED WASTE

Following sample collection, boreholes that are not converted to monitoring wells will be backfilled with soil cuttings and an upper bentonite plug. Boreholes will be restored to grade with the surrounding area. If soil is identified as grossly contaminated, it will be separated and placed into a sealed and labeled New York State Department of Transportation (NYSDOT)-approved 55-gallon drum pending characterization and off-Site disposal. Groundwater purged from the monitoring wells during development and sample collection will be placed into a NYSDOT-approved 55-gallon drum pending off-Site disposal.

3.6 SOIL VAPOR SAMPLING

Samples will be collected in accordance with the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006). Seven vapor implants will be installed using a direct-push drill rig (e.g., Geoprobe®) or another appropriate drill rig, depending on subsurface conditions, to advance a stainless-steel probe to the desired sampling depth. Soil vapor probes will be installed to a depth of 6 ft to account for conditions beneath the slab-on-grade construction. Sampling will occur over a two-hour duration.

Samples will be collected in appropriately sized Summa canisters that have been certified clean by the laboratory, and samples will be analyzed using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 liters per minute. Sampling methods are described in the FSP provided as Appendix B.

3.7 PROPOSED SAMPLING RATIONALE

Haley & Aldrich of New York has proposed the sample plan described herein and as shown on Figure 7, in consideration of the data generated during the previous investigations conducted at the Site, as described in section 2.5. Consideration was also taken regarding potential Site-wide excavation to 15 ft bgs for the proposed redevelopment.

During the previous investigations conducted at the Site, soil, groundwater, and soil vapor samples were collected. However, the sample maps from the previous investigations show data gaps. Data gaps include the lack of a full suite analysis of soil and groundwater at the Site, and the lack of installation of permanent groundwater monitoring wells.

Proposed sampling will include soil, groundwater, and soil vapor sampling to address data gaps, ascertain and delineate on-Site source(s), and refine the findings of the previous investigations conducted at the

DRAFT

Site. The proposed RI will characterize the nature and extent of contamination while evaluating if there is an on-Site source of contamination and/or a potential off-Site source migrating onto the Site. Indoor air sampling and sub-slab sampling are not proposed, given that demolition will occur prior to RI activities. The Proposed Sample Location Plan (included as Figure 7) is designed to generate sufficient data to identify the source of contamination and classify subsurface conditions throughout the Site as a whole.

DRAFT

4. Green and Sustainable Remediation and Climate Resiliency

The work completed as part of this RIWP will comply with all NYSDEC guidance documents, including DER-31: Green Remediation (NYSDEC, 2011). To ensure compliance with DER-31, the work will be completed using the best practices and techniques described below. Specific reporting methods relative to DER-31 are further described below.

4.1 BEST PRACTICES AND TECHNIQUES

DER-31 provides examples of best practices and techniques that could be applied during all phases of remediation (Attachment 1 of the DER-31 policy). In addition, the techniques identified below will be implemented at sites unless a Site-specific evaluation demonstrates impracticability or favors an alternative green approach:

Practice/Technique	**Potential Benefits[1]**	**Applicable to this Work Plan**
Use renewable energy where possible or purchase Renewable Energy Credits	Reduce/supplement purchased energy use	
Use of remediation technologies with an intermittent energy supply (i.e., energy use during peak energy generation only)	Reduce energy use	X
Incorporate green building design	Reduce future use impacts	
Reuse existing buildings and infrastructure to reduce waste	Reduce waste and material use	
Reuse and recycle construction and demolition debris and other materials (i.e., grind waste wood and other organics for on-site use)	Reduce waste and material use	
Design cover systems to be usable (i.e., habitat or recreation)	Reduce construction impacts of future development	
Reduce vehicle idling	Reduce air emissions and fuel use	X
Use of Low-Sulfur Diesel Fuel or alternate fuels (i.e., biodiesel or E85) when possible	Reduce air emissions	
Sequence work to minimize double-handling of materials	Reduce construction impacts	X
Use energy-efficient systems and office equipment in the job trailer	Reduce energy use	X

[1] *Potential benefits listed are not comprehensive and will vary depending upon the site and implementation of the practice or technique.*

DRAFT

In order to comply with the requirements of DER-31, the following actions will be taken:

1. All vehicles and fuel-consuming equipment on the Site will be shut off if not in use for more than three minutes;
2. Work will be sequenced, to the extent practicable, to allow the direct loading of waste containers for off-Site disposal;
3. Work will be sequenced, to the extent practicable, to limit unnecessary mobilizations to and throughout the Site; and,
4. To the extent practicable, energy-efficient systems and office equipment will be utilized.

4.2 REPORTING

All green and sustainable practices and techniques employed will be discussed in the forthcoming Remedial Investigation Report (RIR).

4.3 CLIMATE RESILIENCY EVALUATION

The Site is not located within a 100-year flood zone. The development plan is still under design but will incorporate consideration for resiliency to climate change, including the design of a cover system that will mimic, rather than alter, the current setting in the vicinity of the Site and will provide pathways for surface runoff and resiliency against future flooding events. A Climate Screening Checklist is provided in Appendix E.

4.4 ENVIRONMENTAL FOOTPRINT ANALYSIS

An environmental footprint analysis has been completed using SEFA for the scope of work included in this RIWP. Results of the preliminary analysis, available in Appendix F, indicate that the majority of greenhouse gas emissions, potentially exceeding six metric tons, would be the product of drilling activities, consumables, and transportation associated with the RI.

DRAFT

5. Quality Assurance and Quality Control

Quality assurance/quality control (QA/QC) procedures will be used to provide performance information with regard to the accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used: (1) to document that samples are representative of actual conditions at the Site; and (2) to identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix or by laboratory techniques that may have introduced systematic or random errors to the analytical process.

QA/QC procedures are defined in the QAPP included in Appendix C.

6. Data Use

6.1 DATA SUBMITTAL

Analytical data will be supplied in ASP Category B Data Packages. If more stringent than those suggested by the USEPA, the laboratory's in-house QA/QC limits will be utilized. Validated data will be submitted to the NYSDEC EQuIS database in an Electronic Data Deliverables (EDD) package.

6.2 DATA VALIDATION

Data packages will be sent to a qualified data validation specialist to evaluate the accuracy and precision of the analytical results. A Data Usability Summary Report (DUSR) will be created to confirm the compliance of methods with the protocols described in the NYSDEC ASP. DUSRs will summarize and confirm the usability of the data for project-related decisions. Data validation will be completed in accordance with the DUSR guidelines from the NYSDEC DER. DUSRs will be included with the submittal of an RIR, further discussed in Section 9. Additional details on the DUSRs are provided in the QAPP in Appendix C.

7. Project Organization

A project team for the Site has been created based on qualifications and experience with personnel suited for successfully completing the project.

The NYSDEC-designated Case Manager, **TBD**, will be responsible for overseeing the successful completion of the project work and adherence to the work plan on behalf of NYSDEC.

The NYSDOH-designated Case Manager, **TBD**, will be responsible for overseeing the successful completion of the project work and adherence to the work plan on behalf of NYSDOH.

James Bellew will be the Qualified Environmental Professional (QEP) for this work. In this role, the QEP will be responsible for the overall completion of each task as per requirements outlined in this work plan and in accordance with the DER-10 guidance.

Laura Keim will be the Project Manager for this work. In this role, the Project Manager will be responsible for communications with the NYSDEC Case Manager regarding project status, schedule, issues, and updates for the project work.

Sebastian Sotomayor will be the Assistant Project Manager and field team leader for this work and will also act as the Quality Assurance Officer (QAO). The QAO will ensure the application and effectiveness of the QAPP by the analytical laboratory and the project staff, provide input to the field team as to corrective actions that may be required as a result of the above-mentioned evaluations, and prepare and/or review data validation and audit reports.

Calvin Jackson will be the field geologist responsible for implementing the field effort for this work. The field geologist's responsibilities will include implementing the work plan activities and directing the subcontractors to ensure the successful completion of all field activities.

The drilling subcontractor will be Lakewood; Lakewood will provide a Geoprobe® operator to implement the scope of work in this RIWP.

The geophysical survey contractor will be either NOVA, Ground Penetrating Radar Systems, LLC (GPRS) or equivalent subcontractor. In this role, the geophysical survey contractor will conduct a geophysical survey throughout all accessible regions of the Site prior to the performance of ground-intrusive work.

The analytical laboratory will be Pace Analytical Services, LLC (Pace), of Westborough, Massachusetts, an NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory (Certification No. 11148). Pace will be responsible for analyzing samples as per the analyses and methods identified in Section 3.

8. Health and Safety

8.1 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) has been prepared in accordance with NYSDEC and NYSDOH guidelines and is provided as Appendix G of this work plan. The HASP includes a description of health and safety protocols to be followed by Haley & Aldrich of New York field staff during implementation of the remedy, including monitoring within the work area, along with response actions should impacts be observed. The HASP has been developed in accordance with the Occupational Safety and Health Administration (OSHA) Title 40 Code of Federal Regulations (CFR) Part 1910.120 regulatory requirements for use by Haley & Aldrich of New York field staff who will work at the Site during planned activities. Contractors or other personnel who perform work at the Site are required to develop their own HASP and procedures of comparable or higher content for their respective personnel in accordance with relevant OSHA regulatory requirements for work at hazardous waste sites, as well as the general industry, as applicable, based on the nature of work being performed.

8.2 COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan (CAMP) will require real-time monitoring for particulates (i.e., dust) and VOCs at one location upwind of the work area/exclusion zone and one location downwind of the work area/exclusion zone. The proposed investigation work may be completed both indoors and outdoors. The CAMP will be implemented during all intrusive activities and the handling of contaminated or potentially contaminated media to protect downwind receptors. Background readings will be collected at each station prior to intrusive activities each day. Ground-intrusive activities include, but are not limited to, drilling, excavation, stockpiling, equipment idling, transport, etc.

A Haley & Aldrich of New York representative will continually monitor the breathing air in the vicinity of the immediate work area using a PID to measure total VOCs in the air at concentrations as low as 1 ppm. Community air monitoring will be performed using appropriate equipment to monitor VOCs. Fugitive dust migration will be visually assessed during all work activities, and the air in the work zone will also be monitored for visible dust generation.

The equipment will be calibrated at least daily and will be capable of calculating 15-minute running average concentrations. Upwind background conditions will be evaluated prior to intrusive work and periodically throughout the day. If downwind VOC measurements above 5 ppm are sustained for 15 minutes, the intrusive work will be temporarily halted. Should visible dust generation be observed, a more rigorous monitoring of dust using recordable meters will be implemented in accordance with the NYSDOH Generic CAMP. CAMP data will be provided to NYSDEC in the daily reports, further detailed in Section 9. Exceedances of the action levels for VOCs or particulates will be reported to NYSDEC and NYSDOH within 24 hours of the occurrence, along with the reason for the exceedance and any mitigation completed to address per this CAMP. The NYSDOH CAMP guidance document is included as Appendix H.

8.3 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

A comprehensive QHHEA (on Site and off Site) will be performed following the collection of all RI data. The exposure assessment will be performed in accordance with Section 3.3(c)4 of DER-10 and the NYSDOH guidance for performing a qualitative Exposure Assessment (EA) (DER-10; Appendix 3B). The results of the QHHEA will be provided in the RIR. According to Section 3.10 of DER-10 and the Fish and Wildlife Resources Impact Analysis Decision Key in DER-10, Appendix 3C, a Fish and Wildlife Exposure Assessment will be performed (if needed) based on the RI results.

9. Reporting

9.1 DAILY REPORTING

Daily reports will be submitted to NYSDEC and NYSDOH summarizing the Site activities completed during the RI. Daily reports will include a Site figure, a description of Site activities, a photo log, and CAMP data. Daily reports will be submitted by 12 p.m. the following business day after Site work is completed.

9.2 REMEDIAL INVESTIGATION REPORT

Following the completion of the work, a summary of the RI will be provided to NYSDEC in an RIR to support the implementation of the proposed Remedial Action. The report will include:

- A description of existing Site conditions;
- A summary of the RI activities;
- Figure showing sampling locations;
- Tables summarizing laboratory analytical results;
- Laboratory analytical data reports;
- DUSRs;
- Field sampling data sheets;
- Community air monitoring data;
- Soil boring, test pit, and monitoring well logs;
- Daily reports;
- Findings regarding the nature and extent of contamination at the Site;
- Qualitative Exposure Assessment of any contamination from an on-Site source that has migrated off the Site; and
- Conclusions and recommendations.

The RIR will include all data collected during the RI and adhere to the technical requirements of DER-10.

10. Schedule

The Site owner plans to implement this RIWP promptly upon execution of a Brownfield Cleanup Agreement and after approval of the RIWP.

Anticipated RI/BCP Schedule	
BCP Application, RIWP, and 45-Day Public Comment Period (Concurrent with BCP Application)	June 2026 to September 2026
Executed Brownfield Cleanup Agreement (BCA)	October 2026
NYSDEC Approval of RIWP and Citizen Participation Plan	November 2026
RI Implementation	November to December 2026
RIR/RAWP Submittal, NYSDEC Review, and 45-Day Public Comment Period	December 2026 to April 2027
NYSDEC Approval of RIR/RAWP and Issuance of Decision Document	May 2027

References

1. Brussee Environmental Corp., 2026. Phase II Subsurface Investigation Report, 145-11 Liberty Avenue, Queens, New York 11435. May.

2. Atlantic Environmental Solutions, Inc., 2017. Phase II Site Investigation Report, 145-11 Liberty Avenue, Jamaica, New York. February.

3. New York State Department of Environmental Conservation, 2006. Part 375 of Title 6 of the New York Compilation of Codes, Rules, and Regulations. December 14.

4. New York State Department of Environmental Conservation, 2010. Program Policy DER-10, "Technical Guidance for Site Investigation and Remediation." May.

5. New York State Department of Environmental Conservation, 2011. DER-31/Green Remediation. January.

6. New York State Department of Environmental Conservation, 2023. Division of Environmental Remediation, Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs. April.

7. New York State Department of Health, 2006. Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October (February 2024 matrices).

TABLES

TABLE 1
SAMPLE AND ANALYSIS PLAN
145-11 Liberty Avenue
Queens, New York

Sample Location	Sample Rationale	Estimated Sample Depth (feet bgs)	Target Compound List VOCs (8260B)	Target Compound List SVOCs (8270C)	Total Analyte List Metals (6010)	PCBs (8082)	Pesticides (8081B)	PFAS (1633)	1,4-Dioxane (8270 SIM)	VOCs (TO-15)
SOIL										
SB-01	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
	Groundwater Interface	26'-28'**	X	X	X	X	X	X	X	
SB-02	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
	Groundwater Interface	26'-28'**	X	X	X	X	X	X	X	
SB-03	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
	Groundwater Interface	26'-28'**	X	X	X	X	X	X	X	
SB-04	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
	Groundwater Interface	26'-28'**	X	X	X	X	X	X	X	
SB-05	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
SB-06	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
SB-07	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	
SB-08	Shallow Urban Fill	0'-2'	X	X	X	X	X	X	X	
	Bottom of Urban Fill	6'-9'*	X	X	X	X	X	X	X	
	Potential Redevelopment Depth	13'-15'	X	X	X	X	X	X	X	

TABLE 1
SAMPLE AND ANALYSIS PLAN
145-11 Liberty Avenue
Queens, New York

Sample Location	Sample Rationale	Estimated Sample Depth (feet bgs)	Target Compound List VOCs (8260B)	Target Compound List SVOCs (8270C)	Total Analyte List Metals (6010)	PCBs (8082)	Pesticides (8081B)	PFAS (1633)	1,4-Dioxane (8270 SIM)	VOCs (TO-15)
GROUNDWATER										
MW-01	Groundwater	Straddle Groundwater Table	X	X	X	X	X	X	X	
MW-02			X	X	X	X	X	X	X	
MW-03			X	X	X	X	X	X	X	
MW-04			X	X	X	X	X	X	X	
SOIL VAPOR										
SV-01	Soil Vapor	6'								X
SV-02										X
SV-03										X
SV-04										X
SV-05										X
SV-06										X
SV-07										X
QA/QC SAMPLES										
DUP01_DATE	Duplicate, Soil (1)	--	X	X	X	X	X	X	X	
DUP02_DATE	Duplicate, Soil (2)	--	X	X	X	X	X	X	X	
DUP01_DATE	Duplicate, Groundwater (1)	--	X	X	X	X	X	X	X	
MSMSD01_DATE	MS/MSD, Soil (1)	--	X	X	X	X	X	X	X	
MSMSD02_DATE	MS/MSD, Soil (2)	--	X	X	X	X	X	X	X	
MSMSD01_DATE	MS/MSD, Groundwater (1)	--	X	X	X	X	X	X	X	
FB01_DATE	Field Blank, Soil (1)	--	X	X	X	X	X	X	X	
FB02_DATE	Field Blank, Soil (2)	--	X	X	X	X	X	X	X	
FB01_DATE	Field Blank, Groundwater (1)	--	X	X	X	X	X	X	X	
TB01_DATE	Trip Blank, Soil	--	X							
TB01_DATE	Trip Blank, Groundwater	--	X							

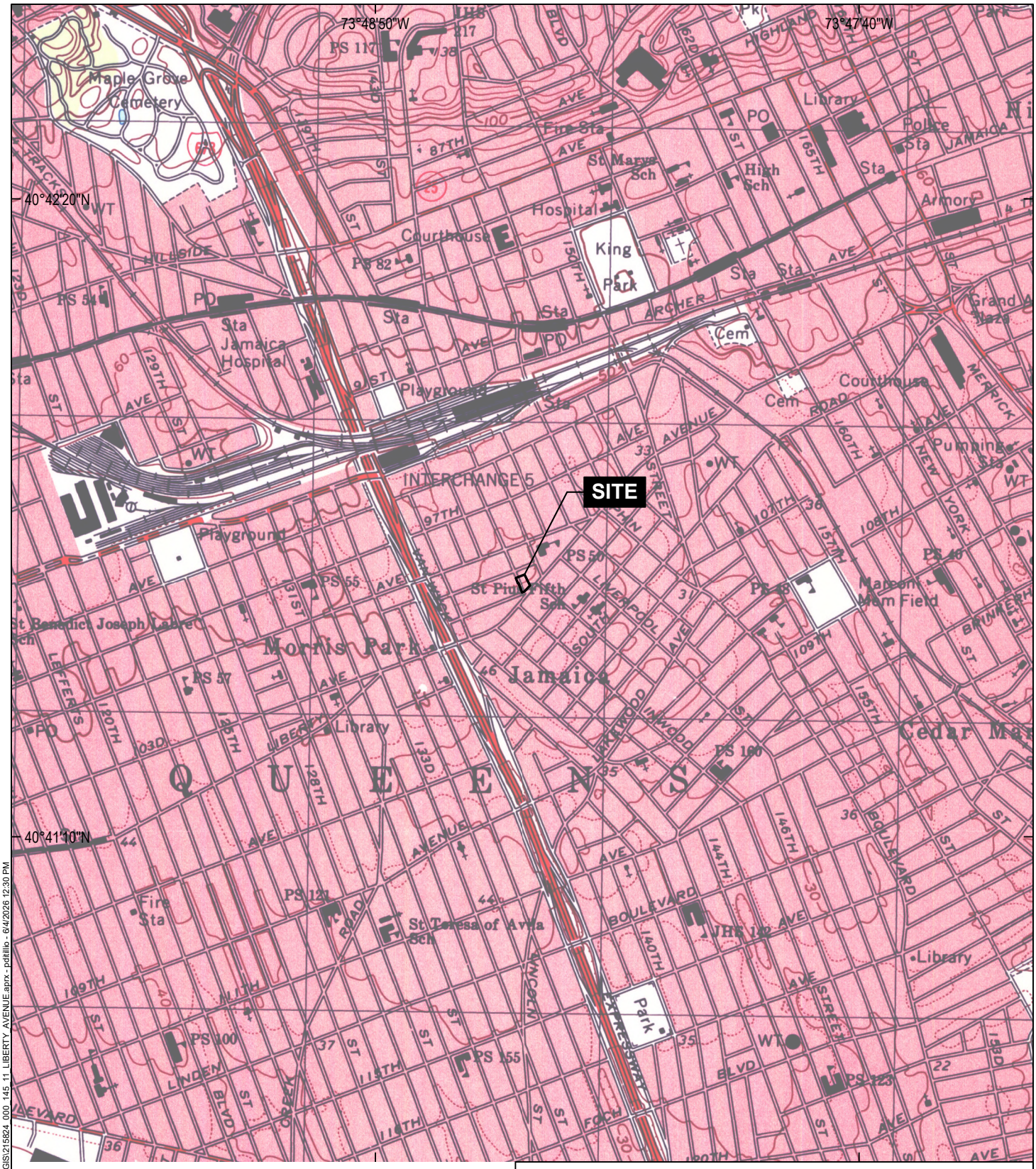
Notes:
VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds
PCBs - Polychlorinated biphenyls
PFAS - Per- and Polyfluoroalkyl Substances
Additional samples will be collected from any interval exhibiting elevated PID readings or where visual and olfactory evidence of impacts are observed.
** - Intermediate 2-ft interval sample depth to be determined in field*
*** - Groundwater interface to be confirmed in the field prior to sampling*

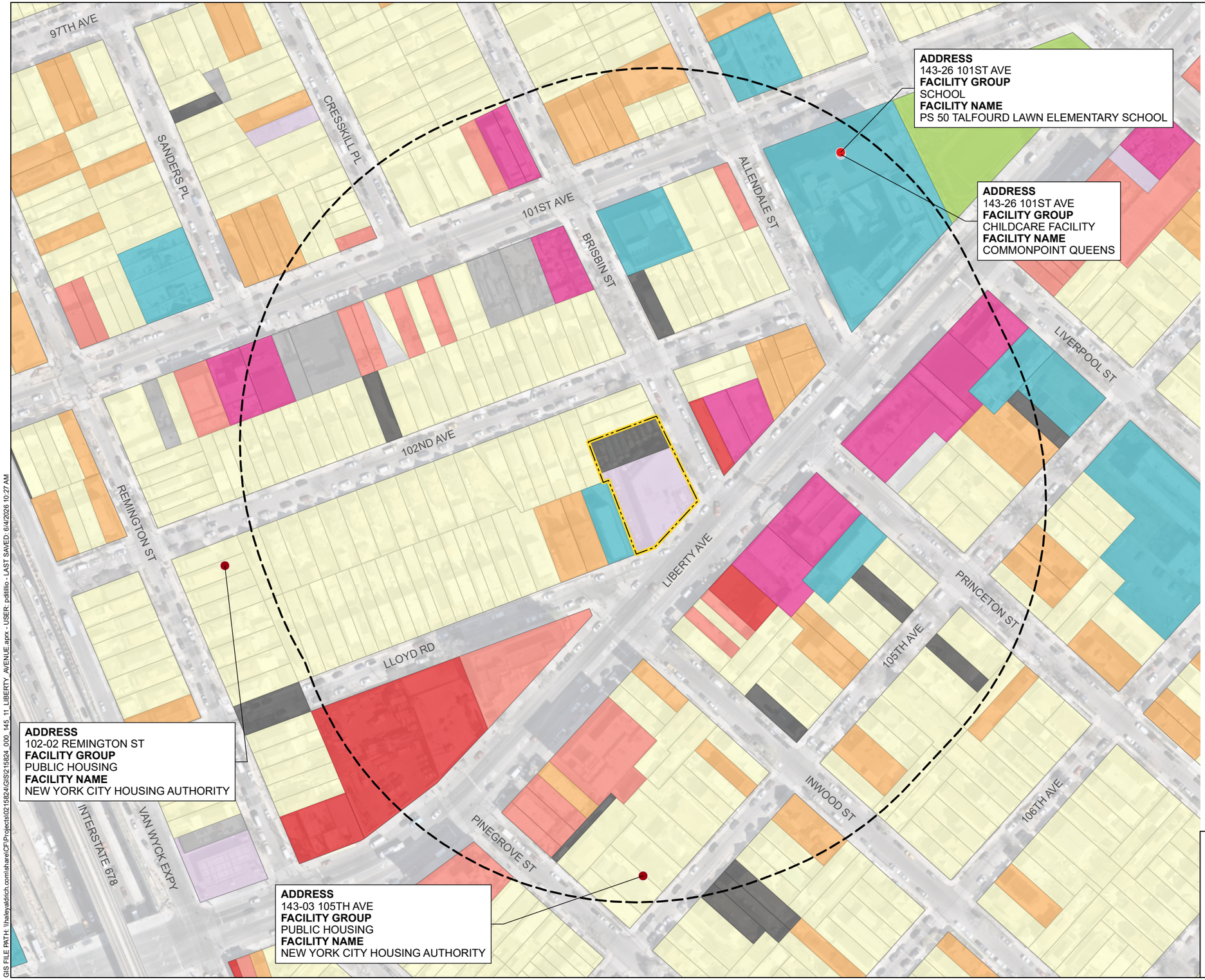
QA/QC samples include:
MS/MSD - 1 for every 20 samples
Trip Blanks - 1 per cooler of samples to be analyzed for VOCs
Field Blanks - 1 for every 20 samples
Duplicates - 1 for every 20 samples

Soil QA/QC Samples:
(2) Duplicates
(2) MS/MSD
(2) Field Blanks
(1) Trip Blank per day

Groundwater QA/QC Samples:
(1) Duplicate
(1) MS/MSD
(1) Field Blank
(1) Trip Blank per day

FIGURES


73°48'50"W
73°47'40"W
40°42'20"N
40°41'10"N
SITE
Maple Grove Cemetery
Jamaica Hospital
Morris Park
Jamaica
INTERCHANGE 5
Playground
Playground
Courthouse
Courthouse
Library
Library
Library
Hospital
King Park
Park
Park
Fire Sta
Fire Sta
Police Sta
Armory
High Sch
St Marys Sch
St Benedict Joseph Labre
St Pius Fifth Sch
St Teresa of Avila Sch
PS 50
PS 55
PS 57
PS 82
PS 54
PS 117
PS 121
PS 100
PS 155
PS 160
PS 123
PS 40
PS 48
JHS 217
JHS 10
Cem
Cem
Marconi Mem Field
Cedar Ma
Grand A
Pumping
Sta
Sta
Sta
Sta
Sta
PO
PO
PD
PD
WT
WT
WT
WT
Q U E E N S
Jamaica
Jamaica
Jamaica



LEGEND

SENSITIVE RECEPTOR

- CHILDCARE FACILITY
- PUBLIC HOUSING
- SCHOOL
- SITE BOUNDARY
- 500-FT BUFFER OF SITE BOUNDARY
- PARCEL BOUNDARY

LAND USE CATEGORY

- ONE AND TWO FAMILY BUILDINGS
- MULTI-FAMILY WALK-UP BUILDINGS
- MIXED RESIDENTIAL AND COMMERCIAL BUILDINGS
- COMMERCIAL AND OFFICE BUILDINGS
- INDUSTRIAL AND MANUFACTURING BUILDINGS
- TRANSPORTATION AND UTILITY
- PUBLIC FACILITIES AND INSTITUTIONS
- OPEN SPACE AND OUTDOOR RECREATION
- PARKING FACILITIES
- VACANT LAND
- OTHER

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. SENSITIVE RECEPTOR DATA SOURCES: NEW YORK STATE OFFICE OF INFORMTION TECHNOLOGY SERVICES, NATIONAL CENTER FOR EDUCATION STATISTICS (NCES)
4. LAND USE DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING
5. AERIAL IMAGERY SOURCE: NEARMAP, APRIL 9, 2026

N

0 140 280

SCALE IN FEET

HALEY ALDRICH

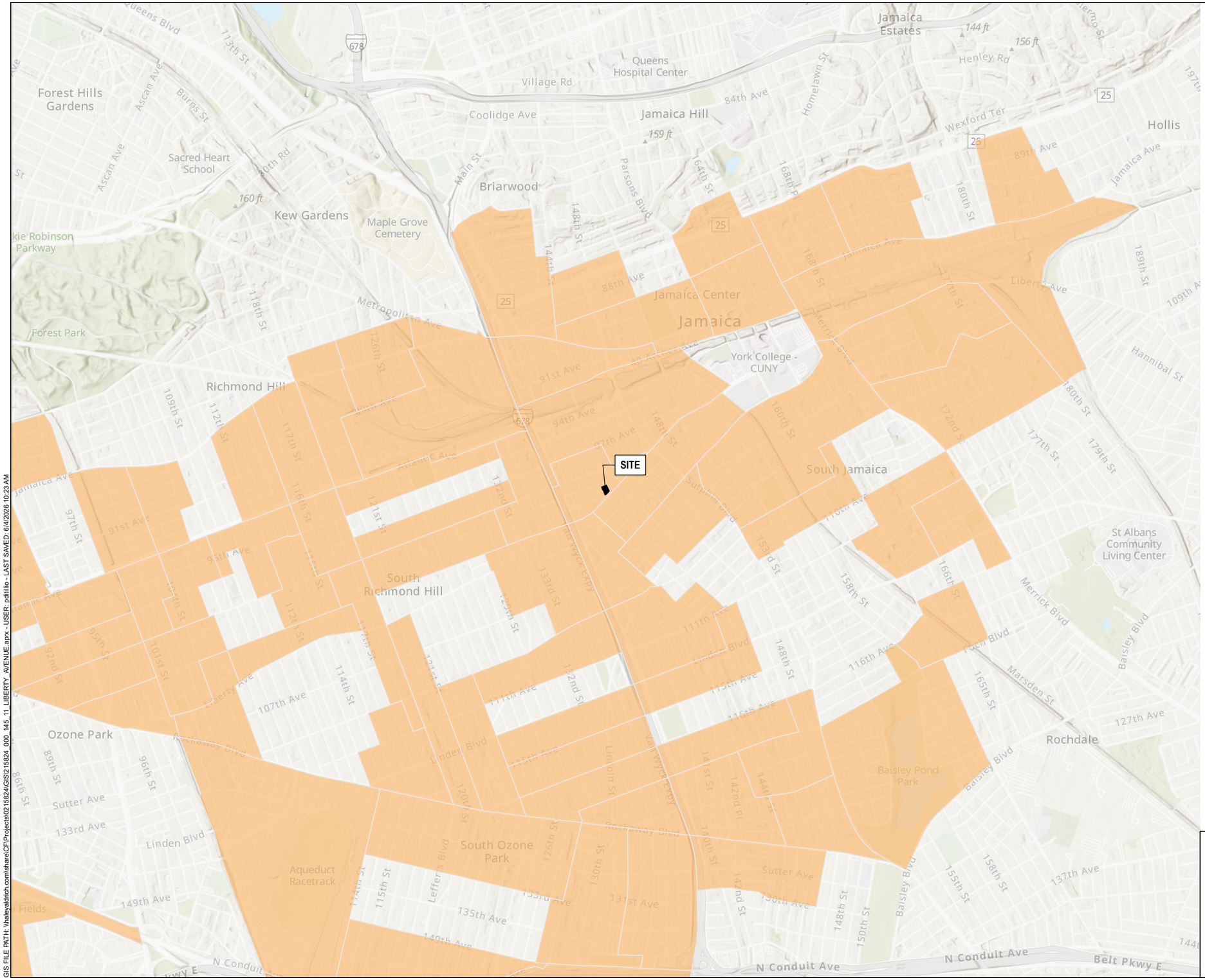
145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

SURROUNDING LAND USE - SENSITIVE RECEPTOR MAP

JUNE 2026

FIGURE 3

GIS FILE PATH: \\haleyaldrich.com\share\CP\Projects\0215824\GIS\215824_000_145_11_LIBERTY_AVENUE.aprx - USER: rpitillo - LAST SAVED: 6/4/2026 10:27 AM



OVERVIEW MAP

LEGEND

- SITE BOUNDARY
- DISADVANTAGED COMMUNITY, NEW YORK CITY AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. DISADVANTAGED COMMUNITY DATA SOURCE: NEW YORK STATE, DEPARTMENT OF STATE, 2023
3. BASE MAP SOURCE: ESRI

N

0 2,000 4,000
MAP SCALE IN FEET

HALEY ALDRICH

145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

DISADVANTAGED COMMUNITIES

JUNE 2026

FIGURE 4

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0215824\GIS\215824_000_145_11_LIBERTY_AVENUE.aprx - USER: pdilillo - LAST SAVED: 6/4/2026 10:23 AM

SB1	SB1 (0-2') 5/4/2026
Semi-Volatile Organic Compounds (SVOCs) (ug/kg)	
Benzo(a)pyrene	1,100
Benzo(b)fluoranthene	1,200
Indeno(1,2,3-cd)pyrene	710
Metals (mg/kg)	
Lead	*1,420*

SB2	SB2 (0-2') 5/4/2026
Metals (mg/kg)	
Lead	199

SB4	SB4 (0-2') 5/4/2026	SB4 (2-4') 5/4/2026
Volatile Organic Compounds (VOCs) (ug/kg)		
1,3,5-Trimethylbenzene	*3,100*	ND
cis-1,2-Dichloroethene	*440*	ND
Ethylbenzene	*1,100*	ND
Tetrachloroethene	*1,400*	ND
Vinyl Chloride	230	ND
Total Xylenes	*3,200*	ND
Semi-Volatile Organic Compounds (SVOCs) (ug/kg)		
Phenanthrene	2,000	ND
Metals (mg/kg)		
Lead	177	NA

SB3	SB3 (0-2') 5/4/2026
Volatile Organic Compounds (VOCs) (ug/kg)	
Tetrachloroethene	*1,700*
Semi-Volatile Organic Compounds (SVOCs) (ug/kg)	
Benzo(a)pyrene	1,300
Benzo(b)fluoranthene	1,500
Benzo(ghi)perylene	830
Indeno(1,2,3-cd)pyrene	990
Metals (mg/kg)	
Lead	136

SB5	SB5 (0-2') 5/4/2026
Volatile Organic Compounds (VOCs) (ug/kg)	
Tetrachloroethene	*2,700*
Metals (mg/kg)	
Lead	302

SB6	SB6 (0-2') 5/4/2026
Volatile Organic Compounds (VOCs) (ug/kg)	
Tetrachloroethene	*1,500*

SB1
SB2
SB3
SB4
SB5
SB6

BLOCK: 10019 LOT: 38

BLOCK: 10019 LOT: 39

LLOYD RD

LEGEND

- SOIL BORING
- SITE BOUNDARY
- PARCEL BOUNDARY

Analyte	*NY-PGW*	NY-RESR	NY-UNRES
Volatile Organic Compounds (VOCs) (ug/kg)			
1,3,5-Trimethylbenzene	3,100	100,000	3,100
cis-1,2-Dichloroethene	190	41,000	190
Ethylbenzene	1,000	76,000	1,000
Tetrachloroethene	1,300	18,000	1,300
Vinyl Chloride	20	480	30
Total Xylenes	1,200	100,000	260
Semi-Volatile Organic Compounds (SVOCs) (ug/kg)			
Benzo(a)pyrene	22,000	1,000	1,000
Benzo(b)fluoranthene	2,100	1,400	1,000
Benzo(ghi)perylene	1,000,000	4,900	640
Indeno(1,2,3-cd)pyrene	6,600	1,400	500
Phenanthrene	1,000,000	4,900	1,100
Metals (mg/kg)			
Lead	450	400	63

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, APRIL 9, 2026
4. SOIL ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (SCO), RESTRICTED-USE RESIDENTIAL SCOS, AND PROTECTION OF GROUNDWATER SCO'S.
5. EXCEEDANCES OF THE PROTECTION OF GROUNDWATER CRITERIA ARE SHOWN IN ITALICS.
6. EXCEEDANCES OF THE UNRESTRICTED SCOS ARE SHADED GRAY.
7. EXCEEDANCES OF THE RESTRICTED SCOS ARE SHADED YELLOW.
8. SOURCE MATERIAL COMPOUNDS FOUND TO EXCEED NYSDEC PART 375 PGWSCOS ARE SHOWN AS CELLS WITH RED BORDER (BTEX)
9. NY-PGW - NYSDEC PART 375 PROTECTION OF GROUNDWATER CRITERIA
10. NY-RESR - NYSDEC PART 375 RESTRICTED-USE RESIDENTIAL SCOs
11. NY-UNRES - NYSDEC PART 375 UNRESTRICTED USE SCOs
12. DEFINITIONS:
    MG/KG: MILLIGRAM PER KILOGRAM
    UG/KG: MICROGRAM PER KILOGRAM
13. ANALTYICAL DATA DERVIRED FROM SUBSURFACE INVESTIGATION REPORT 145-11 LIBERTY AVENUE, QUEENS, NY - BRUSSEE ENVIRONMENTAL CORP. (MAY 2026)

N

0 30 60
SCALE IN FEET

HALEY ALDRICH

145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

SOIL RESULTS EXCEEDANCE MAP

JUNE 2026

FIGURE 4

GIS FILE PATH: C:\Users\pdilillo\OneDrive - haleyaldrich.com\Documents\TEMPORARY GIS WORK\021582421582 4_000_145_11_LIBERTY_AVENUE.aprx - USER: pdilillo - LAST SAVED: 6/3/2026 1:16 PM

SV5	SV5 5/4/2026
Volatile Organic Compounds (µg/m3)	
1,2,4-Trimethylbenzene	20.8
1,3,5-Trimethylbenzene	5.45
1,3-Butadiene	10.8
2-Hexanone	12.9
4-Ethyltoluene	18.6
Acetone	217
Acrylonitrile	7.05
Benzene	10.3
Carbon Disulfide	14.3
Carbon Tetrachloride	1.98
Chloroform	5.9
cis-1,2-Dichloroethene	26.5
Ethanol	51.2
Ethylbenzene	185
Heptane	13.6
Hexane	14.2
Isopropylalcohol	11.4
Xylene (m&p)	660
Methyl Ethyl Ketone	47.5
Xylene (o)	213
Propylene	73.1
Tetrachloroethene	1,600
Toluene	24.7
Trichloroethene	50.4

SV4	SV4 5/4/2026
Volatile Organic Compounds (µg/m3)	
1,2,4-Trimethylbenzene	16.1
1,3,5-Trimethylbenzene	5.75
4-Ethyltoluene	21
Acetone	114
Benzene	5
Carbon Disulfide	11
Carbon Tetrachloride	1.23
Chloroform	36.3
cis-1,2-Dichloroethene	5.35
Ethanol	102
Ethylbenzene	19.9
Heptane	7.09
Hexane	6.66
Isooctane	40.7
Isopropylalcohol	7.47
Xylene (m&p)	68.6
Methyl Ethyl Ketone	11.6
Xylene (o)	33.9
Propylene	13
Tetrachloroethene	1,170
Toluene	53.5
Trichloroethene	21.8

SV2	SV2 5/4/2026
Volatile Organic Compounds (µg/m3)	
1,2,4-Trimethylbenzene	13.1
4-Ethyltoluene	13.1
4-Methyl-2-pentanone	7.7
Acetone	89.7
Carbon Tetrachloride	11
Chloroform	13.4
cis-1,2-Dichloroethene	241
Ethanol	55.6
Ethylbenzene	178
Heptane	8.44
Isooctane	5.73
Isopropylalcohol	8.13
Xylene (m&p)	673
Methyl Ethyl Ketone	13.5
Xylene (o)	226
Tetrachloroethene	4,070
Toluene	22.9
Trichloroethene	107

SV3	SV3 5/4/2026
Volatile Organic Compounds (µg/m3)	
1,2,4-Trimethylbenzene	15.7
1,3-Butadiene	5.93
4-Ethyltoluene	16.3
4-Methyl-2-pentanone	19.6
Acetone	101
Acrylonitrile	19.1
Benzene	12
Carbon Disulfide	71.6
Carbon Tetrachloride	8.24
Chloroform	18.5
cis-1,2-Dichloroethene	11.8
Cyclohexane	5.09
Ethanol	37.1
Ethylbenzene	25.6
Heptane	12.6
Hexane	12.3
Isooctane	10.7
Isopropylalcohol	11.9
Xylene (m&p)	99.8
Methyl Ethyl Ketone	16.2
Xylene (o)	33.9
Propylene	19.8
Tetrachloroethene	4,890
Toluene	73.4
Trichloroethene	82.7
Vinyl Chloride	1.8

SS1	SS1 5/4/2026
Volatile Organic Compounds (µg/m3)	
1,2,4-Trimethylbenzene	14.1
4-Ethyltoluene	11.7
Acetone	20.2
Carbon Tetrachloride	20.9
Chloroform	19
cis-1,2-Dichloroethene	3.43
Ethanol	7.42
Xylene (m&p)	14.9
Xylene (o)	5.12
Tetrachloroethene	16,900
Toluene	11.6
Trichloroethene	145



LEGEND

- SOIL VAPOR SAMPLE
- SITE BOUNDARY
- PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, APRIL 9, 2026
4. RESULTS ARE DISPLAYED IN MICROGRAMS PER CUBIC METER (ug/m3)
5. ANALTYICAL DATA DERVIRED FROM SUBSURFACE INVESTIGATION REPORT 145-11 LIBERTY AVENUE, QUEENS, NY - BRUSSEE ENVIRONMENTAL CORP. (MAY 2026)

N

0 40 80
SCALE IN FEET

HALEY ALDRICH

145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

MAP OF SOIL VAPOR CHEMISTRY

JUNE 2026

FIGURE 2

GIS FILE PATH: C:\Users\pdilillo\OneDrive - haleyaldrich.com\Documents\TEMPORARY GIS WORK\02158\240215824_000_145_11_LIBERTY_AVENUE.aprx - USER: pdilillo - LAST SAVED: 6/3/2026 1:19 PM



LEGEND

- MONITORING WELL
- SITE BOUNDARY

Analyte	*New York TOGS 111 Ambient Water Quality Standards*
Volatile Organic Compounds (VOCs) (ug/L)	
Tetrachloroethene	5

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. AERIAL IMAGERY SOURCE: NEARMAP, APRIL 9, 2026

3. GROUNDWATER ANALYTICAL RESULTS ARE COMPARED TO NYSDEC TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS FOR CLASS GA WATER.

4. EXCEEDANCES OF THE OF THE CRITERIA ARE SHADED GRAY.

5. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION

6. SOURCE MATERIAL COMPOUNDS FOUND TO EXCEED NYSDEC PART 375 PGWSCOS ARE SHOWN AS CELLS WITH RED BORDER (BTEX)

7. DEFINITIONS:
   ug/L: MICROGRAM PER LITER

N

0 40 80
SCALE IN FEET

HALEY ALDRICH

145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

MAP OF GROUNDWATER CHEMISTRY

JUNE 2026

FIGURE 2

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0215824\GIS\215824_000_145_11_LIBERTY_AVENUE.aprx - USER: pdilillo - LAST SAVED: 6/4/2026 11:47 AM



LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- PROPOSED SOIL BORING LOCATION
- PROPOSED CO-LOCATED SOIL BORING/MONITORING WELL LOCATION
- PROPOSED SOIL VAPOR INSTALLATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, APRIL 9, 2026

N

0 30 60

SCALE IN FEET

HALEY ALDRICH

145-11 LIBERTY AVENUE
BROOKLYN, NEW YORK

PROPOSED SAMPLING PLAN

JUNE 2026

FIGURE 7

GIS FILE PATH: C:\Users\pdilillo\OneDrive - haleyaldrich.com\Documents\TEMPORARY GIS WORK\02158241215824_000_145_11_LIBERTY_AVENUE.aprx - USER: pdilillo - LAST SAVED: 6/3/2026 12:23 PM

APPENDIX A
Previous Reports

February 17, 2017

Mr. Eric Almeida
Almeida Concrete Pumping and Equipment, Inc.
97-25 72nd Drive
Forest Hills, NY 11375

Re: ***Phase I Environmental Site Assessment Report***
145-11 Liberty Avenue
Jamaica, New York
Block: 10019 Lots: 38, 39

Dear Mr. Almeida:

Please find a copy of the enclosed Phase I Environmental Assessment Report prepared by Atlantic Environmental Solutions, Inc. (AESI) in connection with the referenced property located at 145-11 Liberty Avenue, Jamaica, New York. The enclosed report was prepared in conformance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Practice E1527-13). Recognized Environmental Conditions (RECs) warranting further evaluations were observed by our firm at the subject property, and our recommendations are as follows:

- During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. AESI recommends a Phase II subsurface investigation to confirm the presence or absence of contamination on the site as a result of a potential discharge from this UST.

- During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. In addition, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed. In the event redevelopment is planned for the subject property, AESI recommends the proper inventory, storage and disposal of all hazardous substance containers in accordance with all local, state and Federal regulations. In addition, AESI recommends

the proper closure and disposal of the 275-gallon AST in accordance with all local, state and Federal regulations.

Should you have any questions regarding this inspection, please do not hesitate to contact us at (201) 876-9400. It has been our pleasure to assist you in this matter.

Sincerely,

Jeffrey Anderson, CHMM
Vice President

Michael Novak
President

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT

Subject Property:

145-11 Liberty Avenue
Jamaica, New York
Block: 10019; Lots: 38, 39

Prepared For:

Almeida Concrete Pumping and Equipment, Inc.
97-25 72nd Drive
Forest Hills, NY 11375

Prepared By:

Atlantic Environmental Solutions, Inc.
5 Marine View Plaza, Suite 303
Hoboken, New Jersey 07030
Phone: (201) 876-9400 Fax: (201) 876-9563

February 2017

LIST OF FIGURES

1	Site Location Map

LIST OF ATTACHMENTS

A	Photographic Documentation
B	Sanborn Maps
C	Aerial Photographs
D	Historic Topographic Maps
E	City Directory Abstract
F	Inquiries and Response Letters
G	EDR Report
H	Historical Documents

Table of Contents

1.0 INTRODUCTION 1
1.1 PURPOSE 1
1.2 SCOPE OF ASSESSMENT AND METHODOLOGY USED 1
1.3 LIMITATIONS, LIMITING CONDITIONS, AND EXCEPTIONS 1
2.0 SUBJECT PROPERTY DESCRIPTION 2
2.1 LOCATION AND LEGAL DESCRIPTION 2
2.2 ENVIRONMENTAL SETTING 2
2.2.1 Regional Topography, Geology, and Hydrogeology 2
2.2.2 Local Topography, Geology, and Hydrogeology 2
2.2.3 Site Soils 2
2.3 DESCRIPTIONS OF STRUCTURES AND UTILITIES 2
2.4 ENVIRONMENTAL LIENS 2
2.5 CURRENT USES OF PROPERTY 3
2.5.1 Description of Operations 3
2.5.2 Raw Materials 3
2.5.3 Wastes Generated (Annual Generator Reports and Manifests) 3
2.5.4 Federal, State, and Local Permits and Registrations 3
2.5.5 Environmental Enforcement Actions 3
2.5.6 Previous Environmental Assessment or Investigation Reports 3
2.5.7 Proceedings Involving Environmental Matters 3
2.5.8 State On-Line Mapping Resources 4
2.6 CURRENT USES OF ADJOINING PROPERTIES 4
3.0 RECORDS REVIEW, INTERVIEWS, AND CORRESPONDENCES 4
3.1 HISTORICAL USE INFORMATION 4
3.1.1 Fire Insurance Map Review 4
3.1.2 Aerial Photograph Review 6
3.1.3 Historic Topographic Map Review 7
3.1.4 City Directory Abstract 8
3.1.5 Historic Ownership 8
3.1.6 Municipal File Review 8
3.2 STANDARD ENVIRONMENTAL RECORD SOURCES: FEDERAL AND STATE. 9
3.2.1 Federal NPL Sites (1 mile) 10
3.2.2 Corrective Action Report (CORRACTS) (1 mile) 10
3.2.3 NPL Records of Decision (ROD) (1 mile) 11

3.2.4 NPL Consent Decrees (CONSENT) (1 mile) 11
3.2.5 Federal CERCLIS List (½ mile) 11
3.2.6 State Hazardous Waste Sites (SHWS) (½ mile) 11
3.2.7 Federal RCRA TSD Facilities (½ mile) 12
3.2.8 State Landfill and/or Solid Waste Disposal Sites (NY SWF/LF) (½ mile) 12
3.2.9 Leaking Storage Tanks (NY LTANKS) (½ mile) 12
3.2.10 Resource Conservation and Recovery Act (RCRA)-Small Quantity Generators (SQG) (On or adjacent) 13
3.2.11 Resource Conservation and Recovery Act (RCRA)-Large Quantity Generators (LQG) (On or adjacent) 13
3.2.12 Resource Conservation and Recovery Act (RCRA)-Conditionally Exempt Small Quantity Generator (CESQG) (On or adjacent) 13
3.2.13 State Registered Underground Storage Tanks (NY UST) (On or adjacent) 13
3.2.14 Delisted NPL Sites (Subject property only) 13
3.2.15 Superfund Enterprise Management System Archive (Subject property only) 13
3.2.16 RCRA Administrative Action Tracking System (RAATS) (Subject property only). 13
3.2.17 Hazardous Materials Information Reporting System (HMIRS) (Subject property only) 13
3.2.18 State and Tribal Institutional Control Registries (NY INST Control) (On or Adjacent) 14
3.2.19 State and Tribal Voluntary Cleanup Sites (Indian VCP) (1/2 mile) 14
3.2.20 State and Tribal Brownfield Sites (NY Brownfields) (1/2 mile) 14
3.3 INTERVIEWS AND CORRESPONDENCES 14
3.3.1 Interviews with Operator 14
3.3.2 Interviews with Property Manager 14
3.3.3 Interviews with Owner 15
3.3.4 Interviews and Correspondences with Regulatory, Municipal, and Utility Officials 15
4.0 INFORMATION FROM SITE RECONNAISSANCE 15
4.1 HAZARDOUS SUBSTANCES AND WASTES 15
4.1.1 Hazardous Waste Generation, Handling, and Disposal 15
4.1.2 Hazardous Substance and Unidentified Substance Containers 15
4.2 BULK STORAGE TANKS AND APPURTENANCES 15
4.2.1 Aboveground Tanks and Associated Piping 15
4.2.2 Underground Tanks and Associated Piping 16
4.2.3 Storage Pads and Areas Including Drum and Waste Storage 16
4.2.4 Rail Spurs or Sidings 16

4.2.5 Rail, Truck, or Other Loading and Unloading Areas 16
4.2.6 Pump Stations, Sumps, and Pits 16
4.2.7 Surface Lagoons and Impoundments 16
4.2.8 Chemical Storage Cabinets or Closets 16
4.3 DRAINAGE SYSTEMS AND AREAS 16
4.3.1 Surface Water Bodies 16
4.3.2 Floor Drains or Trenches and Piping 17
4.3.3 Process Area Sinks and Piping 17
4.3.4 Sanitary Sewer Collection Systems 17
4.3.5 Septic Systems and Leach Fields 17
4.3.6 Seepage Pits and Dry Wells 17
4.3.7 Storm Water Detention Ponds and Fire Water Ponds 17
4.3.8 Drainage Swales and Culverts 17
4.3.9 Roof Leaders Where Process Operations Vent To Roof 17
4.4 DISCHARGE AND DISPOSAL AREAS 17
4.4.1 Solid Waste Generation and Disposal and Dumpsters 17
4.4.2 Sanitary and Process Waste Generation and Discharge Points 17
4.4.3 Underground Piping, Including Industrial Process Sewers 18
4.4.4 Waste Piles 18
4.4.5 Landfills or Land farms 18
4.4.6 Open Pipe Discharges 18
4.5 BUILDING INTERIOR AREAS (with a potential for discharge to the environment). 18
4.5.1 Waste Treatment Areas 18
4.5.2 Boiler Rooms 18
4.6 OTHER SITE SPECIFIC AREAS OF CONCERN 18
4.6.1 Electrical Transformers and Capacitors 18
4.6.2 Areas of Stressed Vegetation, Discolored Areas, and Odors 18
4.6.3 Compressor Vent Discharges 18
4.6.4 Non-Contact Cooling Water Discharges 18
4.6.5 Active or Inactive Production, Monitoring or Irrigation Wells 18
4.6.6 Weighing Stations 19
4.6.7 Vapor Encroachment 19
4.6.8 Other Areas 19
4.7 ADDITIONAL SERVICES 19
5.0 FINDINGS 20
5.1 DE MINIMIS ENVIRONMENTAL CONDITIONS 20

5.2 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS 20
5.3 RECOGNIZED ENVIRONMENTAL CONDITIONS 20
6.0 RECOMMENDATIONS 22
7.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS 23
8.0 LIMITATIONS, QUALIFICATIONS, AND DISCLAIMERS 24
8.1 DATA GAPS 24

1.0 INTRODUCTION

Atlantic Environmental Solutions, Inc. (AESI) was retained by Almeida Concrete Pumping to conduct a Phase I Environmental Site Assessment (ESA) of the property located at 145-11 Liberty Avenue in Jamaica, New York ("subject property" or "site"). A site location map is provided as Figure 1 to indicate the subject property. The subject property is known in municipal tax records as Block 10019; Lot 39.

1.1 PURPOSE

The objective of the assessment is to develop an initial summary of the actual and potential environmental liabilities associated with the subject property through visual analysis, review of readily available information, review of accessible previous environmental reports, and review of past and present land use in the vicinity. Specifically, AESI performed the assessment to identify the presence of hazardous substances, petroleum products, or conditions that indicate an existing or past discharge of hazardous substances or petroleum products onto the ground, ground water, surface water, or structures located on the subject property.

1.2 SCOPE OF ASSESSMENT AND METHODOLOGY USED

The Phase I Environmental Site Assessment was prepared in accordance with the general requirements developed by the American Society for Testing and Materials (ASTM) as presented in the *Standard Practice for Phase I Environmental Assessments* (E1527-13). This report provides a general characterization of the subject property based on readily available information obtained from an inspection of the property, a review of available records, interviews with facility personnel, and interviews with relevant regulatory officials. This report provides documentation of the assessment, a summary of all recognized environmental concerns (RECs), and recommendations for further action, where warranted.

AESI performed an inspection of the subject property on January 24, 2017. The site inspection was performed to determine if there were obvious, visual indications of present or past activities which have, or could have, contaminated the site. The site inspection included a visual assessment of the interior and exterior of the site structure and observations of neighboring properties made from the perimeter of the subject property.

1.3 LIMITATIONS, LIMITING CONDITIONS, AND EXCEPTIONS

This assessment included communication with relevant Federal, State, and local regulatory agencies, and a review of readily available historical information. It was not the purpose of this assessment to determine the actual presence, degree, or extent of contamination, if any, on the subject property.

The assessment was not intended to identify all *de minimis* conditions that do not present a material risk of harm to public health or the environment that would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. In general, RECs requiring further investigation consist of those areas where a discharge is suspected to have resulted in the contamination of soil, groundwater, or surface water at concentrations above applicable State or Federal cleanup criteria.

The assessment did not include an evaluation for the presence or absence of radon, asbestos, freshwater wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, high voltage power lines, lead-based paint, lead in drinking water, or other non-scope considerations as defined by the ASTM standard practice E1527-13.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located at 145-11 Liberty Avenue, Jamaica, New York. The subject property is bound to the north residential properties; to the south by Liberty Avenue followed by Central Auto Parts, Splish Splash Laundromat, and Nicky's Deli and Grill; to the east by Brisbin Street followed by True Zion Gospel Temple, Inc. and Cabinet and Countertop Designs, and to the west by St. Mark's Baptist Church and residential properties.

The subject property is known in municipal tax records as Block 10019; Lot 39.

2.2 ENVIRONMENTAL SETTING

2.2.1 Regional Topography, Geology, and Hydrogeology

According to the United States Geological Survey (USGS), the subsurface geology in the area of the site consist of glacial till and outwash deposit sediments that overlie the Manhattan Schist, the uppermost bedrock unit at the site.

Saturated layers impacted by salt water intrusion are typically present in the overburden. It is generally inferred that the depth to the uppermost aquifer is greater than 70 feet at the surface of the bedrock/sediment interface.

2.2.2 Local Topography, Geology, and Hydrogeology

Site specific geologic and hydrogeologic characteristics/conditions have not been fully determined. However, it is anticipated that the site stratigraphy will be consistent with the regional lithology. The local topography is generally flat. The elevation of the subject property is approximately 40 feet above mean sea level (MSL).

AESI has no specific knowledge regarding the flow direction of groundwater beneath the subject property.

2.2.3 Site Soils

The subsurface soils at the site are classified by the U.S. Department of Agriculture Soil Conservation Service as urban land, meaning that the soil varies. The soil surface textures may consist of silt loam, loamy sand, sandy loam, and fine sandy loam. Deeper soils may consist of stratified sandy loams, unweathered bedrock, and gravels.

2.3 DESCRIPTIONS OF STRUCTURES AND UTILITIES

The subject property contains one (1) structure with attached truck loading area. The subject property is serviced by municipal electric, water, sewer and natural gas.

2.4 ENVIRONMENTAL LIENS

Based on available information, no environmental liens are currently held against the subject property. No Federal Superfund liens were identified in the background information search.

2.5 CURRENT USES OF PROPERTY

2.5.1 Description of Operations
The subject property is currently used as a truck maintenance and repair facility.

2.5.2 Raw Materials
Raw materials were not observed on the subject property during the site inspection.

2.5.3 Wastes Generated (Annual Generator Reports and Manifests)
AESI has not received waste generator reports and/or manifests associated with the former operations at the subject property.

2.5.4 Federal, State, and Local Permits and Registrations
A search of New York City Department of Buildings records revealed the subject property was issued a permit for the installation of one (1) oil separator and one (1) 550-gallon waste oil underground storage tank (UST). The permit, identified as Permit Number 400105480-01-PL, was issued on July 26, 1990, and expired on September 5, 1990. Documents provided by the Client revealed that this UST is located on the northern portion of the exterior of the property.

During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with the waste oil UST. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the waste oil UST.

2.5.5 Environmental Enforcement Actions
Based on our review of background information obtained from the correspondence and inquiries made by AESI, no environmental enforcement actions have been recorded at the property.

2.5.6 Previous Environmental Assessment or Investigation Reports
An Environmental Site Assessment previously completed for the subject property in May 1994 was provided to AESI by the Client. The report identified two (2) aboveground storage tanks (ASTs), one containing fresh motor oil and the other containing hydraulic oil, and indications of a 550-gallon underground storage tank (UST), including an access cover, fill ports and vent pipes, at the northern portion of the subject property. Based on AESI's review of the New York City Department of Buildings records, this UST is identified as a 550-gallon waste oil UST with an associated oil separator.

The report also identified three (3) small floor drains and one (1) waste oil drop pit, reportedly discharging to the oil-water separator. Additionally, the report identified a parts washer. It was not indicted if the parts washer discharged to the oil-water separator or waste oil UST. However, during AESI's site inspection, it was confirmed that the parts washer was self-contained and did not discharge to the oil-water separator or waste oil UST.

Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the waste oil UST. See Attachment H for a copy of the 1994 Environmental Site Assessment.

2.5.7 Proceedings Involving Environmental Matters
Based on the review of background information obtained from the correspondence and inquiries made by AESI, no proceedings involving environmental matters were found for the subject property.

2.5.8 State On-Line Mapping Resources

According to the New York State Department of Environmental Conservation's electronic databases, NYC Speed and NYC Automated City Register Information System (ACRIS), no further environmental concerns are identified.

2.6 CURRENT USES OF ADJOINING PROPERTIES

The subject property is bound to the north residential properties; to the south by Liberty Avenue followed by Central Auto Parts, Splish Splash Laundromat, and Nicky's Deli and Grill; to the east by Brisbin Street followed by True Zion Gospel Temple, Inc. and Cabinet and Countertop Designs; and to the west by St. Mark's Baptist Church and residential properties.

Automobile repair facilities, laundromats and cabinetry/contracting operations typically utilize hazardous materials such as solvents, hydraulic oils, lubricating oils and other petroleum constituents. However, based on AESI's research, there is no evidence that these operations have had a negative environmental impact on the subject property.

3.0 RECORDS REVIEW, INTERVIEWS, AND CORRESPONDENCES

3.1 HISTORICAL USE INFORMATION

3.1.1 Fire Insurance Map Review

AESI contacted Environmental Data Resources (EDR) Inc., the largest provider of Sanborn historic fire insurance maps, requesting fire insurance maps for the site area. Sanborn maps were provided for the years 1901, 1911, 1925, 1942, 1951, 1963, 1967, 1981, 1982, 1985, 1986, 1987, 1988, 1990, 1991, 1992, 1993, 1995, 1996, 1999, 2001, 2002, 2003, 2004, 2005 and 2006. Please refer to Attachment B for a copy of the Sanborn Maps.

1901 – The subject property can be observed as two (2) vacant lots. The surrounding parcels consist of a mix of residences and vacant lots.

1911 – The subject property remains vacant, while the parcels to the south can be observed as developed residential structures.

1925 – The subject property remains vacant, while the surrounding parcels become more developed with residential structures.

1942 – The subject property remains vacant. The surrounding parcels become more developed with commercial and residential structures. A fire department can be observed to the southeast of the subject property.

1951 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1942 Sanborn Map.

1963 – The subject property can be observed as developed with one (1) commercial/industrial structure that is used as a wire rope warehouse. Adjacent to the subject property, to the southeast, a construction equipment sales and services warehouse can be observed. A clothing manufacturer

is also present to the southeast of the subject property. A filling station can now be observed to the southwest of the subject property.

1967 – Significant changes to the subject property are not observed subsequent to the 1963 Sanborn Map. An auto repair shop can now be observed across Liberty Avenue from the subject property. The clothing manufacturer that was present to the southwest is now identified as a novelty case manufacturer. A vacant warehouse to the east is now identified as an auto repair shop.

1981 – The structure on the subject property is now identified as being used for truck repairs with an attached parking lot. Significant changes to the surrounding properties are not observed subsequent to the 1967 Sanborn Map.

1982 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1967 Sanborn Map.

1985 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1982 Sanborn Map.

1986 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1985 Sanborn Map.

1987 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1986 Sanborn Map.

1988 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1987 Sanborn Map.

1990 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1988 Sanborn Map.

1991 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1990 Sanborn Map.

1992 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1991 Sanborn Map.

1993 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1992 Sanborn Map.

1995 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1993 Sanborn Map.

1996 – Significant changes to the subject property are not observed subsequent to the 1995 Sanborn Map. The filling station located to the southwest is now identified as an auto repair shop.

1999 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1996 Sanborn Map.

2001 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1999 Sanborn Map.

2002 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2001 Sanborn Map.

2003 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2002 Sanborn Map.

2004 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2003 Sanborn Map.

2005 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2004 Sanborn Map.

2006 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2005 Sanborn Map.

3.1.2 Aerial Photograph Review

Aerial photographs were reviewed for the subject property for the years 1946, 1951, 1954, 1961, 1966, 1975, 1984, 1994, 2006, 2009 and 2011. Please refer to Attachment C for a copy of the Aerial Photographs. The following represents an interpretation of the aerial photographs with respect to the subject properties and the immediate surrounding area:

1946 – The subject property appears undeveloped. The subject property is located in a densely-populated residential and commercial area of Jamaica, New York. A rail station and yard associated with the Long Island Rail Road (LIRR) can be observed to the north of the subject property.

1951 – The subject property remains undeveloped. A highway, currently identified as the Van Wyck Expressway, appears to have been developed to the west of the subject property.

1954 – The subject property appears developed with one (1) structure. However, due to the poor quality of this Aerial Photograph, details about this structure are not discernible. Some commercial/industrial development can be observed to the south and northeast.

1961 – The subject property appears developed with one (1) structure with attached parking areas. A vacant lot to the southwest appears to have been developed into commercial/industrial use. Other significant changes are not observed subsequent to the 1954 Aerial Photograph.

1966 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1961 Aerial Photograph.

1975 – Significant changes to the subject property are not observed subsequent to the 1966 Aerial Photograph. A vacant lot to the northeast appears to have been developed into commercial/industrial use. Other significant changes are not observed subsequent to the 1966 Aerial Photograph.

1984 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1975 Aerial Photograph.

1994 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1984 Aerial Photograph.

2006 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1994 Aerial Photograph.

2009 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2006 Aerial Photograph.

2011 – Significant changes to the subject property or surrounding area are not observed subsequent to the 2009 Aerial Photograph.

3.1.3 Historic Topographic Map Review

AESI reviewed historic USGS Topographic Maps for the years 1897, 1989, 1900, 1947, 1957, 1966, 1979, 1994, and 2013. The topographic maps identify some of the surrounding structures, roadways, rail lines, elevation differentiation, and nearby waterways. Please refer to Attachment D for a copy of the Topographic Maps. The following is a brief summary for each year reviewed:

1897 – The subject property is located in a lightly-developed area in the northwestern portion of Jamaica, Queens, New York. The LIRR can be observed running east-to-west to the north of the subject property. A small lake can be observed to the northeast of the subject property.

1898 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1897 Topographic Map.

1900 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1898 Topographic Map.

1947 – Significant residential and commercial/industrial development can be observed throughout the Topographic Map. The lake observed in previous Topographic Maps appears to have been filled to allow for commercial/industrial and roadway development.

1957 – The Van Wyck Expressway Appears to have been developed to the west of the subject property. It should be noted that structures are not identified on this Topographic Map.

1966 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1957 Topographic Map. It should be noted that structures are not identified on this Topographic Map.

1979 – Some additional commercial/industrial development can be observed to the north of the subject property. Other significant changes to the subject property or surrounding area are not observed subsequent to the 1966 Topographic Map. It should be noted that only select structures are identified on this Topographic Map.

1994 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1979 Topographic Map. It should be noted that only select structures are identified on this Topographic Map.

2013 – Significant changes to the subject property or surrounding area are not observed subsequent to the 1994 Topographic Map. It should be noted that structures are not identified on this Topographic Map.

3.1.4 City Directory Abstract

AESI reviewed the City Directory Abstract, provided by EDR, for the subject property and conducted a limited municipal deed search. The City Directory Abstract provides the names of owners and/or operators at the subject property using sources such as Cole Information Services and New York Telephone Directory. Refer to Attachment E for a copy of the City Directory Abstract. Based on this review, the property was identified as being occupied by the following entities:

Occupant	*Year(s)*
E W G Recycling Liberty Truck Repair Corp	2005-2008
Jamaica Mack, Inc.	1983
Jamaica Truck Parts, Inc.	1976
Burke Theo J & Son Inc. Construction Equipment	1970

3.1.5 Historic Ownership

AESI reviewed the NYC ACRIS online database to obtain a summary of historic ownership at the subject property. Based on this review, the property was identified as being owned by the following entities:

Owner	*Year(s)*
145-11 Liberty Ave. Corp	1994-Present
Armando Gabrielli	1973-1994
Jamaica Truck Repair Inc./Jamaica Truck Parts Inc.	1969-1973
Theodore J Burke, Sr.	Unknown – 1969

3.1.6 Municipal File Review

New York City, Office of City Clerk

Inquiries were sent to the office of the New York City Clerk. At this time AESI is still waiting for a response. Should information be found showing an adverse environmental quality at the subject property, AESI will inform the client. See Attachment F for copies of inquiry letters.

New York City, Department of City Planning

Inquiries were sent to the office of New York City Department of City Planning. At this time AESI is still waiting for a response. Should information be found showing an adverse environmental quality at the subject property, AESI will inform the client. See Attachment F for copies of inquiry letters.

New York City, Department of Finance

Inquiries were sent to the office of New York City Department of Finance. At this time AESI is still waiting for a response. Should information be found showing an adverse environmental quality at the subject property, AESI will inform the client. See Attachment F for copies of inquiry letters.

New York City, Department of Buildings
Inquiries were sent to the office of New York City Department of Buildings. Information obtained has been integrated throughout this report. See Attachment F for copies of inquiry letters.

New York City, Fire Department
Inquiries were sent to the office of New York City Fire Department. At this time AESI is still waiting for a response. Should information be found showing an adverse environmental quality at the subject property, AESI will inform the client. See Attachment F for copies of inquiry letters.

New York State, Department of Health
Inquiries were sent to the office of New York City Department of Health. At this time AESI is still waiting for a response. Should information be found showing an adverse environmental quality at the subject property, AESI will inform the client. See Attachment F for copies of inquiry letters.

3.2 STANDARD ENVIRONMENTAL RECORD SOURCES: FEDERAL AND STATE

In addition to the site inspection, AESI conducted a review of available environmental regulatory records provided by Federal and State regulatory agencies and compiled by EDR. The objective of the background research was to obtain and/or review readily available records from standard sources that would assist in identifying recognized environmental concerns. The EDR Radius Map report, included as Attachment G, contains information from a variety of public sources; the accuracy of the information from these sources can vary and is not always complete. AESI has reviewed the information and made all reasonable efforts to compensate for obvious mistakes or insufficiencies in the information provided for which AESI has obtained supplemental, actual knowledge.

The following sources of information, which meet or exceed the ASTM E1527-13 requirements, were reviewed for sites within the stated approximate distances from the subject property:

Sources reviewed for sites within a one-mile radius of subject property:

- National Priority List (NPL) Sites - Superfund;
- Corrective Action Report (CORRACTS);
- NPL Records of Decision (ROD), and
- NPL Consent Decrees (CONSENT).

Sources reviewed for sites within a one-half mile radius of subject property:

- Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS);
- State Hazardous Waste Sites (SHWS) (aka known contaminated site list);
- Resource Conservation and Recovery Act - Treatment, Storage, & Disposal Facilities (RCRA-TSDF);
- State Landfill Sites (NY SWF/LF), and
- State Leaking Underground Storage Tank Incident Reports (NY LTANKS).

Sources reviewed for sites on or adjacent to subject property:

- Resource Conservation and Recovery Act (RCRA) - Small Quantity Generators;
- RCRA - Large Quantity Generators;
- RCRA- Conditionally Exempt Small Quantity Generators, and
- State Registered Underground Storage Tanks (NY UST).

Sources reviewed only for the subject property:

- Delisted NPL Sites;
- Superfund Enterprise Management System Archive (SEMS-ARCHIVE);
- RCRA Administrative Action Tracking System (RAATS);
- Hazardous Materials Information Reporting System (HMIRS);
- PCB Activity Database (PADS);
- Federal Emergency Response Notification System list (ERNS);
- Facility Index System (FINDS);
- Toxic Chemical Release Inventory System (TRIS);
- Federal Superfund Liens (NPL Liens);
- Toxic Substances Control Act (TSCA);
- Material Licensing Tracking System (MLTS).

3.2.1 Federal NPL Sites (1 mile)

The NPL list is generated by the USEPA and consists of the highest priority Superfund sites in the country. A facility's inclusion on this list indicates that the site has been classified as a national priority site and that further investigation is pending. Sites listed in the NPL database were not identified within one (1) mile of the subject property.

3.2.2 Corrective Action Report (CORRACTS) (1 mile)

The USEPA-generated CORRACTS list identifies hazardous waste handlers (TSD facilities) with RCRA corrective action activity. One (1) CORRACTS site was identified within one (1) mile of the subject property.

This site is identified as LIRR – Morris Park Repair & Richmond Hill Yard, located at the corner of 121 St and Atlantic Avenue, approximately 0.935 miles west of the subject property. The site was assigned EPA Identification Number NYD960641625. Hazardous waste site ID 241130 was assigned to the site. The LIRR primarily used the site to repair diesel automobiles and rebuild major mechanical and electrical components of equipment transported to the site.

In 2011, human exposure was documented and subsequently verified to be under control. It was not indicated what materials were exposed, or if this exposure was to the public or if it was contained on-site. Thereafter, in 2012, migration of groundwater contamination at the site was verified to be under control. Further information regarding the nature and extent of this groundwater contamination was not provided in the database listing.

However, due to the distance of the site from the subject property, it is unlikely to cause an adverse impact on the subject property.

3.2.3 NPL Records of Decision (ROD) (1 mile)

The federal ROD list identifies Records of Decision at NPL Superfund sites. Sites listed in the ROD database were not identified within one (1) mile of the subject property.

3.2.4 NPL Consent Decrees (CONSENT) (1 mile)

The CONSENT list is generated by the EPA regional offices to identify major legal settlements at NPL Superfund sites. Sites listed in the CONSENT database were not identified within one (1) mile of the subject property.

3.2.5 Federal CERCLIS List (½ mile)

The USEPA-generated CERCLIS list identifies hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and/or private persons pursuant to CERCLA. Sites listed in the CERCLIS database were not identified within one-half (1/2) mile of the subject property.

3.2.6 State Hazardous Waste Sites (SHWS) (½ mile)

This list is the State's equivalent to the Federal government's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list. Sites listed in this database may also be listed in CERCLIS. This list includes sites being cleaned up by potentially responsible parties (PRPs), as well as sites being cleaned up using State funds. Two (2) SHWS sites are identified within one-half (1/2) mile of the subject property.

The closest of these sites is identified as K – Jamaica Gas and Light and is located at the corner of Beaver Road and 158th Street, approximately 0.597 miles northeast from the subject property. This site is has been vacant land since the late 1960s and is used to store roll-off containers and trash compactors. This site operated as a Manufactured Gas Plant (MGP) for at least 25 years in the late 1800s before being converted to a gas storage and distribution facility around 1900 until the plant was demolished in 1938. Between 1938 to the late 1960s, the property was used for office space by Brooklyn Union Gas Company.

Reportedly, the primary contaminants of concern at this site were polyaromatic hydrocarbons (PAHs) and coal tar. Total PAHs were detected in subsurface soil samples above applicable regulatory standards. However, groundwater does not contain MGP-related constituents at concentrations above regulatory standards. Further information regarding the nature and extent of the contamination, or the status of an ongoing remediation case, were not provided in the database listing. However, due to the distance of this site from the subject property, it is unlikely to have a negative impact on the subject property.

The other site is identified as K – Jamaica Holder Station and is located at the corner of 158th Street and Liberty Avenue, approximately 0.645 miles northeast from the subject property. The site is currently occupied by a university and a federal government building. The site operated as a gas distribution facility from 1944 to 1975 that included a 10.6 million cubic feet tar-sealed, remote gas distribution holder.

Contaminants were not detected during soil investigation activities. Benzo(a)anthracene, a PAH, was detected in groundwater at a concentration of 0.002 parts per billion (ppb), exceeding applicable regulatory standards. However, the site was given a No Further Action designation in January 2013. Due to the closed status of the site, it is unlikely to have a negative impact on the subject property.

3.2.7 Federal RCRA TSD Facilities (½ mile)

This database identifies sites which store, treat and/or dispose of hazardous wastes as defined by RCRA. Sites listed in the RCRA-TSDF database were not identified within one-half (1/2) mile of the subject property.

3.2.8 State Landfill and/or Solid Waste Disposal Sites (NY SWF/LF) (½ mile)

This database contains an inventory of solid waste disposal facilities and landfills in the state. Eight (8) NY SWF/LF sites were identified within one-half (1/2) mile of the subject property. The closest of these sites is identified as A1 Auto Parts Inc., located at 97-15 Sutphin Boulevard, approximately 0.251 miles north-northeast of the subject property. The site reportedly operated as a vehicle dismantling facility. However, the site is now inactive. Therefore, the site is unlikely to have a negative impact on the subject property.

The next closest of these sites is identified as New York City Auto Salvage, Inc., located at 148-36 Liberty Avenue, approximately 0.361 miles northeast of the subject property. The site currently operates as a vehicle dismantling facility. However, due to the distance of the site from the subject property, it is unlikely to have a negative impact on the subject property.

The next closest of these sites is identified as City Mason Division of SRM, located at 105th Avenue and 150th Street, approximately 0.373 miles northeast of the subject property. The site is now inactive. Therefore, the site is unlikely to have a negative impact on the subject property.

3.2.9 Leaking Storage Tanks (NY LTANKS) (½ mile)

This database consists of an inventory of registered UST sites that have a cleanup underway. Twenty-six NY LTANKS sites are identified within one-half (1/2) mile of the subject property.

The closest of these sites is located at 138-57 Lloyd Road, approximately 58 feet west-southwest of the subject property. On November 21, 1993, it was reported that approximately one (1) gallon of No. 2 heating oil leaked to surface concrete and was cleaned up with Speedy Dry. The spill was cleaned up on the same day and the case was subsequently closed. Therefore, this site is unlikely to have a negative impact on the subject property.

The next closest of these sites is identified as Public School #195, located at 64-35 102nd Street, approximately 0.151 miles west of the subject property. The site has two (2) in-use 10,000-gallon No. 4 heating oil USTs. Three (3) spill numbers have been assigned to this site. Spill number 0001984 was reported on May 16, 2000, due to a tank tightness test failure of Tank #2. However, this case was closed based on a tank tightness test that passed on May 11, 2005. Spill number 0607179 was reported on September 22, 2006, due to a spill of approximately 50 gallons from a vent pipe. However, this case was also closed. Spill number 1409189 was reported on December 10, 2014, due to a tank tightness test failure. As of the latest update, dated January 6, 2015, the failed tank system is out-of-service and further investigation is required. However, due to the distance of the site from the subject property, it is unlikely to have a negative impact on the subject property.

The next closest of these sites is identified as St. Pius Church, located at 106-12 Liverpool Street, approximately 0.153 miles east-southeast of the subject property. Reportedly, a 3,000-gallon UST failed a tank tightness test and further action was not taken. However, due to a lack of recent information, the case has been closed with the indication that the case does not meet any clean up requirements. Therefore, the site is unlikely to have a negative impact on the subject property.

3.2.10 Resource Conservation and Recovery Act (RCRA)-Small Quantity Generators (SQG) (On or adjacent)
The RCRA-Small Quantity Generator (SQG) database consists of sites which generate small quantities (between 100 kg and 1,000 kg of hazardous wastes per month) and have obtained EPA generator identification numbers. Sites listed in the RCRA-SQG database were not identified on or adjacent to the subject property.

3.2.11 Resource Conservation and Recovery Act (RCRA)-Large Quantity Generators (LQG) (On or adjacent)
The RCRA-Large Quantity Generator (LQG) database consists of sites which generate large quantities (more than 1,000 kilograms per month) of hazardous wastes and have obtained EPA generator identification numbers. Sites listed in the RCRA-LQG database were not identified on or adjacent to the subject property.

3.2.12 Resource Conservation and Recovery Act (RCRA)-Conditionally Exempt Small Quantity Generator (CESQG) (On or adjacent)
The RCRA-Conditionally Exempt Small Quantity Generator (CESQG) database consists of sites which generate, transport, treat, and/or dispose of hazardous waste as defined by RCRA. CESQGs generate less than 100 kilograms of hazardous waste, or less than 1 kilogram acutely hazardous waste per month. Sites listed in the RCRA-CESQG database were not identified on or adjacent to the subject property.

3.2.13 State Registered Underground Storage Tanks (NY UST) (On or adjacent)
The NY UST database consists of sites with registered USTs. Sites listed in the NY UST database were not identified on or adjacent to the subject property.

3.2.14 Delisted NPL Sites (Subject property only)
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. Sites may be deleted from the NPL where no further response is appropriate. The subject property was not identified on the Delisted NPL database.

3.2.15 Superfund Enterprise Management System Archive (Subject property only)
Formerly known as the CERCLIS-NFRAP database, the SEMS-ARCHIVE database tracks sites that have no further interest under the Federal Superfund Program based on available information. Archived status indicates that assessment at a site has been completed and that the EPA has determined no further steps will be taken to list the site on the NPL. The subject property was not identified on the SEMS-ARCHIVE database.

3.2.16 RCRA Administrative Action Tracking System (RAATS) (Subject property only)
This database contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. The subject property was not identified on the RAATS database.

3.2.17 Hazardous Materials Information Reporting System (HMIRS) (Subject property only)
The HMIRS database contains sites with hazardous material spill incidents reported to the Department of Transportation (DOT). The subject property was not identified on the HMIRS database.

3.2.18 State and Tribal Institutional Control Registries (NY INST Control) (On or Adjacent)
The state and tribal Institutional Control Registries (NY INST Control) database lists site where engineering and/or institutional controls remain in place as part of a remedial action to address soil and/or groundwater contamination. State and/or tribal institutional control registries are not located on or adjacent to the subject property.

3.2.19 State and Tribal Voluntary Cleanup Sites (Indian VCP) (1/2 mile)
The state and tribal voluntary cleanup site (NY VCP) database lists responsible parties, developers, local officials, or individuals who may work with the department to remediate non-priority contaminated site that pose no immediate threat to human health or the environment. NY VCP sites are not located within one-half (1/2) mile of the subject property.

3.2.20 State and Tribal Brownfield Sites (NY Brownfields) (1/2 mile)
Brownfields sites (NY Brownfields) are identified as former or current commercial/industrial use sites that are presently vacant or underutilized, on which there is suspected to have been a discharge of a contamination to the soil or groundwater at concentration greater than applicable cleanup criteria. Two (2) NY Brownfield sites are identified within one-half (1/2) mile of the subject property.

The closest of these sites is located at 147-20 94th Avenue, approximately 0.375 miles north-northeast of the subject property. The features of the site include buildings used as a food storage warehouse and a vacant warehouse with attached parking areas. Historic fill material was identified in subsurface soils to approximately five (5) feet below ground surface (bgs). Two (2) USTs were identified via ground-penetrating radar (GPR) activities. The primary contaminants of concern detected in soil include metals and semi-volatile organic compounds (SVOCs); however, these contaminants are attributed to historic fill material. Groundwater does not contain contaminants of concern above regulatory standards. Soil vapor contained chlorinated solvents at concentrations above regulatory standards; however, contaminants in soil vapor are not expected to extend off-site. Due to the lack of groundwater contamination at the site, it is unlikely to have a negative impact on the subject property.

The other site is located at 147-22 Archer Avenue, approximately 0.459 miles north of the subject property. The site consists of vacant commercial buildings, parking areas, a vacant automobile repair facility and a church. Historic uses of the site include a filling station, automobile repair facilities, cabinetry and a garage door company. Reportedly, the garage door company housed two gasoline USTs between 1942 and 1951. Historic fill material was identified in subsurface soils from three (3) to ten (10) feet bgs. The primary contaminants of concern include lead in soil, chloroform in groundwater and chlorinated solvents in soil vapor. Off-site investigations have not been completed to date. However, due to the distance of the site from the subject property, it is unlikely to have a negative impact on the subject property.

3.3 INTERVIEWS AND CORRESPONDENCES

3.3.1 Interviews with Operator
Interviews with the current operator of the subject property were not conducted.

3.3.2 Interviews with Property Manager
Interviews with the current property manager of the subject property were not conducted.

3.3.3 Interviews with Owner

AESI requested historic and current information from the subject property owner and information obtained has been integrated within this report.

3.3.4 Interviews and Correspondences with Regulatory, Municipal, and Utility Officials

In addition to the EDR report, written or verbal requests for information were made to the following agencies to enhance and supplement the sources identified above:

- USEPA Region II - Freedom of Information (FOI).
- New York City Clerk.
- New York City Tax Assessor
- New York City Department of Buildings.
- New York City Fire Department.
- New York City Department of Health

Information obtained from the listed agencies has been incorporated throughout the report. See Attachment F for copies of inquiry letters and responses.

4.0 INFORMATION FROM SITE RECONNAISSANCE

AESI conducted a site inspection of the subject property on January 23, 2017. The site inspection observations are discussed in the following sections.

4.1 HAZARDOUS SUBSTANCES AND WASTES

4.1.1 Hazardous Waste Generation, Handling, and Disposal

During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the waste oil UST.

4.1.2 Hazardous Substance and Unidentified Substance Containers

During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. In addition, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the hazardous substance containers and 275-gallon AST.

4.2 BULK STORAGE TANKS AND APPURTENANCES

4.2.1 Aboveground Tanks and Associated Piping

During AESI's site inspection, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing

fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in the area of the AST was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding 275-gallon AST.

4.2.2 Underground Tanks and Associated Piping

During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the waste oil UST.

4.2.3 Storage Pads and Areas Including Drum and Waste Storage

During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the bucket and drum storage areas.

4.2.4 Rail Spurs or Sidings

Rail spurs or siding were not observed on the subject property during the site inspection.

4.2.5 Rail, Truck, or Other Loading and Unloading Areas

Rail trucks or other loading and unloading areas were not observed on the subject property during the site inspection.

4.2.6 Pump Stations, Sumps, and Pits

Pump stations, sumps or pits were not observed on the subject property during the site inspection. However, a previous Environmental Site Assessment provided by the Client identified a waste oil pit that discharged to the oil separator. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the waste oil pit.

4.2.7 Surface Lagoons and Impoundments

Surface lagoons or impoundments were not observed on the subject property during the site inspection.

4.2.8 Chemical Storage Cabinets or Closets

Chemical storage cabinets or closets were not observed on the subject property during the site inspection.

4.3 DRAINAGE SYSTEMS AND AREAS

4.3.1 Surface Water Bodies

Surface water bodies were not identified at the subject property during the site inspection.

4.3.2 Floor Drains or Trenches and Piping

A previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. As stated above, AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the floor drains and waste oil pit.

4.3.3 Process Area Sinks and Piping

A previous Environmental Site Assessment provided by the Client identified a parts washer. It was not indicted if the parts washer discharged to the oil separator or waste oil UST. However, during AESI's site inspection, it was confirmed that the parts washer was self-contained and did not discharge to the oil separator or waste oil UST. Evidence of a discharge near the parts washer was not observed; therefore, further action is not warranted.

4.3.4 Sanitary Sewer Collection Systems

Sanitary sewer collection systems were not observed on the subject property during the site inspection.

4.3.5 Septic Systems and Leach Fields

Septic systems or leach fields were not observed on the subject property during the site inspection.

4.3.6 Seepage Pits and Dry Wells

Seepage pits or dry wells were not observed on the subject property during the site inspection.

4.3.7 Storm Water Detention Ponds and Fire Water Ponds

Storm water detention ponds or fire water ponds were not observed on the subject property during the site inspection.

4.3.8 Drainage Swales and Culverts

Drainage swales or culverts were not observed on the subject property during the site inspection.

4.3.9 Roof Leaders Where Process Operations Vent To Roof

Roof leaders were not observed on the subject property during the site inspection.

4.4 DISCHARGE AND DISPOSAL AREAS

4.4.1 Solid Waste Generation and Disposal and Dumpsters

Four (4) dumpsters were observed by AESI during the site inspection. One (1) dumpster was empty at the time of the site inspection, and one (1) other dumpster contained various automobile parts. The contents of the remaining dumpsters were not accessible to AESI personnel. Evidence of a discharge near the dumpsters was not observed; therefore, further action is not warranted.

4.4.2 Sanitary and Process Waste Generation and Discharge Points

During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since

been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the process waste generation and discharge points.

4.4.3 Underground Piping, Including Industrial Process Sewers

During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. Please refer to Sections 5.0 and 6.0 for Findings and Recommendations regarding the underground piping.

4.4.4 Waste Piles

Waste piles were not observed on the subject property during the site inspection.

4.4.5 Landfills or Land farms

Landfills or land farms were not observed on the subject property during the site inspection.

4.4.6 Open Pipe Discharges

Open pipe discharge points were not observed on the subject property during the site inspection.

4.5 BUILDING INTERIOR AREAS (with a potential for discharge to the environment)

4.5.1 Waste Treatment Areas

Waste treatment areas were not observed on the subject property during the site inspection.

4.5.2 Boiler Rooms

Boiler rooms were not observed on the subject property during the site inspection.

4.6 OTHER SITE SPECIFIC AREAS OF CONCERN

4.6.1 Electrical Transformers and Capacitors

Electrical transformers were not observed on the subject property during the site inspection.

4.6.2 Areas of Stressed Vegetation, Discolored Areas, and Odors

Areas of stressed vegetation, discolored areas, and odors were not observed on the subject property during the site inspection.

4.6.3 Compressor Vent Discharges

Compressor vent discharges were not observed on the subject property during the site inspection.

4.6.4 Non-Contact Cooling Water Discharges

Non-contact cooling water discharges were not observed on the subject property during the site inspection.

4.6.5 Active or Inactive Production, Monitoring or Irrigation Wells

Production, monitoring, or irrigation wells were not observed on the subject property during the site inspection.

4.6.6 Weighing Stations
Weighing stations were not observed on the subject property during the site inspection.

4.6.7 Vapor Encroachment
Vapor encroachment issues were not identified during the performance of this Phase I ESA.

4.6.8 Other Areas
Other areas were not observed during the site inspection.

4.7 ADDITIONAL SERVICES

Additional services were not included as part of this Phase I ESA.

5.0 FINDINGS

5.1 DE MINIMIS ENVIRONMENTAL CONDITIONS

Conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies are deemed de minimis conditions by the ASTM standard.

- De minimis conditions were not discovered by AESI during the performance of this Phase I ESA.

5.2 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

Historical Recognized Environmental Conditions (HRECs) are conditions that in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.

- Historical Recognized Environmental Conditions (HRECs) were not discovered by AESI during the performance of this Phase I ESA.

5.3 RECOGNIZED ENVIRONMENTAL CONDITIONS

Recognized Environmental Conditions (RECs) are those constituting the presence or likely presence of any hazardous substance or petroleum products under conditions that indicate an existing release, a past release, or material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

- During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. Please refer to Section 6.0 for Recommendations regarding the waste oil UST.

- During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. In addition, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed.

Please refer to Section 6.0 for Recommendations regarding the hazardous substance containers and 275-gallon AST.

6.0 RECOMMENDATIONS

Atlantic Environmental Solutions, Inc. (AESI) performed a Phase I Environmental Assessment inspection on January 6, 2017, in connection with the referenced property located at 145-11 Liberty Avenue in Jamaica, New York ("subject property" or "site"). The inspection was performed in conformance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Practice E-1527-13). The following are AESI's recommendations for the subject property:

- During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed. AESI recommends a Phase II subsurface investigation to confirm the presence or absence of contamination on the site as a result of a potential discharge from this UST.

- During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. In addition, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed. In the event redevelopment is planned for the subject property, AESI recommends the proper inventory, storage and disposal of all hazardous substance containers in accordance with all local, state and Federal regulations. In addition, AESI recommends the proper closure and disposal of the 275-gallon AST in accordance with all local, state and Federal regulations.

7.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

The preceding Phase I Environmental Assessment was prepared by the undersigned environmental professionals in accordance with the ASTM - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-13). The undersigned environmental professionals are employed by Atlantic Environmental Solutions, Inc., an environmental consulting firm located in Hoboken, New Jersey, and is qualified to conduct Phase I Environmental Site Assessments.

Jeffrey W. Anderson, CHMM, LSRP
Vice-President

Michael J. Novak, LSRP
President

8.0 LIMITATIONS, QUALIFICATIONS, AND DISCLAIMERS

This report has been prepared on behalf of, and exclusively for the use of Almeida Construction. This report and the findings contained within shall not, in whole or in part, be distributed or conveyed to any other party without the prior consent of Atlantic Environmental Solutions, Inc.

The opinions included in this report are based on the information obtained during the assessment, our experience, and the information provided by the persons available at the site at the time of inspection familiar with the subject property. If additional information becomes available, we require the opportunity to review the information, reassess the potential environmental concerns, and modify our opinions, if necessary.

8.1 DATA GAPS

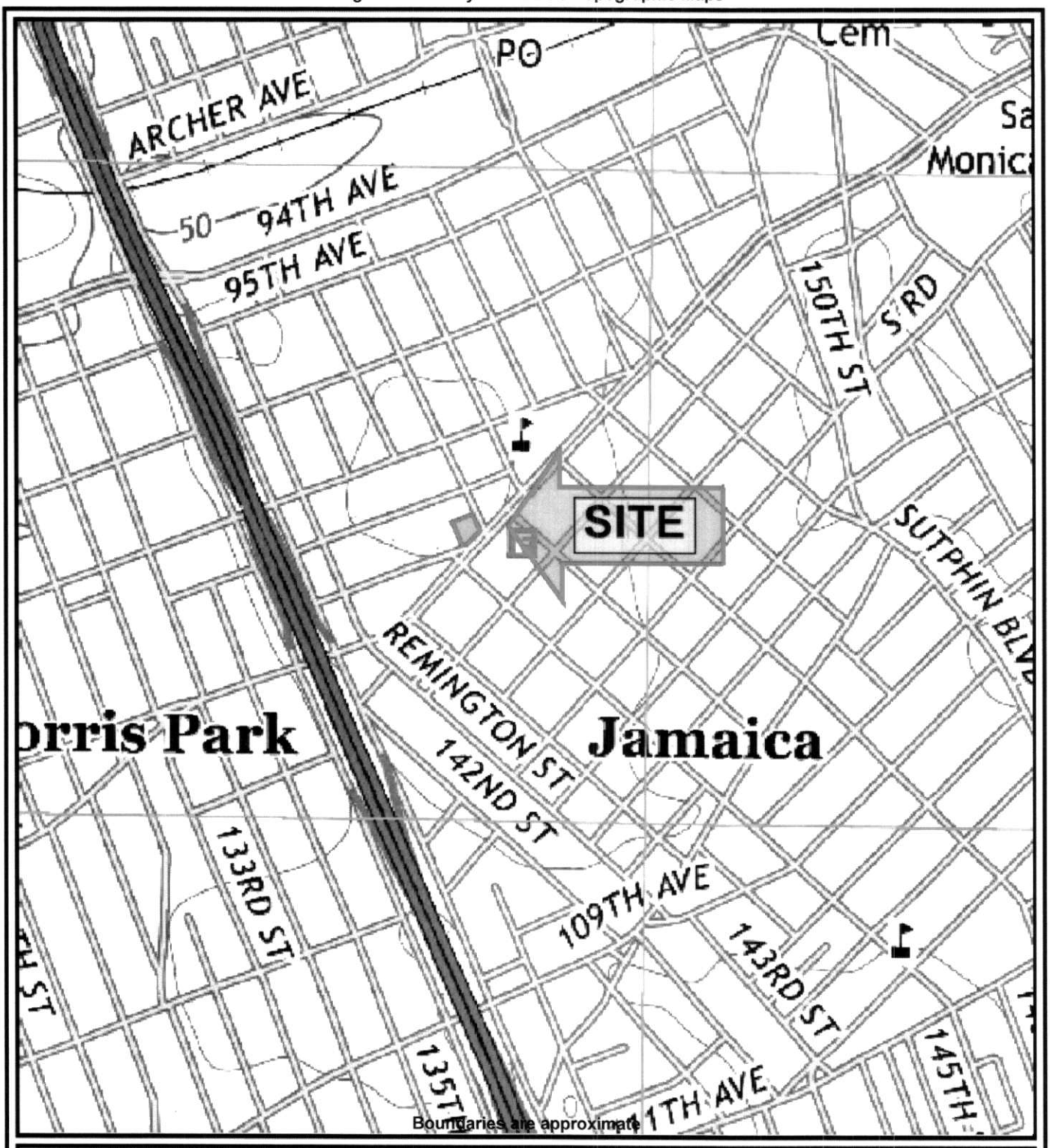
A data gap is defined by the ASTM - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-13) as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

- The New York City Department of Fire, City Planning, Finance, and Health did not respond to AESI's request for information at the time of report preparation.

If additional information becomes available that may impact the findings of the report, we require the opportunity to review the information, reassess the potential environmental concerns, and modify our opinions, if necessary.

FIGURES

Image Provided By EDR USGS Topographic Maps



EDR 2013	↑ N	SITE LOCATION MAP 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

ATTACHMENT A

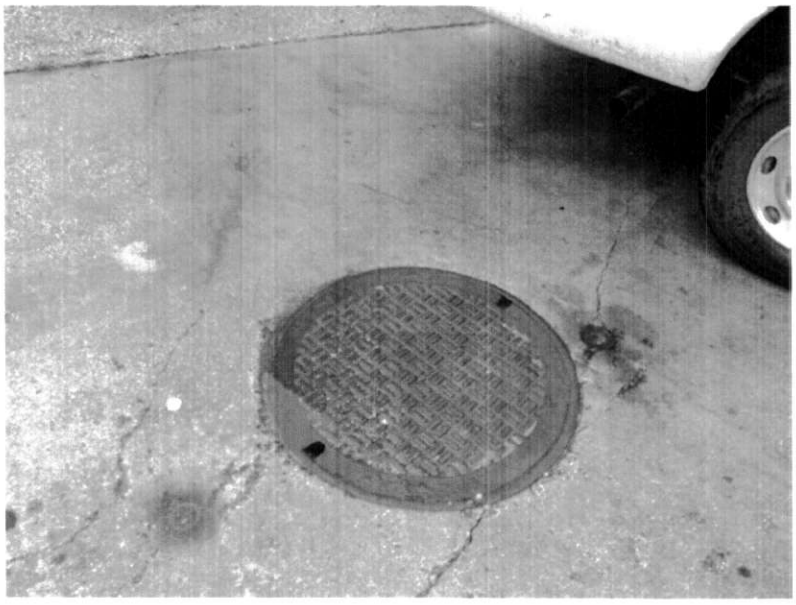
PHOTOGRAPHIC DOCUMENTATION

Attachment A
Photographic Documentation
Commercial Property
145-11 Liberty Avenue
Jamaica, New York

Photo #1 – View of exterior parking area of subject property



Photo #2 – View of access cover and fill port for underground storage tank



Attachment A
Photographic Documentation
Commercial Property
145-11 Liberty Avenue
Jamaica, New York

Photo #3 – View of storm drain



Photo #4 – View of interior lofted area of subject property



Attachment A
Photographic Documentation
Commercial Property
145-11 Liberty Avenue
Jamaica, New York

Photo #5 – View of aboveground storage tank

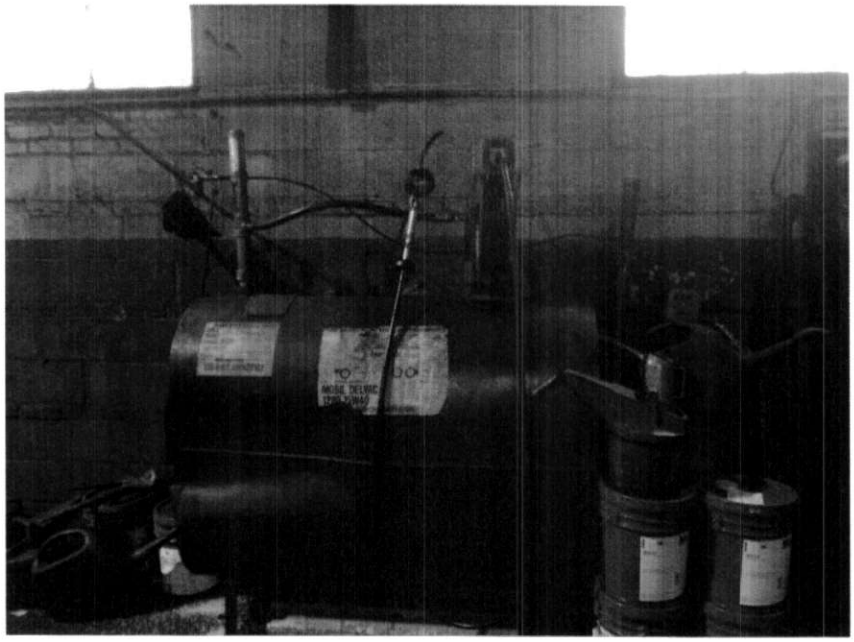
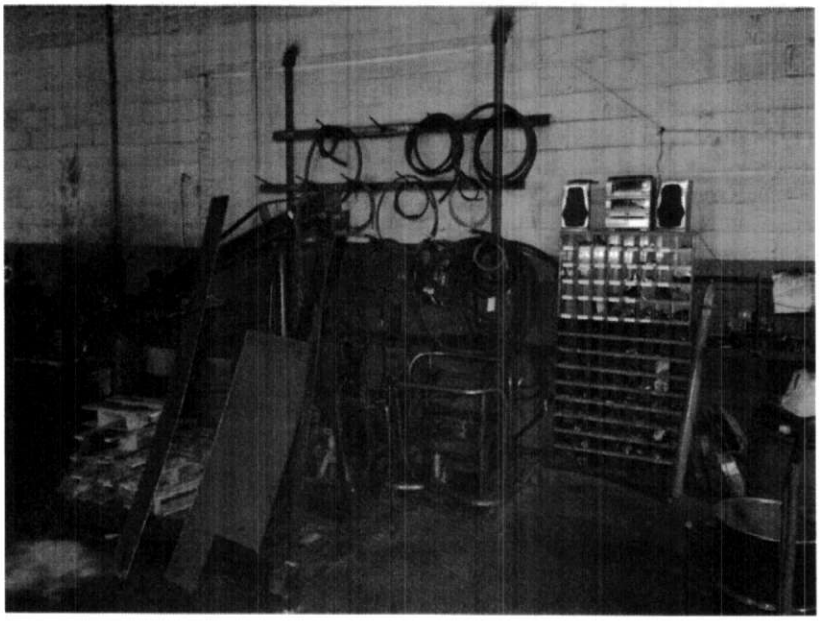


Photo #6 – View of interior of subject property and truck repair equipment



Attachment A
Photographic Documentation
Commercial Property
145-11 Liberty Avenue
Jamaica, New York

Photo #7 – View of one (1) floor drain

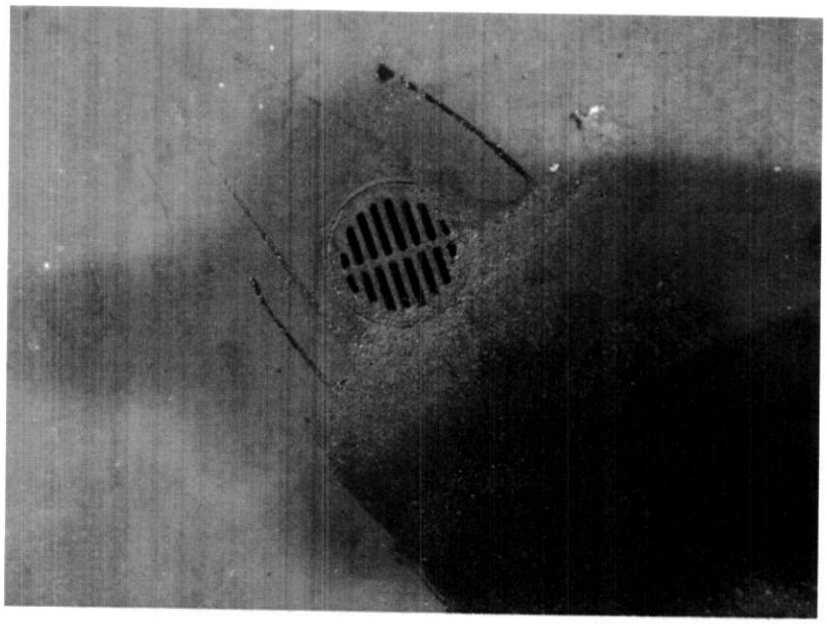
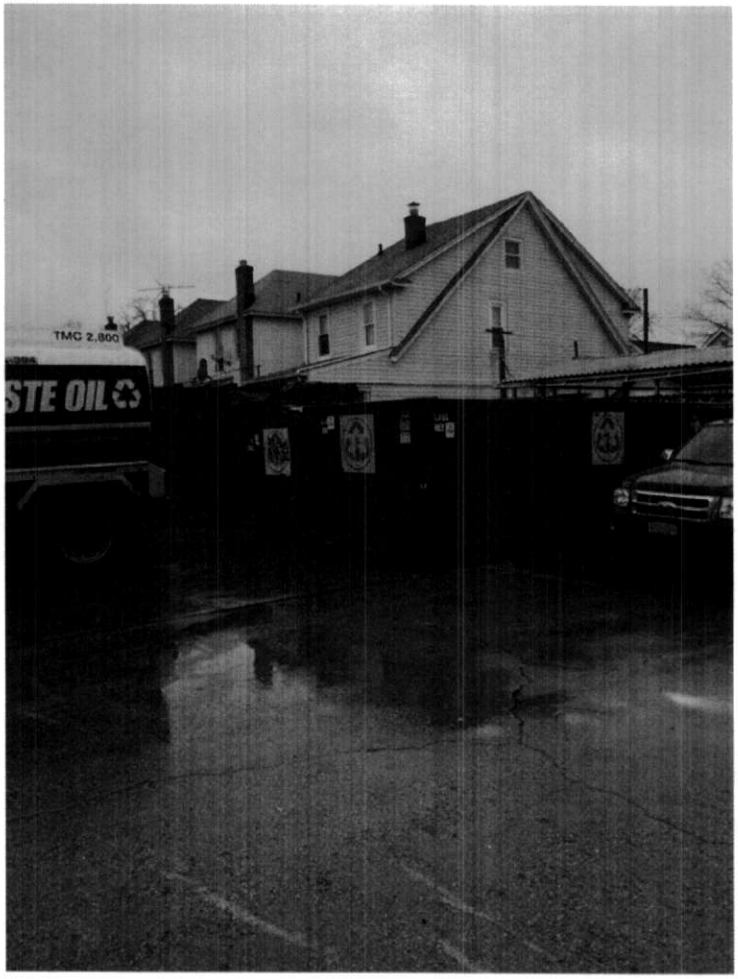


Photo #8 – View of interior office area



Attachment A
Photographic Documentation
Commercial Property
145-11 Liberty Avenue
Jamaica, New York

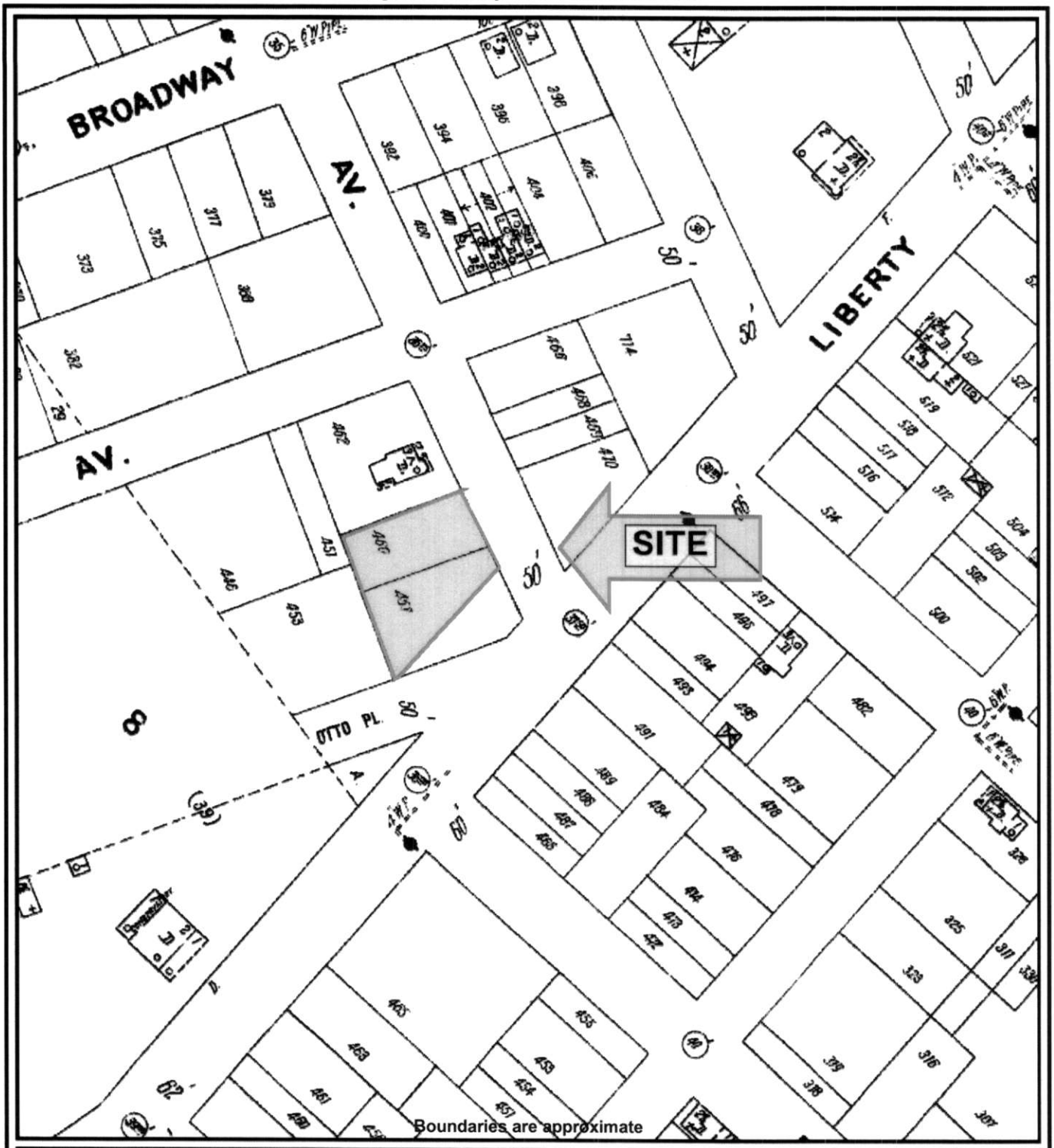
Photo #9 – View of dumpsters located on subject property



ATTACHMENT B

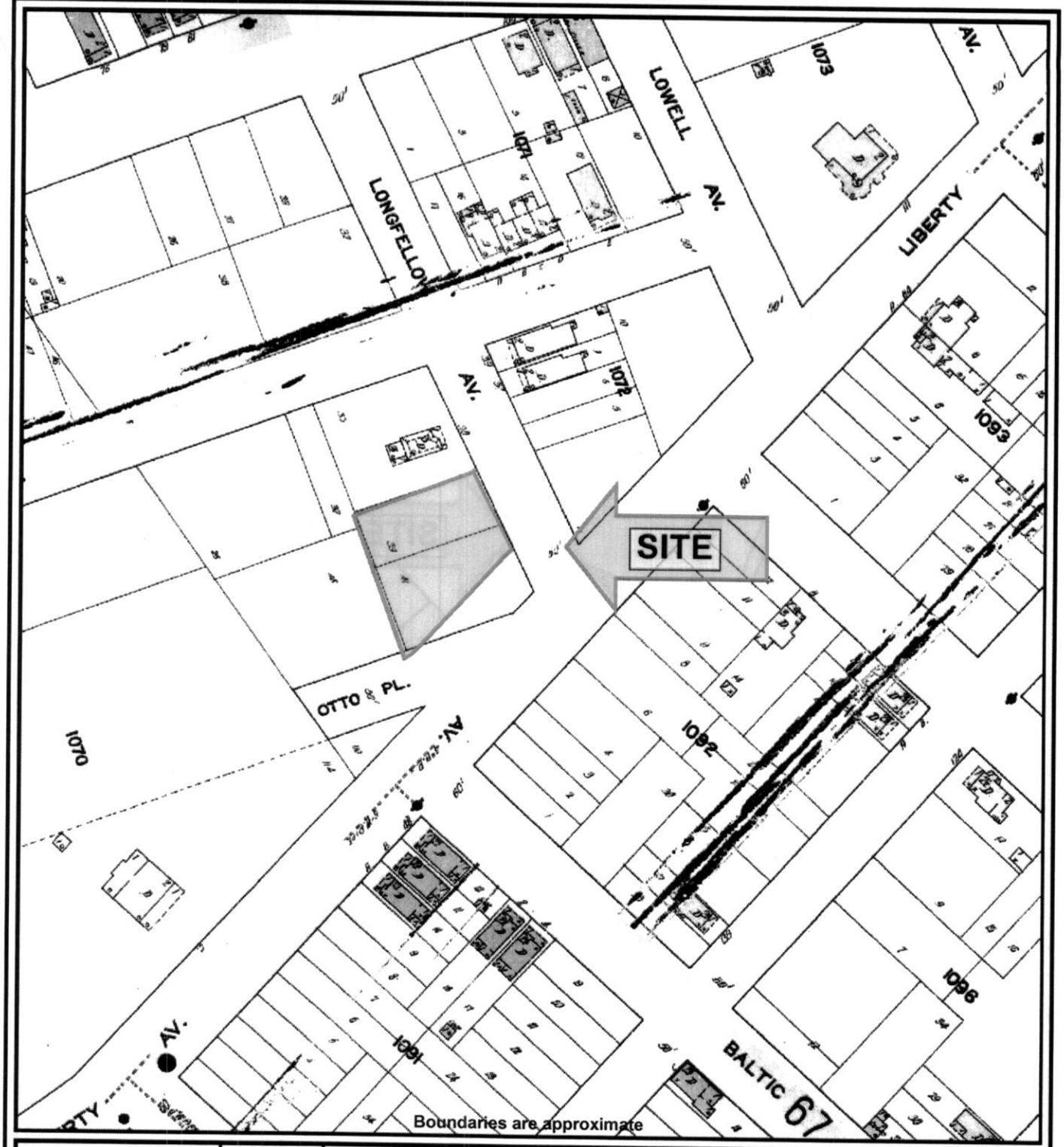
SANBORN MAPS

Image Provided By EDR Certified Sanborns



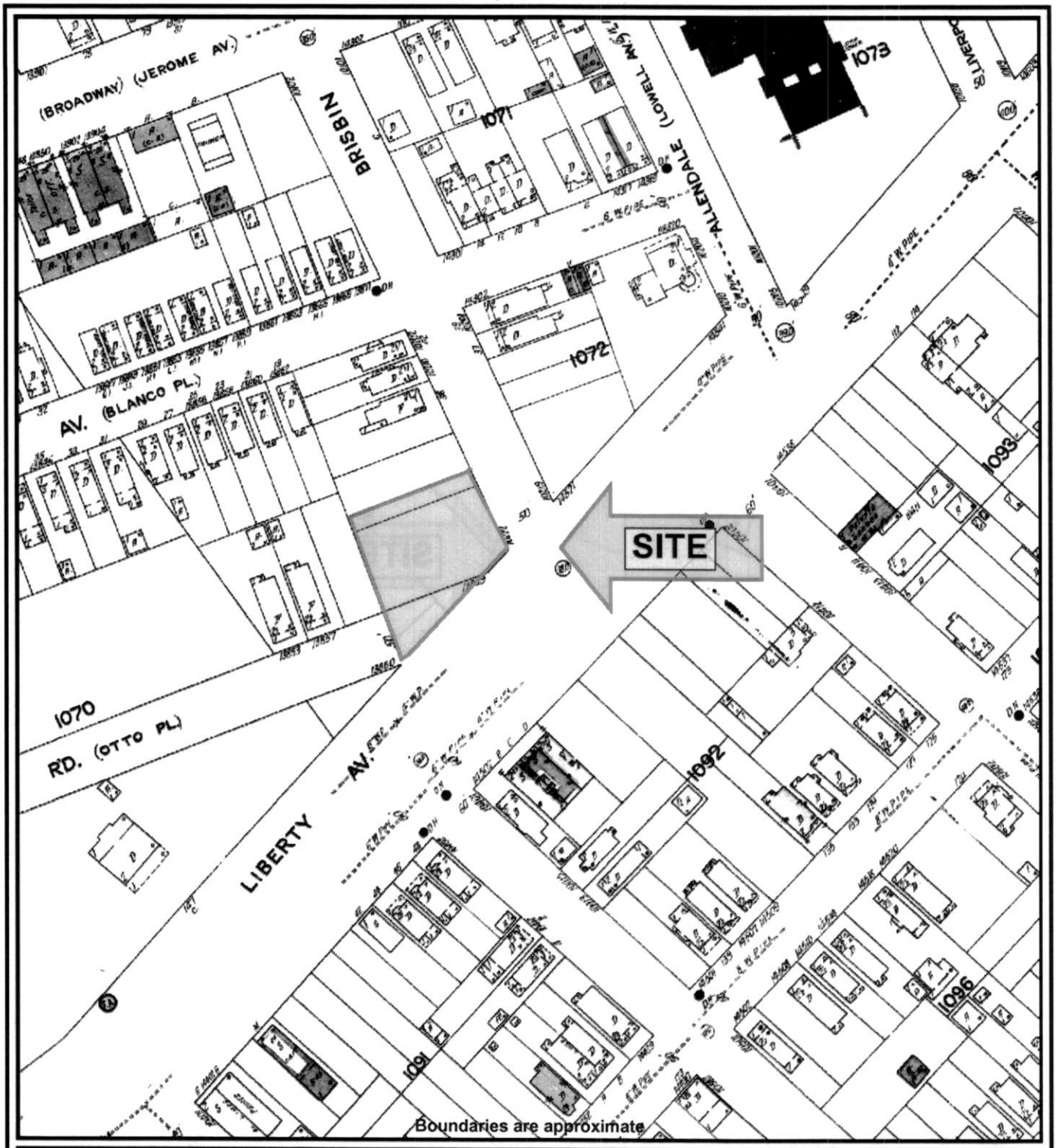
EDR 1901	↑ N	SANBORN - 1901 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



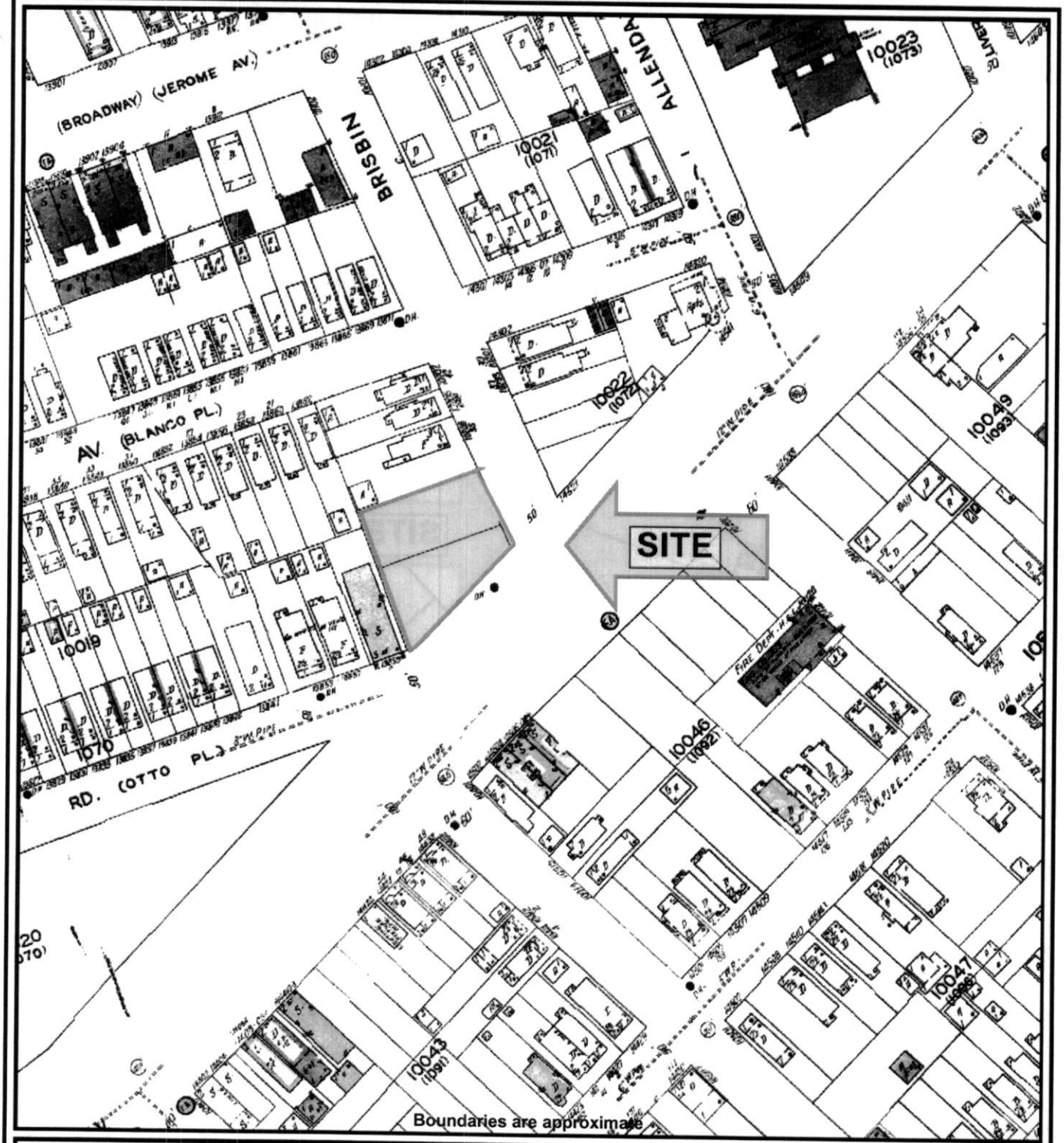
EDR	N	SANBORN - 1911	AESI
1911		145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



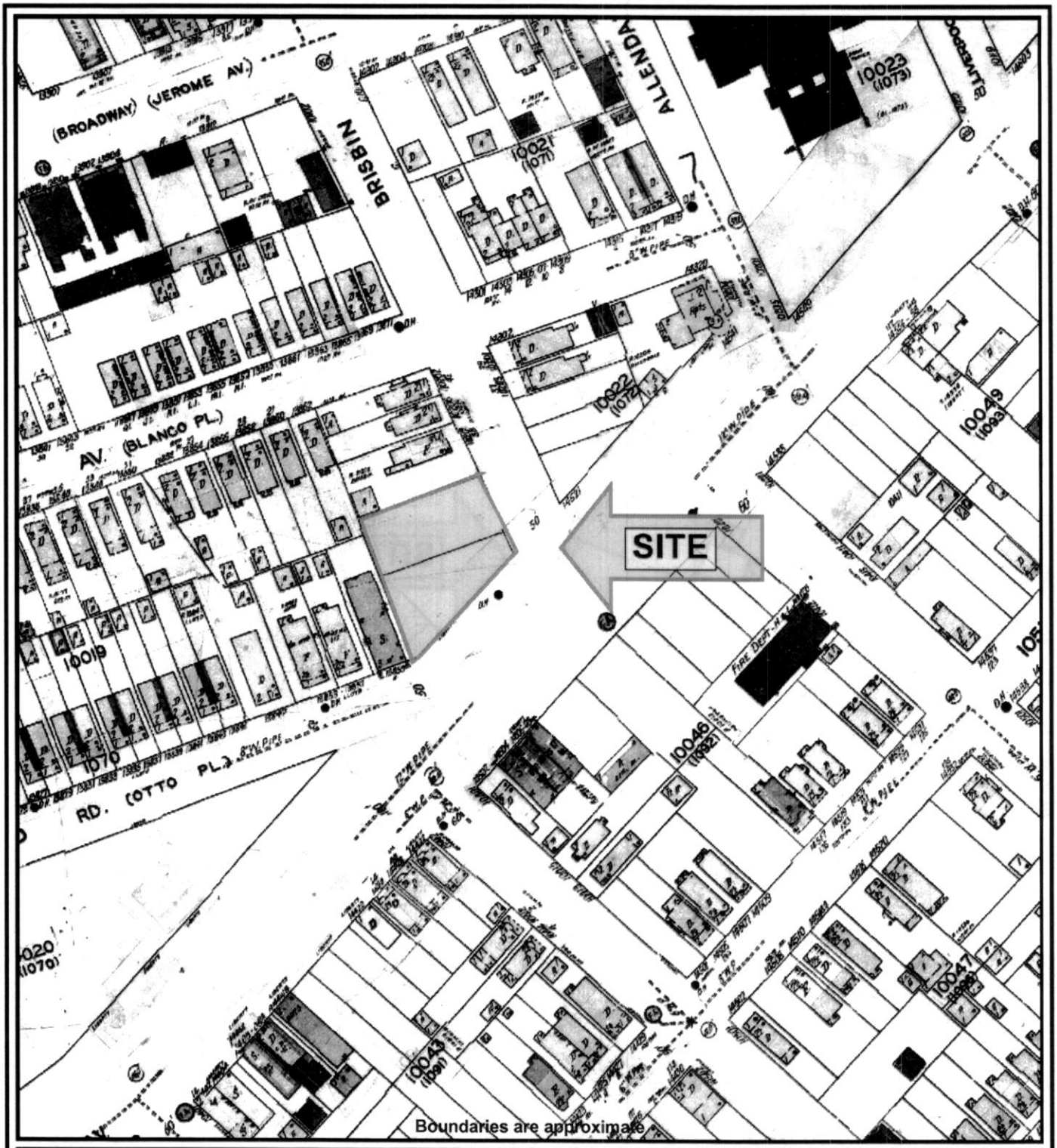
EDR 1925	↑ N	SANBORN - 1925 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



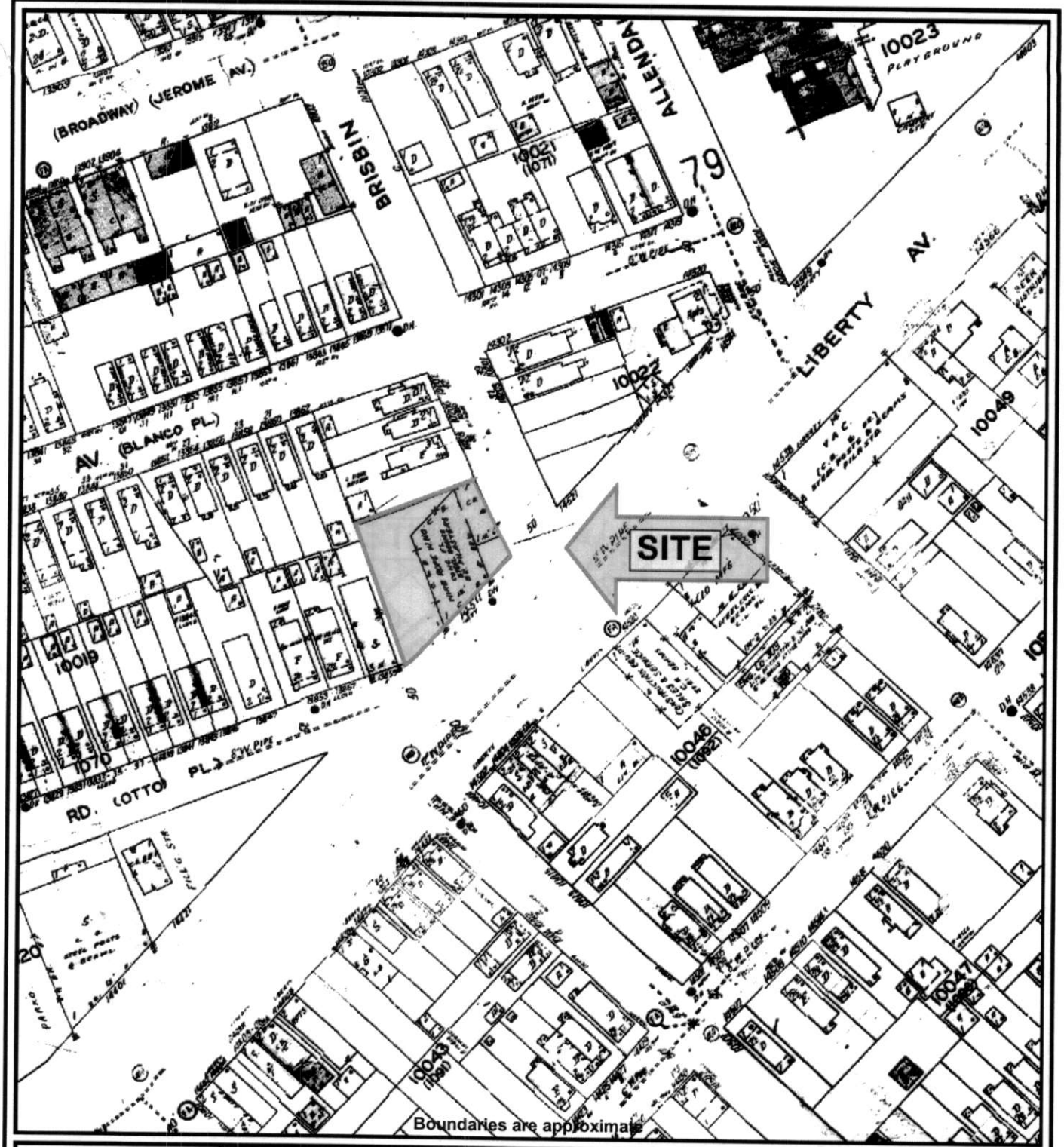
EDR 1942	↑ N	SANBORN - 1942 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



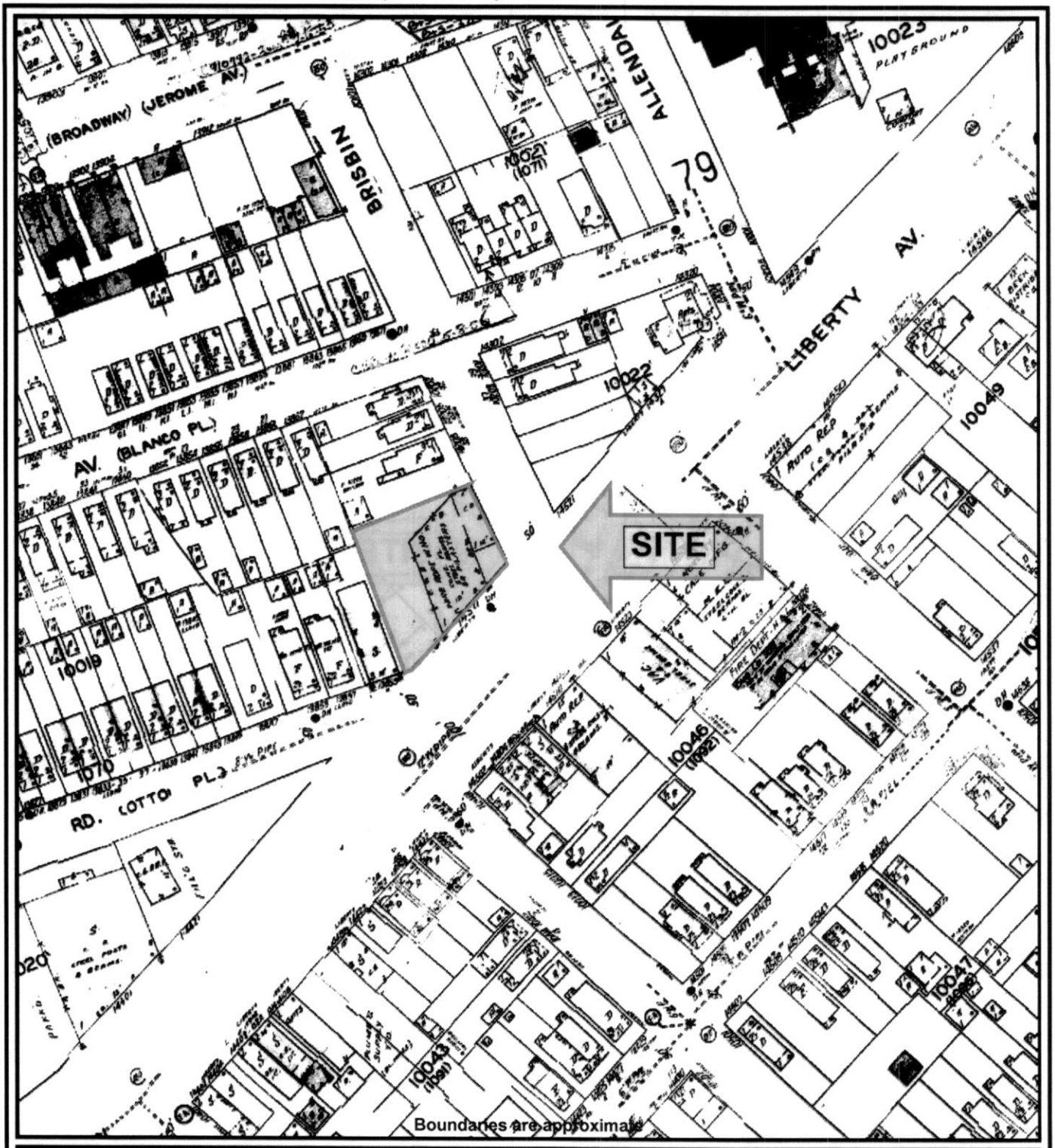
EDR 1951	↑ N	SANBORN - 1951 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



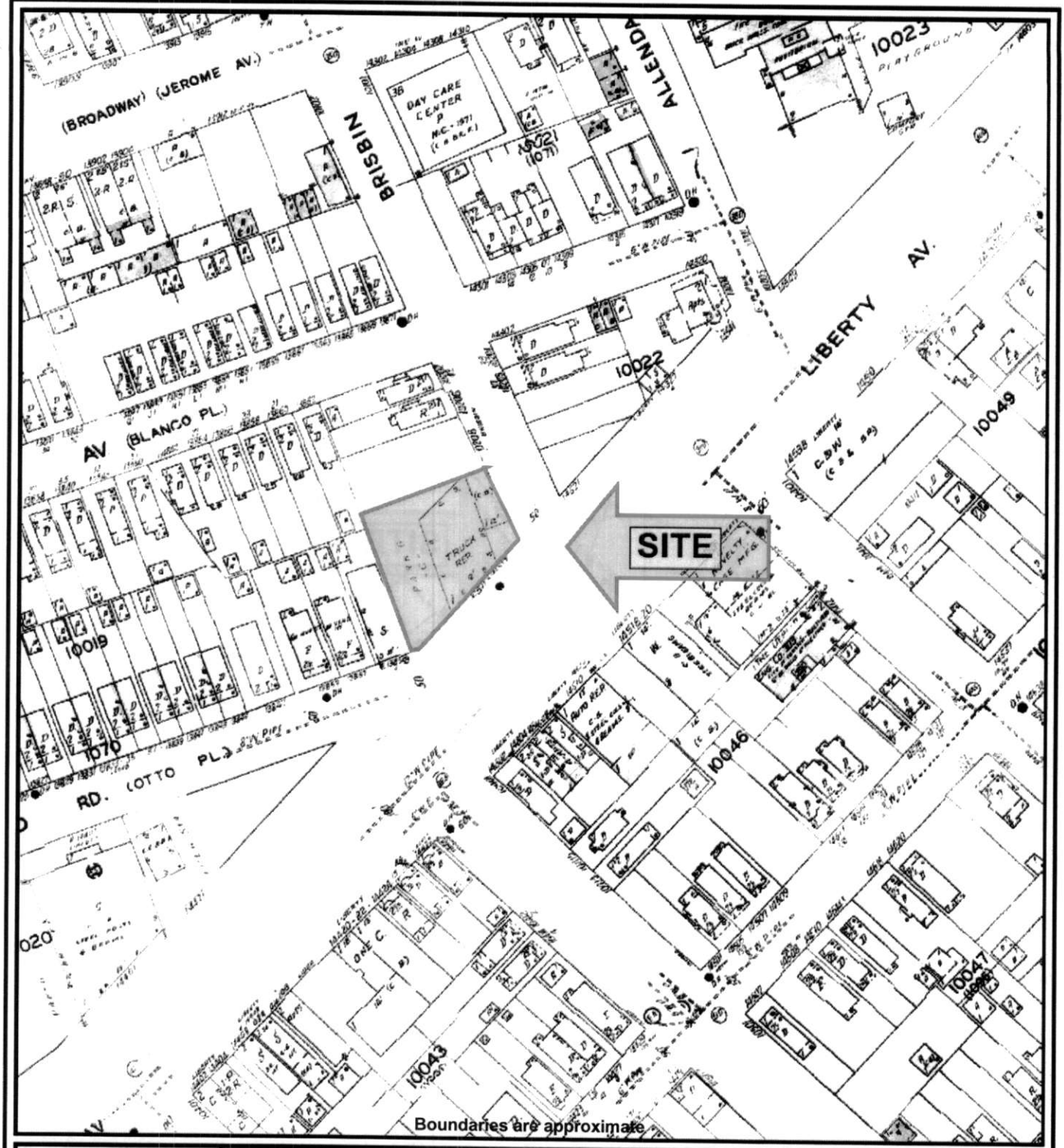
EDR 1963	↑ N	SANBORN - 1963 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



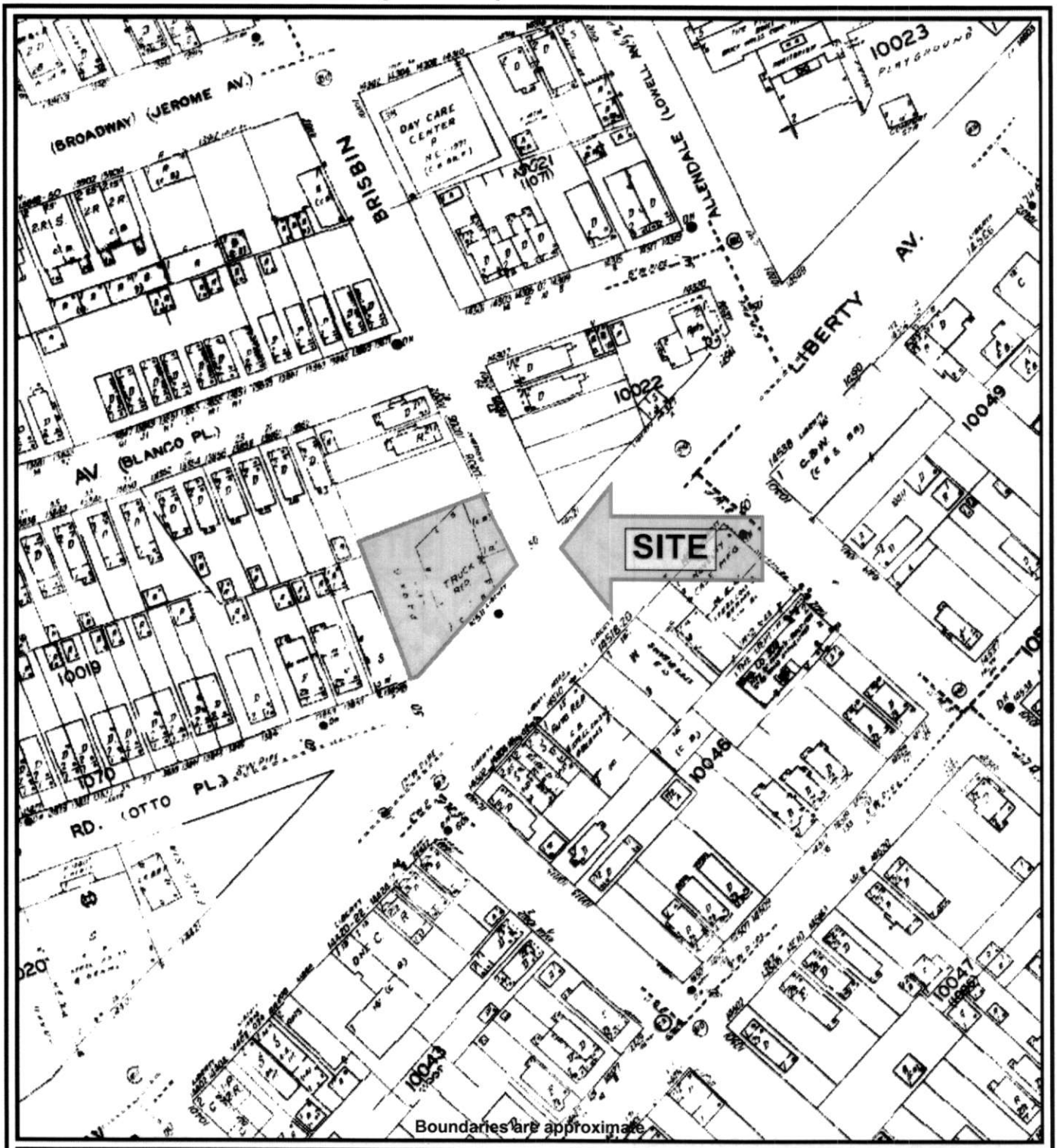
EDR 1967	↑ N	SANBORN - 1967 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



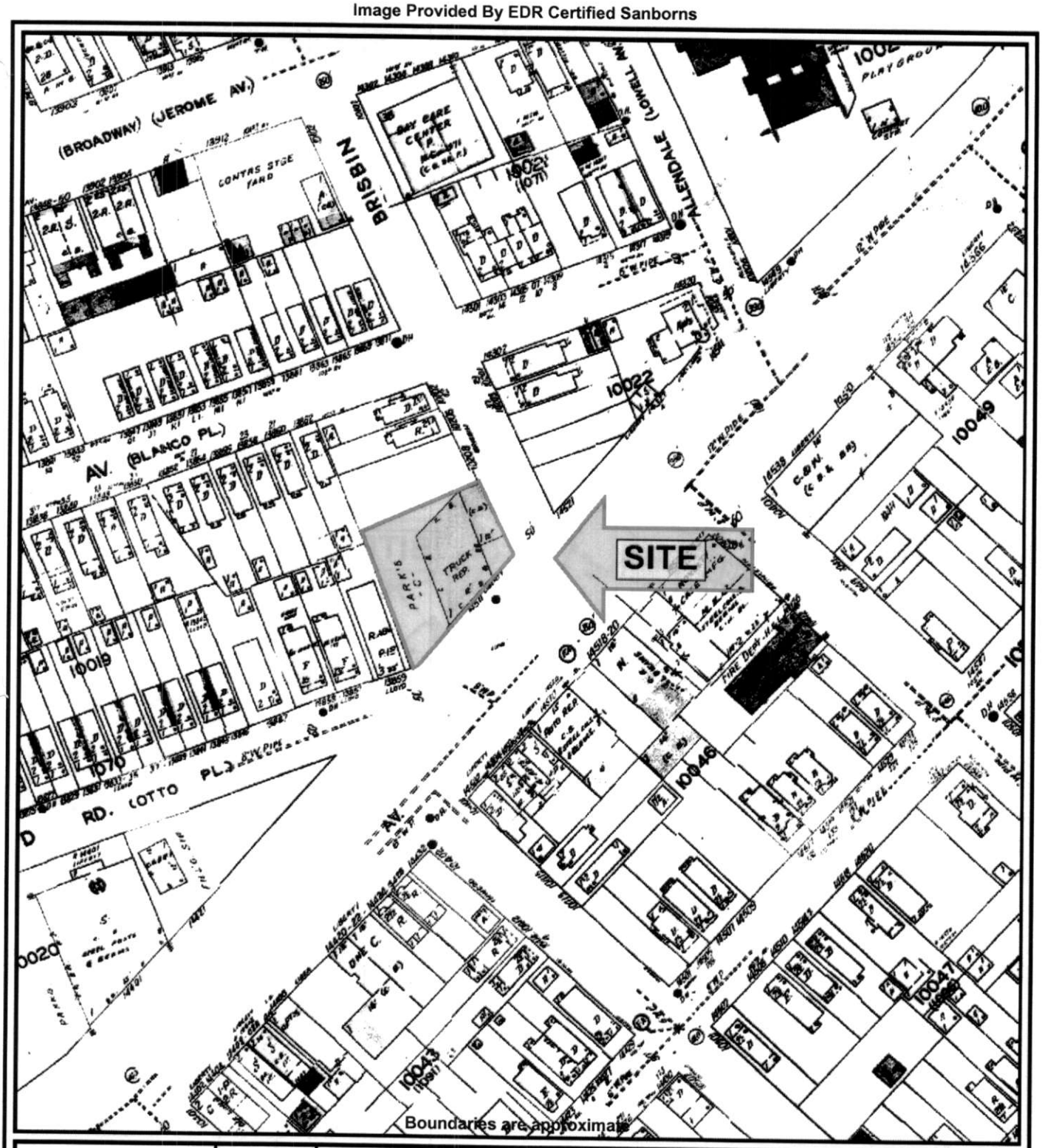
EDR 1981	↑ N	SANBORN - 1981 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



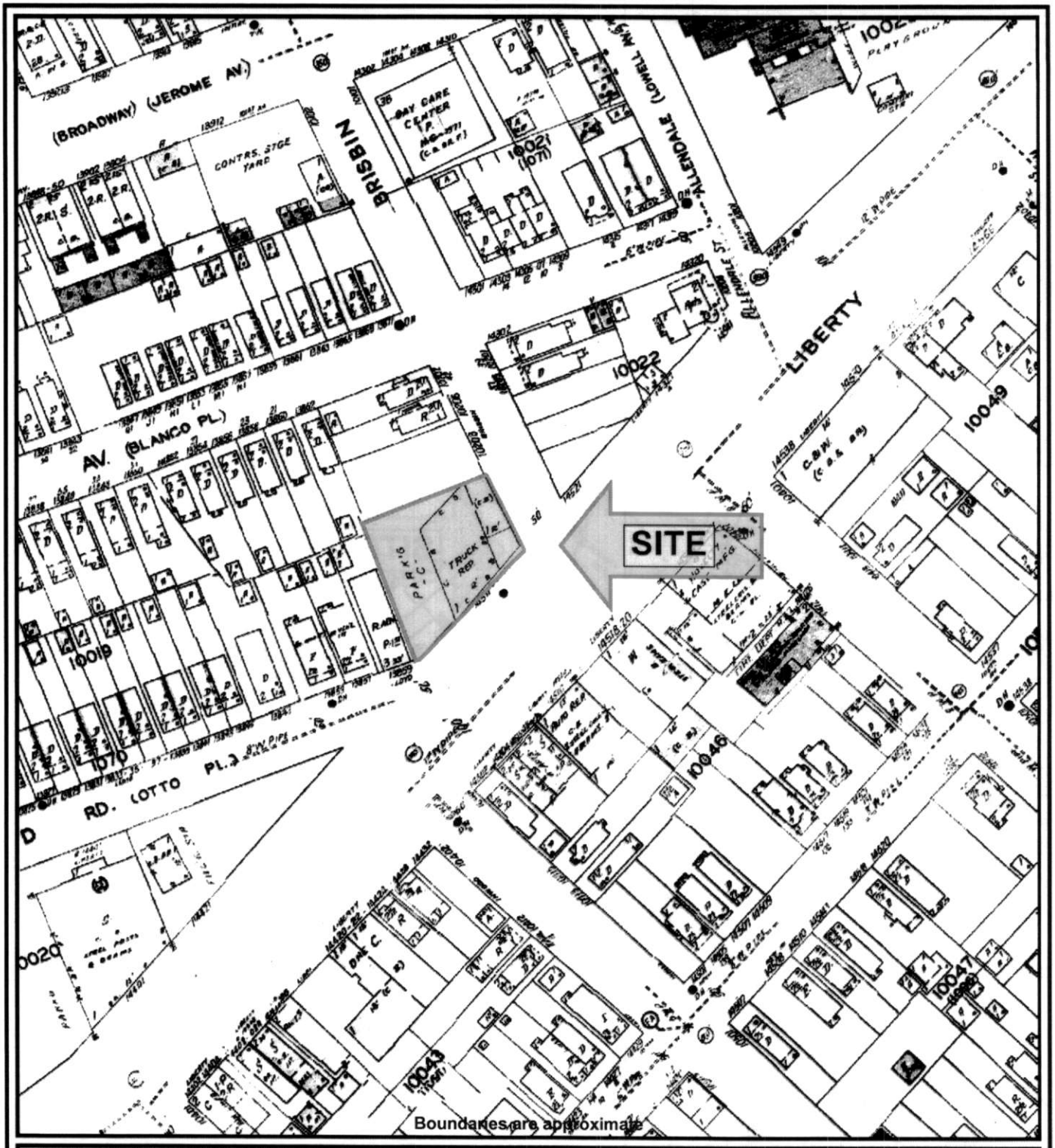
EDR 1982	↑ N	SANBORN - 1982 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



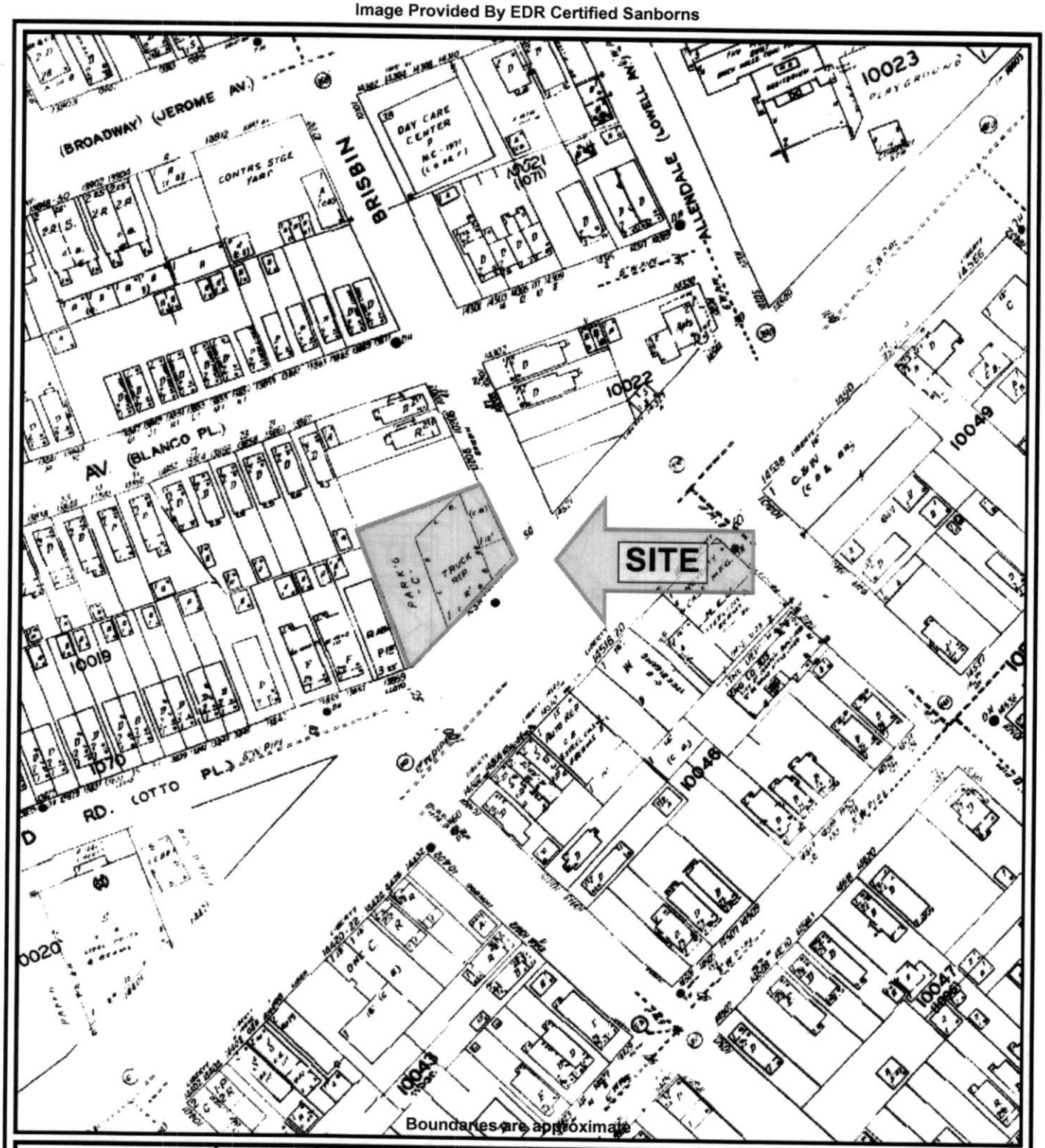
EDR 1985	↑ N	SANBORN - 1985 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



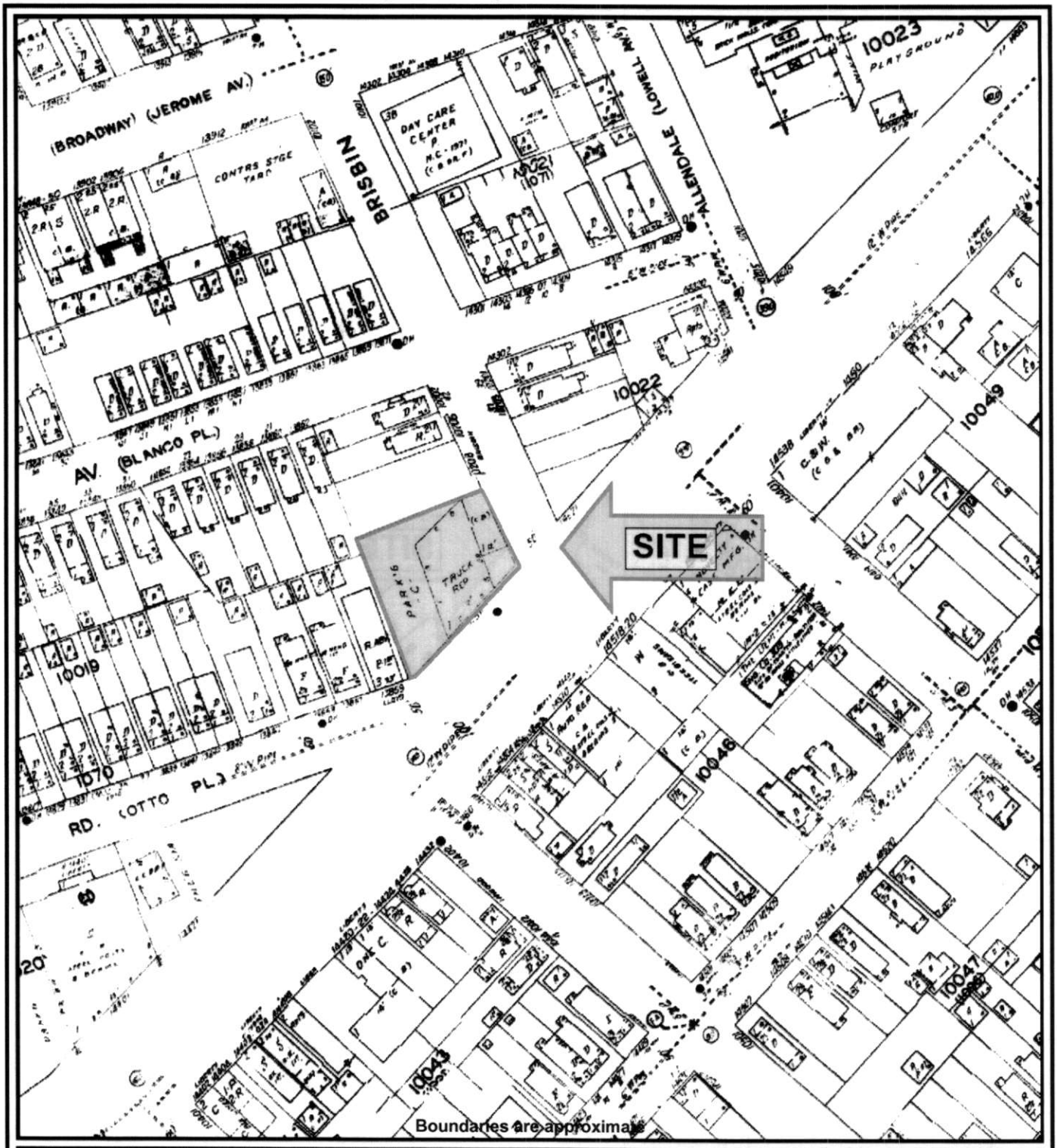
EDR 1986	↑ N	SANBORN - 1986 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



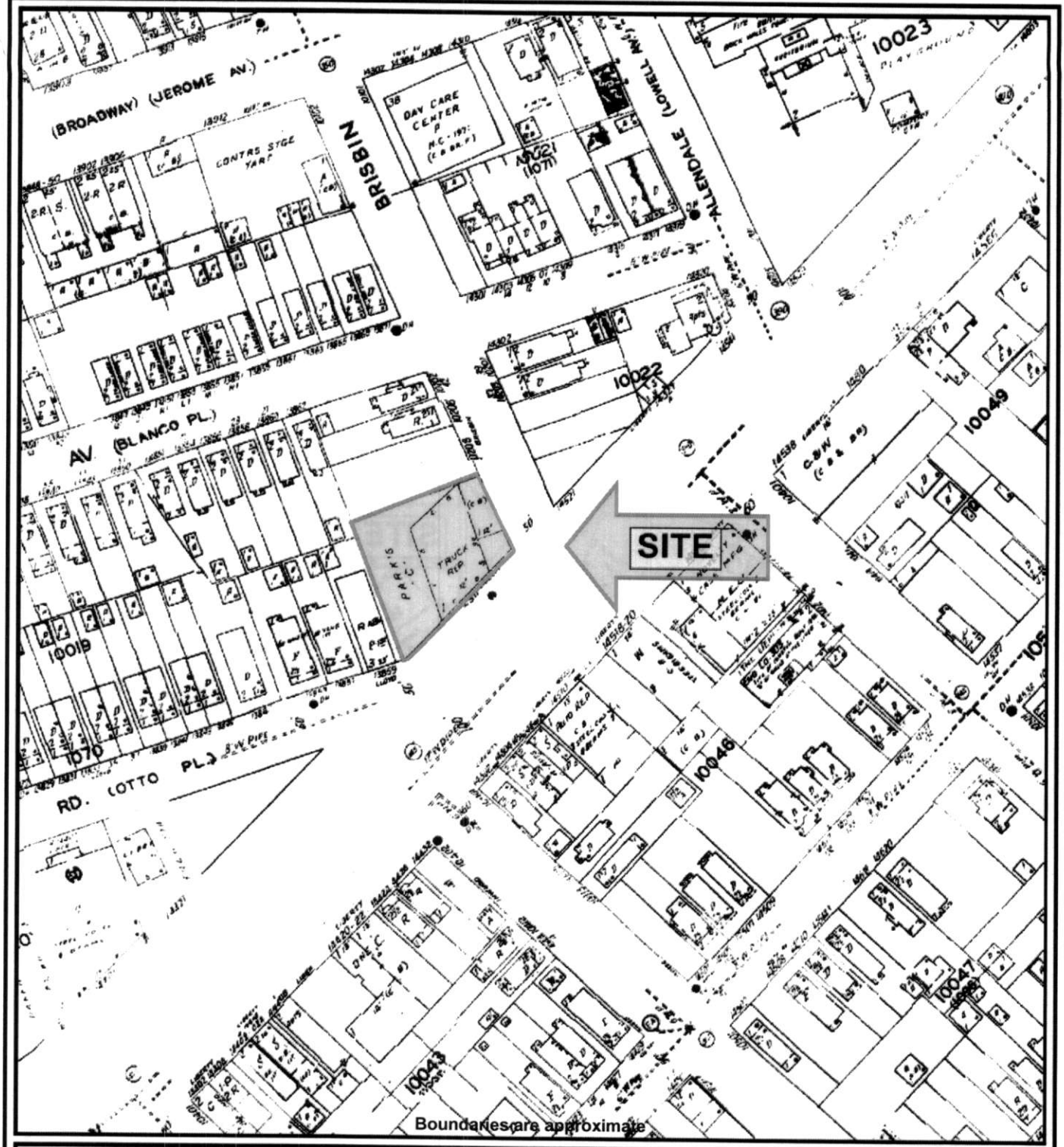
EDR 1987	↑ N	SANBORN - 1987 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



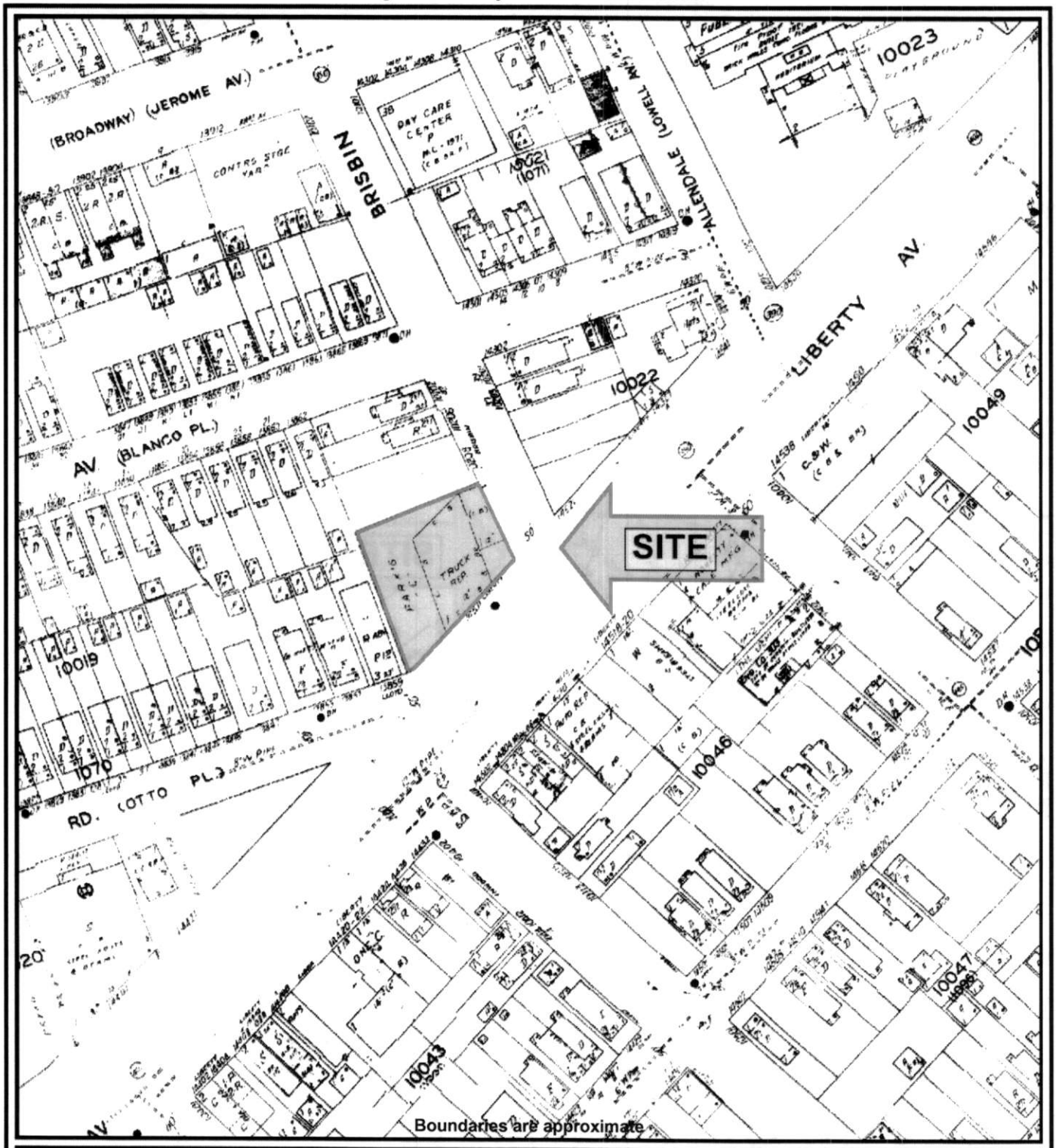
EDR 1988	↑ N	SANBORN - 1988 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



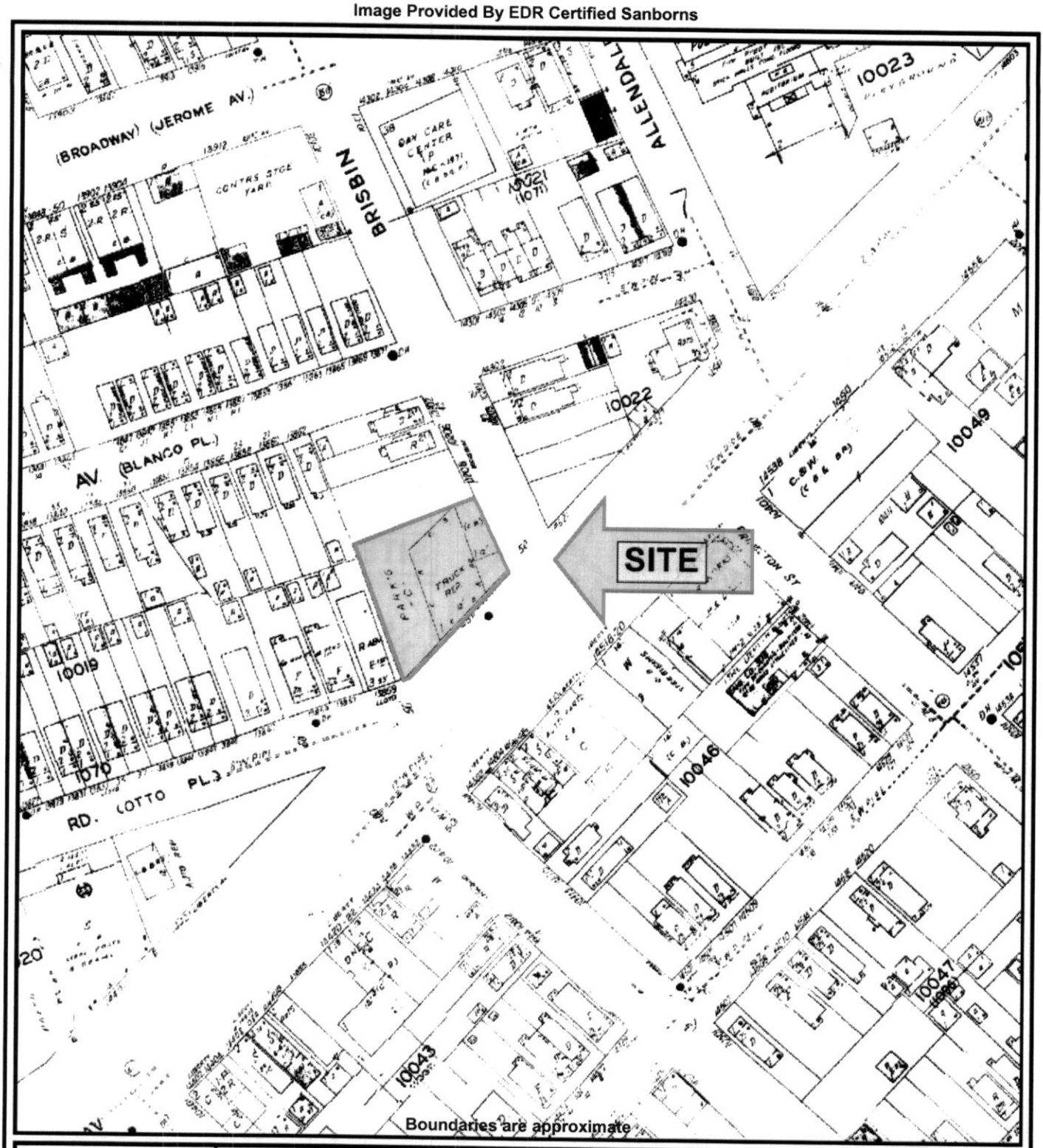
EDR 1990	↑ N	SANBORN - 1990 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



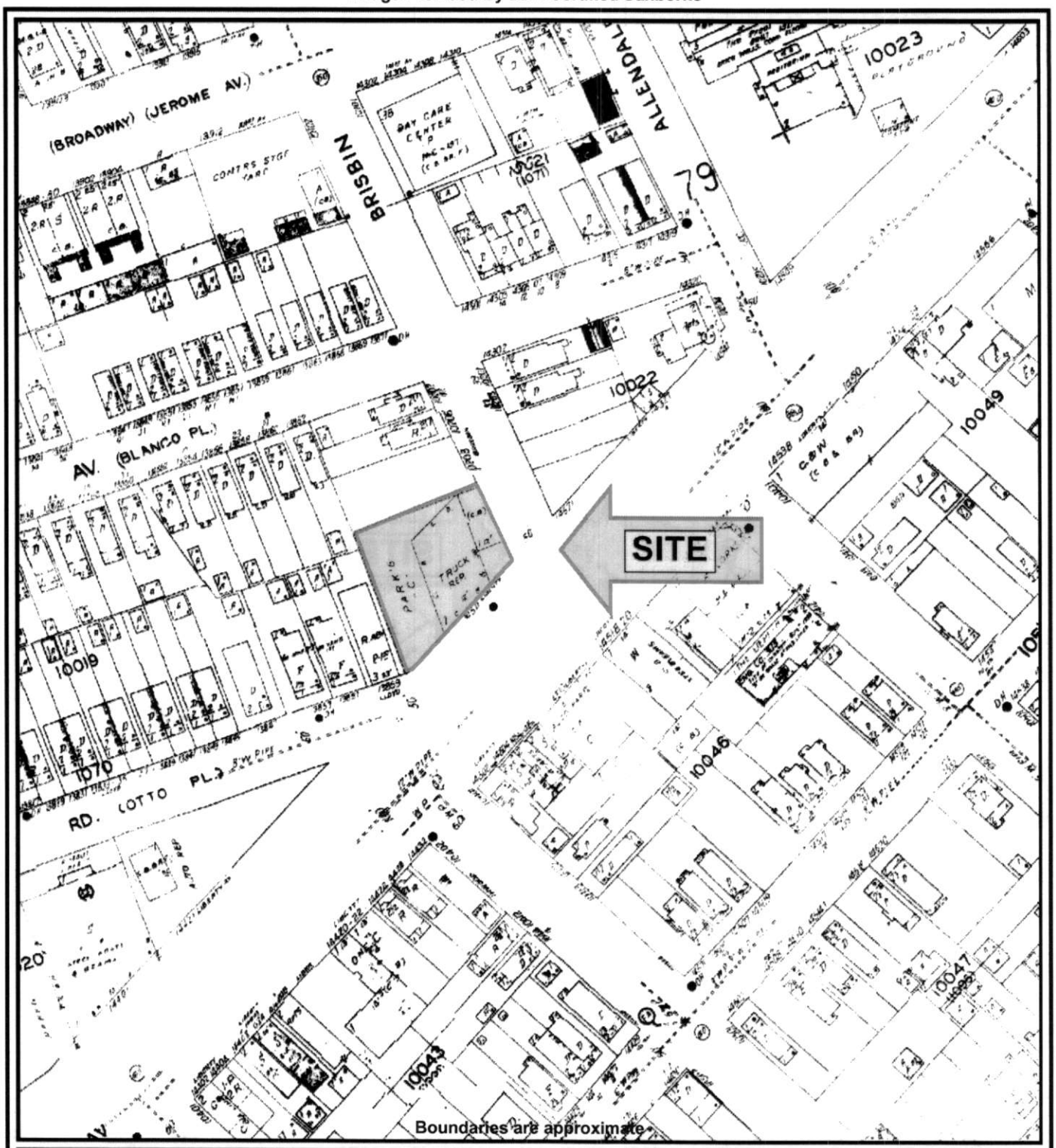
EDR 1991	↑ N	SANBORN - 1991 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



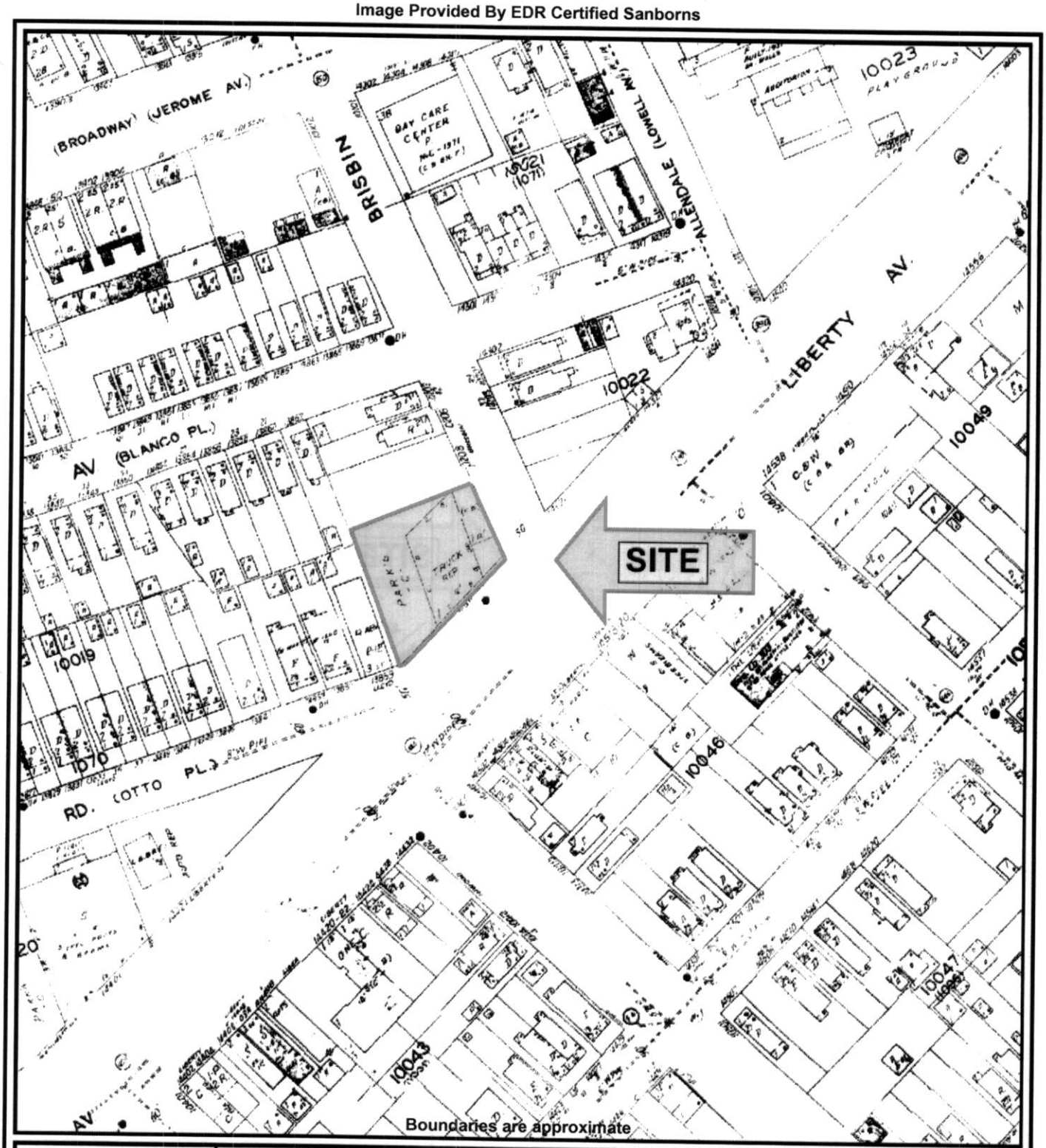
EDR 1992	↑ N	SANBORN - 1992 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



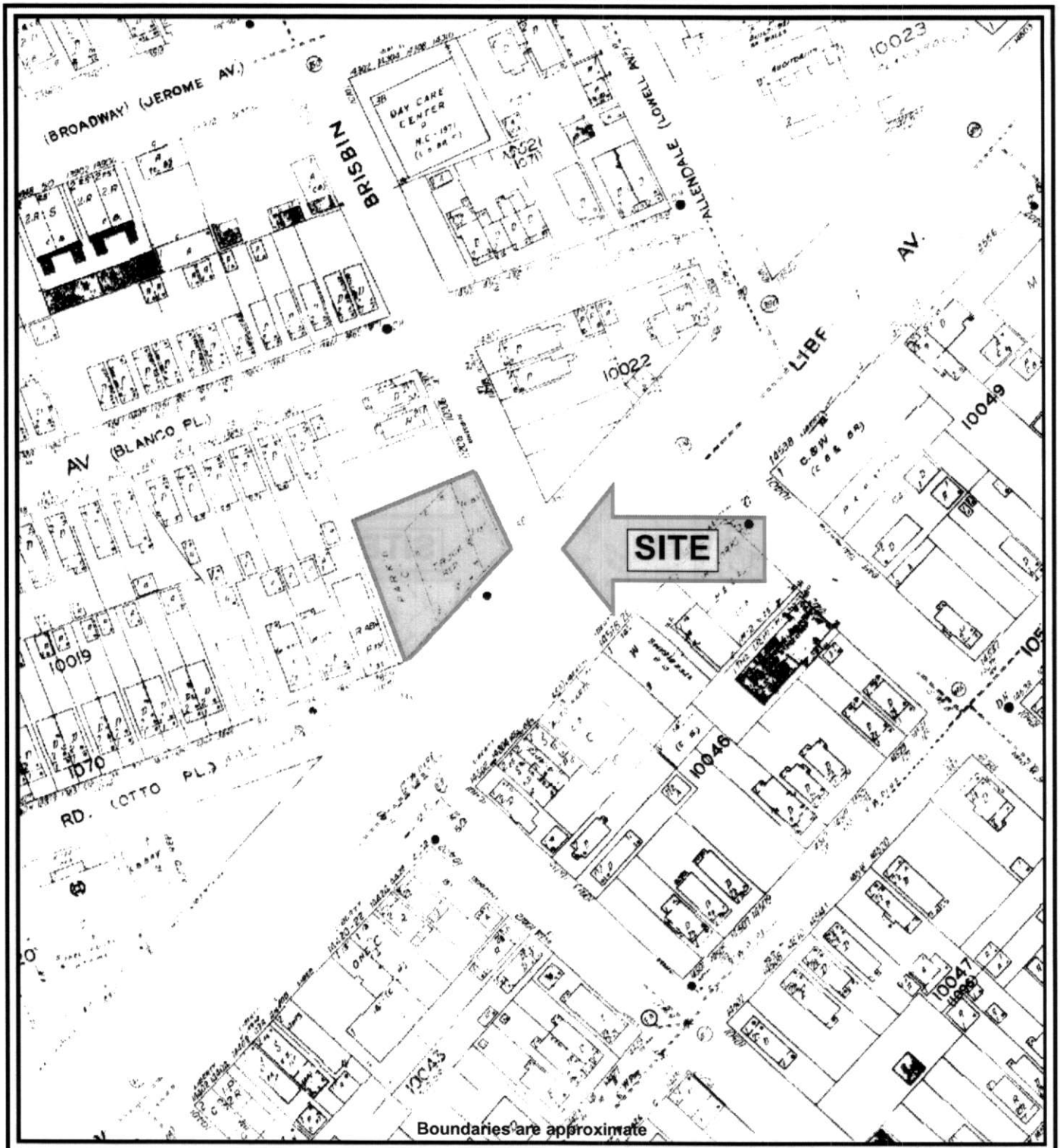
EDR 1993	↑ N	SANBORN - 1993 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



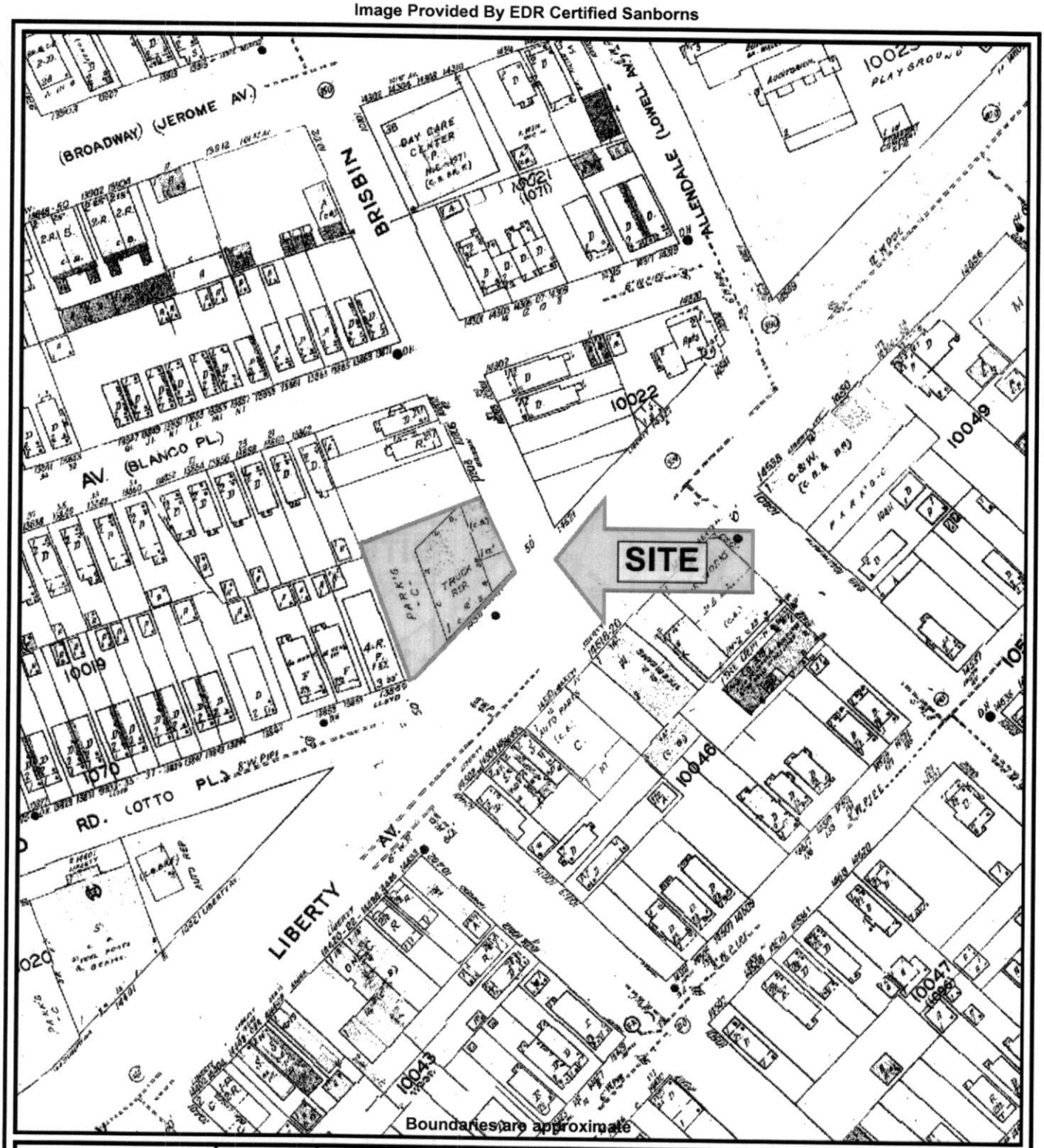
EDR 1995	↑ N	SANBORN - 1995 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



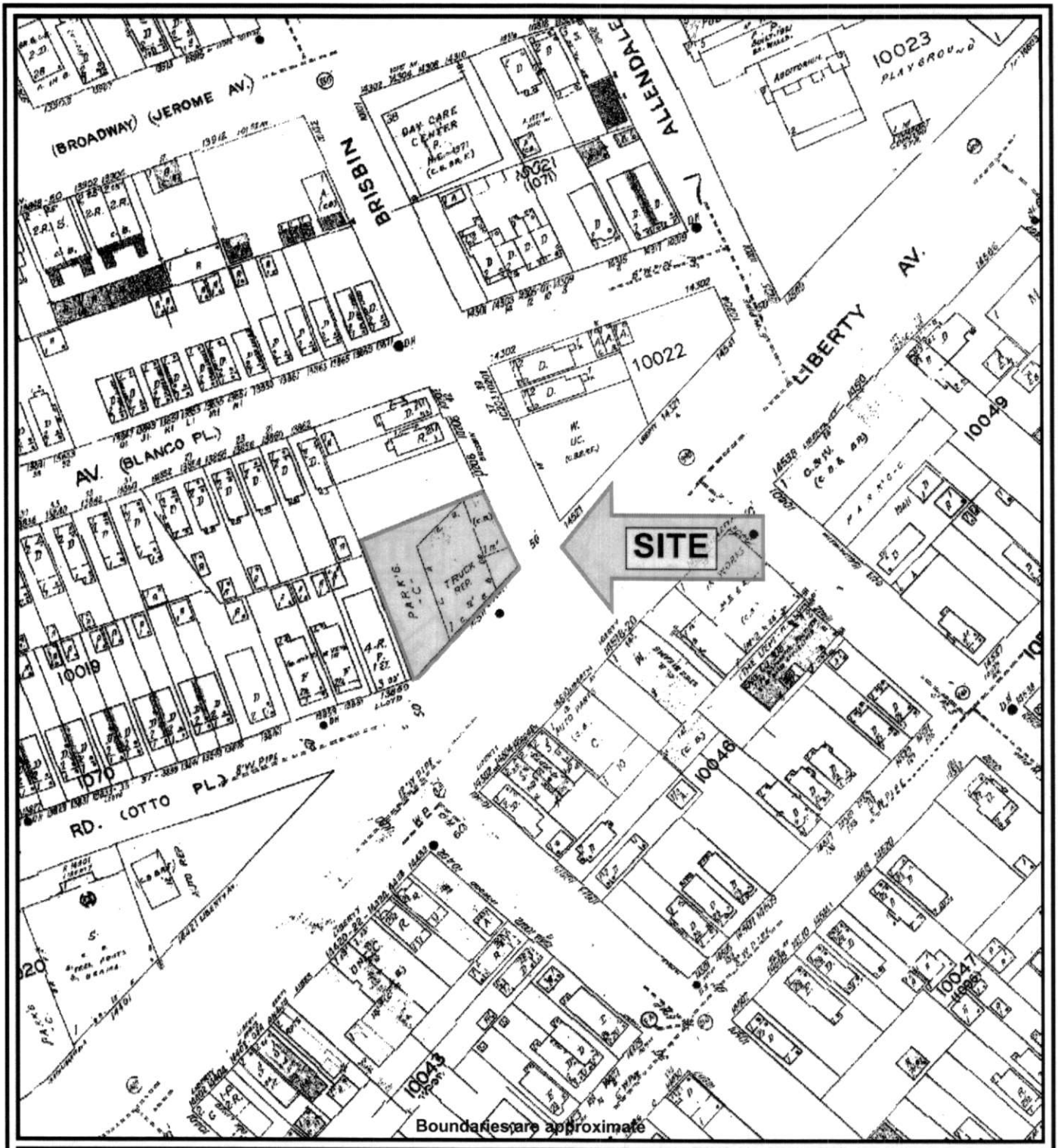
EDR 1996	↑ N	SANBORN - 1996 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



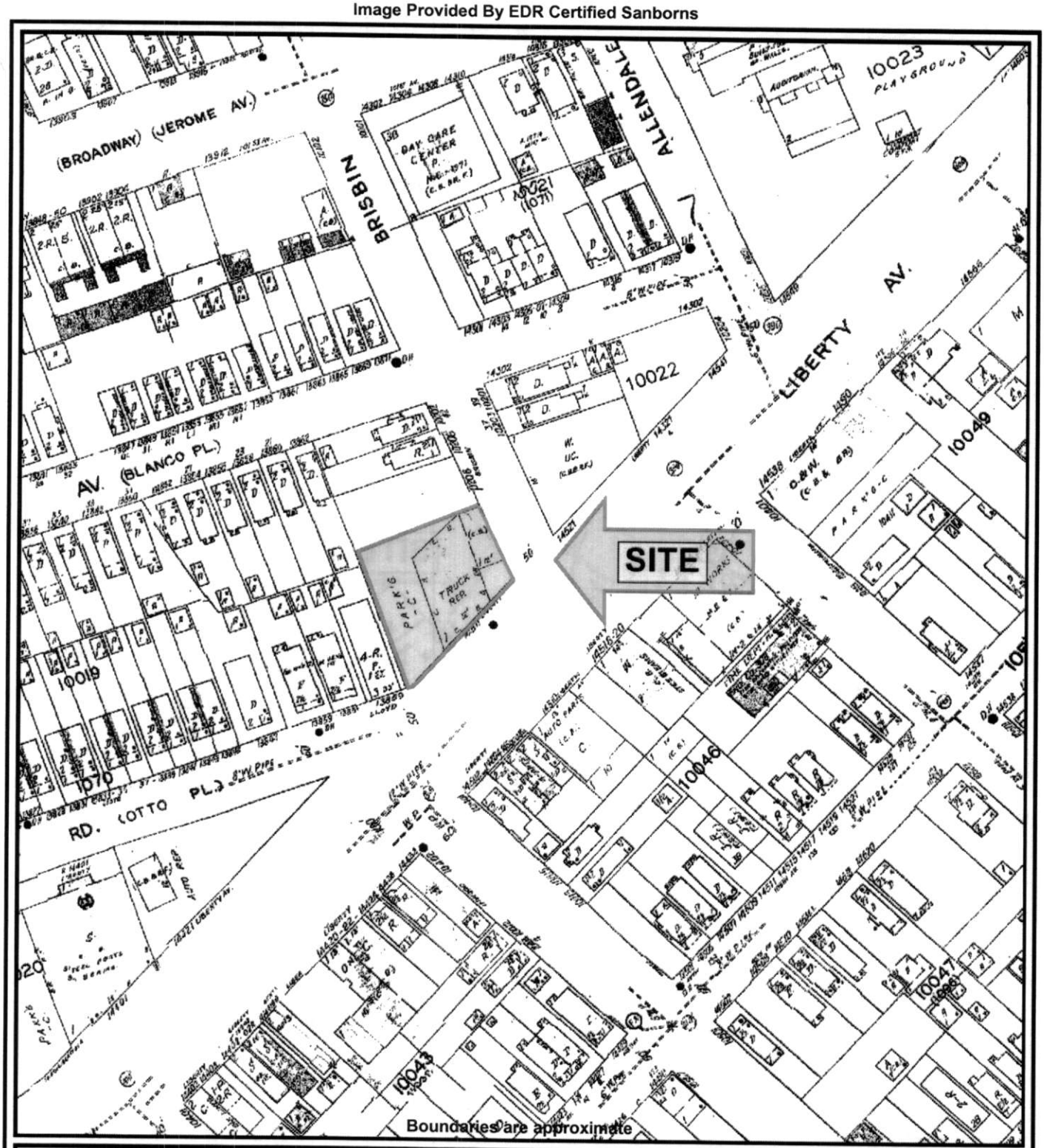
EDR 1999	↑ N	SANBORN - 1999 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



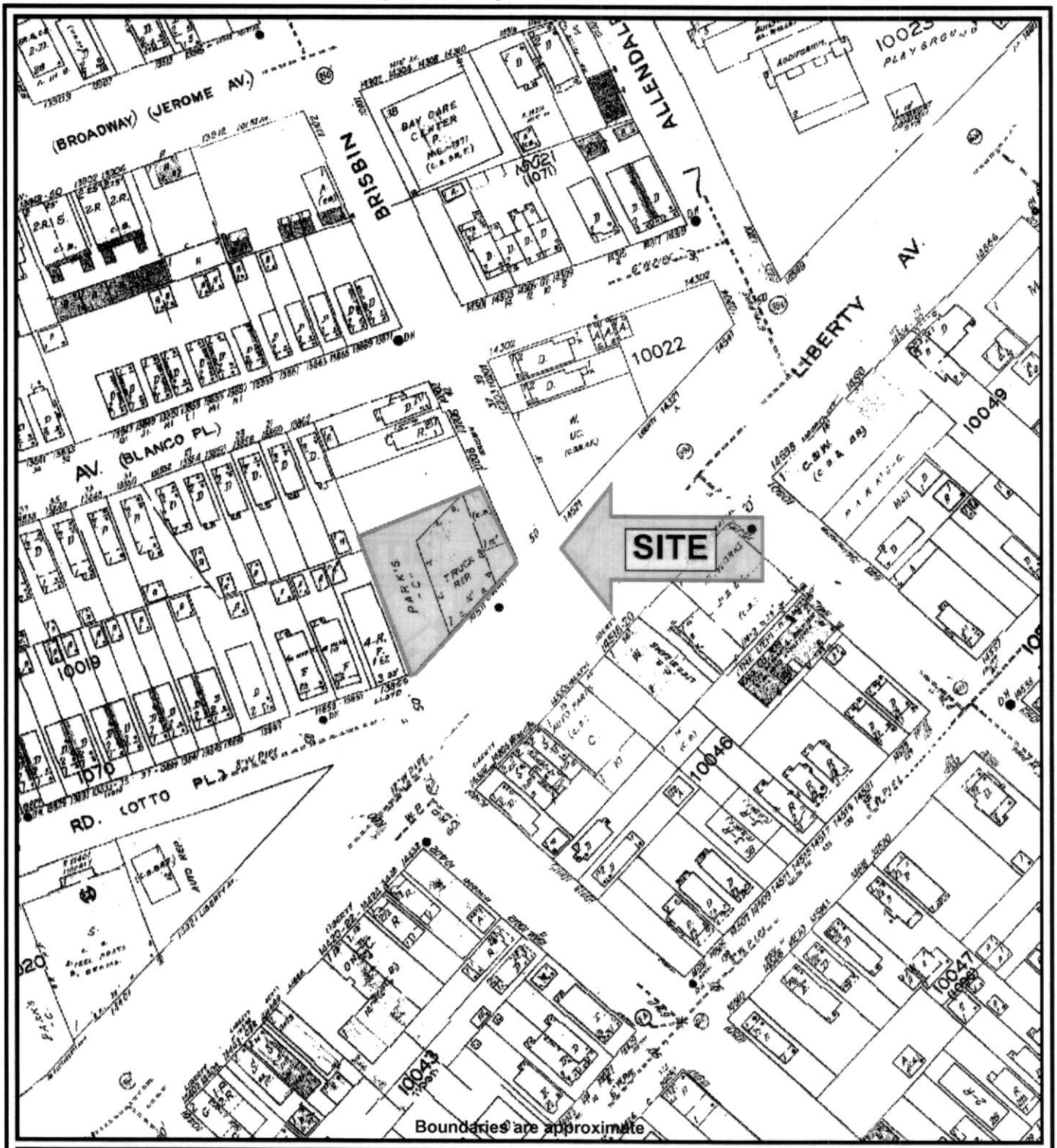
EDR 2001	↑ N	SANBORN - 2001 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



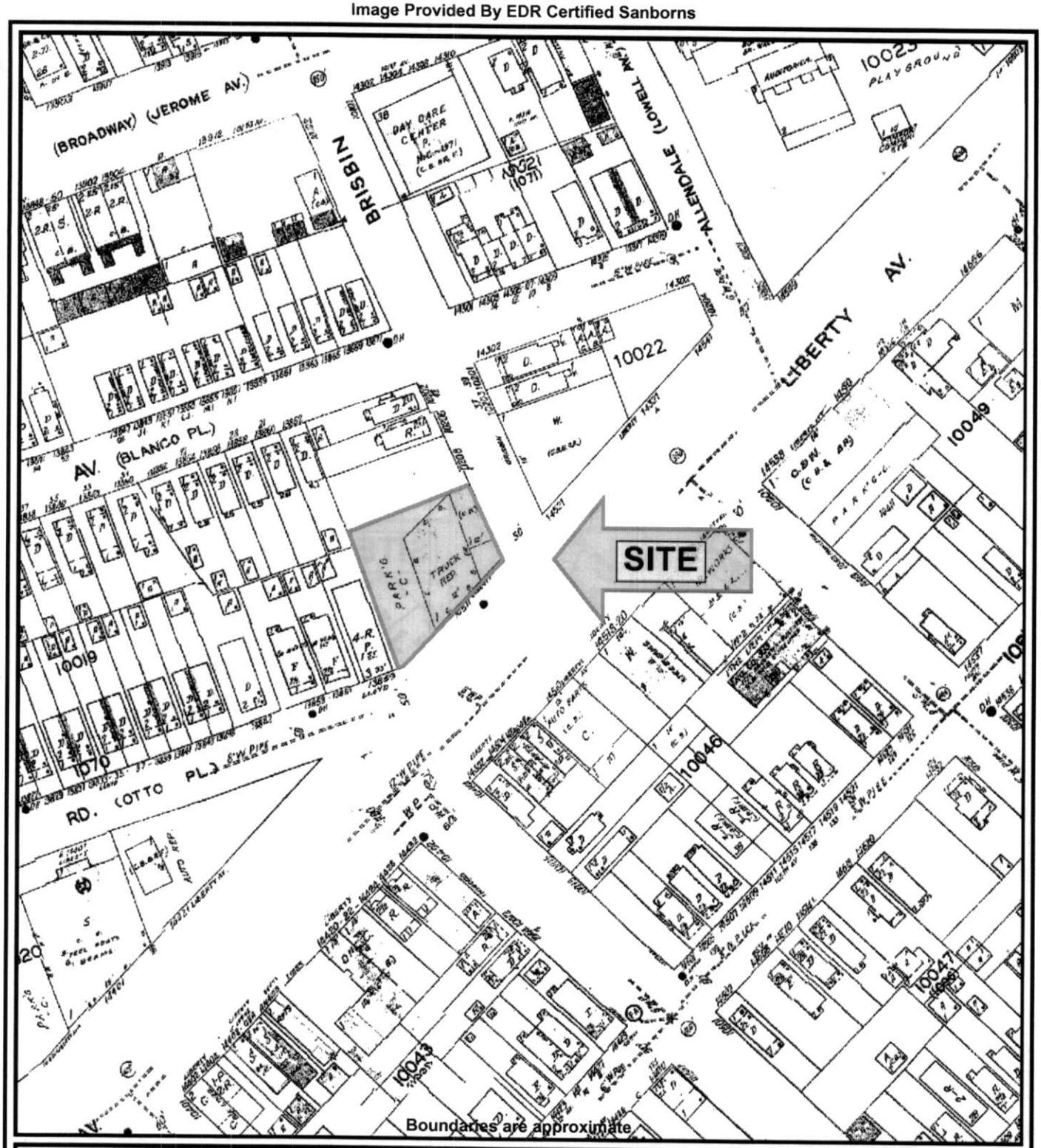
EDR 2002	↑ N	SANBORN - 2002 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



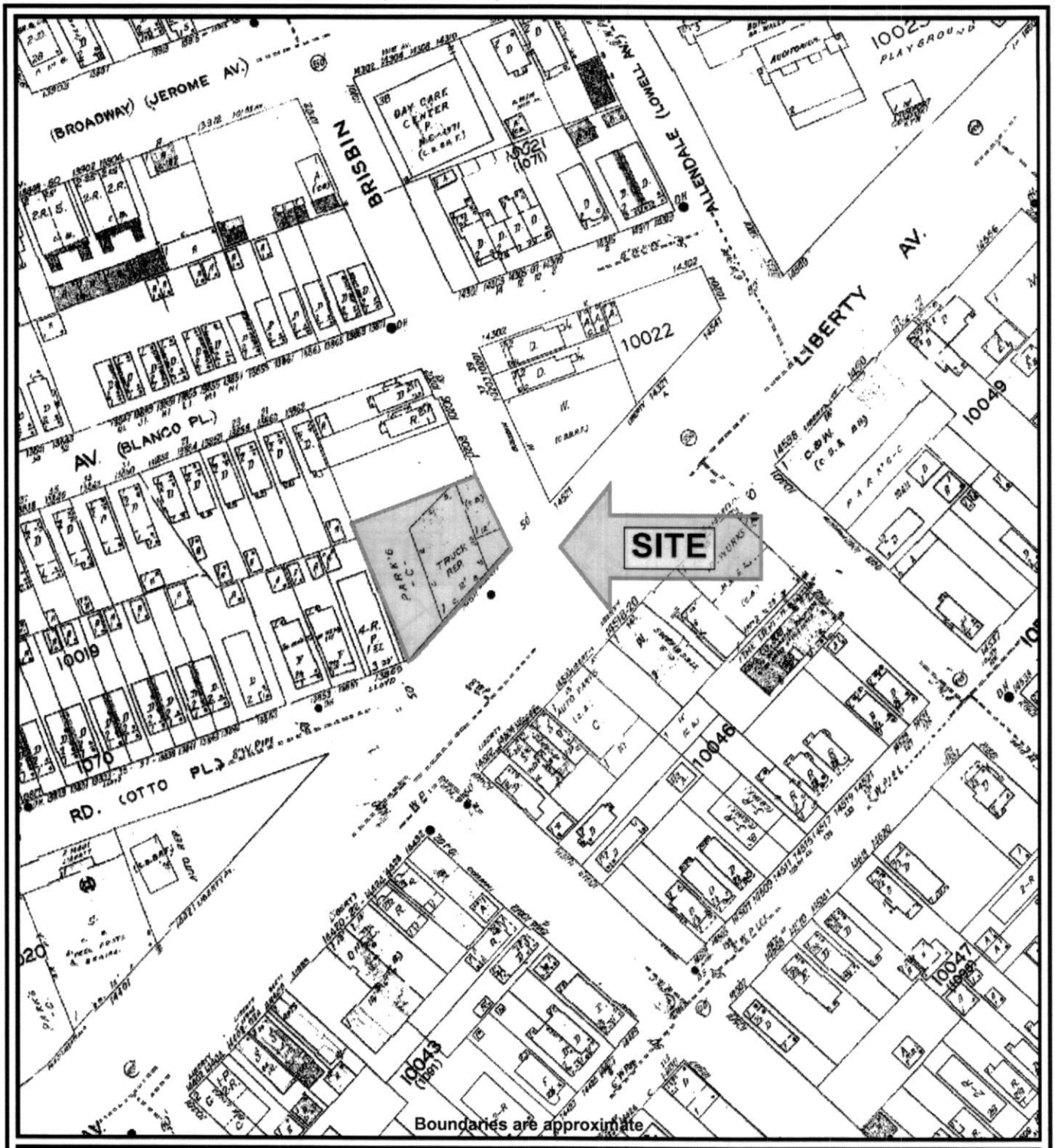
EDR 2003	↑ N	SANBORN - 2003 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



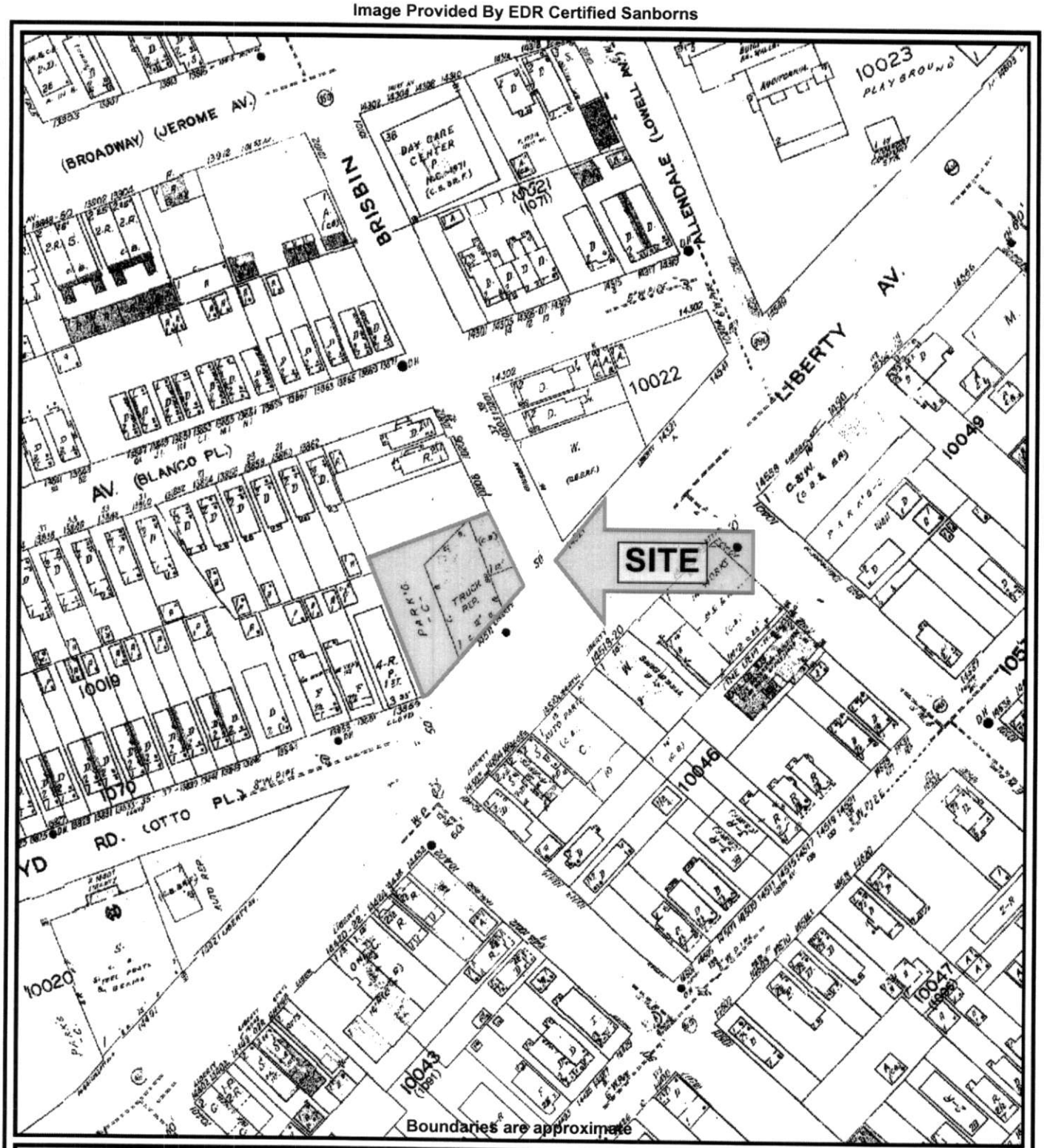
EDR 2004	↑ N	SANBORN - 2004 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



EDR 2005	↑ N	SANBORN - 2005 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Certified Sanborns



EDR 2006	↑ N	SANBORN - 2006 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

ATTACHMENT C

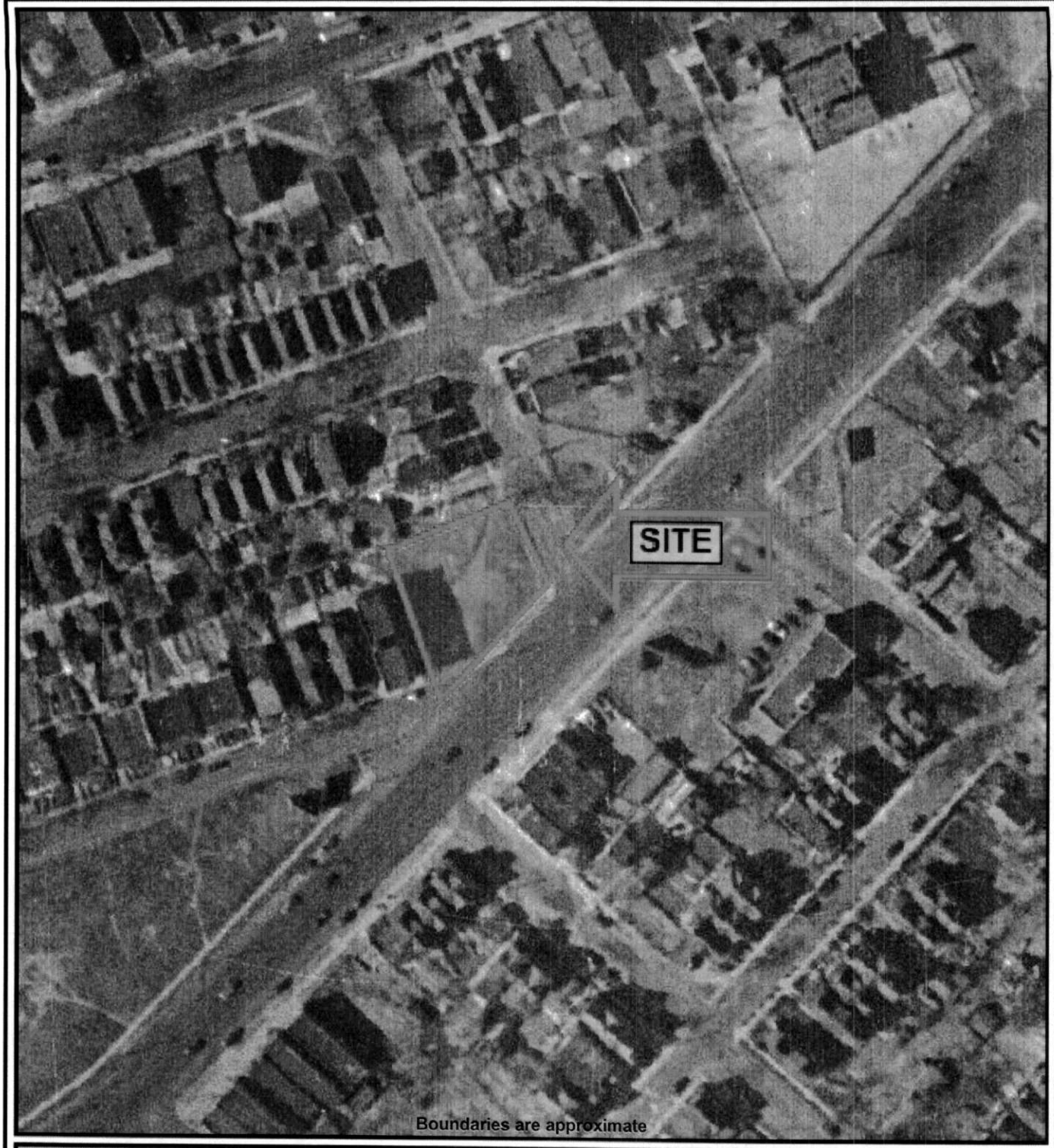
AERIAL PHOTOGRAPHS

Image Provided By EDR Aerials



EDR 1946	↑ N	AERIAL - 1946 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1951	↑ N	AERIAL - 1951 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1954	↑ N	AERIAL - 1954 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1961	↑ N	AERIAL - 1961 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1966	↑ N	AERIAL - 1966 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1961	↑ N	AERIAL - 1961 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1984	↑ N	AERIAL - 1984 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 1994	↑ N	AERIAL - 1994 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 2006	↑ N	AERIAL - 2006 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



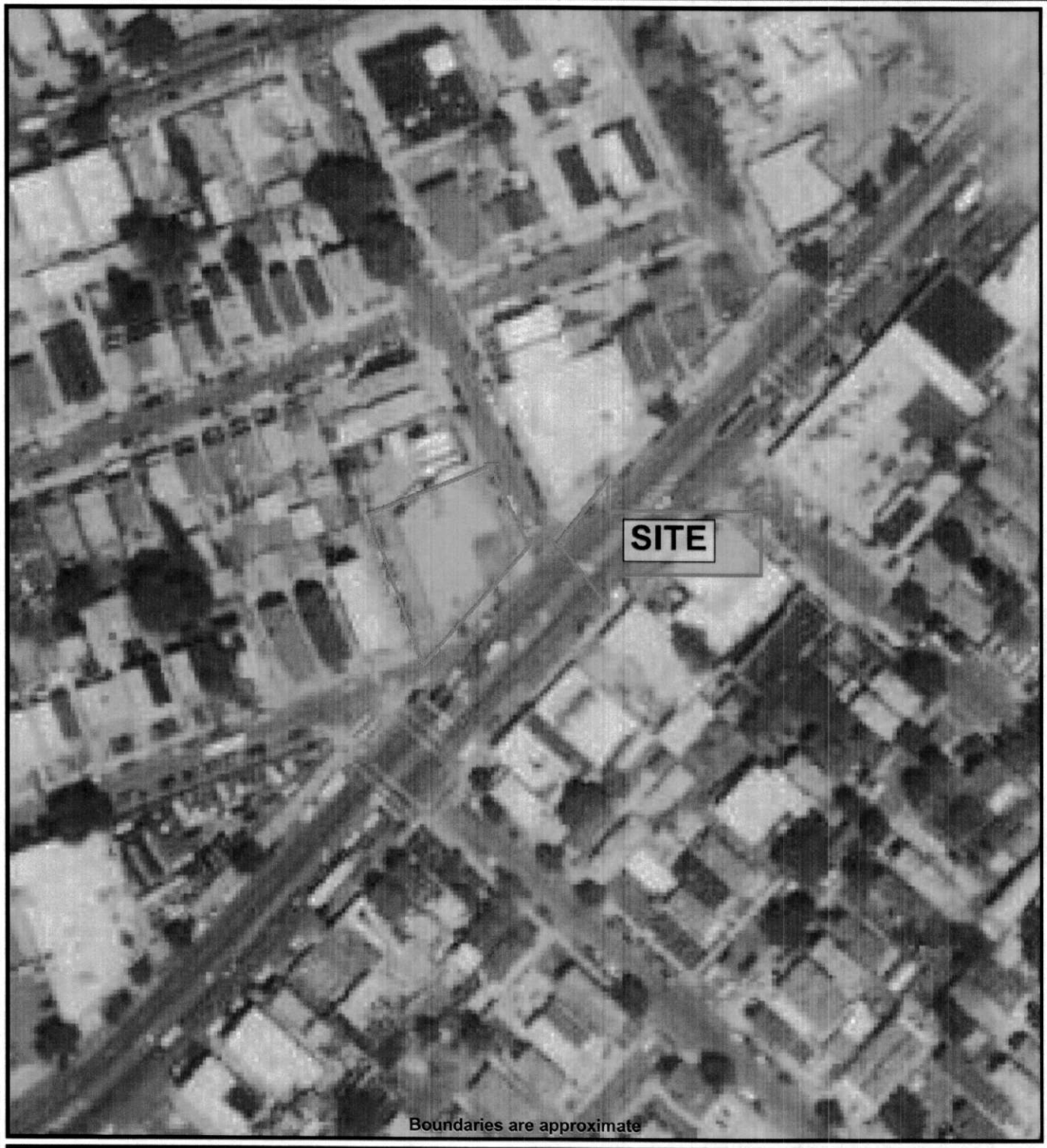
EDR 2009	↑ N	AERIAL - 2009 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 2011	↑ N	AERIAL - 2011 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR Aerials



EDR 2015	↑ N	AERIAL - 2015 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

ATTACHMENT D

HISTORICAL TOPOGRAPHIC MAPS

Image Provided By EDR USGS Topographic Maps



EDR 1897	↑ N	TOPO MAP - 1897 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



Boundaries are approximate

EDR 1898	↑ N	TOPO MAP - 1898 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



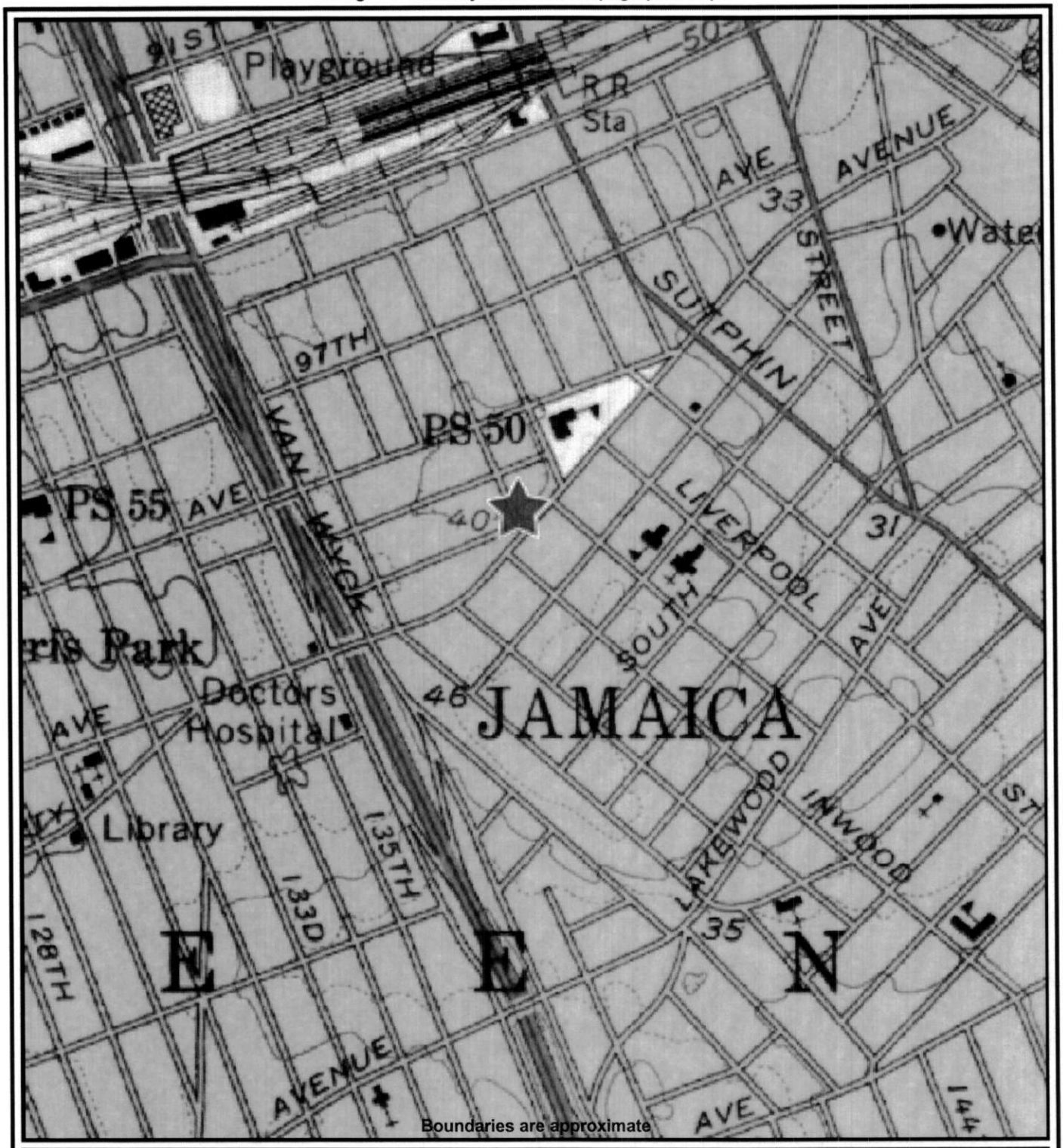
EDR 1900	↑ N	TOPO MAP - 1900 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



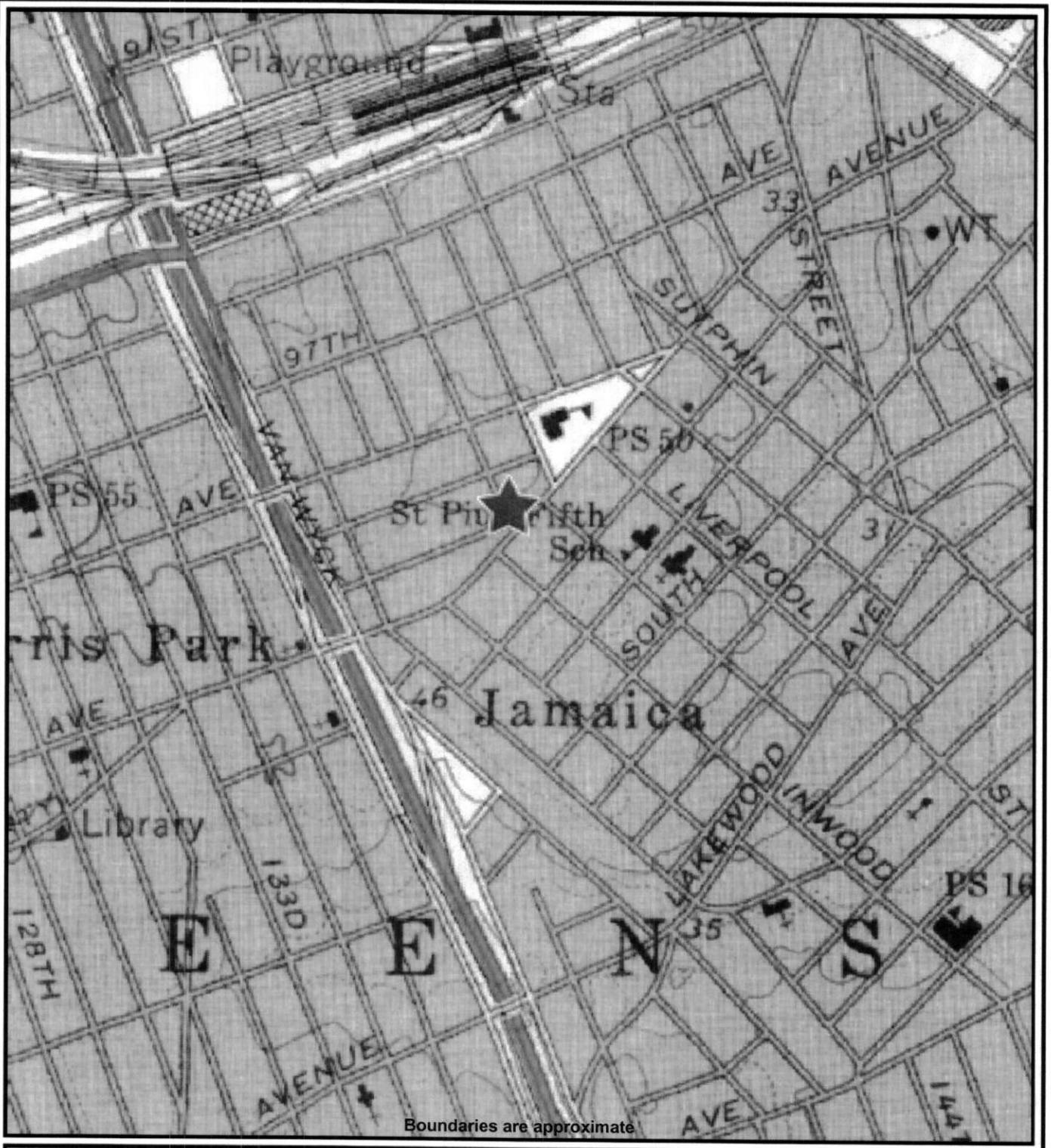
EDR 1947	↑ N	TOPO MAP - 1947 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



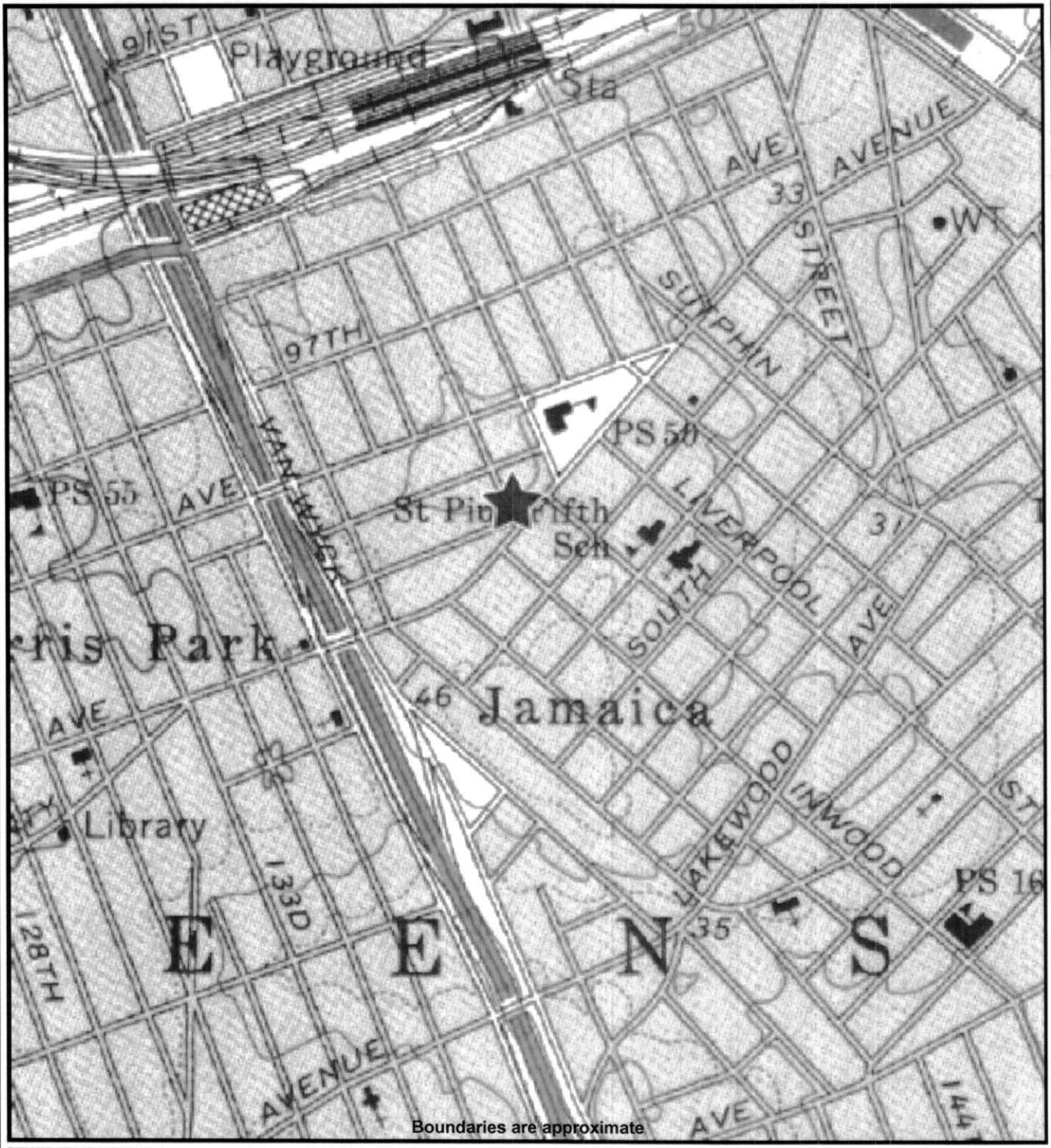
EDR 1957	↑ N	TOPO MAP - 1957 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



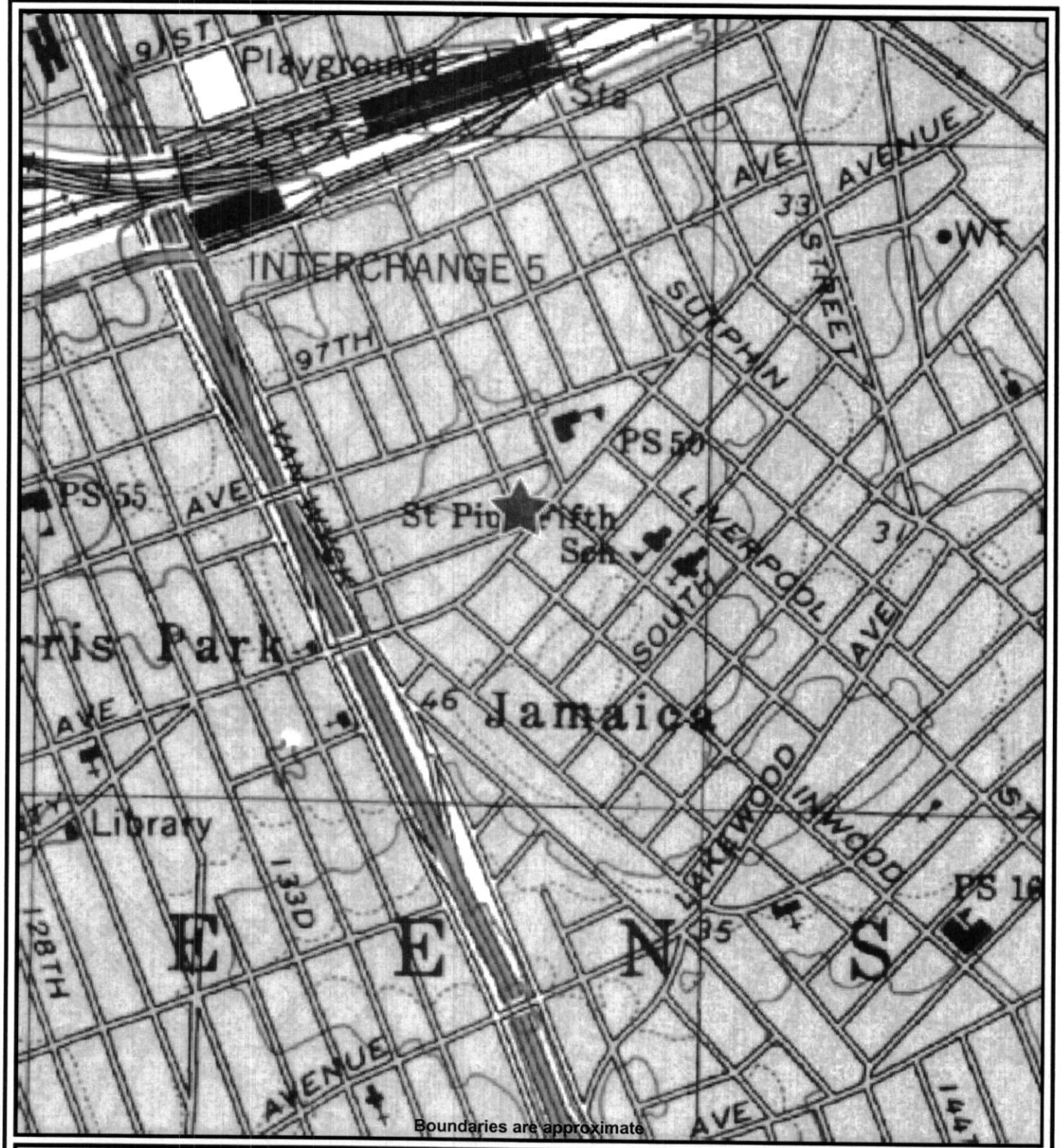
EDR 1966	↑ N	TOPO MAP - 1966 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



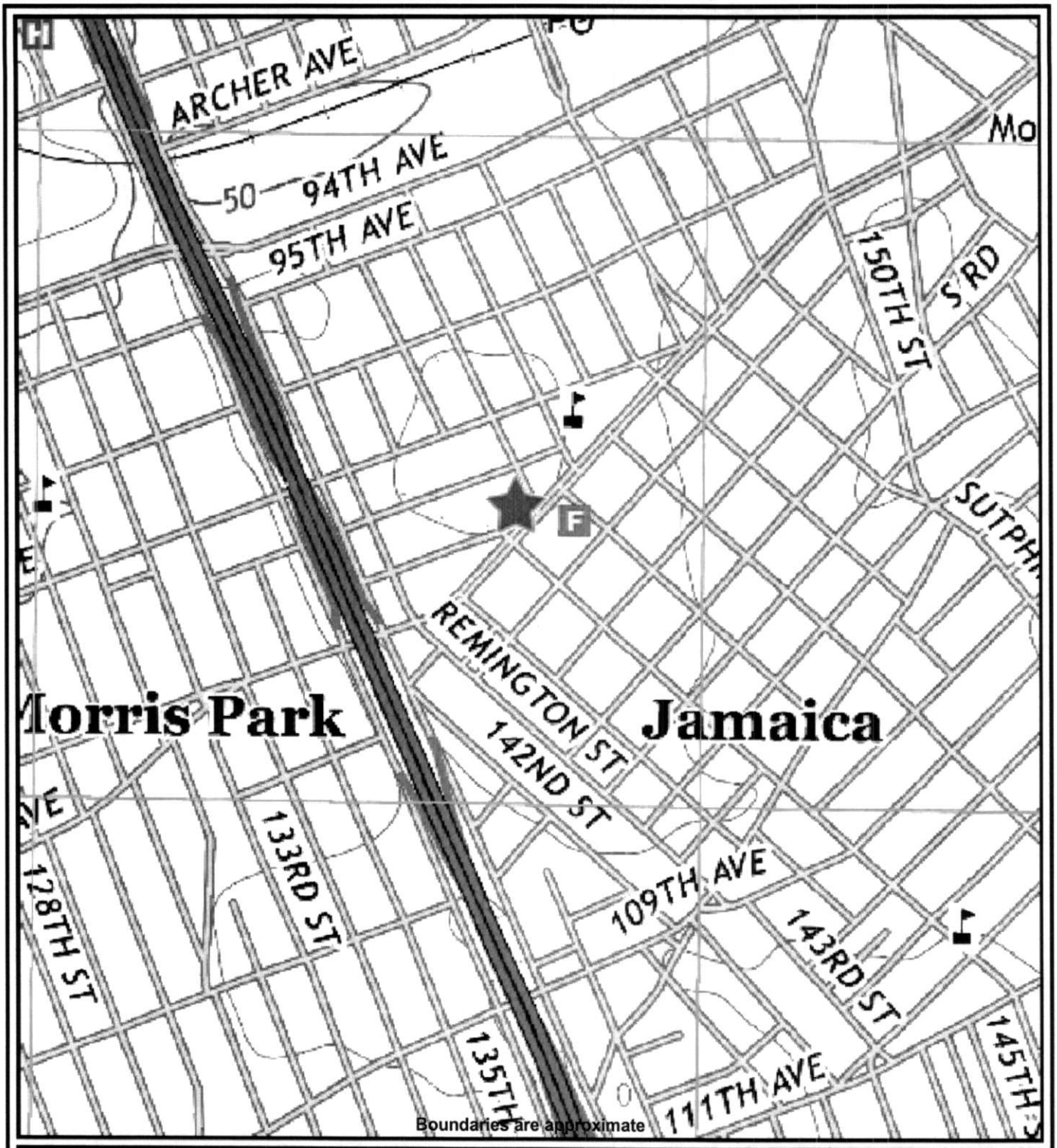
EDR 1979	↑ N	TOPO MAP - 1979 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



EDR 1994	↑ N	TOPO MAP - 1994 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AESI 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

Image Provided By EDR USGS Topographic Maps



EDR 2013	↑ N	TOPO MAP - 2013 145-11 Liberty Ave JAMAICA, New York 11435 1/23/2017	AES 5 Marine View Plaza, Suite 303 Hoboken, NJ 07030

ATTACHMENT E

CITY DIRECTORY ABSTRACT

145-11 BRISBIN ST
145-11 BRISBIN ST
JAMAICA, NY 11435

Inquiry Number: 4833535.5
January 23, 2017

The EDR-City Directory Abstract

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2016 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2013. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 100 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2013	Cole Information Services	-	-	-	-
2008	Cole Information Services	-	X	X	-
2005	Hill-Donnelly Information Services	-	X	X	-
2000	Cole Information Services	-	-	-	-
1996	NYNEX	-	-	-	-
1991	NYNEX Information Resource Company	-	-	-	-
1983	New York Telephone	-	X	X	-
1976	New York Telephone	-	X	X	-
1970	New York Telephone	-	X	X	-
1967	New York Telephone	-	-	-	-
1962	New York Telephone Directory	-	-	-	-
1950	New York Telephone	-	-	-	-
1945	New York Telephone	-	-	-	-
1939	New York Telephone Company	-	-	-	-
1934	R. L. Polk & Co.	-	-	-	-
1922	H.C. Morris	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

145-11 BRISBIN ST
JAMAICA, NY 11435

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

LIBERTY AVE

14511 LIBERTY AVE

Year	Uses	Source
2008	E W G RECYCLING	Cole Information Services
	LIBERTY TRUCK REPAIR CORP	Cole Information Services
2005	Ewg	Hill-Donnelly Information Services
	Liberty Truck Repair Corp	Hill-Donnelly Information Services
1983	Jamaica Mack Inc	New York Telephone
1976	JAMAICA TRUCK PARTS INC	New York Telephone
1970	Burke Theo J & Son Inc const equip	New York Telephone

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
145-11 BRISBIN ST	2013, 2008, 2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
14511 LIBERTY AVE	2013, 2008, 2000, 1996, 1991, 1967, 1962, 1950, 1945, 1939, 1934, 1922
14511 LIBERTY AVE	2013, 2005, 2000, 1996, 1991, 1983, 1976, 1970, 1967, 1962, 1950, 1945, 1939, 1934, 1922

ATTACHMENT F

INQUIRIES AND RESPONSE LETTERS

January 23, 2017

Records Access Officer
NYS Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Re: Freedom of Information (FOI) Request
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the above referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation, or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence:
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

M Greenfield

Melissa M. Greenfield
Environmental Scientist

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR ACCESS TO RECORDS

(See Instructions on Reverse Side)

APPLICANT

- **TO THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION:**

I hereby apply to inspect the following records under the provisions of the Freedom of Information Law:

Address of Facility or Site (if applicable)
145-11 Liberty Avenue
Jamaica, New York
Block: 10019; Lot: 39

Spill No. (if applicable)_____ Facility ID No. (if applicable) _____

PBS No. (if applicable)_____

Other: Please See Attached Letter

After inspection, should I desire copies of all or part of the records inspected, I will identify the records to be copied and hereby offer to promptly pay the established fees. (Cost of reproduction or 25¢ per page as applicable). Contact me if cost will exceed $ 25.00.

Name (Print or type) Melissa M. Greenfield Telephone No. 2018769400 Fax No. 2018769563

Company (if applicable) Atlantic Environmental Solutions, I[illegible] E-Mail Address mgreenfield@solutionsenvironmental[illegible]

Mailing Address 5 Marine View Plaza, Suite 303 Hoboken, New Jersey 07030

Signature _____ Date 1/23/17

RECORDS CUSTODIAN

TO APPLICANT:

RECORDS PROVIDED

____ The reproduction costs for the records provided $_____

____ Records have been (partially, fully) provided

(If not provided, date when records are expected to be fully provided:_____)

RECORDS NOT AVAILABLE

____ Records cannot be located after a diligent search ____ The Department is not the custodian for records indicated

RECORDS DENIED

I hereby advise that access to the records, or part of the records, has been denied for the reason(s) checked below:

____ Specifically exempt by another statute

____ Would impair present or imminent contract awards or collective bargaining negotiations

____ Compiled for law enforcement purposes

____ Inter-agency or intra-agency materials that are not:

- statistical or factual tabulations or data
- instructions to staff that affect the public
- final agency policy or determinations; or
- external audits, including but not limited to audits performed by the comptroller and the Federal government

____ Unwarranted invasion of privacy

____ Trade secrets

____ Could endanger life or safety of any other person

____ Other exemptions (as applicable)

Records Custodian signature_____ Date:_____

INSTRUCTIONS

TO APPLICANT: (The completion of this form is voluntary; however, it will facilitate access to records you seek.)

1. Please identify the specific records you wish to inspect under the "applicant" portion of this form, sign and date in the appropriate place, and give or mail to the Records Access Officer, NYS Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-1500. In the alternative, you may send your request electronically to access.records@dec.ny.gov

2. If after inspection you should desire copies, identify to the Records Custodian the specific records to be copied. Make check or money order payable to the "New York State Department of Environmental Conservation" for copies reproduced by the Department.

3. If you are denied access to records or portions of records, you may submit a written appeal to the FOIL Appeals Officer, Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-1500. Such appeal has to be made within 30 days after the denial. Please attach a copy of this form showing the "Records Denied" portion when filing your appeal. The FOIL Appeals Officer will evaluate the appeal and respond in writing to you within ten (10) business days after receipt of the appeal.

TO DEC RECORDS CUSTODIAN:

1. Conduct search for records:
   - 1a. If records requested for inspection are not in the custody of the Department, advise the applicant if possible as to the identity and location of the proper custodial agency.
   - 1b. If records are found, determine accessibility (in accordance with Public Officers Law Section 87.2)

2. After determination of accessibility:
   - 2a. If accessibleBmake available to applicant for inspection.
   - 2b. If not accessibleBcomplete "Records Denied" portion of this form, make and retain one copy of completed form, and give original to applicant fully explaining reason for denial.

3. If applicant desires copiesBcollect total cost from applicant, and make copies (or arrange with applicant to have copies made with outside vendor and applicant pays vendor). Originals must be returned to Department Records Custodian(s).

4. If you are not able to respond to a request within five (5) business days, acknowledge receipt of the request in writing by the fifth business day and estimate when your final response will be made. If a request can not be fulfilled within (20) business days from the date of the acknowledgment letter, you must advise the requester of a date certain for completion of the request.

SPECIAL NOTE

See **www.dec.ny.gov/public/373.html** for answers to the most commonly asked questions about DEC and the New York State Freedom of Information Law.

ATLANTIC ENVIRONMENTAL SOLUTIONS, INC

January 23, 2017

The City Clerk, Clerk of the Council
Executive Office
141 Worth Street
New York, NY 10013

Re: Freedom of Information (FOI) Request
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

M Greenfield

Melissa M. Greenfield
Environmental Scientist

5 Marine View Plaza, Suite 303 · Hoboken, NJ 07030 P 201.876.9400 · F 201.876.9563
www.solutionsenvironmental.com

ATLANTIC ENVIRONMENTAL SOLUTIONS, INC

January 23, 2017

Queens County Clerk's Office
8811 Sutphin Blvd #105
Jamaica, New York 11435

Re: Freedom of Information (FOI) Request
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

M Greenfield

Melissa M. Greenfield
Environmental Scientist

5 Marine View Plaza, Suite 303 · Hoboken, NJ 07030 P 201.876.9400 · F 201.876.9563
www.solutionsenvironmental.com

ATLANTIC ENVIRONMENTAL SOLUTIONS, INC

January 17, 2017

City of New York
Building Department
12606 Queens Blvd
Jamaica, New York 11415

Re: ***Freedom of Information (FOI) Request***
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to call me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

Melissa M. Greenfield
Environmental Scientist

5 Marine View Plaza, Suite 303 · Hoboken, NJ 07030 P 201.876.9400 · F 201.876.9563
www.solutionsenvironmental.com

ATLANTIC ENVIRONMENTAL SOLUTIONS, INC

January 17, 2017

NYC Buildings Department
Records Access Officer
280 Broadway, 7th Floor
New York, NY 10007

Re: ***Freedom of Information (FOI) Request***
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to call me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

Melissa M. Greenfield
Environmental Scientist

5 Marine View Plaza, Suite 303 · Hoboken, NJ 07030 P 201.876.9400 · F 201.876.9563
www.solutionsenvironmental.com

January 23, 2017

Department of City Planning
Queens Office
120-55 Queens Blvd.
Room 201
Kew Gardens, New York 11424

Re: ***Freedom of Information (FOI) Request***
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Environmental violations, incidents, complaints, etc.
- Community Right to Know (RTK) Information
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.
- Monitoring well, potable well, or other well installation records
- Industrial Site Recovery Act (ISRA) or ECRA correspondence
- Groundwater contamination reports, including Classification Exception Areas (CEAs)
- Declaration of Environmental Restrictions (DERs)
- Hazardous Substance Inventories
- Air emission permits, records
- Solid waste or sanitary waste permits, records

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

M Greenfield

Melissa M. Greenfield
Environmental Scientist

ATLANTIC ENVIRONMENTAL SOLUTIONS, INC

January 23, 2017

New York City Department of Finance
Records Access Officer
14406 9th Avenue
Jamaica, New York 11435

Re: Freedom of Information (FOI) Request
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the above referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Copy of the Subject Property Tax Map
- History of Building Construction, Previous Owners and Operators
- Underground Storage Tank (UST) registrations, installation or removal permits
- Hazardous substance (including petroleum) discharges, leaks, spills, etc.

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

Melissa M. Greenfield
Environmental Scientist

5 Marine View Plaza, Suite 303 · Hoboken, NJ 07030 P 201.876.9400 · F 201.876.9563
www.solutionsenvironmental.com

January 23, 2017

FDNY Public Records Unit
9 Metro Tech Center, 1st Floor
Brooklyn, NY 11201

Re: Freedom of Information (FOI) Request
145-11 Liberty Avenue
Jamaica, New York
Block: 10019, Lot: 39

Dear Sir or Madam:

Atlantic Environmental Solutions, Inc. (AESI) has been retained to perform an environmental assessment of the above referenced property. The purpose of this letter is to request any information which may be in your files in connection with the subject property. Please review your files for any of the following:

- Previous Fire Incidences
- Underground Storage Tank (UST) registration records, installation/removal permits, etc.
- Community Right to Know Information, Hazardous Substance Inventories
- Septic system records
- Hazardous Waste Manifests and disposal documentation
- Groundwater or soil sample analyses data

Thank you in advance for your help regarding this matter. In the event that there is a fee associated with obtaining this information, or if your office would rather make the file available for my review, please do not hesitate to contact me at (201) 876-9400. Our fax number is (201) 876-9563.

Sincerely,

Melissa M. Greenfield
Environmental Scientist

ATTACHMENT G

EDR REPORT

145-11 BRISBIN ST
145-11 BRISBIN ST
JAMAICA, NY 11435

Inquiry Number: 4833535.2s
January 23, 2017

EDR Summary Radius Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	418
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-8
Physical Setting Source Map Findings	A-9
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

145-11 BRISBIN ST
JAMAICA, NY 11435

COORDINATES

Latitude (North):	40.6937780 - 40° 41' 37.60"
Longitude (West):	73.8079150 - 73° 48' 28.49"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	600722.6
UTM Y (Meters):	4505236.5
Elevation:	39 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	U.S. Geological Survey

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150522
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
145-11 BRISBIN ST
JAMAICA, NY 11435

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1		14511 LIBERTY AVE	EDR Hist Auto	Higher	11, 0.002, ESE
A2	138-57 LLOYD ROAD	138-57 LLOYD ROAD	NY LTANKS	Higher	58, 0.011, WSW
A3	LOT 4,TAXBLOCK 10046	145-10 LIBERTY AVENU	NY E DESIGNATION	Higher	143, 0.027, SE
A4	CON EDISON	145-28 LIBERTY AV	NY MANIFEST	Higher	148, 0.028, East
A5	LOT 6,TAXBLOCK 10046	145-18 LIBERTY AVENU	NY E DESIGNATION	Higher	151, 0.029, ESE
A6		14526 LIBERTY AVE	EDR Hist Auto	Higher	160, 0.030, East
A7	ACTION TRANSMISSION	145-26 LIBERTY AVE	NY Spills	Higher	161, 0.030, East
A8	LOT 9,TAXBLOCK 10046	145-26 LIBERTY AVENU	NY E DESIGNATION	Higher	161, 0.030, East
A9	ACTION TRANSMISSION	145-26 LIBERTY AVENU	NY AST	Higher	161, 0.030, East
B10	LOT 114,TAXBLOCK 100	144-21 LIBERTY AVENU	NY E DESIGNATION	Higher	234, 0.044, SW
B11	SERVICE STATION	144-21 LIBERTY AVE	RCRA NonGen / NLR, FINDS, ECHO	Higher	234, 0.044, SW
B12		14421 LIBERTY AVE	EDR Hist Auto	Higher	234, 0.044, SW
A13	ENGINE COMPANY 303	104-12 PRINCETON STR	NY UST	Higher	236, 0.045, ESE
A14	ENGINE COMPANY 303	104-12 PRINCETON STR	NY AST	Higher	236, 0.045, ESE
A15	NYC DEP	104-12 PRINCETON ST	RCRA NonGen / NLR, NY MANIFEST	Higher	236, 0.045, ESE
16	LOT 6,TAXBLOCK 10043	144-20 LIBERTY AVENU	NY E DESIGNATION	Higher	283, 0.054, South
C17	ALLENDALE ST &	LIBERTY AVE & ALLEND	NY Spills	Higher	288, 0.055, ENE
C18	SPILL NUMBER 0202791	ALLENDALE ST & 102ND	NY Spills	Higher	289, 0.055, NE
D19	LOT 29,TAXBLOCK 1001	101-02 BRISBIN STREE	NY E DESIGNATION	Lower	305, 0.058, NNW
C20	LOT 1,TAXBLOCK 10049	145-50 LIBERTY AVENU	NY E DESIGNATION	Higher	309, 0.059, ENE
D21	LOT 27,TAXBLOCK 1001	139-12 101 AVENUE	NY E DESIGNATION	Lower	321, 0.061, NNW
D22	LOT 25,TAXBLOCK 1001	139-06 101 AVENUE	NY E DESIGNATION	Lower	326, 0.062, NW
C23	XTREME COLLISION & A	145-56 LIBERTY AVENU	NY AST	Higher	335, 0.063, ENE
24	OCCUPIED FORECLOSED	144-27 105 AVE	NY Spills	Higher	338, 0.064, SSE
D25	LOT 20,TAXBLOCK 1001	138-48 101 AVENUE	NY E DESIGNATION	Higher	341, 0.065, NW
D26	LOT 5,TAXBLOCK 10021	143-14 101 AVENUE	NY E DESIGNATION	Higher	355, 0.067, North
B27	AVENUE CONCRETE	LIBERTY AVENUE & PIN	NY Spills	Higher	357, 0.068, SSW
E28	CON EDISON SERVICE B	138-29 102ND AVE FRO	RCRA NonGen / NLR, NY MANIFEST	Higher	387, 0.073, WNW
E29	LOT 117,TAXBLOCK 100	138-42A 101 AVENUE	NY E DESIGNATION	Higher	392, 0.074, WNW
E30	LOT 18,TAXBLOCK 1001	138-42 101 AVENUE	NY E DESIGNATION	Higher	392, 0.074, WNW
B31		14404 LIBERTY AVE	EDR Hist Auto	Higher	393, 0.074, SSW
E32	LOT 17,TAXBLOCK 1001	138-40 101 AVENUE	NY E DESIGNATION	Higher	403, 0.076, WNW
E33	LOT 16,TAXBLOCK 1001	138-38 101 AVENUE	NY E DESIGNATION	Higher	415, 0.079, WNW
D34	CON EDISON SERVICE B	101ST AVE & CRESSKIL	RCRA NonGen / NLR, NY MANIFEST	Higher	418, 0.079, NW
B35	LOT 137,TAXBLOCK 100	144-01 LIBERTY AVENU	NY E DESIGNATION	Higher	429, 0.081, SSW
B36	FAMILY DOLLAR STORE	144-01 LIBERTY AVE	RCRA-CESQG, ECHO	Higher	430, 0.081, SW
B37	NYNEX	PINEGROVE & LIBERTY	NY MANIFEST	Higher	440, 0.083, SSW
38	BELL ATLANTIC-NY	LIBERTY AVE/PINEGROV	RCRA NonGen / NLR, NY MANIFEST	Higher	440, 0.083, SSW
E39	LOT 12,TAXBLOCK 1001	138-36 101 AVENUE	NY E DESIGNATION	Higher	447, 0.085, WNW

MAPPED SITES SUMMARY

Target Property Address:
145-11 BRISBIN ST
JAMAICA, NY 11435

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
D40	CON EDISON SERVICE B	139-07 101ST AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	460, 0.087, NW
E41	138-26 101ST AVE	138-26 101ST AVENUE	NY AST	Higher	475, 0.090, WNW
E42	LOT 11,TAXBLOCK 1001	138-26 101 AVENUE	NY E DESIGNATION	Higher	482, 0.091, WNW
E43		13826 101ST AVE	EDR Hist Auto	Higher	482, 0.091, WNW
D44	CON EDISON SERVICE B	139-03 101ST AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	491, 0.093, NW
D45	CON EDISON SERVICE B	139-03 101ST AVE FRO	RCRA NonGen / NLR, NY MANIFEST	Higher	491, 0.093, NW
F46	PUBLIC SCHOOL 50 - Q	143-26 101ST AVENUE	NY AST	Higher	497, 0.094, NNE
F47	NYC DEPT OF EDUCATIO	143-26 101ST AVE	RCRA-SQG	Higher	497, 0.094, NNE
F48	NYC DEPT OF EDUCATIO	143-26 101ST AVE	NY MANIFEST	Higher	497, 0.094, NNE
E49		13824 101ST AVE	EDR Hist Auto	Higher	498, 0.094, WNW
E50	TRANSMISSION AUTO	138-13 102ND AVE	NY Spills	Higher	529, 0.100, West
G51	CON EDISON SERVICE B	97-34 ALLENDALE ST F	RCRA NonGen / NLR, NY MANIFEST	Higher	536, 0.102, North
G52	F&L REALTY LLC	97-34 ALLENDALE STRE	NY AST	Higher	536, 0.102, North
H53	LOT 6,TAXBLOCK 10041	143-18 PINEGROVE STR	NY E DESIGNATION	Higher	538, 0.102, SSW
E54	LOT 7,TAXBLOCK 10018	138-16 101 AVENUE	NY E DESIGNATION	Higher	539, 0.102, WNW
F55	CON EDISON	97-43 ALLENDALE ST	NY MANIFEST	Higher	544, 0.103, NN[illegible]
E56		13814 101ST AVE	EDR Hist Auto	Higher	593, 0.112, WN[illegible]
E57	ONE-O-ONE TRANSMISSI	138-14 101ST AVENUE	NY AST	Higher	593, 0.112, WNW
H58	LOT 4,TAXBLOCK 10041	143-12 LIBERTY AVENU	NY E DESIGNATION	Higher	593, 0.112, SSW
F59	CON EDISON SERVICE B	143-41 101ST AVE FRO	RCRA NonGen / NLR, NY MANIFEST	Higher	595, 0.113, NNE
H60	CON EDISON	143-18 LIBERTY AVE F	NY MANIFEST	Higher	597, 0.113, SW
H61	CATCH BASIN	143-18 LIBERTY AVENU	NY Spills	Higher	597, 0.113, SW
H62	CON EDISON - SERVICE	143-18 LIBERTY AVE	RCRA-LQG	Higher	597, 0.113, SW
H63	CON EDISON SERVICE B	143-18 LIBERTY AVE F	RCRA NonGen / NLR, NY MANIFEST	Higher	597, 0.113, SW
H64	LOT 138,TAXBLOCK 100	143-05 REMINGTON STR	NY E DESIGNATION	Higher	612, 0.116, SW
G65	CON EDISON SERVICE B	97-24 ALLENDALE ST F	RCRA NonGen / NLR, NY MANIFEST	Higher	621, 0.118, North
H66	LOT 3,TAXBLOCK 10041	143-10 LIBERTY AVENU	NY E DESIGNATION	Higher	622, 0.118, SSW
E67	LOT 4,TAXBLOCK 10018	138-10 101 AVENUE	NY E DESIGNATION	Higher	625, 0.118, WNW
F68	MANHOLE #2945	101 AVE & LIVERPOOL	NY Spills	Higher	626, 0.119, NNE
F69	CON EDISON MANHOLE:	101ST AVE & LIVERPOO	RCRA NonGen / NLR, NY MANIFEST	Higher	626, 0.119, NNE
H70	CON EDISON	143-05 LIBERTY AVE	RCRA NonGen / NLR, ECHO	Higher	630, 0.119, SW
H71	CON EDISON	143-05 LIBERTY AVE	NY MANIFEST	Higher	630, 0.119, SW
E72	LOT 3,TAXBLOCK 10018	138-12 101 AVENUE	NY E DESIGNATION	Higher	646, 0.122, WNW
73	ST PIUS V SCHOOL	105-12 LIVERPOOL STR	NY UST	Higher	649, 0.123, East
I74	M & M OLDSMOBILE	138-19 101ST ST	RCRA NonGen / NLR, FINDS, NY MANIFEST, ECHO	Higher	665, 0.126, WNW
H75	CON EDISON	LIBERTY AVE & REMING	NY MANIFEST	Higher	685, 0.130, SW
H76	CON EDISON - MANHOLE	LIBERTY AVE & REMING	RCRA-LQG	Higher	685, 0.130, SW
I77	CON EDISON MANHOLE:	138-05 101ST AVE FRO	RCRA NonGen / NLR, NY MANIFEST	Higher	740, 0.140, W[illegible]
78	FRANK MAHADAI HOUSEH	139-02 97TH AVE	RCRA-SQG, NY MANIFEST	Higher	795, 0.151, NW

MAPPED SITES SUMMARY

Target Property Address:
145-11 BRISBIN ST
JAMAICA, NY 11435

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
J79	PUBLIC SCHOOL #195 -	64-35 102ND ST	NY LTANKS	Higher	797, 0.151, West
J80	CON EDISON	62-58 102 ST	NY MANIFEST	Higher	797, 0.151, West
J81	CON EDISON	84-11 102 ST	NY MANIFEST	Higher	797, 0.151, West
J82	CON EDISON	95-14 102 ST	NY MANIFEST	Higher	804, 0.152, West
J83	CON EDISON	VAN WYCK BLVD & 102	NY MANIFEST	Higher	805, 0.152, West
J84	CON EDISON - MANHOLE	VAN WYCK BLVD & 102	RCRA-LQG	Higher	805, 0.152, West
85	CLOSED-LACKOF RECENT	106012 LIVERPOOL ST.	NY LTANKS	Higher	808, 0.153, ESE
K86	CUMBERLAND FARMS INC	137-21 LIBERTY AVE	RCRA NonGen / NLR, US AIRS, NY MANIFEST	Higher	821, 0.155, SW
K87	CUMBERLAND #70270	137-21 LIBERTY AVENU	NY UST, NY HIST UST	Higher	821, 0.155, SW
K88	CON EDISON	121-21 LIBERTY AVE	NY MANIFEST	Higher	825, 0.156, SW
K89	CON EDISON	109-07 LIBERTY AV	NY MANIFEST	Higher	825, 0.156, SW
K90	CON EDISON	109-07 LIBERTY AVE	NY MANIFEST	Higher	825, 0.156, SW
K91	CON EDISON - MANHOLE	LIBERTY AVE & VAN WY	RCRA-LQG	Higher	838, 0.159, SW
K92	CON EDISON	LIBERTY AVE & VAN WY	NY MANIFEST	Higher	838, 0.159, SW
K93	CON EDISON	743 26 LIBERTY AV	NY MANIFEST	Higher	840, 0.159, SW
94	MERIT SERVICE STATIO	148 LIBERTY AVE	NY LTANKS	Higher	840, 0.159, SW
K95	CON EDISON	50 FT WO 150 LIBERTY	NY MANIFEST	Higher	840, 0.159, SW
K96	CON EDISON	104-09 LIBERTY AVE	NY MANIFEST	Higher	840, 0.159, SW
K97	CON EDISON SERVICE B	103-11 VAN WYCK E SI	RCRA NonGen / NLR, NY MANIFEST	Higher	842, 0.159, SW
L98	CON EDISON SERVICE B	VAN WYCK EXP & 101ST	RCRA NonGen / NLR, NY MANIFEST	Higher	899, 0.170, West
M99	CON EDISON	205-15 104 AVE	NY MANIFEST	Higher	941, 0.178, SSW
M100	CON EDISON	47-10 104 ST	NY MANIFEST	Higher	941, 0.178, SSW
M101	CON EDISON	95 AVE 104 ST	NY MANIFEST	Higher	941, 0.178, SSW
M102	CON EDISON	39-16 104TH ST	NY MANIFEST	Higher	941, 0.178, SSW
L103	CON EDISON	104-05 101 AVE	NY MANIFEST	Higher	949, 0.180, West
L104	CON EDISON	88-09 101 AVE	NY MANIFEST	Higher	949, 0.180, West
L105	CON EDISON	91-07 101 AVE	NY MANIFEST	Higher	966, 0.183, West
L106	NEW YORK CITY DEP DH	33-10 101ST	NY MANIFEST	Higher	966, 0.183, West
L107	NYSDEC	117-20 101ST AVENUE	NY MANIFEST	Higher	966, 0.183, West
N108	CON EDISON SERVICE B	95-29 BRISBIN ST FRO	RCRA NonGen / NLR, FINDS	Higher	1008, 0.191, NNW
N109	CON EDISON	95-29 BRISBIN ST FRO	NY MANIFEST	Higher	1008, 0.191, NNW
K110	CON EDISON	VAN WYCK SERV RD &AM	NY MANIFEST	Lower	1031, 0.195, SW
K111	CON EDISON	VAN WYCK EXPWY & LIB	NY MANIFEST	Lower	1031, 0.195, SW
O112	DAVID COLE	138-23 97TH AVE	RCRA-SQG	Higher	1048, 0.198, NW
O113	DAVID COLE	138-23 97TH AVE	NY MANIFEST	Higher	1048, 0.198, NW
P114	CON EDISON SERVICE B	102-16 VAN WYCK EXPW	RCRA NonGen / NLR, NY MANIFEST	Higher	1067, 0.202, WSW
P115	CON EDISON SERVICE B	102-32 VAN WYCK EXPW	RCRA NonGen / NLR, NY MANIFEST	Higher	1070, 0.203, WSW
116	CON EDISON SERVICE B	102-10 VAN WYCK EXPW	RCRA NonGen / NLR, NY MANIFEST	Higher	1075, 0.204, WSW
O117	138-07 97TH AVENUE	138-07 97TH AVENUE	NY LTANKS	Higher	1097, 0.208, NW

MAPPED SITES SUMMARY

Target Property Address:
145-11 BRISBIN ST
JAMAICA, NY 11435

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Q118	RUBIE'S COSTUME CO	101-10 VAN WYCK EXPY	RCRA-CESQG, FINDS, NY MANIFEST, ECHO	Higher	1110, 0.210, West
R119	TRI-US AUTO RADIATOR	97-20 SUTPHIN BLVD	RCRA NonGen / NLR, FINDS, NY MANIFEST, ECHO	Higher	1127, 0.213, NNE
R120	BAM MOBILE TRUCK & A	97-16 SUTPHIN BOULEV	NY AST	Higher	1162, 0.220, NNE
S121	PS 206	61-21 97TH PLACE	NY LTANKS, NY Spills	Higher	1213, 0.230, WNW
S122	CON EDISON	25-12 97 ST	NY MANIFEST	Higher	1213, 0.230, WNW
S123	HOUSING COMPLEX	67-97 136TH ST	NY LTANKS	Higher	1213, 0.230, WNW
S124	FRANK MAHADAI RESIDE	139-02 97TH AVENUE	PA MANIFEST	Higher	1213, 0.230, WNW
S125	CON EDISON	25-34 97 ST	NY MANIFEST	Higher	1213, 0.230, WNW
R126	BP JAMAICA	97-44 SUTPHIN BOULEV	NY UST, NY Spills	Higher	1244, 0.236, NNE
127	NAGENDEVEN, INC.	97-20 VAN WYCK EXPRE	NY AST	Higher	1250, 0.237, West
S128	CON EDISON SERVICE B	5TH AVE N OF 128TH S	RCRA NonGen / NLR, FINDS, NY MANIFEST, ECHO	Higher	1251, 0.237, WNW
T129	V-M AUTO COLLISION W	105-06 SUTPHIN BLVD	RCRA NonGen / NLR, NY MANIFEST	Lower	1284, 0.243, ENE
T130	T & H GARAGE	105-20 SUTPHIN BLVD.	NY AST	Lower	1292, 0.245, ENE
Q131	SUPREME GAS LLC	134-35 101 AVENUE	NY UST	Higher	1294, 0.245, West
Q132	DLD AUTO REPAIR INC	134-35 101 AVE	NY AST	Higher	1294, 0.245, West
T133	CON EDISON MANHOLE:	SUTPHIN BLVD & 105TH	RCRA NonGen / NLR, FINDS	Lower	1294, 0.245, E
T134	CON EDISON	SUTPHIN BLVD & 105TH	NY MANIFEST	Lower	1294, 0.245, E
U135	CON EDISON	95-17 REMINGTON ST F	NY MANIFEST	Higher	1307, 0.248, NW
U136	CON EDISON SERVICE B	95-17 REMINGTON ST F	RCRA NonGen / NLR	Higher	1307, 0.248, NW
137	CON EDISON SERVICE B	102-06 135TH ST FRON	RCRA NonGen / NLR, NY MANIFEST	Higher	1308, 0.248, WSW
138	CON EDISON SERVICE B	143-04 95TH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	1314, 0.249, NNW
Q139	CON EDISON SERVICE B	134-21 101ST AVE	RCRA NonGen / NLR	Higher	1318, 0.250, West
Q140	CON EDISON	134-21 101ST AVE FRO	NY MANIFEST	Higher	1318, 0.250, West
Q141	CON EDISON SERVICE B	134-21 101ST AVE FRO	RCRA NonGen / NLR	Higher	1318, 0.250, West
Q142	CON EDISON	134-21 101ST AVE	NY MANIFEST	Higher	1318, 0.250, West
R143	A1 AUTO PARTS INC	97-15 SUTPHIN BLVD	NY SWF/LF	Higher	1325, 0.251, NNE
V144	CITY TRANSIT MIX INC	147-16 LIBERTY AVE	NY LTANKS, NY SPDES	Lower	1346, 0.255, NE
V145	JAMAICA RECYCLING ME	147-20 LIBERTY AVENU	NY SWRCY	Lower	1359, 0.257, NE
146	CLOSED-LACKOF RECENT	148-19 LIBERTY AVENU	NY LTANKS	Higher	1496, 0.283, NE
W147	95-21 SUTPHIN BLVD	95-21 SUTPHIN BLVD	NY LTANKS	Higher	1532, 0.290, NNE
148	MULLINGS HOME	105-21 135TH STREET	NY LTANKS	Higher	1544, 0.292, SSW
W149	ATLAS CONCRETE	95-11 147TH PLACE	NY LTANKS, NY UST, NY AST, NY HIST UST, NY SPDES	Higher	1788, 0.339, NNE
X150	MAX'S LUNCHEONETTE	SPUTPHIN BLVD & 95TH	NY LTANKS	Higher	1801, 0.341, NNE
151	BAYSIDE COMMUNITY CH	107-03 150TH STREET	NY LTANKS	Lower	1877, 0.355, East
Y152	NEW YORK CITY AUTO S	148-36 LIBERTY AVE	NY SWF/LF, NY SPDES	Lower	1908, 0.361, NE
Z153	LIRR	MORRIS PARK STORAGE	NY LTANKS	Higher	1931, 0.366, North
Z154	TRI-BRO AUTO SVC INC	93-50 SUTPHIN BOULEV	NY LTANKS, NY UST	Higher	1938, 0.367, North
Y155	HESS/MERIT STATION 3	148-27 LIBERTY AVENU	NY LTANKS, NY Spills	Lower	1948, 0.369, N
Y156	CITY MASON DIVISION	105 AVE. & 150TH STR	NY SWF/LF	Lower	1968, 0.373, NE

MAPPED SITES SUMMARY

Target Property Address:
145-11 BRISBIN ST
JAMAICA, NY 11435

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
X157	JAMAICA 94TH AVENUE	147-20 94TH AVENUE	NY BROWNFIELDS	Higher	1979, 0.375, NNE
158	108-26 LIVERPOOL ST	108-26 LIVERPOOL ST	NY LTANKS	Higher	2017, 0.382, ESE
159	LIBERTY AUTO PARTS I	97-09 150TH STREET	NY SWF/LF	Lower	2175, 0.412, NE
160	145-13 109TH AVE	145-13 109TH AVE	NY LTANKS	Lower	2244, 0.425, SE
161	BROOK MEMORIAL	143-22 109TH AVE	NY LTANKS	Lower	2262, 0.428, SE
162	LAKEWOOD FUEL	141-03 LAKEWOOD AVE	NY LTANKS, NY AST	Lower	2327, 0.441, SSE
AA163	103-154 99TH STREET	103-154 99TH STREET	US BROWNFIELDS	Lower	2384, 0.452, ENE
164	HONEYWELL FARMS	155-25 STYLER ROAD	NY LTANKS, NY UST, NY CBS, NY Spills	Lower	2384, 0.452, ENE
165	THE CROSSING AT JAMA	147-22 ARCHER AVENUE	NY BROWNFIELDS	Higher	2426, 0.459, North
AB166	J & J AUTO WRECKERS	150-35 LIBERTY AVE	NY SWF/LF, NY CBS, NY SPDES	Lower	2443, 0.463, NE
AC167	EASY DOES IT AUTO SA	15008 BEAVER ROAD	NY SWF/LF	Lower	2449, 0.464, NE
AC168	TIC TAC AUTO INC	150-08 BEAVER ROAD	NY SWF/LF	Lower	2449, 0.464, NE
AA169	NATIONWIDE SCRAP	154-20 SOUTH ROAD	NY SWRCY	Lower	2482, 0.470, ENE
AA170	T&T RECYCLING	154-20 SOUTH ROAD	NY SWRCY	Lower	2482, 0.470, ENE
AA171	BABYLON PAPER STOCK	154-20 SOUTH ROAD	NY SWRCY	Lower	2482, 0.470, ENE
172	KHAIRULLAH HOME	109-11 LIVERPOOL STR	NY LTANKS	Lower	2555, 0.484, ESE
173	CONTEMP PROCESSING I	94-01 150TH ST	NY LTANKS, NY UST, NY Spills	Lower	2606, 0.494, NNE
174	NYC DEPT. SANITATION	132-05 ATLANTIC AVE	NY LTANKS	Higher	2624, 0.497, WNW
175	SUB STATION - CON ED	137-30 91ST AVE	NY LTANKS, NY Spills	Higher	2627, 0.498, NW
AB176	A&J SCRAP METAL PROC	95-49 TUCKERTON ST	NY SWF/LF, NY SPDES	Lower	2629, 0.498, NE
AD177	K - JAMAICA GAS AND	BEAVER RD., & 158TH	NY SHWS	Higher	3152, 0.597, NNE
AD178	JAMAICA GAS AND LIGH	BEAVER RD., AND 158T	EDR MGP	Higher	3294, 0.624, NE
179	K - JAMAICA HOLDER S	158TH ST. & LIBERTY	NY SHWS, NY BROWNFIELDS	Lower	3408, 0.645, NE
AE180	LIRR - MORRIS PARK R	121ST STREET AND ATL	NY DEL SHWS	Higher	4928, 0.933, West
AE181	LIRR - MORRIS PARK R	121 ST ST & ATLANTIC	CORRACTS, RCRA-TSDF, RCRA-LQG, 2020 COR ACTION, NJ	Higher	4935, 0.935, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: A review of the CORRACTS list, as provided by EDR, and dated 09/12/2016 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LIRR - MORRIS PARK R	***121 ST ST & ATLANTIC***	***W 1/2 - 1 (0.935 mi.)***	***AE181***	***49***

Federal RCRA generators list

RCRA-LQG: A review of the RCRA-LQG list, as provided by EDR, and dated 09/12/2016 has revealed that there are 4 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON - SERVICE	143-18 LIBERTY AVE	SW 0 - 1/8 (0.113 mi.)	H62	20
CON EDISON - MANHOLE	LIBERTY AVE & REMING	SW 1/8 - 1/4 (0.130 mi.)	H76	23
CON EDISON - MANHOLE	VAN WYCK BLVD & 102	W 1/8 - 1/4 (0.152 mi.)	J84	25
CON EDISON - MANHOLE	LIBERTY AVE & VAN WY	SW 1/8 - 1/4 (0.159 mi.)	K91	26

RCRA-SQG: A review of the RCRA-SQG list, as provided by EDR, and dated 09/12/2016 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NYC DEPT OF EDUCATIO	143-26 101ST AVE	NNE 0 - 1/8 (0.094 mi.)	F47	17
FRANK MAHADAI HOUSEH	***139-02 97TH AVE***	***NW 1/8 - 1/4 (0.151 mi.)***	***78***	***23***
DAVID COLE	138-23 97TH AVE	NW 1/8 - 1/4 (0.198 mi.)	O112	30

EXECUTIVE SUMMARY

RCRA-CESQG: A review of the RCRA-CESQG list, as provided by EDR, and dated 09/12/2016 has revealed that there are 2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FAMILY DOLLAR STORE	***144-01 LIBERTY AVE***	***SW 0 - 1/8 (0.081 mi.)***	***B36***	***15***
RUBIE'S COSTUME CO	***101-10 VAN WYCK EXPY***	***W 1/8 - 1/4 (0.210 mi.)***	***Q118***	***32***

State- and tribal - equivalent CERCLIS

NY SHWS: A review of the NY SHWS list, as provided by EDR, and dated 11/14/2016 has revealed that there are 2 NY SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
K - JAMAICA GAS AND Site Code: 378997	BEAVER RD., & 158TH	NNE 1/2 - 1 (0.597 mi.)	AD177	48

Lower Elevation	Address	Direction / Distance	Map ID	Page
K - JAMAICA HOLDER S Site Code: 378996	***158TH ST. & LIBERTY***	***NE 1/2 - 1 (0.645 mi.)***	***179***	***49***

State and tribal landfill and/or solid waste disposal site lists

NY SWF/LF: A review of the NY SWF/LF list, as provided by EDR, and dated 10/04/2016 has revealed that there are 8 NY SWF/LF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A1 AUTO PARTS INC	97-15 SUTPHIN BLVD	NNE 1/4 - 1/2 (0.251 mi.)	R143	37

Lower Elevation	Address	Direction / Distance	Map ID	Page
NEW YORK CITY AUTO S	***148-36 LIBERTY AVE***	***NE 1/4 - 1/2 (0.361 mi.)***	***Y152***	***40***
CITY MASON DIVISION	105 AVE. & 150TH STR	NE 1/4 - 1/2 (0.373 mi.)	Y156	41
LIBERTY AUTO PARTS I	97-09 150TH STREET	NE 1/4 - 1/2 (0.412 mi.)	159	41
J & J AUTO WRECKERS	***150-35 LIBERTY AVE***	***NE 1/4 - 1/2 (0.463 mi.)***	***AB166***	***43***
EASY DOES IT AUTO SA	15008 BEAVER ROAD	NE 1/4 - 1/2 (0.464 mi.)	AC167	44
TIC TAC AUTO INC	150-08 BEAVER ROAD	NE 1/4 - 1/2 (0.464 mi.)	AC168	44
A&J SCRAP METAL PROC	***95-49 TUCKERTON ST***	***NE 1/4 - 1/2 (0.498 mi.)***	***AB176***	***48***

State and tribal leaking storage tank lists

NY LTANKS: A review of the NY LTANKS list, as provided by EDR, and dated 11/14/2016 has revealed that there are 26 NY LTANKS sites within approximately 0.5 miles of the target property.

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
138-57 LLOYD ROAD Spill Number/Closed Date: 9209764 / 1993-11-21 Site ID: 135811 Program Number: 9209764	138-57 LLOYD ROAD	WSW 0 - 1/8 (0.011 mi.)	A2	8
PUBLIC SCHOOL #195 - Spill Number/Closed Date: 1409189 / Not Reported Site ID: 502794 Program Number: 1409189	64-35 102ND ST	W 1/8 - 1/4 (0.151 mi.)	J79	24
CLOSED-LACKOF RECENT Spill Number/Closed Date: 8705555 / 2003-03-04 Site ID: 253239 Program Number: 8705555	106012 LIVERPOOL ST.	ESE 1/8 - 1/4 (0.153 mi.)	85	25
MERIT SERVICE STATIO Spill Number/Closed Date: 9409085 / 1995-07-18 Site ID: 329799 Program Number: 9409085	148 LIBERTY AVE	SW 1/8 - 1/4 (0.159 mi.)	K94	27
138-07 97TH AVENUE Spill Number/Closed Date: 9312378 / 1994-01-21 Site ID: 120397 Program Number: 9312378	138-07 97TH AVENUE	NW 1/8 - 1/4 (0.208 mi.)	O117	32
PS 206 Spill Number/Closed Date: 0013054 / 2006-01-06 Site ID: 109938 Program Number: 0013054	***61-21 97TH PLACE***	***WNW 1/8 - 1/4 (0.230 mi.)***	***S121***	***33***
HOUSING COMPLEX Spill Number/Closed Date: 0106078 / 2006-04-27 Site ID: 295709 Program Number: 0106078	67-97 136TH ST	WNW 1/8 - 1/4 (0.230 mi.)	S123	33
CLOSED-LACKOF RECENT Spill Number/Closed Date: 8801528 / 2003-03-05 Site ID: 192190 Program Number: 8801528	148-19 LIBERTY AVENU	NE 1/4 - 1/2 (0.283 mi.)	146	38
95-21 SUTPHIN BLVD Spill Number/Closed Date: 9508921 / 1995-10-20 Site ID: 95651 Program Number: 9508921	95-21 SUTPHIN BLVD	NNE 1/4 - 1/2 (0.290 mi.)	W147	38
MULLINGS HOME Spill Number/Closed Date: 0606170 / 2007-09-21 Site ID: 369474 Program Number: 0606170	105-21 135TH STREET	SSW 1/4 - 1/2 (0.292 mi.)	148	39
ATLAS CONCRETE Spill Number/Closed Date: 9103735 / 1995-05-25 Site ID: 215198 Program Number: 9103735	***95-11 147TH PLACE***	***NNE 1/4 - 1/2 (0.339 mi.)***	***W149***	***39***
MAX'S LUNCHEONETTE Spill Number/Closed Date: 9410935 / 1994-11-16 Site ID: 142208 Program Number: 9410935	SPUTPHIN BLVD & 95TH	NNE 1/4 - 1/2 (0.341 mi.)	X150	39
LIRR	MORRIS PARK STORAGE	N 1/4 - 1/2 (0.366 mi.)	Z153	40

Spill Number/Closed Date: 0008005 / 2004-05-18
Site ID: 291518
Program Number: 0008005

TRI-BRO AUTO SVC INC	***93-50 SUTPHIN BOULEV***	***N 1/4 - 1/2 (0.367 mi.)***	***Z154***	***40***
Spill Number/Closed Date: 9907900 / 2004-12-28 Site ID: 104840 Program Number: 9907900				
108-26 LIVERPOOL ST	108-26 LIVERPOOL ST	ESE 1/4 - 1/2 (0.382 mi.)	158	41
Spill Number/Closed Date: 9108595 / 1991-11-13 Site ID: 202937 Program Number: 9108595				
NYC DEPT. SANITATION	132-05 ATLANTIC AVE	WNW 1/4 - 1/2 (0.497 mi.)	174	45
Spill Number/Closed Date: 0811265 / 2009-03-02 Site ID: 408831 Program Number: 0811265				
SUB STATION - CON ED	***137-30 91ST AVE***	***NW 1/4 - 1/2 (0.498 mi.)***	***175***	***45***
Spill Number/Closed Date: 0110154 / 2002-12-06 Site ID: 74364 Program Number: 0110154				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY TRANSIT MIX INC	***147-16 LIBERTY AVE***	***NE 1/4 - 1/2 (0.255 mi.)***	***V144***	***38***
Spill Number/Closed Date: 0612956 / 2010-08-13 Site ID: 377910 Program Number: 0612956				
BAYSIDE COMMUNITY CH	107-03 150TH STREET	E 1/4 - 1/2 (0.355 mi.)	151	40
Spill Number/Closed Date: 8709586 / 1988-02-12 Site ID: 225926 Program Number: 8709586				
HESS/MERIT STATION 3	***148-27 LIBERTY AVENU***	***NE 1/4 - 1/2 (0.369 mi.)***	***Y155***	***40***
Spill Number/Closed Date: 9600085 / 1996-04-02 Site ID: 195422 Program Number: 9600085				
145-13 109TH AVE	145-13 109TH AVE	SE 1/4 - 1/2 (0.425 mi.)	160	42
Spill Number/Closed Date: 9201561 / 1992-05-08 Site ID: 173851 Program Number: 9201561				
BROOK MEMORIAL	143-22 109TH AVE	SE 1/4 - 1/2 (0.428 mi.)	161	42
Spill Number/Closed Date: 0210589 / 2003-09-09 Site ID: 137788 Program Number: 0210589				
LAKEWOOD FUEL	***141-03 LAKEWOOD AVE***	***SSE 1/4 - 1/2 (0.441 mi.)***	***162***	***42***
Spill Number/Closed Date: 8900355 / 2006-01-31 Site ID: 76610 Program Number: 8900355				
HONEYWELL FARMS	***155-25 STYLER ROAD***	***ENE 1/4 - 1/2 (0.452 mi.)***	***164***	***43***
Spill Number/Closed Date: 9203003 / 2006-03-31 Site ID: 253301 Program Number: 9203003				
KHAIRULLAH HOME	109-11 LIVERPOOL STR	ESE 1/4 - 1/2 (0.484 mi.)	172	44

Spill Number/Closed Date: 0511987 / 2006-01-18
Site ID: 358240
Program Number: 0511987

CONTEMP PROCESSING I ***94-01 150TH ST*** ***NNE 1/4 - 1/2 (0.494 mi.)*** ***173*** ***45***
Spill Number/Closed Date: 9909545 / 2003-12-09
Site ID: 84431
Program Number: 9909545

State and tribal registered storage tank lists

NY UST: A review of the NY UST list, as provided by EDR, has revealed that there are 5 NY UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ENGINE COMPANY 303 Database: UST, Date of Government Version: 09/27/2016	104-12 PRINCETON STR	ESE 0 - 1/8 (0.045 mi.)	A13	10
ST PIUS V SCHOOL Database: UST, Date of Government Version: 09/27/2016	105-12 LIVERPOOL STR	E 0 - 1/8 (0.123 mi.)	73	22
CUMBERLAND #70270 Database: UST, Date of Government Version: 09/27/2016	***137-21 LIBERTY AVENU***	***SW 1/8 - 1/4 (0.155 mi.)***	***K87***	***25***
BP JAMAICA Database: UST, Date of Government Version: 09/27/2016	***97-44 SUTPHIN BOULEV***	***NNE 1/8 - 1/4 (0.236 mi.)***	***R126***	***34***
SUPREME GAS LLC Database: UST, Date of Government Version: 09/27/2016	134-35 101 AVENUE	W 1/8 - 1/4 (0.245 mi.)	Q131	35

NY AST: A review of the NY AST list, as provided by EDR, has revealed that there are 11 NY AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ACTION TRANSMISSION Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-607162	145-26 LIBERTY AVENU	E 0 - 1/8 (0.030 mi.)	A9	9
ENGINE COMPANY 303 Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-600539	104-12 PRINCETON STR	ESE 0 - 1/8 (0.045 mi.)	A14	10
XTREME COLLISION & A Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-612085	145-56 LIBERTY AVENU	ENE 0 - 1/8 (0.063 mi.)	C23	12
138-26 101ST AVE Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-609175	138-26 101ST AVENUE	WNW 0 - 1/8 (0.090 mi.)	E41	16
PUBLIC SCHOOL 50 - Q Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-604805	143-26 101ST AVENUE	NNE 0 - 1/8 (0.094 mi.)	F46	17
F&L REALTY LLC Database: AST, Date of Government Version: 09/27/2016	97-34 ALLENDALE STRE	N 0 - 1/8 (0.102 mi.)	G52	18

Facility Id: 2-244007				
ONE-O-ONE TRANSMISSI Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-611464	138-14 101ST AVENUE	WNW 0 - 1/8 (0.112 mi.)	E57	19
BAM MOBILE TRUCK & A Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-611329	97-16 SUTPHIN BOULEV	NNE 1/8 - 1/4 (0.220 mi.)	R120	32
NAGENDEVEN, INC. Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-365602	97-20 VAN WYCK EXPRE	W 1/8 - 1/4 (0.237 mi.)	127	34
DLD AUTO REPAIR INC Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-610560	134-35 101 AVE	W 1/8 - 1/4 (0.245 mi.)	Q132	35

Lower Elevation	Address	Direction / Distance	Map ID	Page
T & H GARAGE Database: AST, Date of Government Version: 09/27/2016 Facility Id: 2-603382	105-20 SUTPHIN BLVD.	ENE 1/8 - 1/4 (0.245 mi.)	T130	35

State and tribal Brownfields sites

NY BROWNFIELDS: A review of the NY BROWNFIELDS list, as provided by EDR, and dated 11/14/2016 has revealed that there are 2 NY BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JAMAICA 94TH AVENUE Site Code: 524733	147-20 94TH AVENUE	NNE 1/4 - 1/2 (0.375 mi.)	X157	41
THE CROSSING AT JAMA Site Code: 522958	147-22 ARCHER AVENUE	N 1/4 - 1/2 (0.459 mi.)	165	43

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A review of the US BROWNFIELDS list, as provided by EDR, and dated 09/20/2016 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
103-154 99TH STREET	103-154 99TH STREET	ENE 1/4 - 1/2 (0.452 mi.)	AA163	42

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

NY SWRCY: A review of the NY SWRCY list, as provided by EDR, and dated 10/04/2016 has revealed that there are 4 NY SWRCY sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
JAMAICA RECYCLING ME	147-20 LIBERTY AVENU	NE 1/4 - 1/2 (0.257 mi.)	V145	38
NATIONWIDE SCRAP	154-20 SOUTH ROAD	ENE 1/4 - 1/2 (0.470 mi.)	AA169	44
T&T RECYCLING	154-20 SOUTH ROAD	ENE 1/4 - 1/2 (0.470 mi.)	AA170	44
BABYLON PAPER STOCK	154-20 SOUTH ROAD	ENE 1/4 - 1/2 (0.470 mi.)	AA171	44

Local Lists of Hazardous waste / Contaminated Sites

NY DEL SHWS: A review of the NY DEL SHWS list, as provided by EDR, and dated 11/14/2016 has revealed that there is 1 NY DEL SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LIRR - MORRIS PARK R	121ST STREET AND ATL	W 1/2 - 1 (0.933 mi.)	AE180	49

Local Lists of Registered Storage Tanks

NY HIST UST: A review of the NY HIST UST list, as provided by EDR, and dated 01/01/2002 has revealed that there is 1 NY HIST UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUMBERLAND #70270 Facility Status: 1 PBS Number: 2-188832 Tank Status: 1	***137-21 LIBERTY AVENU***	***SW 1/8 - 1/4 (0.155 mi.)***	***K87***	***25***

Records of Emergency Release Reports

NY Spills: A review of the NY Spills list, as provided by EDR, and dated 11/14/2016 has revealed that there are 8 NY Spills sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ACTION TRANSMISSION Spill Number/Closed Date: 0402237 / 2011-12-07 spillno: 0402237 Site ID: 210683	145-26 LIBERTY AVE	E 0 - 1/8 (0.030 mi.)	A7	9
ALLENDALE ST &	LIBERTY AVE & ALLEND	ENE 0 - 1/8 (0.055 mi.)	C17	11

Spill Number/Closed Date: 0204519 / 2003-03-07 spillno: 0204519 Site ID: 274666				
SPILL NUMBER 0202791 Spill Number/Closed Date: 0202791 / 2002-08-02 spillno: 0202791 Site ID: 146102	ALLENDALE ST & 102ND	NE 0 - 1/8 (0.055 mi.)	C18	11
OCCUPIED FORECLOSED Spill Number/Closed Date: 1104731 / Not Reported spillno: 1104731 Site ID: 452342	144-27 105 AVE	SSE 0 - 1/8 (0.064 mi.)	24	12
AVENUE CONCRETE Spill Number/Closed Date: 9607583 / 2003-02-24 spillno: 9607583 Site ID: 241988	LIBERTY AVENUE & PIN	SSW 0 - 1/8 (0.068 mi.)	B27	13
TRANSMISSION AUTO Spill Number/Closed Date: 0303519 / 2006-03-16 spillno: 0303519 Site ID: 269714	138-13 102ND AVE	W 0 - 1/8 (0.100 mi.)	E50	17
CATCH BASIN Spill Number/Closed Date: 9607251 / 1998-04-30 spillno: 9607251 Site ID: 258644	143-18 LIBERTY AVENU	SW 0 - 1/8 (0.113 mi.)	H61	20
MANHOLE #2945 Spill Number/Closed Date: 0509293 / 2005-12-16 spillno: 0509293 Site ID: 355050	101 AVE & LIVERPOOL	NNE 0 - 1/8 (0.119 mi.)	F68	21

Other Ascertainable Records

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 09/12/2016 has revealed that there are 32 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SERVICE STATION	*144-21 LIBERTY AVE*	*SW 0 - 1/8 (0.044 mi.)*	*B11*	*10*
NYC DEP	*104-12 PRINCETON ST*	*ESE 0 - 1/8 (0.045 mi.)*	*A15*	*10*
CON EDISON SERVICE B	*138-29 102ND AVE FRO*	*WNW 0 - 1/8 (0.073 mi.)*	*E28*	*13*
CON EDISON SERVICE B	*101ST AVE & CRESSKIL*	*NW 0 - 1/8 (0.079 mi.)*	*D34*	*14*
BELL ATLANTIC-NY	*LIBERTY AVE/PINEGROV*	*SSW 0 - 1/8 (0.083 mi.)*	*B38*	*15*
CON EDISON SERVICE B	*139-07 101ST AVE*	*NW 0 - 1/8 (0.087 mi.)*	*D40*	*15*
CON EDISON SERVICE B	*139-03 101ST AVE*	*NW 0 - 1/8 (0.093 mi.)*	*D44*	*16*
CON EDISON SERVICE B	*139-03 101ST AVE FRO*	*NW 0 - 1/8 (0.093 mi.)*	*D45*	*16*
CON EDISON SERVICE B	*97-34 ALLENDALE ST F*	*N 0 - 1/8 (0.102 mi.)*	*G51*	*18*
CON EDISON SERVICE B	*143-41 101ST AVE FRO*	*NNE 0 - 1/8 (0.113 mi.)*	*F59*	*19*
CON EDISON SERVICE B	*143-18 LIBERTY AVE F*	*SW 0 - 1/8 (0.113 mi.)*	*H63*	*20*
CON EDISON SERVICE B	*97-24 ALLENDALE ST F*	*N 0 - 1/8 (0.118 mi.)*	*G65*	*20*
CON EDISON MANHOLE:	*101ST AVE & LIVERPOO*	*NNE 0 - 1/8 (0.119 mi.)*	*F69*	*21*
CON EDISON	*143-05 LIBERTY AVE*	*SW 0 - 1/8 (0.119 mi.)*	*H70*	*22*
M & M OLDSMOBILE	*138-19 101ST ST*	*WNW 1/8 - 1/4 (0.126 mi.)*	*I74*	*22*
CON EDISON MANHOLE:	*138-05 101ST AVE FRO*	*WNW 1/8 - 1/4 (0.140 mi.)*	*I77*	*23*

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUMBERLAND FARMS INC	***137-21 LIBERTY AVE***	***SW 1/8 - 1/4 (0.155 mi.)***	***K86***	***25***
CON EDISON SERVICE B	***103-11 VAN WYCK E SI***	***SW 1/8 - 1/4 (0.159 mi.)***	***K97***	***27***
CON EDISON SERVICE B	***VAN WYCK EXP & 101ST***	***W 1/8 - 1/4 (0.170 mi.)***	***L98***	***28***
CON EDISON SERVICE B	***95-29 BRISBIN ST FRO***	***NNW 1/8 - 1/4 (0.191 mi.)***	***N108***	***30***
CON EDISON SERVICE B	***102-16 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.202 mi.)***	***P114***	***31***
CON EDISON SERVICE B	***102-32 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.203 mi.)***	***P115***	***31***
CON EDISON SERVICE B	***102-10 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.204 mi.)***	***P116***	***31***
TRI-US AUTO RADIATOR	***97-20 SUTPHIN BLVD***	***NNE 1/8 - 1/4 (0.213 mi.)***	***R119***	***32***
CON EDISON SERVICE B	***5TH AVE N OF 128TH S***	***WNW 1/8 - 1/4 (0.237 mi.)***	***S128***	***34***
CON EDISON SERVICE B	95-17 REMINGTON ST F	NW 1/8 - 1/4 (0.248 mi.)	U136	36
CON EDISON SERVICE B	***102-06 135TH ST FRON***	***WSW 1/8 - 1/4 (0.248 mi.)***	***137***	***36***
CON EDISON SERVICE B	***143-04 95TH AVE***	***NNW 1/8 - 1/4 (0.249 mi.)***	***138***	***36***
CON EDISON SERVICE B	134-21 101ST AVE	W 1/8 - 1/4 (0.250 mi.)	Q139	37
CON EDISON SERVICE B	134-21 101ST AVE FRO	W 1/8 - 1/4 (0.250 mi.)	Q141	37

Lower Elevation	Address	Direction / Distance	Map ID	Page
V-M AUTO COLLISION W	***105-06 SUTPHIN BLVD***	***ENE 1/8 - 1/4 (0.243 mi.)***	***T129***	***35***
CON EDISON MANHOLE:	***SUTPHIN BLVD & 105TH***	***ENE 1/8 - 1/4 (0.245 mi.)***	***T133***	***35***

NY E DESIGNATION: A review of the NY E DESIGNATION list, as provided by EDR, and dated 06/16/2016 has revealed that there are 25 NY E DESIGNATION sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOT 4,TAXBLOCK 10046	145-10 LIBERTY AVENU	SE 0 - 1/8 (0.027 mi.)	A3	8
LOT 6,TAXBLOCK 10046	145-18 LIBERTY AVENU	ESE 0 - 1/8 (0.029 mi.)	A5	8
LOT 9,TAXBLOCK 10046	145-26 LIBERTY AVENU	E 0 - 1/8 (0.030 mi.)	A8	9
LOT 114,TAXBLOCK 100	144-21 LIBERTY AVENU	SW 0 - 1/8 (0.044 mi.)	B10	9
LOT 6,TAXBLOCK 10043	144-20 LIBERTY AVENU	S 0 - 1/8 (0.054 mi.)	B16	11
LOT 1,TAXBLOCK 10049	145-50 LIBERTY AVENU	ENE 0 - 1/8 (0.059 mi.)	C20	11
LOT 20,TAXBLOCK 1001	138-48 101 AVENUE	NW 0 - 1/8 (0.065 mi.)	D25	12
LOT 5,TAXBLOCK 10021	143-14 101 AVENUE	N 0 - 1/8 (0.067 mi.)	D26	13
LOT 117,TAXBLOCK 100	138-42A 101 AVENUE	WNW 0 - 1/8 (0.074 mi.)	E29	13
LOT 18,TAXBLOCK 1001	138-42 101 AVENUE	WNW 0 - 1/8 (0.074 mi.)	E30	13
LOT 17,TAXBLOCK 1001	138-40 101 AVENUE	WNW 0 - 1/8 (0.076 mi.)	E32	14
LOT 16,TAXBLOCK 1001	138-38 101 AVENUE	WNW 0 - 1/8 (0.079 mi.)	E33	14
LOT 137,TAXBLOCK 100	144-01 LIBERTY AVENU	SSW 0 - 1/8 (0.081 mi.)	B35	14
LOT 12,TAXBLOCK 1001	138-36 101 AVENUE	WNW 0 - 1/8 (0.085 mi.)	E39	15
LOT 11,TAXBLOCK 1001	138-26 101 AVENUE	WNW 0 - 1/8 (0.091 mi.)	E42	16
LOT 6,TAXBLOCK 10041	143-18 PINEGROVE STR	SSW 0 - 1/8 (0.102 mi.)	H53	18
LOT 7,TAXBLOCK 10018	138-16 101 AVENUE	WNW 0 - 1/8 (0.102 mi.)	E54	18
LOT 4,TAXBLOCK 10041	143-12 LIBERTY AVENU	SSW 0 - 1/8 (0.112 mi.)	H58	19
LOT 138,TAXBLOCK 100	143-05 REMINGTON STR	SW 0 - 1/8 (0.116 mi.)	H64	20
LOT 3,TAXBLOCK 10041	143-10 LIBERTY AVENU	SSW 0 - 1/8 (0.118 mi.)	H66	21
LOT 4,TAXBLOCK 10018	138-10 101 AVENUE	WNW 0 - 1/8 (0.118 mi.)	E67	21
LOT 3,TAXBLOCK 10018	138-12 101 AVENUE	WNW 0 - 1/8 (0.122 mi.)	E72	22

Lower Elevation	Address	Direction / Distance	Map ID	Page
LOT 29,TAXBLOCK 1001	101-02 BRISBIN STREE	NNW 0 - 1/8 (0.058 mi.)	D19	11
LOT 27,TAXBLOCK 1001	139-12 101 AVENUE	NNW 0 - 1/8 (0.061 mi.)	D21	12
LOT 25,TAXBLOCK 1001	139-06 101 AVENUE	NW 0 - 1/8 (0.062 mi.)	D22	12

EXECUTIVE SUMMARY

NY MANIFEST: A review of the NY MANIFEST list, as provided by EDR, and dated 10/01/2016 has revealed that there are 64 NY MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON EPA ID: NYP004694584	145-28 LIBERTY AV	E 0 - 1/8 (0.028 mi.)	A4	8
NYC DEP EPA ID: NYP003665023	***104-12 PRINCETON ST***	***ESE 0 - 1/8 (0.045 mi.)***	***A15***	***10***
CON EDISON SERVICE B EPA ID: NYP004389052	***138-29 102ND AVE FRO***	***WNW 0 - 1/8 (0.073 mi.)***	***E28***	***13***
CON EDISON SERVICE B EPA ID: NYP004444923	***101ST AVE & CRESSKIL***	***NW 0 - 1/8 (0.079 mi.)***	***D34***	***14***
NYNEX EPA ID: NYP000916460	PINEGROVE & LIBERTY	SSW 0 - 1/8 (0.083 mi.)	B37	15
BELL ATLANTIC-NY EPA ID: NYP000936013	***LIBERTY AVE/PINEGROV***	***SSW 0 - 1/8 (0.083 mi.)***	***B38***	***15***
CON EDISON SERVICE B EPA ID: NYP004444931	***139-07 101ST AVE***	***NW 0 - 1/8 (0.087 mi.)***	***D40***	***15***
CON EDISON SERVICE B EPA ID: NYP004445037	***139-03 101ST AVE***	***NW 0 - 1/8 (0.093 mi.)***	***D44***	***16***
CON EDISON SERVICE B EPA ID: NYP004386405	***139-03 101ST AVE FRO***	***NW 0 - 1/8 (0.093 mi.)***	***D45***	***16***
NYC DEPT OF EDUCATIO EPA ID: NYR000220087	143-26 101ST AVE	NNE 0 - 1/8 (0.094 mi.)	F48	17
CON EDISON SERVICE B EPA ID: NYP004390035	***97-34 ALLENDALE ST F***	***N 0 - 1/8 (0.102 mi.)***	***G51***	***18***
CON EDISON EPA ID: NYP004817896	97-43 ALLENDALE ST	NNE 0 - 1/8 (0.103 mi.)	F55	18
CON EDISON SERVICE B EPA ID: NYP004385118	***143-41 101ST AVE FRO***	***NNE 0 - 1/8 (0.113 mi.)***	***F59***	***19***
CON EDISON EPA ID: NYP004389136	143-18 LIBERTY AVE F	SW 0 - 1/8 (0.113 mi.)	H60	19
CON EDISON SERVICE B EPA ID: NYP004389078	***143-18 LIBERTY AVE F***	***SW 0 - 1/8 (0.113 mi.)***	***H63***	***20***
CON EDISON SERVICE B EPA ID: NYP004389326	***97-24 ALLENDALE ST F***	***N 0 - 1/8 (0.118 mi.)***	***G65***	***20***
CON EDISON MANHOLE: EPA ID: NYP004387254	***101ST AVE & LIVERPOO***	***NNE 0 - 1/8 (0.119 mi.)***	***F69***	***21***
CON EDISON EPA ID: NYP004748893	143-05 LIBERTY AVE	SW 0 - 1/8 (0.119 mi.)	H71	22
M & M OLDSMOBILE EPA ID: NYD981564305	***138-19 101ST ST***	***WNW 1/8 - 1/4 (0.126 mi.)***	***I74***	***22***
CON EDISON EPA ID: NYP004814261	LIBERTY AVE & REMING	SW 1/8 - 1/4 (0.130 mi.)	H75	23
CON EDISON MANHOLE: EPA ID: NYP004383899	***138-05 101ST AVE FRO***	***WNW 1/8 - 1/4 (0.140 mi.)***	***I77***	***23***
FRANK MAHADAI HOUSEH	***139-02 97TH AVE***	***NW 1/8 - 1/4 (0.151 mi.)***	***78***	***23***

EPA ID: NYR000138495				
CON EDISON EPA ID: NYP004715041	62-58 102 ST	W 1/8 - 1/4 (0.151 mi.)	J80	24
CON EDISON EPA ID: NYP004720884	84-11 102 ST	W 1/8 - 1/4 (0.151 mi.)	J81	24
CON EDISON EPA ID: NYP004562861	95-14 102 ST	W 1/8 - 1/4 (0.152 mi.)	J82	24
CON EDISON EPA ID: NYP004814303	VAN WYCK BLVD & 102	W 1/8 - 1/4 (0.152 mi.)	J83	24
CUMBERLAND FARMS INC EPA ID: NYD986957025	***137-21 LIBERTY AVE***	***SW 1/8 - 1/4 (0.155 mi.)***	***K86***	***25***
CON EDISON EPA ID: NYP004401758	121-21 LIBERTY AVE	SW 1/8 - 1/4 (0.156 mi.)	K88	26
CON EDISON EPA ID: NYP004680104	109-07 LIBERTY AV	SW 1/8 - 1/4 (0.156 mi.)	K89	26
CON EDISON EPA ID: NYP004823445	109-07 LIBERTY AVE	SW 1/8 - 1/4 (0.156 mi.)	K90	26
CON EDISON EPA ID: NYP004814279	LIBERTY AVE & VAN WY	SW 1/8 - 1/4 (0.159 mi.)	K92	26
CON EDISON EPA ID: NYP004694876	743 26 LIBERTY AV	SW 1/8 - 1/4 (0.159 mi.)	K93	27
CON EDISON EPA ID: NYP004698346	50 FT WO 150 LIBERTY	SW 1/8 - 1/4 (0.159 mi.)	K95	27
CON EDISON EPA ID: NYP004492599	104-09 LIBERTY AVE	SW 1/8 - 1/4 (0.159 mi.)	K96	27
CON EDISON SERVICE B EPA ID: NYP004367876	***103-11 VAN WYCK E SI***	***SW 1/8 - 1/4 (0.159 mi.)***	***K97***	***27***
CON EDISON SERVICE B EPA ID: NYP004428124	***VAN WYCK EXP & 101ST***	***W 1/8 - 1/4 (0.170 mi.)***	***L98***	***28***
CON EDISON EPA ID: NYP004404315	205-15 104 AVE	SSW 1/8 - 1/4 (0.178 mi.)	M99	28
CON EDISON EPA ID: NYP004588679	47-10 104 ST	SSW 1/8 - 1/4 (0.178 mi.)	M100	28
CON EDISON EPA ID: NYP004684387	95 AVE 104 ST	SSW 1/8 - 1/4 (0.178 mi.)	M101	28
CON EDISON EPA ID: NYP004780573	39-16 104TH ST	SSW 1/8 - 1/4 (0.178 mi.)	M102	28
CON EDISON EPA ID: NYP004499786	104-05 101 AVE	W 1/8 - 1/4 (0.180 mi.)	L103	29
CON EDISON EPA ID: NYP004582946	88-09 101 AVE	W 1/8 - 1/4 (0.180 mi.)	L104	29
CON EDISON EPA ID: NYP004406419	91-07 101 AVE	W 1/8 - 1/4 (0.183 mi.)	L105	29
NEW YORK CITY DEP DH EPA ID: NYP010001154	33-10 101ST	W 1/8 - 1/4 (0.183 mi.)	L106	29
NYSDEC	117-20 101ST AVENUE	W 1/8 - 1/4 (0.183 mi.)	L107	29

EPA ID: NYP000931576				
CON EDISON EPA ID: NYP004561742	95-29 BRISBIN ST FRO	NNW 1/8 - 1/4 (0.191 mi.)	N109	30
DAVID COLE EPA ID: NYR000220822	138-23 97TH AVE	NW 1/8 - 1/4 (0.198 mi.)	O113	31
CON EDISON SERVICE B EPA ID: NYP004365805	***102-16 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.202 mi.)***	***P114***	***31***
CON EDISON SERVICE B EPA ID: NYP004365821	***102-32 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.203 mi.)***	***P115***	***31***
CON EDISON SERVICE B EPA ID: NYP004365748	***102-10 VAN WYCK EXPW***	***WSW 1/8 - 1/4 (0.204 mi.)***	***P116***	***31***
RUBIE'S COSTUME CO EPA ID: NYD987035029	***101-10 VAN WYCK EXPY***	***W 1/8 - 1/4 (0.210 mi.)***	***Q118***	***32***
TRI-US AUTO RADIATOR EPA ID: NYR000094227	***97-20 SUTPHIN BLVD***	***NNE 1/8 - 1/4 (0.213 mi.)***	***R119***	***32***
CON EDISON EPA ID: NYP004689030	25-12 97 ST	WNW 1/8 - 1/4 (0.230 mi.)	S122	33
CON EDISON EPA ID: NYP004689048	25-34 97 ST	WNW 1/8 - 1/4 (0.230 mi.)	S125	34
CON EDISON SERVICE B EPA ID: NYP004311833	***5TH AVE N OF 128TH S***	***WNW 1/8 - 1/4 (0.237 mi.)***	***S128***	***34***
CON EDISON EPA ID: NYP004550653	95-17 REMINGTON ST F	NW 1/8 - 1/4 (0.248 mi.)	U135	36
CON EDISON SERVICE B EPA ID: NYP004439527	***102-06 135TH ST FRON***	***WSW 1/8 - 1/4 (0.248 mi.)***	***137***	***36***
CON EDISON SERVICE B EPA ID: NYP004450755	***143-04 95TH AVE***	***NNW 1/8 - 1/4 (0.249 mi.)***	***138***	***36***
CON EDISON EPA ID: NYP004559639	134-21 101ST AVE FRO	W 1/8 - 1/4 (0.250 mi.)	Q140	37
CON EDISON EPA ID: NYP004535811	134-21 101ST AVE	W 1/8 - 1/4 (0.250 mi.)	Q142	37

Lower Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON EPA ID: NYP004365862	VAN WYCK SERV RD &AM	SW 1/8 - 1/4 (0.195 mi.)	K110	30
CON EDISON EPA ID: NYP004367843	VAN WYCK EXPWY & LIB	SW 1/8 - 1/4 (0.195 mi.)	K111	30
V-M AUTO COLLISION W EPA ID: NYD981874456	***105-06 SUTPHIN BLVD***	***ENE 1/8 - 1/4 (0.243 mi.)***	***T129***	***35***
CON EDISON EPA ID: NYP004550307	SUTPHIN BLVD & 105TH	ENE 1/8 - 1/4 (0.245 mi.)	T134	36

EXECUTIVE SUMMARY

PA MANIFEST: A review of the PA MANIFEST list, as provided by EDR, and dated 12/31/2015 has revealed that there is 1 PA MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FRANK MAHADAI RESIDE Generator EPA Id: NYR000138495	139-02 97TH AVENUE	WNW 1/8 - 1/4 (0.230 mi.)	S124	33

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JAMAICA GAS AND LIGH	BEAVER RD., AND 158T	NE 1/2 - 1 (0.624 mi.)	AD178	48

EDR Hist Auto: A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 7 EDR Hist Auto sites within approximately 0.125 miles of the target property.

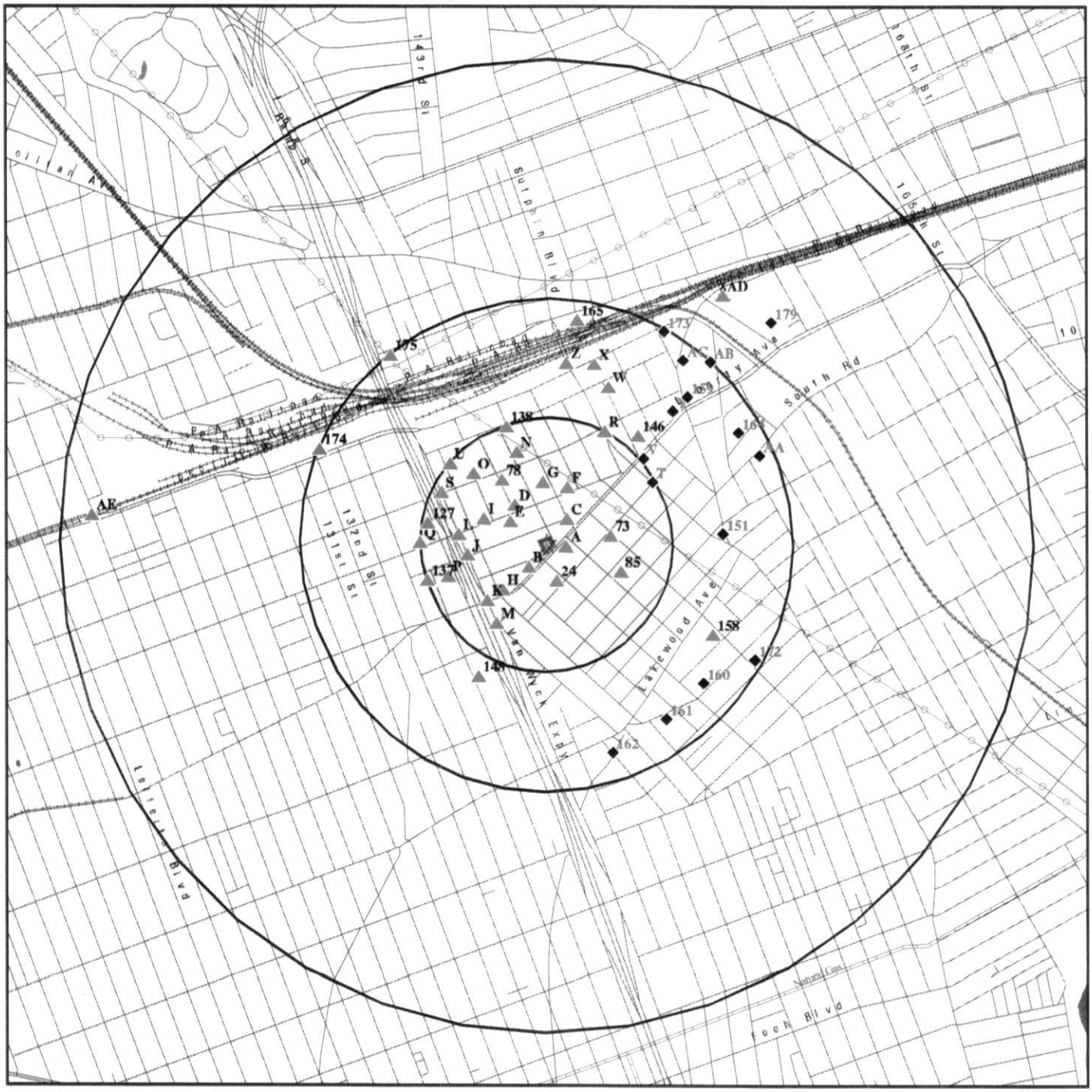
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	14511 LIBERTY AVE	ESE 0 - 1/8 (0.002 mi.)	A1	8
Not reported	14526 LIBERTY AVE	E 0 - 1/8 (0.030 mi.)	A6	9
Not reported	14421 LIBERTY AVE	SW 0 - 1/8 (0.044 mi.)	B12	10
Not reported	14404 LIBERTY AVE	SSW 0 - 1/8 (0.074 mi.)	B31	14
Not reported	13826 101ST AVE	WNW 0 - 1/8 (0.091 mi.)	E43	16
Not reported	13824 101ST AVE	WNW 0 - 1/8 (0.094 mi.)	E49	17
Not reported	13814 101ST AVE	WNW 0 - 1/8 (0.112 mi.)	E56	19

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

OVERVIEW MAP - 4833535.2S

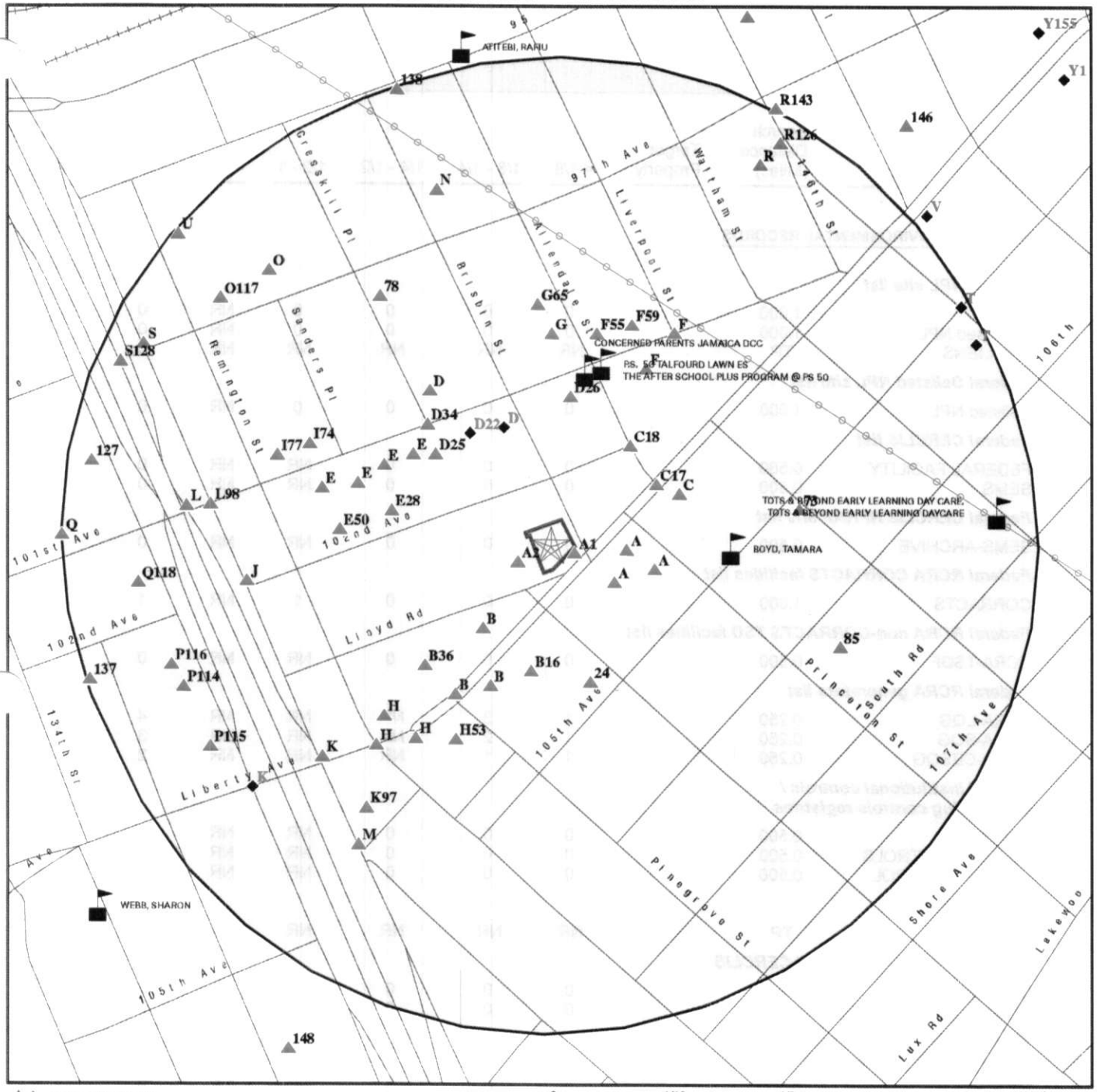


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 145-11 BRISBIN ST ADDRESS: 145-11 BRISBIN ST JAMAICA NY 11435 LAT/LONG: 40.693778 / 73.807915	CLIENT: Atlantic Enviro. Solutions,Inc CONTACT: Melissa M. Greenfield INQUIRY #: 4833535.2s DATE: January 23, 2017 10:08 am

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 4833535.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 145-11 BRISBIN ST ADDRESS: 145-11 BRISBIN ST JAMAICA NY 11435 LAT/LONG: 40.693778 / 73.807915	CLIENT: Atlantic Enviro. Solutions,Inc CONTACT: Melissa M. Greenfield INQUIRY #: 4833535.2s DATE: January 23, 2017 10:10 am

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	3	NR	NR	NR	4
RCRA-SQG	0.250		1	2	NR	NR	NR	3
RCRA-CESQG	0.250		1	1	NR	NR	NR	2
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
NY SHWS	1.000		0	0	0	2	NR	2
NY VAPOR REOPENED	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
NY SWF/LF	0.500		0	0	8	NR	NR	8
State and tribal leaking storage tank lists								
INDIAN LUST	0.500		0	0	0	NR	NR	0
NY LTANKS	0.500		1	6	19	NR	NR	26
NY HIST LTANKS	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
NY UST	0.250		2	3	NR	NR	NR	5
NY CBS UST	0.250		0	0	NR	NR	NR	0
NY MOSF UST	0.500		0	0	0	NR	NR	0
NY CBS	0.250		0	0	NR	NR	NR	0
NY MOSF	0.500		0	0	0	NR	NR	0
NY AST	0.250		7	4	NR	NR	NR	11
NY CBS AST	0.250		0	0	NR	NR	NR	0
NY MOSF AST	0.500		0	0	0	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
NY TANKS	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NY RES DECL	0.125		0	NR	NR	NR	NR	0
NY ENG CONTROLS	0.500		0	0	0	NR	NR	0
NY INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NY BROWNFIELDS	0.500		0	0	2	NR	NR	2
NY ERP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	1	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
NY SWRCY	0.500		0	0	4	NR	NR	4
NY SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
NY DEL SHWS	1.000		0	0	0	1	NR	1
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	0.250		0	1	NR	NR	NR	1
NY HIST AST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Local Land Records								
NY LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
NY Spills	0.125		8	NR	NR	NR	NR	8
NY Hist Spills	0.125		0	NR	NR	NR	NR	0
NY SPILLS 90	0.125		0	NR	NR	NR	NR	0
NY SPILLS 80	0.125		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		14	18	NR	NR	NR	32
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
NY AIRS	TP		NR	NR	NR	NR	NR	0
NY COAL ASH	0.500		0	0	0	NR	NR	0
NY DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NY E DESIGNATION	0.125		25	NR	NR	NR	NR	25

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY Financial Assurance	TP		NR	NR	NR	NR	NR	0
NY HSWDS	0.500		0	0	0	NR	NR	0
NY MANIFEST	0.250		18	46	NR	NR	NR	64
NJ MANIFEST	0.250		0	0	NR	NR	NR	0
PA MANIFEST	0.250		0	1	NR	NR	NR	1
NY SPDES	TP		NR	NR	NR	NR	NR	0
NY UIC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
ABANDONED MINES	0.500		0	0	0	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	1	NR	1
EDR Hist Auto	0.125		7	NR	NR	NR	NR	7
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
NY RGA HWS	TP		NR	NR	NR	NR	NR	0
NY RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals --		0	85	85	34	5	0	209

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 **ESE** **< 1/8** **0.002 mi.** **11 ft.** **Relative:** **Higher**	**14511 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details**	**EDR Hist Auto**	**1015230550** **N/A**
A2 **WSW** **< 1/8** **0.011 mi.** **58 ft.** **Relative:** **Higher**	**138-57 LLOYD ROAD** **138-57 LLOYD ROAD** **JAMAICA, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 9209764 / 1993-11-21 Site ID: 135811 Program Number: 9209764	**NY LTANKS**	**S100494376** **N/A**
A3 **SE** **< 1/8** **0.027 mi.** **143 ft.** **Relative:** **Higher**	**LOT 4,TAXBLOCK 10046** **145-10 LIBERTY AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983635** **N/A**
A4 **East** **< 1/8** **0.028 mi.** **148 ft.** **Relative:** **Higher**	**CON EDISON** **145-28 LIBERTY AV** **QUEENS, NY 11435** **Click here for full text details** **NY MANIFEST** EPA ID: NYP004694584	**NY MANIFEST**	**S117536940** **N/A**
A5 **ESE** **< 1/8** **0.029 mi.** **151 ft.** **Relative:** **Higher**	**LOT 6,TAXBLOCK 10046** **145-18 LIBERTY AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983758** **N/A**

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A6 **East** **< 1/8** **0.030 mi.** **160 ft.** **Relative:** **Higher**	**14526 LIBERTY AVE** **JAMAICA, NY 11435** Click here for full text details	**EDR Hist Auto**	**1015230713** **N/A**
A7 **East** **< 1/8** **0.030 mi.** **161 ft.** **Relative:** **Higher**	**ACTION TRANSMISSION** **145-26 LIBERTY AVE** **JAMAICA, QUEENS, NY** Click here for full text details **NY Spills** Spill Number/Closed Date: 0402237 / 2011-12-07 spillno: 0402237 Site ID: 210683	**NY Spills**	**S106469543** **N/A**
A8 **East** **< 1/8** **0.030 mi.** **161 ft.** **Relative:** **Higher**	**LOT 9,TAXBLOCK 10046** **145-26 LIBERTY AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983877** **N/A**
A9 **East** **< 1/8** **0.030 mi.** **161 ft.** **Relative:** **Higher**	**ACTION TRANSMISSION INC.** **145-26 LIBERTY AVENUE** **JAMAICA, NY 11435** Click here for full text details **NY AST** Facility Id: 2-607162	**NY AST**	**A100194196** **N/A**
B10 **SW** **< 1/8** **0.044 mi.** **234 ft.** **Relative:** **Higher**	**LOT 114,TAXBLOCK 10020** **144-21 LIBERTY AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983241** **N/A**

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
B11 **SW** **< 1/8** **0.044 mi.** **234 ft.** **Relative: Higher**	**SERVICE STATION** **144-21 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details** **RCRA NonGen / NLR** EPA Id: NYD000698613 **FINDS** Registry ID:: 110004328282	**RCRA NonGen / NLR** **FINDS** **ECHO**	**1000432446** **NYD000698613**
B12 **SW** **< 1/8** **0.044 mi.** **234 ft.** **Relative: Higher**	**14421 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details**	**EDR Hist Auto**	**1015229154** **N/A**
A13 **ESE** **< 1/8** **0.045 mi.** **236 ft.** **Relative: Higher**	**ENGINE COMPANY 303** **104-12 PRINCETON STREET** **QUEENS, NY 11435** **Click here for full text details**	**NY UST**	**U004078050** **N/A**
A14 **ESE** **< 1/8** **0.045 mi.** **236 ft.** **Relative: Higher**	**ENGINE COMPANY 303** **104-12 PRINCETON STREET** **QUEENS, NY 11435** **Click here for full text details** **NY AST** Facility Id: 2-600539	**NY AST**	**A100194031** **N/A**
A15 **ESE** **< 1/8** **0.045 mi.** **236 ft.** **Relative: Higher**	**NYC DEP** **104-12 PRINCETON ST** **JAMAICA, NY 11435** **Click here for full text details** **RCRA NonGen / NLR** EPA Id: NYP003665023 **NY MANIFEST** EPA ID: NYP003665023	**RCRA NonGen / NLR** **NY MANIFEST**	**1014472946** **NYP003665023**

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B16 **South** **< 1/8** **0.054 mi.** **283 ft.** **Relative:** **Higher**	**LOT 6,TAXBLOCK 10043** **144-20 LIBERTY AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983757** **N/A**
C17 **ENE** **< 1/8** **0.055 mi.** **288 ft.** **Relative:** **Higher**	**ALLENDALE ST &** **LIBERTY AVE & ALLENDALE** **QUEENS, NY** Click here for full text details **NY Spills** Spill Number/Closed Date: 0204519 / 2003-03-07 spillno: 0204519 Site ID: 274666	**NY Spills**	**S106006125** **N/A**
C18 **NE** **< 1/8** **0.055 mi.** **289 ft.** **Relative:** **Higher**	**SPILL NUMBER 0202791** **ALLENDALE ST & 102ND AV** **QUEENS, NY** Click here for full text details **NY Spills** Spill Number/Closed Date: 0202791 / 2002-08-02 spillno: 0202791 Site ID: 146102	**NY Spills**	**S106004624** **N/A**
D19 **NNW** **< 1/8** **0.058 mi.** **305 ft.** **Relative:** **Lower**	**LOT 29,TAXBLOCK 10018** **101-02 BRISBIN STREET** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983531** **N/A**
C20 **ENE** **< 1/8** **0.059 mi.** **309 ft.** **Relative:** **Higher**	**LOT 1,TAXBLOCK 10049** **145-50 LIBERTY AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983147** **N/A**

D21
NNW
< 1/8
0.061 mi.
321 ft.

Relative:
Lower

LOT 27,TAXBLOCK 10018
139-12 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983510**
N/A

Click here for full text details

D22
NW
< 1/8
0.062 mi.
326 ft.

Relative:
Lower

LOT 25,TAXBLOCK 10018
139-06 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983472**
N/A

Click here for full text details

C23
ENE
< 1/8
0.063 mi.
335 ft.

Relative:
Higher

XTREME COLLISION & AUTO REPAIR
145-56 LIBERTY AVENUE
JAMAICA, NY 11435

NY AST **A100382405**
N/A

Click here for full text details

NY AST
Facility Id: 2-612085

24
SSE
< 1/8
0.064 mi.
338 ft.

Relative:
Higher

OCCUPIED FORECLOSED BUILDING
144-27 105 AVE
JAMAICA, NY

NY Spills **S111159158**
N/A

Click here for full text details

NY Spills
Spill Number/Closed Date: 1104731 / Not Reported
spillno: 1104731
Site ID: 452342

D25
NW
< 1/8
0.065 mi.
341 ft.

Relative:
Higher

LOT 20,TAXBLOCK 10018
138-48 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983401**
N/A

Click here for full text details

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
D26 **North** **< 1/8** **0.067 mi.** **355 ft.** **Relative: Higher**	**LOT 5,TAXBLOCK 10021** **143-14 101 AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983696** **N/A**
B27 **SSW** **< 1/8** **0.068 mi.** **357 ft.** **Relative: Higher**	**AVENUE CONCRETE** **LIBERTY AVENUE & PINEGROV** **QUEENS, NY** Click here for full text details **NY Spills** Spill Number/Closed Date: 9607583 / 2003-02-24 spillno: 9607583 Site ID: 241988	**NY Spills**	**S102402047** **N/A**
E28 **WNW** **< 1/8** **0.073 mi.** **387 ft.** **Relative: Higher**	**CON EDISON SERVICE BOX: 36547** **138-29 102ND AVE FRONT OF** **JAMAICA, NY 11435** Click here for full text details **RCRA NonGen / NLR** EPA Id: NYP004389052 **NY MANIFEST** EPA ID: NYP004389052	**RCRA NonGen / NLR** **NY MANIFEST**	**1016966050** **NYP004389052**
E29 **WNW** **< 1/8** **0.074 mi.** **392 ft.** **Relative: Higher**	**LOT 117,TAXBLOCK 10018** **138-42A 101 AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983243** **N/A**
E30 **WNW** **< 1/8** **0.074 mi.** **392 ft.** **Relative: Higher**	**LOT 18,TAXBLOCK 10018** **138-42 101 AVENUE** **QUEENS, NY 11435** Click here for full text details	**NY E DESIGNATION**	**S108983365** **N/A**

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
B31 **SSW** **< 1/8** **0.074 mi.** **393 ft.** **Relative: Higher**	**14404 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details**	**EDR Hist Auto**	**1015228878** **N/A**
E32 **WNW** **< 1/8** **0.076 mi.** **403 ft.** **Relative: Higher**	**LOT 17,TAXBLOCK 10018** **138-40 101 AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983348** **N/A**
E33 **WNW** **< 1/8** **0.079 mi.** **415 ft.** **Relative: Higher**	**LOT 16,TAXBLOCK 10018** **138-38 101 AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983324** **N/A**
D34 **NW** **< 1/8** **0.079 mi.** **418 ft.** **Relative: Higher**	**CON EDISON SERVICE BOX: 18939** **101ST AVE & CRESSKILL PL** **JAMAICA, NY 11435** **Click here for full text details** **RCRA NonGen / NLR** EPA Id: NYP004444923 **NY MANIFEST** EPA ID: NYP004444923	**RCRA NonGen / NLR** **NY MANIFEST**	**1016970765** **NYP004444923**
B35 **SSW** **< 1/8** **0.081 mi.** **429 ft.** **Relative: Higher**	**LOT 137,TAXBLOCK 10020** **144-01 LIBERTY AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983288** **N/A**

B36
SW
< 1/8
0.081 mi.
430 ft.

Relative:
Higher

FAMILY DOLLAR STORE #11071
144-01 LIBERTY AVE
JAMAICA, NY 11435

Click here for full text details

RCRA-CESQG
EPA Id: NYR000222109

RCRA-CESQG **1018159105**
ECHO **NYR000222109**

B37
SSW
< 1/8
0.083 mi.
440 ft.

Relative:
Higher

NYNEX
PINEGROVE & LIBERTY
QUEENS, NY 11435

Click here for full text details

NY MANIFEST
EPA ID: NYP000916460

NY MANIFEST **1009233517**
N/A

B38
SSW
< 1/8
0.083 mi.
440 ft.

Relative:
Higher

BELL ATLANTIC-NY
LIBERTY AVE/PINEGROVE ST
JAMAICA, NY 00000

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP000936013

NY MANIFEST
EPA ID: NYP000936013

RCRA NonGen / NLR **1007205570**
NY MANIFEST **NYP000936013**

E39
WNW
< 1/8
0.085 mi.
447 ft.

Relative:
Higher

LOT 12,TAXBLOCK 10018
138-36 101 AVENUE
QUEENS, NY 11435

Click here for full text details

NY E DESIGNATION **S108983245**
N/A

D40
NW
< 1/8
0.087 mi.
460 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 12043
139-07 101ST AVE
JAMAICA, NY 11435

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004444931

NY MANIFEST
EPA ID: NYP004444931

RCRA NonGen / NLR **1016970766**
NY MANIFEST **NYP004444931**

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
E41 **WNW** **< 1/8** **0.090 mi.** **475 ft.** **Relative: Higher**	**138-26 101ST AVE** **138-26 101ST AVENUE** **JAMAICA, NY 11435** **Click here for full text details** **NY AST** Facility Id: 2-609175	**NY AST**	**A100293820** **N/A**
E42 **WNW** **< 1/8** **0.091 mi.** **482 ft.** **Relative: Higher**	**LOT 11,TAXBLOCK 10018** **138-26 101 AVENUE** **QUEENS, NY 11435** **Click here for full text details**	**NY E DESIGNATION**	**S108983222** **N/A**
E43 **WNW** **< 1/8** **0.091 mi.** **482 ft.** **Relative: Higher**	**13826 101ST AVE** **JAMAICA, NY 11435** **Click here for full text details**	**EDR Hist Auto**	**1015216705** **N/A**
D44 **NW** **< 1/8** **0.093 mi.** **491 ft.** **Relative: Higher**	**CON EDISON SERVICE BOX: 18940** **139-03 101ST AVE** **JAMAICA, NY 11435** **Click here for full text details** **RCRA NonGen / NLR** EPA Id: NYP004445037 **NY MANIFEST** EPA ID: NYP004445037	**RCRA NonGen / NLR** **NY MANIFEST**	**1016970776** **NYP004445037**
D45 **NW** **< 1/8** **0.093 mi.** **491 ft.** **Relative: Higher**	**CON EDISON SERVICE BOX: 18940** **139-03 101ST AVE FRONT OF** **JAMAICA, NY 11435** **Click here for full text details** **RCRA NonGen / NLR** EPA Id: NYP004386405 **NY MANIFEST** EPA ID: NYP004386405	**RCRA NonGen / NLR** **NY MANIFEST**	**1016965778** **NYP004386405**

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
F46 **NNE** **< 1/8** **0.094 mi.** **497 ft.** **Relative: Higher**	**PUBLIC SCHOOL 50 - QUEENS** **143-26 101ST AVENUE** **JAMAICA, NY 11435** Click here for full text details **NY AST** Facility Id: 2-604805	**NY AST**	**A100301593** **N/A**
F47 **NNE** **< 1/8** **0.094 mi.** **497 ft.** **Relative: Higher**	**NYC DEPT OF EDUCATION - PS 50Q** **143-26 101ST AVE** **QUEENS, NY 11435** Click here for full text details **RCRA-SQG** EPA Id: NYR000220087	**RCRA-SQG**	**1018158935** **NYR000220087**
F48 **NNE** **< 1/8** **0.094 mi.** **497 ft.** **Relative: Higher**	**NYC DEPT OF EDUCATION - PS 50Q** **143-26 101ST AVE** **QUEENS, NY 11435** Click here for full text details **NY MANIFEST** EPA ID: NYR000220087	**NY MANIFEST**	**S118260231** **N/A**
E49 **WNW** **< 1/8** **0.094 mi.** **498 ft.** **Relative: Higher**	**13824 101ST AVE** **JAMAICA, NY 11435** Click here for full text details	**EDR Hist Auto**	**1015216696** **N/A**
E50 **West** **< 1/8** **0.100 mi.** **529 ft.** **Relative: Higher**	**TRANSMISSION AUTO** **138-13 102ND AVE** **QUEENS, NY** Click here for full text details **NY Spills** Spill Number/Closed Date: 0303519 / 2006-03-16 spillno: 0303519 Site ID: 269714	**NY Spills**	**S106015711** **N/A**

G51
North
< 1/8
0.102 mi.
536 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 33185
97-34 ALLENDALE ST FRONT OF
JAMAICA, NY 11435

RCRA NonGen / NLR
NY MANIFEST

1016966148
NYP004390035

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004390035

NY MANIFEST
EPA ID: NYP004390035

G52
North
< 1/8
0.102 mi.
536 ft.

Relative:
Higher

F&L REALTY LLC
97-34 ALLENDALE STREET
JAMAICA, NY 11435

NY AST

U004077133
N/A

Click here for full text details

NY AST
Facility Id: 2-244007

H53
SSW
< 1/8
0.102 mi.
538 ft.

Relative:
Higher

LOT 6,TAXBLOCK 10041
143-18 PINEGROVE STREET
QUEENS, NY 11435

NY E DESIGNATION

S108983756
N/A

Click here for full text details

E54
WNW
< 1/8
0.102 mi.
539 ft.

Relative:
Higher

LOT 7,TAXBLOCK 10018
138-16 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION

S108983805
N/A

Click here for full text details

F55
NNE
< 1/8
0.103 mi.
544 ft.

Relative:
Higher

CON EDISON
97-43 ALLENDALE ST
JAMAICA, NY 11435

NY MANIFEST

S118258577
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004817896

E56
WNW
< 1/8
0.112 mi.
593 ft.

Relative:
Higher

13814 101ST AVE
JAMAICA, NY 11435

Click here for full text details

Database(s): **EDR Hist Auto**
EDR ID Number: **1015216606**
EPA ID Number: **N/A**

E57
WNW
< 1/8
0.112 mi.
593 ft.

Relative:
Higher

ONE-O-ONE TRANSMISSION REBUILDERS INC.
138-14 101ST AVENUE
JAMAICA, NY 11435

Click here for full text details

NY AST
Facility Id: 2-611464

Database(s): **NY AST**
EDR ID Number: **A100354106**
EPA ID Number: **N/A**

H58
SSW
< 1/8
0.112 mi.
593 ft.

Relative:
Higher

LOT 4,TAXBLOCK 10041
143-12 LIBERTY AVENUE
QUEENS, NY 11435

Click here for full text details

Database(s): **NY E DESIGNATION**
EDR ID Number: **S108983634**
EPA ID Number: **N/A**

F59
NNE
< 1/8
0.113 mi.
595 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 35981
143-41 101ST AVE FRONT OF
JAMAICA, NY 11435

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004385118

NY MANIFEST
EPA ID: NYP004385118

Database(s): **RCRA NonGen / NLR, NY MANIFEST**
EDR ID Number: **1016965641**
EPA ID Number: **NYP004385118**

H60
SW
< 1/8
0.113 mi.
597 ft.

Relative:
Higher

CON EDISON
143-18 LIBERTY AVE FRONT OF
JAMAICA, NY 11435

Click here for full text details

NY MANIFEST
EPA ID: NYP004389136

Database(s): **NY MANIFEST**
EDR ID Number: **S117564612**
EPA ID Number: **N/A**

H61
SW
< 1/8
0.113 mi.
597 ft.

Relative:
Higher

CATCH BASIN
143-18 LIBERTY AVENUE
QUEENS, NY

Database(s): **NY Spills**
EDR ID Number: **S102402004**
EPA ID Number: **N/A**

Click here for full text details

NY Spills
Spill Number/Closed Date: 9607251 / 1998-04-30
spillno: 9607251
Site ID: 258644

H62
SW
< 1/8
0.113 mi.
597 ft.

Relative:
Higher

CON EDISON - SERVICE BOX 4031
143-18 LIBERTY AVE
JAMAICA, NY 11435

Database(s): **RCRA-LQG**
EDR ID Number: **1016966058**
EPA ID Number: **NYP004389136**

Click here for full text details

RCRA-LQG
EPA Id: NYP004389136

H63
SW
< 1/8
0.113 mi.
597 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 4032
143-18 LIBERTY AVE FRONT OF
JAMAICA, NY 11435

Database(s): **RCRA NonGen / NLR**
NY MANIFEST
EDR ID Number: **1016966052**
EPA ID Number: **NYP004389078**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004389078

NY MANIFEST
EPA ID: NYP004389078

H64
SW
< 1/8
0.116 mi.
612 ft.

Relative:
Higher

LOT 138,TAXBLOCK 10020
143-05 REMINGTON STREET
QUEENS, NY 11435

Database(s): **NY E DESIGNATION**
EDR ID Number: **S108983289**
EPA ID Number: **N/A**

Click here for full text details

G65
North
< 1/8
0.118 mi.
621 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 35491
97-24 ALLENDALE ST FRONT OF
JAMAICA, NY 11435

Database(s): **RCRA NonGen / NLR**
NY MANIFEST
EDR ID Number: **1016966078**
EPA ID Number: **NYP004389326**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004389326

NY MANIFEST

CON EDISON SERVICE BOX: 35491 (Continued) **1016966078**

EPA ID: NYP004389326

H66
SSW
< 1/8
0.118 mi.
622 ft.

Relative:
Higher

LOT 3,TAXBLOCK 10041
143-10 LIBERTY AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983540**
N/A

Click here for full text details

E67
WNW
< 1/8
0.118 mi.
625 ft.

Relative:
Higher

LOT 4,TAXBLOCK 10018
138-10 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983632**
N/A

Click here for full text details

F68
NNE
< 1/8
0.119 mi.
626 ft.

Relative:
Higher

MANHOLE #2945
101 AVE & LIVERPOOL ST
QUEENS, NY

NY Spills **S107416620**
N/A

Click here for full text details

NY Spills
Spill Number/Closed Date: 0509293 / 2005-12-16
spillno: 0509293
Site ID: 355050

F69
NNE
< 1/8
0.119 mi.
626 ft.

Relative:
Higher

CON EDISON MANHOLE: 2945
101ST AVE & LIVERPOOL ST NW
JAMAICA, NY 11435

RCRA NonGen / NLR **1016965867**
NY MANIFEST **NYP004387254**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004387254

NY MANIFEST
EPA ID: NYP004387254

H70
SW
< 1/8
0.119 mi.
630 ft.

Relative:
Higher

CON EDISON
143-05 LIBERTY AVE
JAMAICA, NY 11435

RCRA NonGen / NLR **1018280031**
ECHO **NYP004748893**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004748893

H71
SW
< 1/8
0.119 mi.
630 ft.

Relative:
Higher

CON EDISON
143-05 LIBERTY AVE
JAMAICA, NY 11435

NY MANIFEST **S117741648**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004748893

E72
WNW
< 1/8
0.122 mi.
646 ft.

Relative:
Higher

LOT 3,TAXBLOCK 10018
138-12 101 AVENUE
QUEENS, NY 11435

NY E DESIGNATION **S108983538**
N/A

Click here for full text details

73
East
< 1/8
0.123 mi.
649 ft.

Relative:
Higher

ST PIUS V SCHOOL
105-12 LIVERPOOL STREET
JAMAICA, NY 11435

NY UST **U001839579**
N/A

Click here for full text details

I74
WNW
1/8-1/4
0.126 mi.
665 ft.

Relative:
Higher

M & M OLDSMOBILE
138-19 101ST ST
JAMAICA, NY 11435

RCRA NonGen / NLR **1000122962**
FINDS **NYD981564305**
NY MANIFEST
ECHO

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYD981564305

FINDS
Registry ID:: 110004410218

NY MANIFEST
EPA ID: NYD981564305

H75
SW
1/8-1/4
0.130 mi.
685 ft.

Relative:
Higher

CON EDISON
LIBERTY AVE & REMINGTON ST
JAMAICA, NY 11435

NY MANIFEST **S118258361**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004814261

H76
SW
1/8-1/4
0.130 mi.
685 ft.

Relative:
Higher

CON EDISON - MANHOLE 2919
LIBERTY AVE & REMINGTON ST
JAMAICA, NY 11435

RCRA-LQG **1019325300**
NYP004814261

Click here for full text details

RCRA-LQG
EPA Id: NYP004814261

I77
WNW
1/8-1/4
0.140 mi.
740 ft.

Relative:
Higher

CON EDISON MANHOLE: 8661
138-05 101ST AVE FRONT OF
JAMAICA, NY 11435

RCRA NonGen / NLR **1016965512**
NY MANIFEST **NYP004383899**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004383899

NY MANIFEST
EPA ID: NYP004383899

78
NW
1/8-1/4
0.151 mi.
795 ft.

Relative:
Higher

FRANK MAHADAI HOUSEHOLD
139-02 97TH AVE
JAMAICA, NY 11435

RCRA-SQG **1009399885**
NY MANIFEST **NYR000138495**

Click here for full text details

RCRA-SQG
EPA Id: NYR000138495

NY MANIFEST
EPA ID: NYR000138495

J79
West
1/8-1/4
0.151 mi.
797 ft.

Relative:
Higher

PUBLIC SCHOOL #195 - NYC SCHOOL DISTIRCT
64-35 102ND ST
QUEENS, NY

NY LTANKS **S117395128**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 1409189 / Not Reported
Site ID: 502794
Program Number: 1409189

J80
West
1/8-1/4
0.151 mi.
797 ft.

Relative:
Higher

CON EDISON
62-58 102 ST
QUEENS, NY 11432

NY MANIFEST **S117738455**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004715041

J81
West
1/8-1/4
0.151 mi.
797 ft.

Relative:
Higher

CON EDISON
84-11 102 ST
QUEENS, NY 11432

NY MANIFEST **S117739005**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004720884

J82
West
1/8-1/4
0.152 mi.
804 ft.

Relative:
Higher

CON EDISON
95-14 102 ST
QUEENS, NY 11432

NY MANIFEST **S117063836**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004562861

J83
West
1/8-1/4
0.152 mi.
805 ft.

Relative:
Higher

CON EDISON
VAN WYCK BLVD & 102 AVE
JAMAICA, NY 11435

NY MANIFEST **S118258363**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004814303

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
J84 **West** **1/8-1/4** **0.152 mi.** **805 ft.** **Relative:** **Higher**	**CON EDISON - MANHOLE 8279** **VAN WYCK BLVD & 102 AVE** **JAMAICA, NY 11435** Click here for full text details **RCRA-LQG** EPA Id: NYP004814303	**RCRA-LQG**	**1019325302** **NYP004814303**
85 **ESE** **1/8-1/4** **0.153 mi.** **808 ft.** **Relative:** **Higher**	**CLOSED-LACKOF RECENT INFO** **106012 LIVERPOOL ST.** **NEW YORK CITY, NY** Click here for full text details **NY LTANKS** Spill Number/Closed Date: 8705555 / 2003-03-04 Site ID: 253239 Program Number: 8705555	**NY LTANKS**	**S100144805** **N/A**
K86 **SW** **1/8-1/4** **0.155 mi.** **821 ft.** **Relative:** **Higher**	**CUMBERLAND FARMS INC #70270** **137-21 LIBERTY AVE** **JAMAICA, NY 11435** Click here for full text details **RCRA NonGen / NLR** EPA Id: NYD986957025 **US AIRS** EPA plant ID:: 110000810418 **NY MANIFEST** EPA ID: NYD986957025	**RCRA NonGen / NLR** **US AIRS** **NY MANIFEST**	**1001489029** **NYD986957025**
K87 **SW** **1/8-1/4** **0.155 mi.** **821 ft.** **Relative:** **Higher**	**CUMBERLAND #70270** **137-21 LIBERTY AVENUE** **JAMAICA, NY 11435** Click here for full text details **NY HIST UST** PBS Number: 2-188832 Tank Status: 1 Facility Status: 1	**NY UST** **NY HIST UST**	**U000396258** **N/A**

K88
SW
1/8-1/4
0.156 mi.
825 ft.

Relative:
Higher

CON EDISON
121-21 LIBERTY AVE
QUEENS, NY 11432

NY MANIFEST | **S116043802**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004401758

K89
SW
1/8-1/4
0.156 mi.
825 ft.

Relative:
Higher

CON EDISON
109-07 LIBERTY AV
QUEENS, NY 11432

NY MANIFEST | **S117535685**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004680104

K90
SW
1/8-1/4
0.156 mi.
825 ft.

Relative:
Higher

CON EDISON
109-07 LIBERTY AVE
QUEENS, NY

NY MANIFEST | **S118258933**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004823445

K91
SW
1/8-1/4
0.159 mi.
838 ft.

Relative:
Higher

CON EDISON - MANHOLE 8280
LIBERTY AVE & VAN WYCK BLVD
JAMAICA, NY 11435

RCRA-LQG | **1019325301**
NYP004814279

Click here for full text details

RCRA-LQG
EPA Id: NYP004814279

K92
SW
1/8-1/4
0.159 mi.
838 ft.

Relative:
Higher

CON EDISON
LIBERTY AVE & VAN WYCK BLVD
JAMAICA, NY 11435

NY MANIFEST | **S118258362**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004814279

K93
SW
1/8-1/4
0.159 mi.
840 ft.

Relative:
Higher

CON EDISON
743 26 LIBERTY AV
QUEENS, NY 11435

NY MANIFEST **S117536967**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004694876

K94
SW
1/8-1/4
0.159 mi.
840 ft.

Relative:
Higher

MERIT SERVICE STATION
148 LIBERTY AVE
JAMAICA, NY

NY LTANKS **S101341091**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9409085 / 1995-07-18
Site ID: 329799
Program Number: 9409085

K95
SW
1/8-1/4
0.159 mi.
840 ft.

Relative:
Higher

CON EDISON
50 FT WO 150 LIBERTY AVE
JAMAICA, NY 11435

NY MANIFEST **S117738020**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004698346

K96
SW
1/8-1/4
0.159 mi.
840 ft.

Relative:
Higher

CON EDISON
104-09 LIBERTY AVE
QUEENS, NY 11420

NY MANIFEST **S116550838**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004492599

K97
SW
1/8-1/4
0.159 mi.
842 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 51390
103-11 VAN WYCK E SIDE SERVICE RD
JAMAICA, NY 11435

RCRA NonGen / NLR **1016963817**
NY MANIFEST **NYP004367876**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004367876

NY MANIFEST
EPA ID: NYP004367876

L98
West
1/8-1/4
0.170 mi.
899 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 49783
VAN WYCK EXP & 101ST AVE
JAMAICA, NY 11435

RCRA NonGen / NLR **1016969163**
NY MANIFEST **NYP004428124**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004428124

NY MANIFEST
EPA ID: NYP004428124

M99
SSW
1/8-1/4
0.178 mi.
941 ft.

Relative:
Higher

CON EDISON
205-15 104 AVE
QUEENS, NY 11432

NY MANIFEST **S116044041**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004404315

M100
SSW
1/8-1/4
0.178 mi.
941 ft.

Relative:
Higher

CON EDISON
47-10 104 ST
QUEENS, NY 11432

NY MANIFEST **S117066234**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004588679

M101
SSW
1/8-1/4
0.178 mi.
941 ft.

Relative:
Higher

CON EDISON
95 AVE 104 ST
QUEENS, NY 11432

NY MANIFEST **S117535999**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004684387

M102
SSW
1/8-1/4
0.178 mi.
941 ft.

Relative:
Higher

CON EDISON
39-16 104TH ST
QUEENS, NY

NY MANIFEST **S118090432**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004780573

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
L103 **West** **1/8-1/4** **0.180 mi.** **949 ft.** **Relative:** **Higher**	**CON EDISON** **104-05 101 AVE** **QUEENS, NY 11432** Click here for full text details **NY MANIFEST** EPA ID: NYP004499786	**NY MANIFEST**	**S116551488** **N/A**
L104 **West** **1/8-1/4** **0.180 mi.** **949 ft.** **Relative:** **Higher**	**CON EDISON** **88-09 101 AVE** **QUEENS, NY 11432** Click here for full text details **NY MANIFEST** EPA ID: NYP004582946	**NY MANIFEST**	**S117065713** **N/A**
L105 **West** **1/8-1/4** **0.183 mi.** **966 ft.** **Relative:** **Higher**	**CON EDISON** **91-07 101 AVE** **QUEENS, NY 11432** Click here for full text details **NY MANIFEST** EPA ID: NYP004406419	**NY MANIFEST**	**S116044246** **N/A**
L106 **West** **1/8-1/4** **0.183 mi.** **966 ft.** **Relative:** **Higher**	**NEW YORK CITY DEP DHMM** **33-10 101ST** **QUEENS, NY 11373** Click here for full text details **NY MANIFEST** EPA ID: NYP010001154	**NY MANIFEST**	**1009244278** **N/A**
L107 **West** **1/8-1/4** **0.183 mi.** **966 ft.** **Relative:** **Higher**	**NYSDEC** **117-20 101ST AVENUE** **QUEENS, NY** Click here for full text details **NY MANIFEST** EPA ID: NYP000931576	**NY MANIFEST**	**1009234485** **N/A**

N108
NNW
1/8-1/4
0.191 mi.
1008 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 27024
95-29 BRISBIN ST FRONT OF
JAMAICA, NY 11435

RCRA NonGen / NLR
FINDS

1017778250
NYP004561742

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004561742

FINDS
Registry ID:: 110063834230

N109
NNW
1/8-1/4
0.191 mi.
1008 ft.

Relative:
Higher

CON EDISON
95-29 BRISBIN ST FRONT OF
JAMAICA, NY 11435

NY MANIFEST

S117063735
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004561742

K110
SW
1/8-1/4
0.195 mi.
1031 ft.

Relative:
Lower

CON EDISON
VAN WYCK SERV RD & LIBERTY
SOUTH RICHMOND HILL, NY 11419

NY MANIFEST

1016963593
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004365862

K111
SW
1/8-1/4
0.195 mi.
1031 ft.

Relative:
Lower

CON EDISON
VAN WYCK EXPWY & LIBERTY AVE N
SOUTH RICHMOND HILL, NY 11419

NY MANIFEST

1016963813
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004367843

O112
NW
1/8-1/4
0.198 mi.
1048 ft.

Relative:
Higher

DAVID COLE
138-23 97TH AVE
JAMAICA, NY 11435

RCRA-SQG

1018159007
NYR000220822

Click here for full text details

RCRA-SQG
EPA Id: NYR000220822

O113
NW
1/8-1/4
0.198 mi.
1048 ft.

Relative:
Higher

DAVID COLE
138-23 97TH AVE
JAMAICA, NY 11435

NY MANIFEST **S118260245**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYR000220822

P114
WSW
1/8-1/4
0.202 mi.
1067 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 19128
102-16 VAN WYCK EXPWY
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR **1016963586**
NY MANIFEST **NYP004365805**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004365805

NY MANIFEST
EPA ID: NYP004365805

P115
WSW
1/8-1/4
0.203 mi.
1070 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 19132
102-32 VAN WYCK EXPWY
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR **1016963588**
NY MANIFEST **NYP004365821**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004365821

NY MANIFEST
EPA ID: NYP004365821

P116
WSW
1/8-1/4
0.204 mi.
1075 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 19162
102-10 VAN WYCK EXPWY
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR **1016963580**
NY MANIFEST **NYP004365748**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004365748

NY MANIFEST
EPA ID: NYP004365748

O117
NW
1/8-1/4
0.208 mi.
1097 ft.

Relative:
Higher

138-07 97TH AVENUE
138-07 97TH AVENUE
JAMAICA, NY

NY LTANKS **S102672335**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9312378 / 1994-01-21
Site ID: 120397
Program Number: 9312378

Q118
West
1/8-1/4
0.210 mi.
1110 ft.

Relative:
Higher

RUBIE'S COSTUME CO
101-10 VAN WYCK EXPY
JAMAICA, NY 11419

RCRA-CESQG **1000872289**
FINDS **NYD987035029**
NY MANIFEST
ECHO

Click here for full text details

RCRA-CESQG
EPA Id: NYD987035029

FINDS
Registry ID:: 110004505303

NY MANIFEST
EPA ID: NYD987035029

R119
NNE
1/8-1/4
0.213 mi.
1127 ft.

Relative:
Higher

TRI-US AUTO RADIATOR
97-20 SUTPHIN BLVD
JAMAICA, NY 11435

RCRA NonGen / NLR **1004762169**
FINDS **NYR000094227**
NY MANIFEST
ECHO

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYR000094227

FINDS
Registry ID:: 110004567157

NY MANIFEST
EPA ID: NYR000094227

R120
NNE
1/8-1/4
0.220 mi.
1162 ft.

Relative:
Higher

BAM MOBILE TRUCK & AUTO REPAIR INC.
97-16 SUTPHIN BOULEVARD
JAMAICA, NY 11435

NY AST **A100350460**
N/A

Click here for full text details

NY AST
Facility Id: 2-611329

S121
WNW
1/8-1/4
0.230 mi.
1213 ft.

Relative:
Higher

PS 206
61-21 97TH PLACE
QUEENS, NY

NY LTANKS **S104951060**
NY Spills **N/A**

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0013054 / 2006-01-06
Site ID: 109938
Program Number: 0013054

NY Spills
Spill Number/Closed Date: 0008926 / 2000-11-02
spillno: 0008926
Site ID: 109937

S122
WNW
1/8-1/4
0.230 mi.
1213 ft.

Relative:
Higher

CON EDISON
25-12 97 ST
QUEENS, NY 11432

NY MANIFEST **S117536435**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004689030

S123
WNW
1/8-1/4
0.230 mi.
1213 ft.

Relative:
Higher

HOUSING COMPLEX
67-97 136TH ST
QUEENS, NY

NY LTANKS **S105135463**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0106078 / 2006-04-27
Site ID: 295709
Program Number: 0106078

S124
WNW
1/8-1/4
0.230 mi.
1213 ft.

Relative:
Higher

FRANK MAHADAI RESIDENCE
139-02 97TH AVENUE
JAMAICA, NY 11435

PA MANIFEST **S108850569**
N/A

Click here for full text details

PA MANIFEST
Generator EPA Id: NYR000138495

S125
WNW
1/8-1/4
0.230 mi.
1213 ft.

Relative:
Higher

CON EDISON
25-34 97 ST
QUEENS, NY 11432

NY MANIFEST | **S117536436**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004689048

R126
NNE
1/8-1/4
0.236 mi.
1244 ft.

Relative:
Higher

BP JAMAICA
97-44 SUTPHIN BOULEVARD
JAMAICA, NY 11435

NY UST | **U001833045**
NY Spills | **N/A**

Click here for full text details

NY Spills
Spill Number/Closed Date: 9408105 / 2009-09-16
spillno: 9408105
Site ID: 212031

127
West
1/8-1/4
0.237 mi.
1250 ft.

Relative:
Higher

NAGENDEVEN, INC.
97-20 VAN WYCK EXPRESSWAY
RICHMOND HILL, NY 11419

NY AST | **A100295205**
N/A

Click here for full text details

NY AST
Facility Id: 2-365602

S128
WNW
1/8-1/4
0.237 mi.
1251 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 34191
5TH AVE N OF 128TH ST
NEW YORK, NY 10035

RCRA NonGen / NLR | **1016677543**
FINDS | **NYP004311833**
NY MANIFEST
ECHO

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004311833

FINDS
Registry ID:: 110058876006

NY MANIFEST
EPA ID: NYP004311833

T129
ENE
1/8-1/4
0.243 mi.
1284 ft.

Relative:
Lower

V-M AUTO COLLISION WORKS FORMER
105-06 SUTPHIN BLVD
JAMAICA, NY 11435

RCRA NonGen / NLR **1000102731**
NY MANIFEST **NYD981874456**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYD981874456

NY MANIFEST
EPA ID: NYD981874456

T130
ENE
1/8-1/4
0.245 mi.
1292 ft.

Relative:
Lower

T & H GARAGE
105-20 SUTPHIN BLVD.
JAMAICA, NY 11434

NY AST **A100382368**
N/A

Click here for full text details

NY AST
Facility Id: 2-603382

Q131
West
1/8-1/4
0.245 mi.
1294 ft.

Relative:
Higher

SUPREME GAS LLC
134-35 101 AVENUE
RICHMOND HILL, NY 11419

NY UST **U003069156**
N/A

Click here for full text details

Q132
West
1/8-1/4
0.245 mi.
1294 ft.

Relative:
Higher

DLD AUTO REPAIR INC
134-35 101 AVE
RICHMOND HILL, NY 11419

NY AST **A100304630**
N/A

Click here for full text details

NY AST
Facility Id: 2-610560

T133
ENE
1/8-1/4
0.245 mi.
1294 ft.

Relative:
Lower

CON EDISON MANHOLE: 2926
SUTPHIN BLVD & 105TH AVE NW
JAMAICA, NY 11405

RCRA NonGen / NLR **1017777143**
FINDS **NYP004550307**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004550307

FINDS
Registry ID:: 110063813048

T134
ENE
1/8-1/4
0.245 mi.
1294 ft.

Relative:
Lower

CON EDISON
SUTPHIN BLVD & 105TH AVE NW
JAMAICA, NY 11405

NY MANIFEST **S117736666**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004550307

U135
NW
1/8-1/4
0.248 mi.
1307 ft.

Relative:
Higher

CON EDISON
95-17 REMINGTON ST FRONT OF
JAMAICA, NY 11435

NY MANIFEST **S117062690**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004550653

U136
NW
1/8-1/4
0.248 mi.
1307 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 66907
95-17 REMINGTON ST FRONT OF
JAMAICA, NY 11435

RCRA NonGen / NLR **1017777176**
NYP004550653

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004550653

137
WSW
1/8-1/4
0.248 mi.
1308 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 62746
102-06 135TH ST FRONT OF
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR **1016970247**
NY MANIFEST **NYP004439527**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004439527

NY MANIFEST
EPA ID: NYP004439527

138
NNW
1/8-1/4
0.249 mi.
1314 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 6246
143-04 95TH AVE
JAMAICA, NY 11435

RCRA NonGen / NLR **1016971337**
NY MANIFEST **NYP004450755**

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004450755

NY MANIFEST

CON EDISON SERVICE BOX: 6246 (Continued) — **1016971337**

EPA ID: NYP004450755

Q139
West
1/8-1/4
0.250 mi.
1318 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 16733
134-21 101ST AVE
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR — **1017775737**
NYP004535811

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004535811

Q140
West
1/8-1/4
0.250 mi.
1318 ft.

Relative:
Higher

CON EDISON
134-21 101ST AVE FRONT OF
SOUTH RICHMOND HILL, NY 11419

NY MANIFEST — **S117063538**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004559639

Q141
West
1/8-1/4
0.250 mi.
1318 ft.

Relative:
Higher

CON EDISON SERVICE BOX: 16733
134-21 101ST AVE FRONT OF
SOUTH RICHMOND HILL, NY 11419

RCRA NonGen / NLR — **1017778048**
NYP004559639

Click here for full text details

RCRA NonGen / NLR
EPA Id: NYP004559639

Q142
West
1/8-1/4
0.250 mi.
1318 ft.

Relative:
Higher

CON EDISON
134-21 101ST AVE
SOUTH RICHMOND HILL, NY 11419

NY MANIFEST — **S117061285**
N/A

Click here for full text details

NY MANIFEST
EPA ID: NYP004535811

R143
NNE
1/4-1/2
0.251 mi.
1325 ft.

Relative:
Higher

A1 AUTO PARTS INC
97-15 SUTPHIN BLVD
JAMAICA, NY 11433

NY SWF/LF — **S108145615**
N/A

Click here for full text details

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
V144 **NE** **1/4-1/2** **0.255 mi.** **1346 ft.** **Relative:** **Lower**	**CITY TRANSIT MIX INC** **147-16 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 0612956 / 2010-08-13 Site ID: 377910 Program Number: 0612956 **NY SPDES** Permit Number: NYR00D701 Limit Set Status Flag: A	**NY LTANKS** **NY SPDES**	**S108467813** **N/A**
V145 **NE** **1/4-1/2** **0.257 mi.** **1359 ft.** **Relative:** **Lower**	**JAMAICA RECYCLING METAL HEAVEN** **147-20 LIBERTY AVENUE** **JAMAICA, NY 11433** **Click here for full text details**	**NY SWRCY**	**S105842304** **N/A**
146 **NE** **1/4-1/2** **0.283 mi.** **1496 ft.** **Relative:** **Higher**	**CLOSED-LACKOF RECENT INFO** **148-19 LIBERTY AVENUE** **NEW YORK CITY, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 8801528 / 2003-03-05 Site ID: 192190 Program Number: 8801528	**NY LTANKS**	**S100167547** **N/A**
W147 **NNE** **1/4-1/2** **0.290 mi.** **1532 ft.** **Relative:** **Higher**	**95-21 SUTPHIN BLVD** **95-21 SUTPHIN BLVD** **JAMAICA, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 9508921 / 1995-10-20 Site ID: 95651 Program Number: 9508921	**NY LTANKS**	**S102660670** **N/A**

148
SSW
1/4-1/2
0.292 mi.
1544 ft.

Relative:
Higher

MULLINGS HOME
105-21 135TH STREET
RICHMOND HILL, NY

NY LTANKS **S108131342**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0606170 / 2007-09-21
Site ID: 369474
Program Number: 0606170

W149
NNE
1/4-1/2
0.339 mi.
1788 ft.

Relative:
Higher

ATLAS CONCRETE
95-11 147TH PLACE
JAMAICA, NY 11435

NY LTANKS **U001841363**
NY UST **N/A**
NY AST
NY HIST UST
NY SPDES

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9103735 / 1995-05-25
Site ID: 215198
Program Number: 9103735

NY AST
Facility Id: 2-600250

NY HIST UST
PBS Number: 2-600250
Tank Status: 1
Facility Status: 1

NY SPDES
Permit Number: NYR00D685
Limit Set Status Flag: A

X150
NNE
1/4-1/2
0.341 mi.
1801 ft.

Relative:
Higher

MAX'S LUNCHEONETTE
SPUTPHIN BLVD & 95TH ST
QUEENS, NY

NY LTANKS **S102672677**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9410935 / 1994-11-16
Site ID: 142208
Program Number: 9410935

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
151 **East** **1/4-1/2** **0.355 mi.** **1877 ft.** **Relative:** **Lower**	**BAYSIDE COMMUNITY CHURCH** **107-03 150TH STREET** **SOUTH JAMAICA, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 8709586 / 1988-02-12 Site ID: 225926 Program Number: 8709586	**NY LTANKS**	**S100143972** **N/A**
Y152 **NE** **1/4-1/2** **0.361 mi.** **1908 ft.** **Relative:** **Lower**	**NEW YORK CITY AUTO SALVAGE INC** **148-36 LIBERTY AVE** **JAMAICA, NY 11435** **Click here for full text details** **NY SPDES** Permit Number: NYR00D571 Limit Set Status Flag: A	**NY SWF/LF** **NY SPDES**	**S108146025** **N/A**
Z153 **North** **1/4-1/2** **0.366 mi.** **1931 ft.** **Relative:** **Higher**	**LIRR** **MORRIS PARK STORAGE YARD** **QUEENS, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 0008005 / 2004-05-18 Site ID: 291518 Program Number: 0008005	**NY LTANKS**	**S104782474** **N/A**
Z154 **North** **1/4-1/2** **0.367 mi.** **1938 ft.** **Relative:** **Higher**	**TRI-BRO AUTO SVC INC** **93-50 SUTPHIN BOULEVARD** **JAMAICA, NY 11435** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 9907900 / 2004-12-28 Site ID: 104840 Program Number: 9907900	**NY LTANKS** **NY UST**	**U003128058** **N/A**
Y155 **NE** **1/4-1/2** **0.369 mi.** **1948 ft.** **Relative:** **Lower**	**HESS/MERIT STATION 32521** **148-27 LIBERTY AVENUE** **JAMAICA, NY** **Click here for full text details** **NY LTANKS** Spill Number/Closed Date: 9600085 / 1996-04-02	**NY LTANKS** **NY Spills**	**S104514369** **N/A**

HESS/MERIT STATION 32521 (Continued) **S104514369**

Site ID: 195422
Program Number: 9600085

NY Spills
Spill Number/Closed Date: 9606415 / 2007-01-17
spillno: 9606415
Site ID: 288182

Y156 **CITY MASON DIVISION OF S.R.M.** **NY SWF/LF** **S105841242**
NE **105 AVE. & 150TH STREET** **N/A**
1/4-1/2 **JAMAICA, NY 11435**
0.373 mi.
1968 ft.

Relative: Lower

Click here for full text details

X157 **JAMAICA 94TH AVENUE** **NY BROWNFIELDS** **S118628314**
NNE **147-20 94TH AVENUE** **N/A**
1/4-1/2 **JAMAICA, NY 11435**
0.375 mi.
1979 ft.

Relative: Higher

Click here for full text details

NY BROWNFIELDS
Site Code: 524733

---

158 **108-26 LIVERPOOL ST** **NY LTANKS** **S102671759**
ESE **108-26 LIVERPOOL ST** **N/A**
1/4-1/2 **JAMAICA, NY**
0.382 mi.
2017 ft.

Relative: Higher

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9108595 / 1991-11-13
Site ID: 202937
Program Number: 9108595

---

159 **LIBERTY AUTO PARTS INC.** **NY SWF/LF** **S108146130**
NE **97-09 150TH STREET** **N/A**
1/4-1/2 **JAMAICA, NY 11435**
0.412 mi.
2175 ft.

Relative: Lower

Click here for full text details

160
SE
1/4-1/2
0.425 mi.
2244 ft.

Relative:
Lower

145-13 109TH AVE
145-13 109TH AVE
JAMAICA, NY

NY LTANKS **S102671888**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9201561 / 1992-05-08
Site ID: 173851
Program Number: 9201561

161
SE
1/4-1/2
0.428 mi.
2262 ft.

Relative:
Lower

BROOK MEMORIAL
143-22 109TH AVE
JAMAICA, NY

NY LTANKS **S105997969**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0210589 / 2003-09-09
Site ID: 137788
Program Number: 0210589

162
SSE
1/4-1/2
0.441 mi.
2327 ft.

Relative:
Lower

LAKEWOOD FUEL
141-03 LAKEWOOD AVE
JAMAICA, NY

NY LTANKS **U001840810**
NY AST **N/A**

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 8900355 / 2006-01-31
Site ID: 76610
Program Number: 8900355

NY AST
Facility Id: 2-476617

AA163
ENE
1/4-1/2
0.452 mi.
2384 ft.

Relative:
Lower

103-154 99TH STREET
103-154 99TH STREET
QUEENS, NY 11368

US BROWNFIELDS **1018119723**
N/A

Click here for full text details

US BROWNFIELDS
ACRES property ID: 151022

164
ENE
1/4-1/2
0.452 mi.
2384 ft.

Relative:
Lower

HONEYWELL FARMS
155-25 STYLER ROAD
JAMAICA, NY 11433

NY LTANKS **U000400282**
NY UST **N/A**
NY CBS
NY Spills

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9203003 / 2006-03-31
Site ID: 253301
Program Number: 9203003

NY CBS
Facility Status: Unregulated/Closed
CBS Number: 2-000057

NY Spills
Spill Number/Closed Date: 0507050 / 2005-09-12
spillno: 0507050
Site ID: 352371

165
North
1/4-1/2
0.459 mi.
2426 ft.

Relative:
Higher

THE CROSSING AT JAMAICA STATION
147-22 ARCHER AVENUE
QUEENS, NY 11435

NY BROWNFIELDS **S118628310**
N/A

Click here for full text details

NY BROWNFIELDS
Site Code: 522958

AB166
NE
1/4-1/2
0.463 mi.
2443 ft.

Relative:
Lower

J & J AUTO WRECKERS INC
150-35 LIBERTY AVE
JAMAICA, NY 11433

NY SWF/LF **S108410832**
NY CBS **N/A**
NY SPDES

Click here for full text details

NY CBS
Facility Status: Unregulated/Closed
CBS Number: 2-000435

NY SPDES
Permit Number: NYR00E034
Limit Set Status Flag: A

AC167
NE
1/4-1/2
0.464 mi.
2449 ft.

Relative:
Lower

EASY DOES IT AUTO SALVAGE INC
15008 BEAVER ROAD
JAMAICA, NY 11433

Click here for full text details

NY SWF/LF

S110242474
N/A

AC168
NE
1/4-1/2
0.464 mi.
2449 ft.

Relative:
Lower

TIC TAC AUTO INC
150-08 BEAVER ROAD
JAMAICA, NY 11433

Click here for full text details

NY SWF/LF

S108146160
N/A

AA169
ENE
1/4-1/2
0.470 mi.
2482 ft.

Relative:
Lower

NATIONWIDE SCRAP
154-20 SOUTH ROAD
JAMAICA, NY 11433

Click here for full text details

NY SWRCY

S108294070
N/A

AA170
ENE
1/4-1/2
0.470 mi.
2482 ft.

Relative:
Lower

T&T RECYCLING
154-20 SOUTH ROAD
JAMAICA, NY 11433

Click here for full text details

NY SWRCY

S117392703
N/A

AA171
ENE
1/4-1/2
0.470 mi.
2482 ft.

Relative:
Lower

BABYLON PAPER STOCK (FORMERLY NATIONWIDE RECYCLING)
154-20 SOUTH ROAD
JAMAICA, NY 11488

Click here for full text details

NY SWRCY

S105842306
N/A

172
ESE
1/4-1/2
0.484 mi.
2555 ft.

Relative:
Lower

KHAIRULLAH HOME
109-11 LIVERPOOL STREET
JAMAICA, NY

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0511987 / 2006-01-18
Site ID: 358240

NY LTANKS

S107523416
N/A

KHAIRULLAH HOME (Continued) **S107523416**

Program Number: 0511987

173
NNE
1/4-1/2
0.494 mi.
2606 ft.

Relative:
Lower

CONTEMP PROCESSING INC
94-01 150TH ST
JAMAICA, NY 11435

NY LTANKS **U001838358**
NY UST **N/A**
NY Spills

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 9909545 / 2003-12-09
Site ID: 84431
Program Number: 9909545

NY Spills
Spill Number/Closed Date: 0007232 / 2009-05-01
Spill Number/Closed Date: 8701261 / 1987-05-14
spillno: 0007232
spillno: 8701261
Site ID: 84430
Site ID: 209443

174
WNW
1/4-1/2
0.497 mi.
2624 ft.

Relative:
Higher

NYC DEPT. SANITATION GARAGE
132-05 ATLANTIC AVE
QUEENS, NY

NY LTANKS **S109416374**
N/A

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0811265 / 2009-03-02
Site ID: 408831
Program Number: 0811265

175
NW
1/4-1/2
0.498 mi.
2627 ft.

Relative:
Higher

SUB STATION - CON ED
137-30 91ST AVE
QUEENS, NY

NY LTANKS **S102240202**
NY Spills **N/A**

Click here for full text details

NY LTANKS
Spill Number/Closed Date: 0110154 / 2002-12-06
Site ID: 74364
Program Number: 0110154

NY Spills
Spill Number/Closed Date: 1503487 / Not Reported
Spill Number/Closed Date: 0900389 / 2009-06-22
Spill Number/Closed Date: 0712290 / 2008-05-19
Spill Number/Closed Date: 0413307 / 2005-05-27
Spill Number/Closed Date: 0410294 / 2008-01-10
Spill Number/Closed Date: 0410225 / 2008-08-04

SUB STATION - CON ED (Continued) **S102240202**

Spill Number/Closed Date: 0406685 / 2004-11-15
Spill Number/Closed Date: 0211702 / 2006-03-23
Spill Number/Closed Date: 0208222 / 2003-02-20
Spill Number/Closed Date: 0203171 / 2005-12-20
Spill Number/Closed Date: 0202856 / 2003-04-21
Spill Number/Closed Date: 0200419 / 2008-01-10
Spill Number/Closed Date: 0200403 / 2002-04-12
Spill Number/Closed Date: 0111654 / 2002-04-18
Spill Number/Closed Date: 0110179 / 2004-09-16
Spill Number/Closed Date: 0104941 / 2002-10-21
Spill Number/Closed Date: 0006623 / 2001-11-26
Spill Number/Closed Date: 0006642 / 2001-06-13
Spill Number/Closed Date: 0004868 / 2002-10-11
Spill Number/Closed Date: 0003742 / 2005-05-20
Spill Number/Closed Date: 9909380 / 2003-07-10
Spill Number/Closed Date: 9909236 / 2002-10-18
Spill Number/Closed Date: 9909237 / 2004-11-12
Spill Number/Closed Date: 9909239 / 2002-10-18
Spill Number/Closed Date: 9908294 / 2001-06-26
Spill Number/Closed Date: 9904347 / 2002-10-11
Spill Number/Closed Date: 9901544 / 2001-06-26
Spill Number/Closed Date: 9901467 / 2004-03-08
Spill Number/Closed Date: 9901245 / 2001-06-13
Spill Number/Closed Date: 9900575 / 1999-06-10
Spill Number/Closed Date: 9900587 / 2002-10-11
Spill Number/Closed Date: 9814974 / 2002-10-21
Spill Number/Closed Date: 9811976 / 2005-07-13
Spill Number/Closed Date: 9808401 / 2001-06-26
Spill Number/Closed Date: 9800780 / 1998-05-19
Spill Number/Closed Date: 9708913 / 1998-01-02
Spill Number/Closed Date: 9704070 / 2003-11-07
Spill Number/Closed Date: 9701408 / 2002-10-11
Spill Number/Closed Date: 9608838 / 2008-05-12
Spill Number/Closed Date: 9603336 / 2001-08-27
Spill Number/Closed Date: 9601855 / 1998-04-17
Spill Number/Closed Date: 9601767 / 2001-08-27
Spill Number/Closed Date: 9601772 / 1998-04-17
Spill Number/Closed Date: 9601184 / 2008-05-12
Spill Number/Closed Date: 9510746 / 2001-08-27
Spill Number/Closed Date: 9509537 / 2005-12-06
spillno: 0003742
spillno: 0004868
spillno: 0006623
spillno: 0006642
spillno: 0104941
spillno: 0110179
spillno: 0111654
spillno: 0200403
spillno: 0200419
spillno: 0202856
spillno: 0203171
spillno: 0208222
spillno: 0211702
spillno: 0406685
spillno: 0410225
spillno: 0410294

SUB STATION - CON ED (Continued) **S102240202**

spillno: 0413307
spillno: 0712290
spillno: 0900389
spillno: 1503487
spillno: 9509537
spillno: 9510746
spillno: 9601184
spillno: 9601767
spillno: 9601772
spillno: 9601855
spillno: 9603336
spillno: 9608838
spillno: 9701408
spillno: 9704070
spillno: 9708913
spillno: 9800780
spillno: 9808401
spillno: 9811976
spillno: 9814974
spillno: 9900575
spillno: 9900587
spillno: 9901245
spillno: 9901467
spillno: 9901544
spillno: 9904347
spillno: 9908294
spillno: 9909236
spillno: 9909237
spillno: 9909239
spillno: 9909380
Site ID: 74360
Site ID: 59895
Site ID: 74361
Site ID: 74362
Site ID: 74363
Site ID: 74365
Site ID: 74366
Site ID: 74367
Site ID: 74368
Site ID: 74369
Site ID: 74370
Site ID: 74371
Site ID: 74372
Site ID: 74373
Site ID: 335143
Site ID: 335348
Site ID: 342378
Site ID: 393887
Site ID: 412326
Site ID: 509791
Site ID: 74374
Site ID: 59899
Site ID: 74375
Site ID: 74376
Site ID: 74377
Site ID: 74378

SUB STATION - CON ED (Continued) **S102240202**

Site ID: 59900
Site ID: 114779
Site ID: 74379
Site ID: 74380
Site ID: 148524
Site ID: 74381
Site ID: 74382
Site ID: 74383
Site ID: 74384
Site ID: 74385
Site ID: 59902
Site ID: 74386
Site ID: 74387
Site ID: 74388
Site ID: 74389
Site ID: 74390
Site ID: 74391
Site ID: 74392
Site ID: 74393
Site ID: 74394

AB176
NE
1/4-1/2
0.498 mi.
2629 ft.

Relative:
Lower

A&J SCRAP METAL PROCESSING LLC **NY SWF/LF** **S108145830**
95-49 TUCKERTON ST **NY SPDES** **N/A**
JAMAICA, NY 11433

Click here for full text details

NY SPDES
Permit Number: NYR00E035
Permit Number: NYR00E100
Permit Number: NYR00F410
Limit Set Status Flag: A

AD177
NNE
1/2-1
0.597 mi.
3152 ft.

Relative:
Higher

K - JAMAICA GAS AND LIGHT MGP **NY SHWS** **S109580118**
BEAVER RD., & 158TH ST. **N/A**
QUEENS, NY 11451

Click here for full text details

NY SHWS
Site Code: 378997

AD178
NE
1/2-1
0.624 mi.
3294 ft.

Relative:
Higher

JAMAICA GAS AND LIGHT **EDR MGP** **1008407956**
BEAVER RD., AND 158TH ST. **N/A**
JAMAICA, NY 11451

Click here for full text details

179
NE
1/2-1
0.645 mi.
3408 ft.

Relative:
Lower

K - JAMAICA HOLDER STATION
158TH ST. & LIBERTY AVE.
QUEENS, NY 11451

NY SHWS **S109580113**
NY BROWNFIELDS **N/A**

Click here for full text details

NY SHWS
Site Code: 378996

NY BROWNFIELDS
Site Code: 57405

AE180
West
1/2-1
0.933 mi.
4928 ft.

Relative:
Higher

LIRR - MORRIS PARK REPAIR
121ST STREET AND ATLANTIC AVENUE
RICHMOND HILL, NY 11423

NY DEL SHWS **S109584588**
N/A

Click here for full text details

AE181
West
1/2-1
0.935 mi.
4935 ft.

Relative:
Higher

LIRR - MORRIS PARK REPAIR & RICHMOND HILL YARD ONE SITE
121 ST ST & ATLANTIC AVE
JAMAICA, NY 11423

CORRACTS **1000231919**
RCRA-TSDF **NYD980641625**
RCRA-LQG
2020 COR ACTION
NJ MANIFEST

Click here for full text details

CORRACTS
EPA ID:: NYD980641625

RCRA-TSDF
EPA Id: NYD980641625

RCRA-LQG
EPA Id: NYD980641625

2020 COR ACTION
EPA ID:: NYD980641625

NJ MANIFEST
EPA Id: NYD980641625

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
NY	AIRS	Air Emissions Data	Department of Environmental Conservation	11/09/2016	11/18/2016	01/04/2017
NY	AST	Petroleum Bulk Storage	Department of Environmental Conservation	09/27/2016	09/28/2016	01/03/2017
NY	BROWNFIELDS	Brownfields Site List	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	CBS	Chemical Bulk Storage Site Listing	Department of Environmental Conservation	09/27/2016	09/28/2016	01/04/2017
NY	CBS AST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	CBS UST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	COAL ASH	Coal Ash Disposal Site Listing	Department of Environmental Conservation	10/04/2016	10/06/2016	01/04/2017
NY	DEL SHWS	Delisted Registry Sites	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	DRYCLEANERS	Registered Drycleaners	Department of Environmental Conservation	03/31/2016	07/13/2016	09/08/2016
NY	E DESIGNATION	E DESIGNATION SITE LISTING	New York City Department of City Planning	06/16/2016	06/24/2016	09/08/2016
NY	ENG CONTROLS	Registry of Engineering Controls	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	ENV RES DECL	Environmental Restrictive Declarations	New York City Department of City Planning	06/29/2016	09/22/2016	01/04/2017
NY	ERP	Environmental Restoration Program Listing	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Conservation	10/03/2016	10/04/2016	01/04/2017
NY	Financial Assurance 2	Financial Assurance Information Listing	Department of Environmental Conservation	12/01/2015	12/29/2015	02/11/2016
NY	HIST AST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006
NY	HIST LTANKS	Listing of Leaking Storage Tanks	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005
NY	HIST SPILLS	SPILLS Database	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005
NY	HIST UST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006
NY	HSWDS	Hazardous Substance Waste Disposal Site Inventory	Department of Environmental Conservation	01/01/2003	10/20/2006	11/30/2006
NY	INST CONTROL	Registry of Institutional Controls	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	LIENS	Spill Liens Information	Office of the State Comptroller	11/08/2016	11/10/2016	01/06/2017
NY	LTANKS	Spills Information Database	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	MOSF	Major Oil Storage Facility Site Listing	Department of Environmental Conservation	09/27/2016	09/28/2016	01/06/2017
NY	MOSF AST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	MOSF UST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	10/01/2016	11/02/2016	01/04/2017
NY	RES DECL	Restrictive Declarations Listing	NYC Department of City Planning	11/18/2010	06/30/2014	07/21/2014
NY	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Conservation		07/01/2013	12/30/2013
NY	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Conservation		07/01/2013	01/10/2014
NY	SHWS	Inactive Hazardous Waste Disposal Sites in New York State	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	SPDES	State Pollutant Discharge Elimination System	Department of Environmental Conservation	09/30/2016	10/11/2016	01/06/2017
NY	SPILLS	Spills Information Database	Department of Environmental Conservation	11/14/2016	11/16/2016	01/04/2017
NY	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	11/02/2010	01/03/2013	03/07/2013
NY	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/14/2012	01/03/2013	02/12/2013
NY	SWF/LF	Facility Register	Department of Environmental Conservation	10/04/2016	10/06/2016	01/04/2017
NY	SWRCY	Registered Recycling Facility List	Department of Environmental Conservation	10/04/2016	10/06/2016	01/05/2017
NY	SWTIRE	Registered Waste Tire Storage & Facility List	Department of Environmental Conservation	08/01/2006	11/15/2006	11/30/2006
NY	TANKS	Storage Tank Faciliy Listing	Department of Environmental Conservation	09/27/2016	09/28/2016	01/05/2017
NY	UIC	Underground Injection Control Wells	Department of Environmental Conservation	09/06/2016	09/08/2016	01/05/2017
NY	UST	Petroleum Bulk Storage (PBS) Database	Department of Environmental Conservation	09/27/2016	09/28/2016	01/03/2017
NY	VAPOR REOPENED	Vapor Intrustion Legacy Site List	Department of Environmenal Conservation	06/01/2016	08/19/2016	01/05/2017
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	04/22/2013	03/03/2015	03/09/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	06/09/2016	06/13/2016	09/02/2016
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2013	02/24/2015	09/30/2015
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	03/31/2016	08/01/2016	09/23/2016
US	CORRACTS	Corrective Action Report	EPA	09/12/2016	09/28/2016	01/06/2017
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	06/02/2016	06/03/2016	09/02/2016
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/31/2012	08/07/2012	09/18/2012
US	Delisted NPL	National Priority List Deletions	EPA	08/05/2016	10/05/2016	01/06/2017
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	09/18/2016	09/20/2016	10/21/2016
US	EDR Hist Auto	EDR Exclusive Historic Gas Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historic Dry Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/26/2016	09/29/2016	11/11/2016
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	09/14/2016	10/04/2016	10/21/2016
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FEMA UST	Underground Storage Tank Listing	FEMA	01/01/2010	02/16/2010	04/12/2010
US	FINDS	Facility Index System/Facility Registry System	EPA	07/15/2016	09/07/2016	11/11/2016
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/31/2015	07/08/2015	10/13/2015
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/22/2016	08/23/2016	10/21/2016
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/21/2016	07/26/2016	09/23/2016
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/27/2016	06/28/2016	09/23/2016
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	07/27/2016	08/05/2016	10/21/2016
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/27/2015	10/29/2015	01/04/2016
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	01/07/2016	01/08/2016	02/18/2016
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	02/05/2016	04/29/2016	06/03/2016
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	02/17/2016	04/27/2016	06/03/2016
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	12/11/2015	02/19/2016	06/03/2016
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/09/2015	02/12/2016	06/03/2016
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/13/2015	10/23/2015	02/18/2016
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	02/25/2016	04/27/2016	06/03/2016
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/20/2015	10/29/2015	01/04/2016
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	01/07/2016	01/08/2016	02/18/2016
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	02/05/2016	04/29/2016	06/03/2016
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	11/05/2015	11/13/2015	01/04/2016
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	12/03/2015	02/04/2016	06/03/2016
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	09/23/2014	11/25/2014	01/29/2015
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	01/26/2016	02/05/2016	06/03/2016
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	02/25/2016	04/27/2016	06/03/2016
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	03/07/2016	04/07/2016	09/02/2016
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	02/18/2014	03/18/2014	04/24/2014
US	LUCIS	Land Use Control Information System	Department of the Navy	05/28/2015	05/29/2015	06/11/2015
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	08/30/2016	09/08/2016	10/21/2016
US	NPL	National Priority List	EPA	08/05/2016	10/05/2016	01/06/2017
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	01/20/2016	04/28/2016	09/02/2016
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	02/01/2011	10/19/2011	01/10/2012
US	PRP	Potentially Responsible Parties	EPA	10/25/2013	10/17/2014	10/20/2014
US	Proposed NPL	Proposed National Priority List Sites	EPA	08/05/2016	10/05/2016	01/06/2017
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	10/03/2016	10/05/2016	10/21/2016
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	09/12/2016	09/28/2016	01/06/2017
US	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	09/12/2016	09/28/2016	01/06/2017
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	09/12/2016	09/28/2016	01/06/2017
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	09/12/2016	09/28/2016	01/06/2017
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	09/12/2016	09/28/2016	01/06/2017
US	RMP	Risk Management Plans	Environmental Protection Agency	08/01/2016	08/22/2016	11/11/2016
US	ROD	Records Of Decision	EPA	11/25/2013	12/12/2013	02/24/2014
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	03/07/2011	03/09/2011	05/02/2011
US	SEMS	Superfund Enterprise Management System	EPA	10/10/2016	10/20/2016	01/06/2017
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	10/10/2016	10/20/2016	01/06/2017
US	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2014	11/24/2015	04/05/2016
US	TSCA	Toxic Substances Control Act	EPA	12/31/2012	01/15/2015	01/29/2015
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	09/14/2010	10/07/2011	03/01/2012
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	06/30/2016	07/25/2016	10/21/2016
US	US AIRS MINOR	Air Facility System Data	EPA	06/30/2016	07/25/2016	10/21/2016
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	09/20/2016	09/21/2016	11/11/2016
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	08/30/2016	09/06/2016	09/23/2016
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	05/09/2016	06/01/2016	09/02/2016
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	07/12/2016	08/17/2016	10/21/2016
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	08/31/2016	09/06/2016	09/23/2016
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	05/09/2016	06/01/2016	09/02/2016
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/05/2016	09/01/2016	09/23/2016
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	10/25/2015	01/29/2016	04/05/2016

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	07/30/2013	08/19/2013	10/03/2013
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2015	09/29/2016	01/03/2017
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2015	07/22/2016	11/22/2016
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2013	06/19/2015	07/15/2015
VT	VT MANIFEST	Hazardous Waste Manifest Data	Department of Environmental Conservation	11/07/2016	11/18/2016	01/06/2017
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	12/31/2015	04/14/2016	06/03/2016

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics
NY	Daycare Centers	Sensitive Receptor: Day Care Providers	Department of Health

US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service
NY	State Wetlands	Freshwater Wetlands	Department of Environmental Conservation
US	Topographic Map		U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

145-11 BRISBIN ST
145-11 BRISBIN ST
JAMAICA, NY 11435

TARGET PROPERTY COORDINATES

Latitude (North):	40.693778 - 40° 41' 37.60"
Longitude (West):	73.807915 - 73° 48' 28.49"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	600722.6
UTM Y (Meters):	4505236.5
Elevation:	39 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5940539 JAMAICA, NY
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

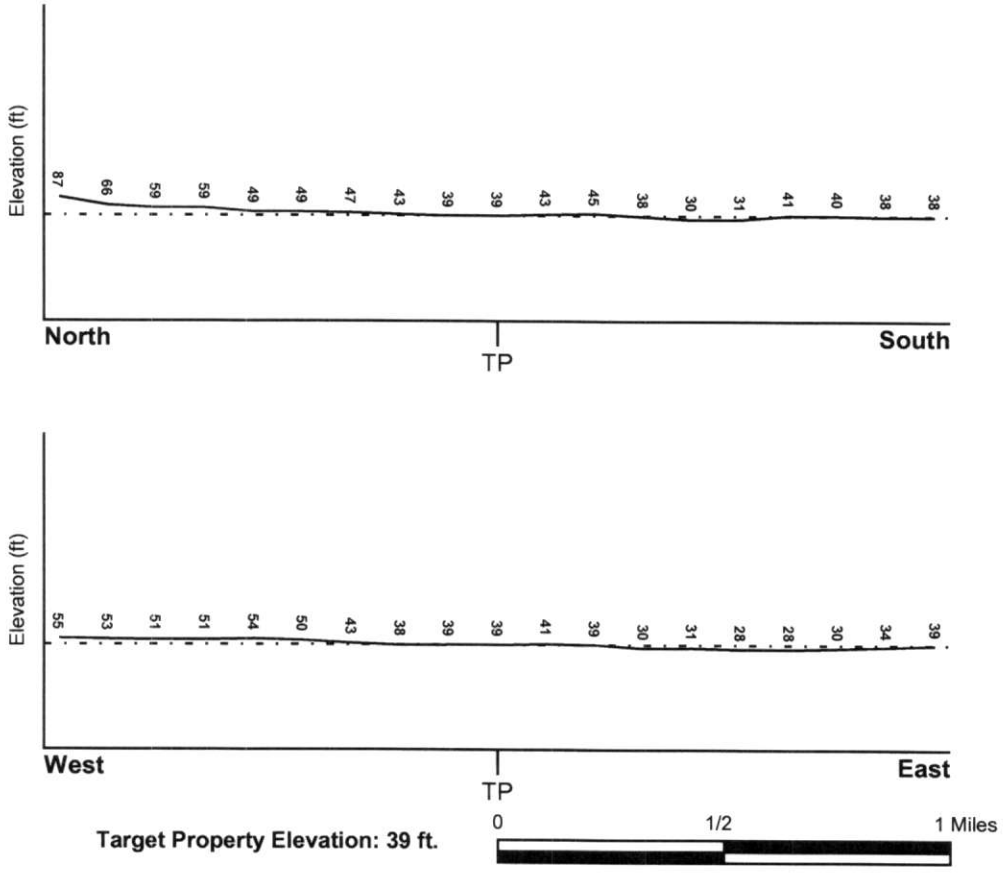
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 39 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
3604970059B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
3604970229F	FEMA FIRM Flood data
3604970067B	FEMA Q3 Flood data
3604970237F	FEMA FIRM Flood data
3604970241F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
JAMAICA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Pleistocene
Code:	Qp *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
loamy sand
sandy loam
fine sandy loam

Surficial Soil Types: silt loam
loamy sand
sandy loam
fine sandy loam

Shallow Soil Types: sandy loam

Deeper Soil Types: unweathered bedrock
very gravelly - loamy sand
stratified
sandy loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000828786	0 - 1/8 Mile NNE
2	USGS40000828740	1/8 - 1/4 Mile West
3	USGS40000828696	1/4 - 1/2 Mile WSW
4	USGS40000828822	1/4 - 1/2 Mile NW
5	USGS40000828908	1/4 - 1/2 Mile North
6	USGS40000828591	1/4 - 1/2 Mile SSE
7	USGS40000828907	1/2 - 1 Mile NE
A8	USGS40000829040	1/2 - 1 Mile North
9	USGS40000829016	1/2 - 1 Mile NNE
10	USGS40000829030	1/2 - 1 Mile NNW
A11	USGS40000829051	1/2 - 1 Mile North
A12	USGS40000829062	1/2 - 1 Mile North
13	USGS40000828815	1/2 - 1 Mile ENE
15	USGS40000829050	1/2 - 1 Mile NNE
B17	USGS40000828527	1/2 - 1 Mile SSE
B18	USGS40000828528	1/2 - 1 Mile SSE
B19	USGS40000828529	1/2 - 1 Mile SSE
20	USGS40000828493	1/2 - 1 Mile SSW
21	USGS40000828844	1/2 - 1 Mile WNW
22	USGS40000829077	1/2 - 1 Mile NNE
23	USGS40000828702	1/2 - 1 Mile West
24	USGS40000829137	1/2 - 1 Mile North
C26	USGS40000828971	1/2 - 1 Mile NW
C27	USGS40000828954	1/2 - 1 Mile NW
D28	USGS40000828800	1/2 - 1 Mile East
D29	USGS40000828801	1/2 - 1 Mile East
C30	USGS40000828972	1/2 - 1 Mile NW
C31	USGS40000828955	1/2 - 1 Mile NW
C32	USGS40000828956	1/2 - 1 Mile NW
E33	USGS40000828466	1/2 - 1 Mile SSW
E34	USGS40000828467	1/2 - 1 Mile SSW
F35	USGS40000829089	1/2 - 1 Mile NE
F36	USGS40000829090	1/2 - 1 Mile NE
37	USGS40000828618	1/2 - 1 Mile ESE
G39	USGS40000829015	1/2 - 1 Mile NE
F40	USGS40000829109	1/2 - 1 Mile NE
G41	USGS40000829014	1/2 - 1 Mile NE
H43	USGS40000828658	1/2 - 1 Mile WSW
F44	USGS40000829110	1/2 - 1 Mile NE
H45	USGS40000828646	1/2 - 1 Mile WSW
I46	USGS40000829136	1/2 - 1 Mile NE
I47	USGS40000829135	1/2 - 1 Mile NE
48	USGS40000829128	1/2 - 1 Mile NW
I49	USGS40000829148	1/2 - 1 Mile NE
J50	USGS40000829201	1/2 - 1 Mile NNE
J52	USGS40000829200	1/2 - 1 Mile NNE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

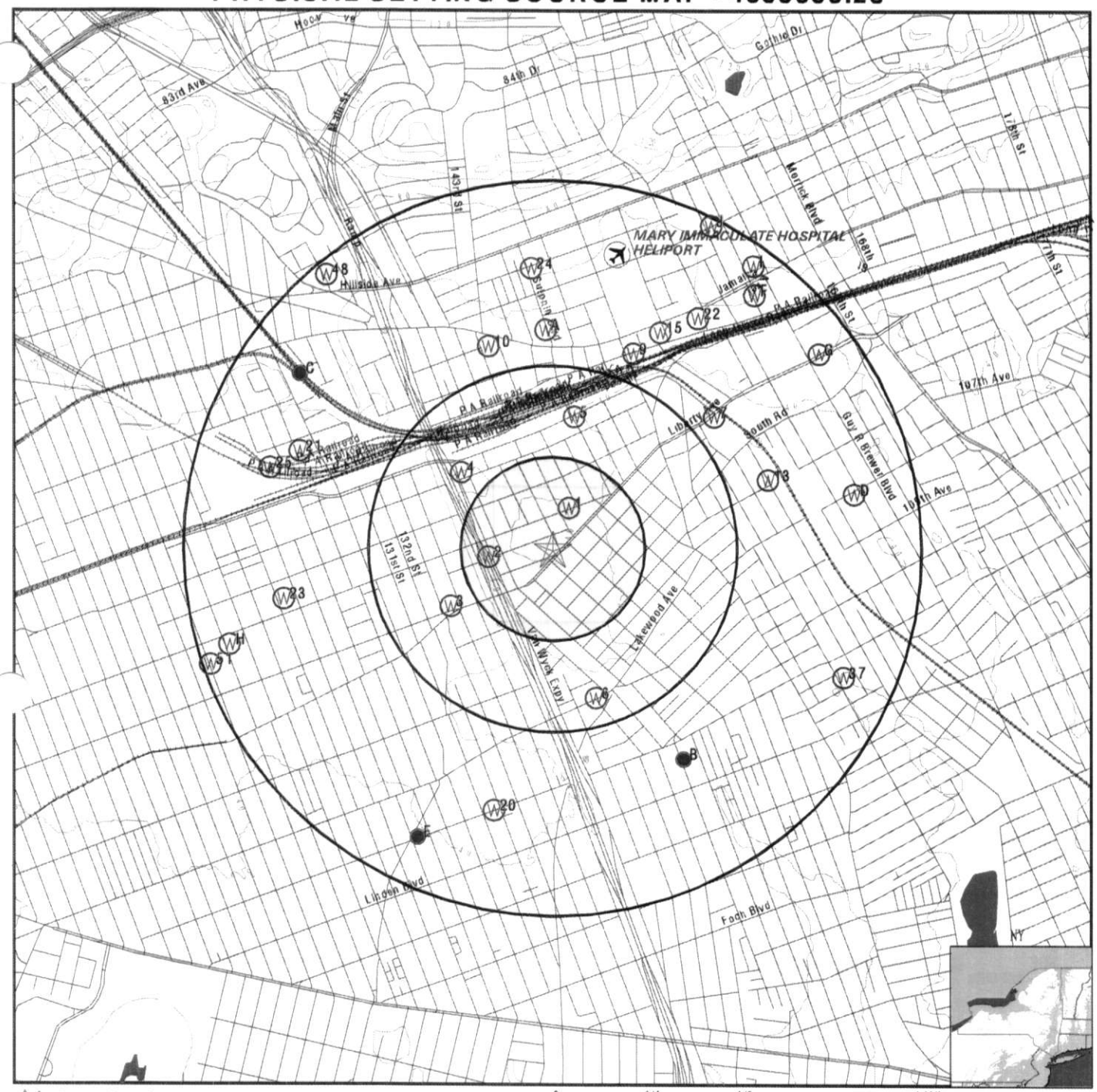
MAP ID	WELL ID	LOCATION FROM TP
B16	NY0011735	1/2 - 1 Mile SSE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B14	NYWS006443	1/2 - 1 Mile SSE
25	NYWS006421	1/2 - 1 Mile WNW
C38	NYWS006409	1/2 - 1 Mile NW
E42	NYWS006449	1/2 - 1 Mile SSW
51	NYWS006432	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 4833535.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

0 1/4 1/2 1 Miles

SITE NAME: 145-11 BRISBIN ST ADDRESS: 145-11 BRISBIN ST JAMAICA NY 11435 LAT/LONG: 40.693778 / 73.807915	CLIENT: Atlantic Enviro. Solutions,Inc CONTACT: Melissa M. Greenfield INQUIRY #: 4833535.2s DATE: January 23, 2017 10:11 am

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 NNE 0 - 1/8 Mile Higher	Click here for full text details	FED USGS	USGS40000828786
2 West 1/8 - 1/4 Mile Higher	Click here for full text details	FED USGS	USGS40000828740
3 WSW 1/4 - 1/2 Mile Higher	Click here for full text details	FED USGS	USGS40000828696
4 NW 1/4 - 1/2 Mile Higher	Click here for full text details	FED USGS	USGS40000828822
5 North 1/4 - 1/2 Mile Higher	Click here for full text details	FED USGS	USGS40000828908
6 SSE 1/4 - 1/2 Mile Lower	Click here for full text details	FED USGS	USGS40000828591
7 NE 1/2 - 1 Mile Lower	Click here for full text details	FED USGS	USGS40000828907
A8 North 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000829040

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
9 **NNE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829016**
10 **NNW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829030**
A11 **North** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829051**
A12 **North** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829062**
13 **ENE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000828815**
B14 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**NY WELLS**	**NYWS006443**
15 **NNE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829050**
B16 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FRDS PWS**	**NY0011735**
B17 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000828527**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
B18 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000828528**
B19 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000828529**
20 **SSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828493**
21 **WNW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828844**
22 **NNE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829077**
23 **West** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828702**
24 **North** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829137**
25 **WNW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**NY WELLS**	**NYWS006421**
C26 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828971**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
C27 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828954**
D28 **East** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828800**
D29 **East** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828801**
C30 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828972**
C31 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828955**
C32 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828956**
E33 **SSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828466**
E34 **SSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828467**
F35 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829089**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
F36 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829090**
37 **ESE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000828618**
C38 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**NY WELLS**	**NYWS006409**
G39 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829015**
F40 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829109**
G41 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829014**
E42 **SSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**NY WELLS**	**NYWS006449**
H43 **WSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828658**
F44 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829110**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
H45 **WSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000828646**
I46 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829136**
I47 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829135**
48 **NW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829128**
I49 **NE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829148**
J50 **NNE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829201**
51 **WSW** **1/2 - 1 Mile** **Higher**	Click here for full text details	**NY WELLS**	**NYWS006432**
J52 **NNE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**FED USGS**	**USGS40000829200**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for QUEENS County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for QUEENS COUNTY, NY

Number of sites tested: 81

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.620 pCi/L	97%	0%	3%
Basement	0.970 pCi/L	93%	6%	1%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

ATTACHMENT H

HISTORICAL DOCUMENTS

Form 54 C.O. rev. 3/60 (5M) 70-1-1(67) 8-32-346

DEPARTMENT OF BUILDINGS

BOROUGH OF QUEENS , THE CITY OF NEW YORK

Date 7/29/71 No. C

CERTIFICATE OF OCCUPANCY

NO CHANGES OF USE OR OCCUPANCY NOT CONSISTENT WITH THIS CERTIFICATE SHALL BE MADE UNLESS FIRST APPROVED BY THE BOROUGH SUPERINTENDENT

This certificate supersedes C. O. No.

THIS CERTIFIES that the new altered ~~existing~~ building premises located at 13019 Block Lot

145-11 Liberty Avenue

That the zoning lot and premises above referred to are situated, bounded and described as follows:

BEGINNING at a point on the east side of Merrill Street distant 0 feet North from the corner formed by the intersection of Liberty Avenue and Merrill Street

running thence S 89.38' - 30.91 feet; thence S 112'; W 6'; S 13.12'

thence S 140.37' feet; thence S 85.22'

running thence feet; thence

to the point or place of beginning, conforms substantially to the approved plans and specifications filed with the application for the permit under which the same was erected and complies with all of the requirements of the Building Code, the Zoning Resolution and all other laws and ordinances, and of the rules and regulations of the Board of Standards and Appeals, applicable to a building of its class and kind at the time the permit was issued.

CERTIFIES FURTHER that, any provisions of Section 26[illegible] of the New York Charter have been complied with as certified by a report of the Fire Commissioner to the Borough Superintendent.

New Alt. No. A1. 23/70 Construction classification 4 Fire-resistive

Occupancy classification Commercial Height 1 stories 12

Date of completion 2/18/72 Located in M-4

at time of issuance of permit.

This certificate is issued subject to the limitations hereinafter specified and to the following resolutions of the Board of Standards and Appeals:

and The City Planning Commission:

PERMISSIBLE USE AND OCCUPANCY

Off-Street Parking Spaces

Off-Street Loading Berths

STORY	LIVE LOADS Lbs. per Sq. Ft.	PERSONS ACCOMMODATED	USE
1st	O.C.	12	Truck Repairs (Use Group 16)

Sewage Disposal

Sanitary Drainage

Storm Drainage

U. Kenny Supt.

OFFICE COPY—DEPARTMENT OF BUILDINGS

CERTIFICATE OF OCCUPANCY

COMPANY: **CORNERSTONE LAND ABSTRACT LLC.** DATE : **09/19/2016**

TITLE #: **CL14713Q** COUNTY: **QUEENS**

PREMISES : **102-08 BRISBIN STREET**

BLOCK: **10019** LOT: **38** SJC REF: **703047**

No certificate of occupancy issued according to the Building Department Index Records. The following information has been found.

No Building Department Records found.

NO OTHER PLANS FOUND.

An inspection of the Sanborn Maps show vacant land.

BUILDING CLASS "V0" - (VACANT LAND)

Effective 09/18/2001 restrictions on access to certain records have been put in place by the Investigations & Discipline Unit of the Department of Buildings. These records are now being searched by City personnel and we cannot assure the accuracy of that research.

IMPORTANT NOTICE ABOUT SEARCH INFORMATION

S.J. CARROLL JR. INC. DOES HEREBY STATE THAT THE RECORDS OF THE ABOVE CITY AGENCY WAS EXAMINED AND THAT THE INFORMATION REPORTED ABOVE IS TRUE AND ACCURATE ABSTRACT OF THE INFORMATION CONTAINED THEREIN ON THE ABOVE NOTED DATE. THIS REPORT IS FOR INFORMATION PURPOSES ONLY. NO LIABILITY IS ASSUMED HEREUNDER. REPORT MAY NOT INCLUDE MINOR APPLICATIONS THAT DO NOT REQUIRE A NEW CERTIFICATE OF OCCUPANCY.

68 Jay Street - 5th Floor, Brooklyn, New York 11201 • 718-852-0051 • Fax 718-852-0533 • www.sjcarroll.com

S.J. CARROLL JR., INC.
Researching the Records of NYC Agencies
Quality & Service for over 35 years

STREET REPORT SEARCH

COMPANY: **CORNERSTONE LAND ABSTRACT LLC.** DATE : **09/19/2016**

TITLE #: **CL14713Q** COUNTY: **QUEENS**

PREMISES : **102-08 BRISBIN STREET**

BLOCK: **10019** LOT: **38** SJC REF: **703047**

FRONT STREET:	BRISBIN STREET
WIDTH:	MAPPED AT 50' BY THE CITY OF NEW YORK
DEDICATED:	CORPORATION COUNCIL OPINION 07/17/1929
OTHER INFO:	
CROSS STREET:	102 AVENUE
WIDTH:	MAPPED AT 50' BY THE CITY OF NEW YORK
DEDICATED:	CORPORATION COUNCIL OPINION 02/22/1915
OTHER INFO:	
CROSS STREET:	
WIDTH:	
DEDICATED:	
OTHER INFO:	

IMPORTANT NOTICE ABOUT SEARCH INFORMATION

S.J. CARROLL JR. INC. DOES HEREBY STATE THAT THE RECORDS OF THE ABOVE CITY AGENCY WAS EXAMINED AND THAT THE INFORMATION REPORTED ABOVE IS TRUE AND ACCURATE ABSTRACT OF THE INFORMATION CONTAINED THEREIN ON THE ABOVE NOTED DATE. THIS REPORT IS FOR INFORMATION PURPOSES ONLY. NO LIABILITY IS ASSUMED HEREUNDER.

68 Jay Street - 5th Floor, Brooklyn, New York 11201 • 718-852-0051 • Fax 718-852-0533 • www.sjcarroll.com

STREET REPORT SEARCH

COMPANY: **CORNERSTONE LAND ABSTRACT LLC.** DATE : **09/19/2016**

TITLE #: **CL14713Q** COUNTY: **QUEENS**

PREMISES : **102-12 BRISBIN STREET** A.K.A. **145-11 LIBERTY AVENUE**

BLOCK: **10019** LOT: **39** SJC REF: **703048**

FRONT STREET:	BRISBIN STREET
WIDTH:	MAPPED AT 50' BY THE CITY OF NEW YORK
DEDICATED:	CORPORATION COUNCIL OPINION 07/17/1929
OTHER INFO:	

CROSS STREET:	LIBERTY AVENUE
WIDTH:	MAPPED AT 100' BY THE CITY OF NEW YORK
DEDICATED:	FINAL DECREE 12/18/1930
OTHER INFO:	

CROSS STREET:	LLOYD ROAD
WIDTH:	MAPPED AT 50' BY THE CITY OF NEW YORK
DEDICATED:	NO TITLE
OTHER INFO:	

IMPORTANT NOTICE ABOUT SEARCH INFORMATION
S.J. CARROLL JR. INC. DOES HEREBY STATE THAT THE RECORDS OF THE ABOVE CITY AGENCY WAS EXAMINED AND THAT THE INFORMATION REPORTED ABOVE IS TRUE AND ACCURATE ABSTRACT OF THE INFORMATION CONTAINED THEREIN ON THE ABOVE NOTED DATE. THIS REPORT IS FOR INFORMATION PURPOSES ONLY. NO LIABILITY IS ASSUMED HEREUNDER.

68 Jay Street - 5th Floor, Brooklyn, New York 11201 • 718-852-0051 • Fax 718-852-0533 • www.sjcarroll.com

BIG APPLE ABSTRACT CORP.

42-40 Bell Boulevard, Bayside, New York 11361 • (718) 428-6100 • (212) 751-3225 • (516) 222-2740
Fax (718) 428-2064 • E-mail: customerservice@bigappleabstract.com • Web: www.bigappleabstract.com

February 6, 2017

Kelly, Lucas & Pacifico, LLP
Attn: Robert G. Lucas, Esq.
23 Birch Hill Road
Locust Valley, New York 11560-1832

RE: Title No.: BA35763
Premises: 102-08 Brisbin Street, Jamaica, NY
Owner(s): 145-11 LIBERTY AVE. CORP.
Buyer(s): ALMEIDA REALTY, LLC

Dear Mr. Lucas:

In reference to the above described file, please be advised that we are hereby omitting the present Exception No. 5 from Schedule B of our title report and adding the following in its place:

5. Survey made by Roguski Land Surveying, P.C., dated January 30, 2017, shows premises improved by a one (1) story high brick building with an attached metal shed on North; concrete pavements shown; concrete driveway shown leading onto Lloyd Road; frame shed and metal roof above concrete pavement located on property adjoining on the north encroaches/projects up to 0.86 feet onto/over premises; metal doors and metal slide gate encroach up to 1.02 feet onto Liberty Avenue; metal slide gate encroaches up to 0.20 feet onto Brisbin Street; but Mortgage Policy will insure against diminution of the value of the adequacy of the Mortgage lien by virtue of the forced removal of said encroachments and/or projections; chain link fence varies up to 1.72 feet from the northerly line; variations between fences, curb and the lines of record title. No other variations or encroachments.

5a. Policy will except any loss or damage which may be incurred by reason of the fact that the certified owner(s) herein may be out of possession of up to 1.72 feet of land lying north of the fence which crosses premises on north.

Note: The survey reading and/or survey inspection are not intended to be and should not be used for the purpose of determining compliance with local building and zoning laws and regulations; they should only be relied upon for the purpose of disclosing exceptions to title.

Kindly attach this letter and the attached survey print to your title report and same is to be made a part thereof.

Very truly yours,

_____

Jack Lau

Encs.
cc: Peter Marinis, Esq.

PHASE II SITE INVESTIGATION REPORT

Subject Property:

145-11 Liberty Avenue
Jamaica, New York
Block: 10019; Lots: 38, 39

Prepared For:

Almeida Concrete Pumping and Equipment, Inc.
97-25 72nd Drive
Forest Hills, NY 11375

Prepared By:

Atlantic Environmental Solutions, Inc.
5 Marine View Plaza, Suite 303
Hoboken, New Jersey 07030
Phone: (201) 876-9400 Fax: (201) 876-9563

February 2017

TABLE OF CONTENTS

SECTION		PAGE
1.0	INTRODUCTION	**1**
2.0	BACKGROUND	**1**
3.0	FEBRUARY 2017 SOIL INVESTIGATION	**1**
4.0	CONCLUSIONS AND RECOMMENDATIONS	**2**
5.0	LIMITATIONS	**2**

1.0 INTRODUCTION

Atlantic Environmental Solutions, Inc. (AESI) was retained by the Almeida Concrete Pumping and Equipment, Inc., to provide Phase II investigative activities in connection with the referenced property located at 145-11 Liberty Avenue in Jamaica, New York ("site" or "subject property"). The purpose of the Phase II investigation was to evaluate recognized environmental conditions (RECs) identified in AESI's February 2017 Phase I Environmental Site Assessment (ESA).

2.0 BACKGROUND

AESI's February 2017 Phase I ESA identified the following RECs in connection with the subject property:

- During AESI's site inspection, two (2) fill ports, one (1) access cover, and one (1) vent pipe were observed in association with a 550-gallon waste oil UST. In addition, a previous Environmental Site Assessment provided by the Client identified three (3) floor drains and a waste oil pit. Presumably, the drains and the pit discharge into the oil separator before discharging into the waste oil UST. AESI personnel were unable to locate the pit; it is not clear if the pit has since been sealed or if it was inaccessible. Evidence of a discharge near the floor drains was not observed.
- During AESI's site inspection, several five (5)-gallon buckets and seven, ten (10)-gallon steel drums containing various petroleum products, such as motor oils, hydraulic oils and transmission fluids, were observed throughout the interior of the subject property. In addition, one (1) 275-gallon aboveground storage tank (AST) containing motor oil was observed in the interior of the subject property. However, a previous Environmental Site Assessment provided by the Client identified two (2) ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed.

AESI's recommendations included performing a Phase II subsurface investigation to confirm the presence or absence of contamination on the site as a result of a potential discharge from the waste oil UST. In addition, AESI recommended the proper inventory, storage and disposal of all hazardous substance containers, as well as the proper closure and disposal of the AST, in accordance with all local, state and Federal regulations.

This report summarizes the Phase II subsurface activities associated with the waste oil UST.

3.0 FEBRUARY 2017 SOIL INVESTIGATION

On February 7, 2017, AESI installed four (4) soil borings in locations surrounding the waste oil UST. The soil borings were advanced to refusal, encountered at depths between 10 and 12 feet below ground surface (bgs). Soil in each boring was observed for visual and olfactory indications of contamination, as well as field-screened with a photoionization detector (PID) for volatile organic vapors. Evidence of contamination in the form of odors, staining or elevated PID readings, was not observed in any of the soil borings.

One (1) soil sample was collected from each boring at the six-inch interval above refusal for analysis of Priority Pollutant (PP) Metals, PP volatile organic compounds (VOCs), PP semi-volatile organic compounds (SVOCs), and total petroleum hydrocarbons (TPHC).

The subject property is utilized as commercial use, with no future plans for redevelopment into residential use. Therefore, the soil analytical results were compared to the New York State Department of Environmental Conservation (NYSDEC) Restricted Use Soil Cleanup Objectives. Contaminants were not detected in any soil sample at concentrations in exceedance of the NYSDEC Restricted Use Soil Cleanup Objectives.

Refer to Table 1 for a summary of the soil analytical results.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical results of the soil sampling conducted on February 7, 2017 indicated concentrations of TPHC, metals, VOCs and SVOCs were below the NYSDEC Restricted Use Soil Cleanup Objectives. No indications of a discharge were identified during the investigation.

AESI has no recommendations at this time.

5.0 LIMITATIONS

This report has been prepared on behalf of, and exclusively for the use of Almeida Concrete Pumping and Equipment, Inc. This report and the findings contained within shall not, in whole or in part, be distributed or conveyed to any other party without the prior consent of Atlantic Environmental Solutions, Inc. (AESI).

The opinions included in this report are based on the information obtained during the assessment, our experience, and the information provided by the persons available at the site at the time of inspection familiar with the subject property. If additional information becomes available, we require the opportunity to review the information, reassess the potential environmental concerns, and modify our opinions, if necessary.

This investigation is limited to the drilling and sampling points performed on the property. Other areas were not investigated. Furthermore, areas that were beneath the property buildings, structures, or otherwise inaccessible by the drilling methods employed, were not considered during this investigation.

Table 1 - Soil Sample Results
145-11 Liberty Avenue
Jamaica, New York

Sample #:		Part 375-6.8(a)	S-1				S-2				S-3				S-4			
Field ID:		Unrestricted Use																
Lab ID:		Soil Cleanup	01117-001				01117-002				01117-003				01117-004			
Date Sampled:		Objectives	02/07/2017				02/07/2017				02/07/2017				02/07/2017			
Depth(ft):		(ppm)	11/12				9/10				11/12				9/10			
	CAS																	
Volatiles (mg/Kg)			Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Chloromethane	74-87-3	NS	ND		0.00127	0.000235	ND		0.00133	0.000246	ND		0.00137	0.000253	ND		0.00111	0.000205
Vinyl chloride	75-01-4	0.02	ND		0.00127	0.000235	ND		0.00133	0.000246	ND		0.00137	0.000253	ND		0.00111	0.000205
Bromomethane	74-83-9	NS	ND		0.00127	0.000378	ND		0.00133	0.000396	ND		0.00137	0.000408	ND		0.00111	0.000331
Chloroethane	75-00-3	NS	ND		0.00127	0.000337	ND		0.00133	0.000352	ND		0.00137	0.000363	ND		0.00111	0.000294
Trichlorofluoromethane	75-69-4	NS	ND		0.00127	0.000239	ND		0.00133	0.00025	ND		0.00137	0.000258	ND		0.00111	0.000209
Acrolein	107-02-8	NS	ND		0.025	0.0033	ND		0.027	0.00346	ND		0.027	0.00356	ND		0.022	0.00289
1,1-Dichloroethene	75-35-4	0.33	ND		0.00127	0.000479	ND		0.00133	0.000501	ND		0.00137	0.000516	ND		0.00111	0.000418
Methylene chloride	75-09-2	0.05	ND		0.00254	0.00126	ND		0.00266	0.00132	ND		0.00274	0.00136	ND		0.00222	0.0011
Acrylonitrile	107-13-1	NS	ND		0.025	0.00518	ND		0.027	0.00543	ND		0.027	0.00559	ND		0.022	0.00453
trans-1,2-Dichloroethene	156-60-5	0.19	ND		0.00127	0.000368	ND		0.00133	0.000386	ND		0.00137	0.000397	ND		0.00111	0.000322
1,1-Dichloroethane	75-34-3	0.27	ND		0.00127	0.000246	ND		0.00133	0.000258	ND		0.00137	0.000266	ND		0.00111	0.000215
Chloroform	67-66-3	0.37	ND		0.00127	0.000267	ND		0.00133	0.000279	ND		0.00137	0.000288	ND		0.00111	0.000233
1,1,1-Trichloroethane	71-55-6	0.68	ND		0.00127	0.0003	ND		0.00133	0.000314	ND		0.00137	0.000323	ND		0.00111	0.000262
Carbon tetrachloride	56-23-5	0.76	ND		0.00127	0.000204	ND		0.00133	0.000214	ND		0.00137	0.000221	ND		0.00111	0.000179
1,2-Dichloroethane (EDC)	107-06-2	0.02	ND		0.00127	0.000335	ND		0.00133	0.000351	ND		0.00137	0.000362	ND		0.00111	0.000293
Benzene	71-43-2	0.06	ND		0.00127	0.000331	ND		0.00133	0.000347	ND		0.00137	0.000358	ND		0.00111	0.00029
Trichloroethene	79-01-6	0.47	ND		0.00127	0.000356	ND		0.00133	0.000372	ND		0.00137	0.000384	ND		0.00111	0.000311
1,2-Dichloropropane	78-87-5	NS	ND		0.00127	0.000215	ND		0.00133	0.000225	ND		0.00137	0.000232	ND		0.00111	0.000188
Bromodichloromethane	75-27-4	NS	ND		0.00127	0.000296	ND		0.00133	0.00031	ND		0.00137	0.000319	ND		0.00111	0.000259
2-Chloroethyl vinyl ether	110-75-8	NS	ND		0.00254	0.000588	ND		0.00266	0.000616	ND		0.00274	0.000634	ND		0.00222	0.000514
cis-1,3-Dichloropropene	10061-01-5	NS	ND		0.00127	0.00026	ND		0.00133	0.000273	ND		0.00137	0.000281	ND		0.00111	0.000228
Toluene	108-88-3	0.7	ND		0.00127	0.00041	ND		0.00133	0.00043	ND		0.00137	0.000443	ND		0.00111	0.000359
trans-1,3-Dichloropropene	10061-02-6	NS	ND		0.00127	0.000293	ND		0.00133	0.000307	ND		0.00137	0.000316	ND		0.00111	0.000256
1,1,2-Trichloroethane	79-00-5	NS	ND		0.00127	0.000343	ND		0.00133	0.000359	ND		0.00137	0.00037	ND		0.00111	0.0003
Tetrachloroethene	127-18-4	1.3	ND		0.00127	0.000325	ND		0.00133	0.00034	ND		0.00137	0.000351	0.000408	J	0.00111	0.000284
Dibromochloromethane	124-48-1	NS	ND		0.00127	0.000237	ND		0.00133	0.000249	ND		0.00137	0.000256	ND		0.00111	0.000208
Chlorobenzene	108-90-7	1.1	ND		0.00127	0.000286	ND		0.00133	0.000299	ND		0.00137	0.000308	ND		0.00111	0.00025
Ethylbenzene	100-41-4	1	ND		0.00127	0.00031	ND		0.00133	0.000325	ND		0.00137	0.000334	ND		0.00111	0.000271
Total Xylenes	1330-20-7	0.26	ND		0.00254	0.00055	ND		0.00266	0.000576	ND		0.00274	0.000593	ND		0.00222	0.000481
Bromoform	75-25-2	NS	ND		0.00127	0.000364	ND		0.00133	0.000382	ND		0.00137	0.000393	ND		0.00111	0.000319
1,1,2,2-Tetrachloroethane	79-34-5	NS	ND		0.00127	0.000342	ND		0.00133	0.000358	ND		0.00137	0.000369	ND		0.00111	0.000299
1,3-Dichlorobenzene	541-73-1	2.4	ND		0.00127	0.000245	ND		0.00133	0.000257	ND		0.00137	0.000264	ND		0.00111	0.000214
1,4-Dichlorobenzene	106-46-7	1.8	ND		0.00127	0.000217	ND		0.00133	0.000227	ND		0.00137	0.000234	ND		0.00111	0.00019
1,2-Dichlorobenzene	95-50-1	1.1	ND		0.00127	0.00022	ND		0.00133	0.00023	ND		0.00137	0.000237	ND		0.00111	0.000192
TOTAL VO's:		NS	ND			NA	ND			NA	ND			NA	0.000408	J		NA

Standards are based upon published regulatory information.
Users are encouraged to consult appropriate regulatory sources for current values and updates.
IAL assumes no responsibility for the accuracy of these values.

EDD created on 2/16/17

Table 1 - Soil Sample Results
145-11 Liberty Avenue
Jamaica, New York

Sample #:		Part 375-6.8(a)	S-1				S-2				S-3				S-4			
Field ID:		Unrestricted Use																
Lab ID:		Soil Cleanup	01117-001				01117-002				01117-003				01117-004			
Date Sampled:		Objectives	02/07/2017				02/07/2017				02/07/2017				02/07/2017			
Depth(ft):		(ppm)	11/12				9/10				11/12				9/10			
	CAS																	
Semivolatiles - BN (mg/Kg)			**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
N-Nitrosodimethylamine	62-75-9	NS	ND		0.035	0.030	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
Bis(2-chloroethyl) ether	111-44-4	NS	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
1,3-Dichlorobenzene	541-73-1	2.4	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
1,4-Dichlorobenzene	106-46-7	1.8	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
1,2-Dichlorobenzene	95-50-1	1.1	ND		0.035	0.033	ND		0.034	0.032	ND		0.034	0.032	ND		0.035	0.033
2,2'-Oxybis(1-Chloropropane)	108-60-1	NS	ND		0.035	0.029	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
N-Nitrosodi-n-propylamine	621-64-7	NS	ND		0.035	0.027	ND		0.034	0.026	ND		0.034	0.026	ND		0.035	0.027
Hexachloroethane	67-72-1	NS	ND		0.035	0.029	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Nitrobenzene	98-95-3	NS	ND		0.035	0.028	ND		0.034	0.027	ND		0.034	0.027	ND		0.035	0.028
Isophorone	78-59-1	NS	ND		0.035	0.030	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Bis(2-chloroethoxy) methane	111-91-1	NS	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
1,2,4-Trichlorobenzene	120-82-1	NS	ND		0.035	0.030	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
Naphthalene	91-20-3	12	ND		0.035	0.031	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
Hexachlorobutadiene	87-68-3	NS	ND		0.035	0.032	ND		0.034	0.032	ND		0.034	0.032	ND		0.035	0.033
Hexachlorocyclopentadiene	77-47-4	NS	ND		0.035	0.031	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
2-Chloronaphthalene	91-58-7	NS	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
Dimethyl phthalate	131-11-3	NS	ND		0.035	0.032	ND		0.034	0.032	ND		0.034	0.032	ND		0.035	0.033
2,6-Dinitrotoluene	606-20-2	NS	ND		0.035	0.027	ND		0.034	0.026	ND		0.034	0.026	ND		0.035	0.027
Acenaphthylene	208-96-8	100	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
Acenaphthene	83-32-9	20	ND		0.035	0.031	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
2,4-Dinitrotoluene	121-14-2	NS	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
Diethyl phthalate	84-66-2	NS	ND		0.035	0.034	ND		0.034	0.034	ND		0.034	0.034	ND		0.035	0.035
Fluorene	86-73-7	30	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
4-Chlorophenyl phenyl ether	7005-72-3	NS	ND		0.035	0.033	ND		0.034	0.032	ND		0.034	0.032	ND		0.035	0.033
N-Nitrosodiphenylamine	86-30-6	NS	ND		0.035	0.030	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
1,2-Diphenylhydrazine	122-66-7	NS	ND		0.035	0.035	ND		0.034	0.034	ND		0.034	0.034	ND		0.035	0.035
4-Bromophenyl phenyl ether	101-55-3	NS	ND		0.035	0.030	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Hexachlorobenzene	118-74-1	0.33	ND		0.035	0.032	ND		0.034	0.032	ND		0.034	0.032	ND		0.035	0.033
Phenanthrene	85-01-8	100	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
Anthracene	120-12-7	100	ND		0.035	0.031	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
Di-n-butyl phthalate	84-74-2	NS	ND		0.035	0.027	ND		0.034	0.026	ND		0.034	0.026	ND		0.035	0.027
Fluoranthene	206-44-0	100	ND		0.035	0.030	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Benzidine	92-87-5	NS	ND		0.035	0.021	ND		0.034	0.021	ND		0.034	0.021	ND		0.035	0.021
Pyrene	129-00-0	100	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
Butyl benzyl phthalate	85-68-7	NS	ND		0.035	0.032	ND		0.034	0.032	ND		0.034	0.031	ND		0.035	0.033
3,3'-Dichlorobenzidine	91-94-1	NS	ND		0.035	0.025	ND		0.034	0.025	ND		0.034	0.025	ND		0.035	0.026
Benzo[a]anthracene	56-55-3	1	ND		0.035	0.030	ND		0.034	0.030	ND		0.034	0.029	ND		0.035	0.030
Chrysene	218-01-9	1	ND		0.035	0.030	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Bis(2-ethylhexyl) phthalate	117-81-7	NS	ND		0.035	0.022	ND		0.034	0.021	ND		0.034	0.021	ND		0.035	0.022
Di-n-octyl phthalate	117-84-0	NS	ND		0.035	0.030	ND		0.034	0.030	ND		0.034	0.030	ND		0.035	0.031
Benzo[b]fluoranthene	205-99-2	1	ND		0.035	0.028	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.028
Benzo[k]fluoranthene	207-08-9	0.8	ND		0.035	0.029	ND		0.034	0.029	ND		0.034	0.029	ND		0.035	0.030
Benzo[a]pyrene	50-32-8	1	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
Indeno[1,2,3-cd]pyrene	193-39-5	0.5	ND		0.035	0.029	ND		0.034	0.028	ND		0.034	0.028	ND		0.035	0.029
Dibenz[a,h]anthracene	53-70-3	0.33	ND		0.035	0.034	ND		0.034	0.034	ND		0.034	0.034	ND		0.035	0.035
Benzo[g,h,i]perylene	191-24-2	100	ND		0.035	0.032	ND		0.034	0.031	ND		0.034	0.031	ND		0.035	0.032
TOTAL BN'S:		NS	ND		ND	NA	ND		ND	NA	ND		ND	NA	ND		ND	NA

Standards are based upon published regulatory information.
Users are encouraged to consult appropriate regulatory sources for current values and updates.
IAL assumes no responsibility for the accuracy of these values.

EDD created on 2/16/17

Table 1 - Soil Sample Results
145-11 Liberty Avenue
Jamaica, New York

Sample #:		Part 375-6.8(a)	S-1				S-2				S-3				S-4			
Field ID:		Unrestricted Use																
Lab ID:		Soil Cleanup	01117-001				01117-002				01117-003				01117-004			
Date Sampled:		Objectives	02/07/2017				02/07/2017				02/07/2017				02/07/2017			
Depth(ft):		(ppm)	11/12				9/10				11/12				9/10			
	CAS																	
NJ-EPH-DRO (mg/Kg)			**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
C9-C28	IALC9	NS	24.1	J	50.1	20.0	ND		50.8	20.3	ND		51.2	20.5	43.3	J	49.1	19.6
C28-C40	IALC28	NS	30.8	J	50.1	20.0	ND		50.8	20.3	ND		51.2	20.5	35.7	J	49.1	19.6
C9-C40 Total	IALTC40	NS	54.9		50.1	20.0	ND		50.8	20.3	ND		51.2	20.5	79.1		49.1	19.6
Metals (mg/Kg)			**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Antimony	7440-36-0	NS	ND		0.567	0.227	0.446	J	0.564	0.226	ND		0.546	0.218	0.605		0.567	0.227
Arsenic	7440-38-2	13	0.680		0.567	0.340	2.62		0.564	0.339	1.78		0.546	0.328	4.02		0.567	0.340
Beryllium	7440-41-7	7.2	ND		0.567	0.283	ND		0.564	0.282	ND		0.546	0.273	ND		0.567	0.283
Cadmium	7440-43-9	2.5	ND		0.567	0.283	ND		0.564	0.282	ND		0.546	0.273	ND		0.567	0.283
Chromium	7440-47-3	NS	14.7		0.567	0.397	14.3		0.564	0.395	15.2		0.546	0.382	13.5		0.567	0.397
Copper	7440-50-8	50	7.38		0.567	0.227	20.0		0.564	0.226	9.89		0.546	0.218	16.2		0.567	0.227
Lead	7439-92-1	63	2.33		0.567	0.170	**187**		0.564	0.169	3.48		0.546	0.164	49.1		0.567	0.170
Mercury	7439-97-6	0.18	ND		0.023	0.0091	0.020	J	0.026	0.011	ND		0.024	0.0096	0.020	J	0.025	0.010
Nickel	7440-02-0	30	9.68		0.567	0.283	10.9		0.564	0.282	10.9		0.546	0.273	9.25		0.567	0.283
Selenium	7782-49-2	3.9	ND		0.567	0.397	ND		0.564	0.395	1.28		0.546	0.382	ND		0.567	0.397
Silver	7440-22-4	2	ND		0.567	0.227	ND		0.564	0.226	ND		0.546	0.218	ND		0.567	0.227
Thallium	7440-28-0	NS	0.721		0.567	0.227	0.347	J	0.564	0.226	0.228	J	0.546	0.218	ND		0.567	0.227
Zinc	7440-66-6	109	13.7		0.567	0.340	74.0		0.564	0.339	29.9		0.546	0.328	60.0		0.567	0.340

6NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives December 2006

BOLD Conc Indicates a concentration that exceeds applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

Standards are based upon published regulatory information.
Users are encouraged to consult appropriate regulatory sources for current values and updates.
IAL assumes no responsibility for the accuracy of these values.

EDD created on 2/16/17

May 20, 2026

Moshe Friedlander
GFL NYC LLC
1342 38th Street
Brooklyn, NY 11218
(718) 400-4786 ext 2
Moshe@grungrp.com

Re: Phase II Subsurface Investigation Report
145-11 Liberty Avenue, Queens, New York 11435
Block 10019, Lots 39 and 38

Brussee Environmental Corp. (BEC) has prepared the following Phase II Subsurface Investigation Report to summarize the findings/results of a subsurface investigation performed to determine soil, soil vapor and groundwater quality based on historic use an automotive/truck repair facility. The work was performed in accordance with the recommendations made by BEC within the proposal dated April 14, 2026. This Phase II Subsurface Investigation Report summarizes the findings of the ground penetrating radar (GPR) survey, and soil, soil vapor, and groundwater samples collected from the Site in May 2026.

Property Description
The Site consists of two adjacent lots located at 145-11 Liberty Avenue (Lot 39) and 10208 Brisbin Street (Lot 38), Queens, New York 11435. The Site is identified as Block 10019, Lots 39 and 38 on the New York City Tax Map. The Site is located in the Jamaica section of the Borough of Queens, New York City, Queens County, New York. The Site is located on the northwest corner of the intersection of Liberty Avenue and Brisbin Street. Lot 39 is approximately 12,056 SF and is currently developed with 1 and 2-story brick manufacturing building occupied by Almeida Concrete Equipment Inc. A concrete capped parking area extends around the side/rear of the building onto adjacent Lot 38 (5,349 SF).

Background
BEC was provided a copy of the Phase II Site Investigation Report prepared by Atlantic Environmental Solutions, Inc. (AESI) in February 2017. The Phase II Site Investigation Report references a February 2017 Phase I ESA also performed by AESI which lists the following recognized environmental conditions (RECs) for the Site:

- The AESI site inspection noted two fill ports, one access cover, and one vent pipe associated with a 550-gallon waste oil UST.
- AESI noted a previous Environmental Site Assessment (not provided to BEC) they reviewed which identified three floor drains and a waste oil pit. AESI assumed the floor drains and the waste oil pit discharge into the oil separator before discharging into the waste oil UST. AESI did not locate the waste oil pit or floor drains.
- AESI identified numerous bulk storage containers of petroleum products such as motor oil, hydraulic oil, and transmission fluids within the building. AESI also noted a 275-gallon motor oil AST inside the building. AESI noted that a review of an older Environmental Site Assessment indicates there used to be two ASTs, one containing fresh motor oil and the other containing hydraulic oil. These substances are commonly associated with truck repair operations. Evidence of a discharge in these areas was not observed.

In accordance with the recommendations in the AESI Phase I Report, AESI performed a Phase II subsurface investigation consisting of the installation of four soil borings around the 550-gallon waste oil UST to depths between 10 and 12 ft below grade. AESI did not identify any olfactory or PID

evidence of contamination and AESI collected one soil sample from each soil boring representing the deepest interval obtained for laboratory analysis of VOCs, SVOCs and metals. The laboratory results of the four soil samples did not identify any detectable concentration of SVOCs, and one metal, lead at 187 mg/kg was detected above UUSCOs within the S-2 soil sample. No other metals were detected above UUSCs. No VOCs were detected within the four soil samples with the exception of a trace concentration of tetrachloroethylene (0.408 ppb) in the S-4 soil sample.

BEC's review of historic Sanborn maps available for the Site indicates the 145-11 Liberty Avenue property (Lot 39) was undeveloped prior to 1951, but was developed by 1963 with the with existing building which was utilized as wire rope warehouse. The Sanborn maps indicate the building has been utilized as a truck repair facility since at least 1981. The 10208 Brisbin Street (Lot 38) property was developed prior to 1911 with a 3-story residential dwelling that was demolished between 1967 and 1981.

Subsurface Investigation

Ground Penetrating Radar Survey
A ground penetrating radar (GPR) survey was performed within the exterior parking lot areas of both lots by Coastal Environmental Solutions, Inc. (Coastal) of Holbrook, New York on May 4, 2026. The GPR survey was performed utilizing a Easy Radar ER-500A Ground Penetrating Radar to detect anomalies indicative of an underground storage tank, designate utilities/conduits, and clear proposed boring locations. The GPR was performed across all accessible areas of the exterior of the building. The GPR survey identified the one 550-gallon waste oil tank that was previously investigated by AESI. The GPR survey did not identify any other anomalies indicative of an underground storage tank. The approximate location of the tank is shown on **Figure 1**. A copy of the GPR report is included in **Appendix C**.

Soil Borings
On May 4, 2026, BEC performed six soil borings (SB1 – SB6) utilizing a track mounted Geoprobe™ 7822 DT. Soil borings SB1, SB2, SB3, SB5 and SB6 were performed outside of the building to a depth of 15 ft below grade, with the exception of soil boring SB5 which hit refusal at 5 ft. Soil boring SB4 was performed inside the building to a depth of 15 ft. Historic fill material was limited to the top 1 ft within the areas BEC investigated, followed by a native medium-coarse brown sand with gravel. Soil boring logs are included in **Appendix A**. Retrieved sample cores were characterized by BEC and field screened for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). No visual or olfactory evidence of contamination was encountered for any of the soil recovered from the five soil borings performed outside of the building and no PID readings above background concentrations were recorded. BEC retained a soil sample for laboratory analysis from soil borings SB1, SB2, SB3, SB4 and SB6 from 0-2 ft below grade. BEC noted a petroleum odor and slight PID readings (max. of 3.5 ppmv) within soil recovered from soil boring SB4 performed inside the building. The impacted soil appeared to be limited to the top 2 ft, but slight PID readings were noted at 10 ft (2.4 ppmv) and 15 ft (1.5 ppmv). BEC retained two soil samples for laboratory analysis from soil boring SB4 representing the depths of 0-2 ft below grade, and 2-4 ft below grade. The soil samples were appropriately packaged in laboratory provided containers, placed in a cooler with ice and transported via laboratory dispatched courier for delivery to Phoenix Environmental Laboratories, Inc. (Phoenix) of 587 East Middle Turnpike, Manchester, CT 06040, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11301). Soil samples SB1(0-2'), SB2(0-2'), SB3(0-2'), SB4(0-2'), and SB5(0-2') were analyzed for volatile organic compounds (VOCs) by USEPA Method 8260, semi-volatile organic compounds (SVOCs) by USEPA Method 8270, and RCRA Metals. Soil samples SB4(2-4') and SB6(0-2') were analyzed for VOCs by USEPA Method 8260 and SVOCs by USEPA Method 8270. A copy of the laboratory report is included in **Appendix B**. Soil sample analytical results

BRUSSEE ENVIRONMENTAL
797 North Country Road, Rocky Point, NY 11778
Cell: 631-338-1749

were compared to New York State Department of Environmental Conservation (NYSDEC) Part 375 Table 375-6.8(a) and (b) Soil Cleanup Objectives for Unrestricted Use (UUSCOs), Residential Use (RSCOs), and Restricted Residential Use (RRSCOs) on Table 1 (VOCs), Table 2 (SVOCs), and Table 3 (Metals).

Gasoline related VOCs were detected slightly above NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) within the SB4(0-2') soil sample, including 1,3,5-trimethylbenzene (3,100 ppb), ethylbenzene (1,100 ppb), and total xylenes (3,200 ppb). No petroleum related VOCs were detected within the SB4(2-4') soil sample collected immediately below the impacted sampling, which indicates the spill is limited to immediately below the slab at least in that area.

The chlorinated VOC tetrachloroethene (PCE) was detected in four of the six shallow soil samples (collected at 0-2 ft bg) at concentrations ranging from 1,400 ppb to 2,700 ppb. The wide-spread, low level detections are likely indicative of historic use as an auto/truck repair facility (break/parts cleaner).

Very little evidence of historic fill material was encountered within the soil borings performed by BEC. Some SVOCs and the metal lead was detected at a concentration above RRSCOs within a few of the soil samples.

Groundwater Sampling
One 1-inch diameter temporary monitoring well was installed by Coastal to a depth of 34 ft below sidewalk grade, in the approximate locations shown on **Figure 1**. Groundwater was encountered at a depth of approximately 29 ft below grade. BEC collected one groundwater sample (MW1) utilizing a check valve and new tubing. The groundwater sample was appropriately packaged in laboratory provided containers, placed in cooler with ice and transported via laboratory dispatched courier for delivery to Phoenix for laboratory analysis of VOCs by EPA Method 8260. No VOCs were detected above NYSDEC Groundwater Quality Standards. However, the chlorinated VOC tetrachloroethene (PCE) was detected at a trace concentration (3.9 ppb) slightly below the standard of 5 ppb.

Soil Vapor Sampling
BEC installed four soil vapor probes (SV2, SV3, SV4, SV5) and one sub-slab soil gas implant (SS1) in the approximate locations shown on **Figure 1**. The four soil vapor implants were installed utilizing GeoProbe direct push technology and were installed at a depth of 8 ft below grade. The soil vapor implants were GeoProbe™ Soil Vapor Implant model 213859, which consist of a 6-inch length of double woven stainless steel wire screen. The implants were attached to ¼ inch polyethylene tubing which extended approximately 18-inches beyond the surface. The tubing was capped with a ¼-inch plastic end to prevent infiltration of foreign particles into the tube. Coarse sand was placed around the implant to a height of approximately 1 ft above the bottom of the probe. The remainder of the borehole was sealed with a bentonite slurry to the surface. The tubing was then sealed at the surface with hydrated granular bentonite.

Prior to sampling, each sampling location was tested to ensure that a proper surface seal had been accomplished. In accordance with NYSDOH guidance (NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006), a tracer gas (helium) was used as a quality assurance/quality control device to verify the integrity of the sampling point seal prior to collecting the samples. Prior to testing and collecting samples, the surface immediately surrounding the polyethylene tubing of the sub-slab soil gas implant was sealed using a 1 ft by 1 ft square sheet of 2-mil HDPE plastic firmly adhered to a wetted layer of granular bentonite. The seal was then tested by enriching the air space above the seal with a tracer gas (helium) while continuously monitoring air drawn from the implant with a helium detector (Dielectric Model MGD-2002, Multi-Gas Detector) for a minimum of

EST. 2021
BRUSSEE ENVIRONMENTAL
797 North Country Road, Rocky Point, NY 11778
Cell: 631-338-1749

15 minutes. The tracer gas test procedure was employed at all five sampling locations. No surface seal leaks were observed at either sampling location.

Following verification that the surface seal was tight, each implant was purged using a MultiRAE meter at a rate of 0.2 liters per minute to evacuate at least three sampling tube volumes. After purging, a 6-liter Summa® canister, fitted with a 2-hour flow regulator, was attached to the surface tube of both of the soil vapor implants. Prior to initiating sample collection, sample identification, canister number, date and start time were recorded on tags attached to each canister and in a bound field notebook. Sampling then proceeded by fully opening the flow control valve on each canister in turn. Immediately after opening the flow control valve on a canister, the initial vacuum (inches of mercury) was recorded in the field book and on the sample tag.

When the vacuum level in each Summa® canister was between 6 and 8 inches of mercury (approx. 2 hours), the flow controller valve was closed, and the sample end time and end vacuum were recorded on the tag, in a bound field notebook, and the chain of custody. The samples were submitted to Phoenix for laboratory analysis of VOCs EPA Method TO-15. A copy of the laboratory analytical report is included in **Appendix B**. Table 5 compares the analytical results to the compounds listed in Table 3.1 Air Guidance Values derived by the New York State Department of Health (NYSDOH) located in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion, dated October 2006 and the revised NYSDOH Decision Matrices dated May 2017, and the revised NYSDOH Decision Matrices dated February 2024. Sampling locations are shown on **Figure 1**.

The laboratory results of the soil vapor samples indicate the following:

- The soil vapor results indicated moderate levels of BTEX VOCs and elevated concentrations of chlorinated VOCs (CVOCs);
- The total concentration of BTEX VOCs (BTEX) ranged from 31.62 µg/m^3 (SS1) to 1,099.9 µg/m^3 (SV2);
- The petroleum related VOCs ethylbenzene (max. of 185 µg/m^3), m&p-xylene (max. of 673 µg/m^3), and o-xylene (max. of 226 µg/m^3) were detected within one of the soil vapor samples (above the monitoring level range established within NYSDOH Soil Vapor Guidance Matrices D, E, or F;
- No other petroleum related VOCs were detected above the monitoring level range established within the NYSDOH soil vapor guidance matrices D, E and F.
- The chlorinated VOCs 1,1,1-trichloroethane, 1,1-dichloroethene, methylene chloride were not detected in either the sub-slab soil gas or the soil vapor samples;
- Trichloroethene (TCE) was detected within all five samples ranging from 21.8 µg/m^3 (SV4) to 145 µg/m^3 (SS1). Several of the TCE detections were above the mitigation level range established within NYSDOH Soil Vapor Guidance Matrix A;
- Cis-1,2-dichloroethene was detected within all five samples ranging from 3.43 µg/m^3 to 241 µg/m^3 (SV2) above the monitoring level range established within NYSDOH Soil Vapor Guidance Matrix A. The SV2 concentration was above the mitigation level range established within NYSDOH Soil Vapor Guidance Matrix A;
- Carbon tetrachloride was detected within all five samples ranging from 1.23 µg/m^3 to 20.9 µg/m^3 (SS1) above the monitoring level range established within NYSDOH Soil Vapor Guidance Matrix A;
- Tetrachloroethylene (PCE) was detected within all five samples ranging from 1,170 µg/m^3 (SV4) to 16,900 µg/m^3 (SS1). PCE was detected above the mitigation level range established within NYSDOH Soil Vapor Guidance Matrix B in all samples;
- Vinyl chloride was detected within one of the five samples (SV3 at 1.84 µg/m^3) below the monitoring level range established within NYSDOH Soil Vapor Guidance Matrix C;

BRUSSEE ENVIRONMENTAL
797 North Country Road, Rocky Point, NY 11778
Cell: 631-338-1749

Conclusions

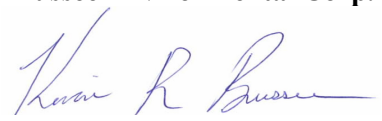
PCE in Soil/Soil Vapor - The chlorinated VOC tetrachloroethene (PCE) was detected within the soil and soil vapor samples collected at the Site which would indicate the historic use of the site has a truck repair facility has negatively impacted the Site. The low level detections of PCE in shallow soil would warrant remedial action (removal/disposal) and the elevated PCE concentrations in soil vapor would warrant mitigation against soil vapor intrusion if the property were to be redeveloped.

Tank - BEC recommends removal of the waste oil tank and all associated lines by an environmental contractor in accordance with NYFD and NYSDEC regulations prior to building demolition. Ownership will also need to complete a petroleum Bulk Storage Application for submission to NYSDEC to deregister each tank with the NYSDEC pursuant to the Environmental Conservation Law: Article 17, Title 10; and Regulations 6 NYCRR Parts 612-614 and 6 NYCRR Subpart 374-2. Prior to removal, the NYSDEC should be notified in accordance with 6 NYCRR Section 612.2(d) of the Petroleum Bulk Storage (PBS) Regulations. Following removal of the underground storage tank and petroleum impacted soil, endpoint soil samples should be collected for laboratory analysis in accordance with the frequency specified within DER-10. Following receipt of the laboratory results, a Tank Closure Report and Spill Closure Report should be prepared and submitted to the NYSDEC.

Hazmat E - Due to the Haz-Mat E-Designation assigned to the Site, any future redevelopment will need to be performed under a Hazmat Remedial Action Work Plan (RAWP) reviewed/approved by the NYC Office of Environmental Remediation (OER). BEC believes the Hazmat RAWP will require waste characterization sampling and proper handling/disposal of soil/fill to be excavated for the new building, and installation of both a vapor barrier (20-mil or thicker) and active sub-slab depressurization system (SSDS) and possibly soil vapor extraction system (SVE). It is also important to note that additional sampling/analysis will be required by OER and/or NYSDEC which could affect the remedial program and schedule the project will proceed within.

Please call if you have any questions or would like to discuss the project further.

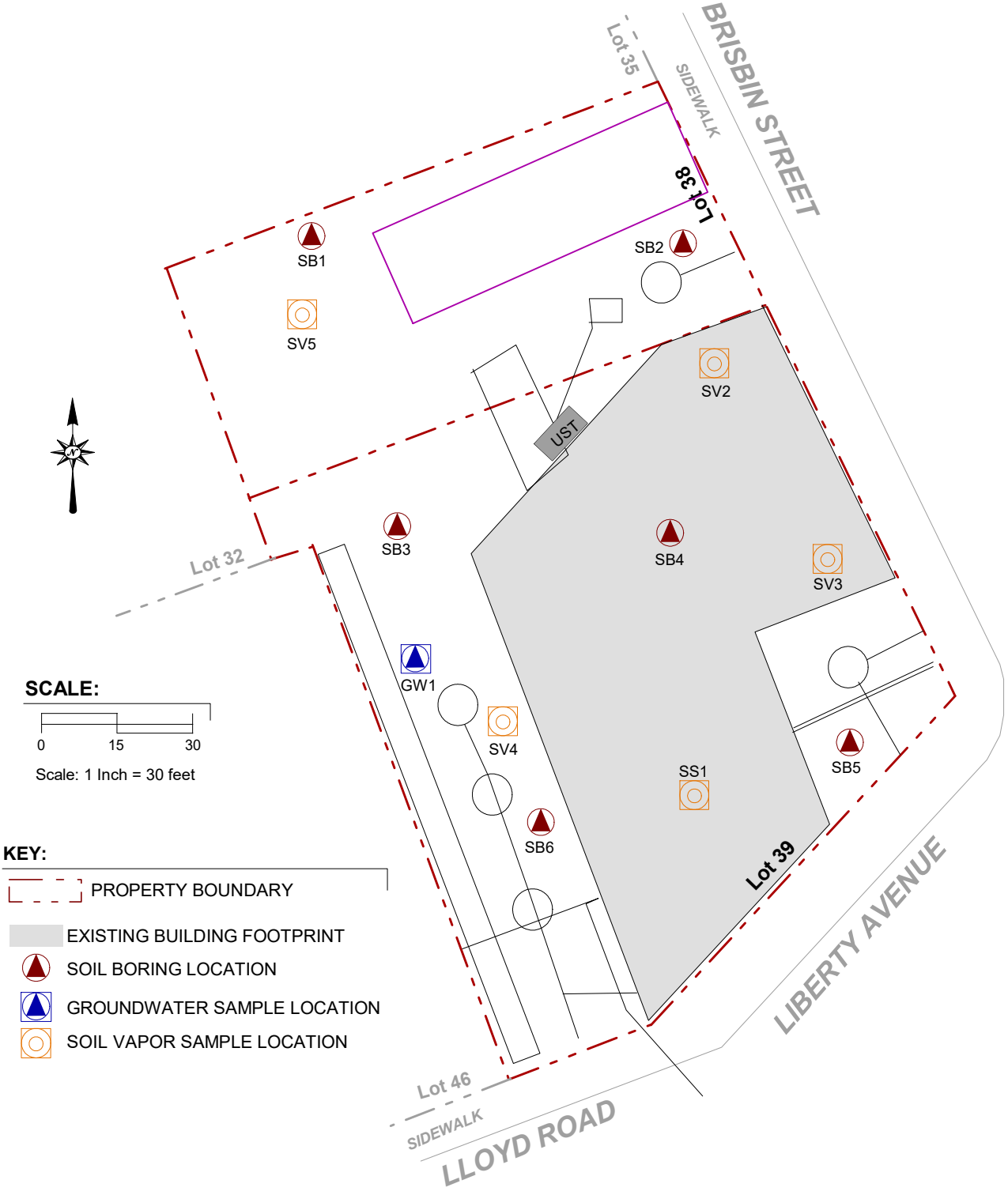
Brussee Environmental Corp.



Kevin Brussee
Principal

BRUSSEE ENVIRONMENTAL
797 North Country Road, Rocky Point, NY 11778
Cell: 631-338-1749

FIGURE



797 North Country Road
Rocky Point, NY 11778
Phone: 631-504-6000

Figure No. 1

Site Name: ALMEDIA CONCRETE EQUIPMENT, INC.

Site Address: 145-11 LIBERTY AVENUE, QUEENS, NY

Drawing Title: SITE SAMPLING LOCATIONS

TABLES

Table 1
145-11 Liberty Avenue, Queens, New York
Phase II Soil Sample
Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Residential Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1		SB2		SB3		SB4				SB5		SB6	
				(0-2')		(0-2')		(0-2')		(0-2')		(2-4')		(0-2')		(0-2')	
				5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026	
	µg/Kg	µg/Kg	µg/Kg	µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane				< 35	35	< 25	25	< 6.3	6.3	< 330	330	< 5.7	5.7	< 29	29	< 29	29
1,1,1-Trichloroethane	680	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,1,2,2-Tetrachloroethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,1,2-Trichloroethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,1-Dichloroethane	270	19,000	47,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 270	270	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,1-Dichloroethene	240	410	980	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 240	240	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,1-Dichloropropene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,2,3-Trichlorobenzene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2,3-Trichloropropane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2,4-Trichlorobenzene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2,4-Trimethylbenzene	5,900	41,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**4,000**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2-Dibromo-3-chloropropane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2-Dibromoethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,2-Dichlorobenzene	1,100	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,2-Dichloroethane	20	2,400	5,800	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 20	20	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,2-Dichloropropane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,3,5-Trimethylbenzene	3,100	41,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**3,100**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,3-Dichlorobenzene	2,600	11,000	38,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
1,3-Dichloropropane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
1,4-dioxane				< 100	100	< 94	94	< 94	94	< 100	100	< 86	86	< 100	100	< 100	100
1,4-Dichlorobenzene	1,800	10,000	24,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
2,2-Dichloropropane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
2-Chlorotoluene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
2-Hexanone (Methyl Butyl Ketone)				< 44	44	< 31	31	< 31	31	< 1600	1,600	< 29	29	< 36	36	< 36	36
2-Isopropyltoluene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**200**	130	< 5.7	5.7	< 340	340	< 7.2	7.2
4-Chlorotoluene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
4-Methyl-2-Pentanone				< 44	44	< 31	31	< 31	31	< 1600	1,600	< 29	29	< 36	36	< 36	36
Acetone	30	100,000	100,000	< 30	30	< 30	30	< 30	30	< 30	30	< 29	29	< 30	30	< 30	30
Acrolein				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Acrylonitrile				< 18	18	< 25	25	< 25	25	< 1300	1,300	< 11	11	< 29	29	< 14	14
Benzene	60	1,200	3,700	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 60	60	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Bromobenzene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
Bromochloromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Bromodichloromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Bromoform				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Bromomethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Carbon Disulfide				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Carbon tetrachloride	760	1,900	7,100	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Chlorobenzene	4,500	73,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Chloroethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Chloroform	370	4,800	24,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Chloromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
cis-1,2-Dichloroethene	190	8,700	41,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**440**	190	< 5.7	5.7	**5.2**	4.3	< 7.2	7.2
cis-1,3-Dichloropropene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Dibromochloromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Dibromomethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Dichlorodifluoromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Ethylbenzene	1,000	32,000	76,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**1,100**	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Hexachlorobutadiene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
Isopropylbenzene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**500**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
m&p-Xylenes				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**1,200**	250	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Methyl Ethyl Ketone (2-Butanone)	100	100,000	100,000	< 44	44	< 31	31	< 31	31	< 100	100	< 29	29	< 36	36	< 36	36
Methyl t-butyl ether (MTBE)	100	40,000	100,000	< 18	18	< 13	13	< 13	13	< 100	100	< 11	11	< 14	14	< 14	14
Methylene chloride	50	17,000	81,000	< 18	18	< 13	13	< 13	13	< 50	50	< 11	11	< 14	14	< 14	14
Naphthalene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**3,100**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
n-Butylbenzene	18,000	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**1,700**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
n-Propylbenzene	5,000	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**1,600**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
o-Xylene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**2,000**	250	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
p-Isopropyltoluene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**750**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
sec-Butylbenzene	25,000	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**1,100**	330	< 5.7	5.7	< 340	340	< 7.2	7.2
Styrene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
tert-Butyl alcohol				< 180	180	< 130	130	< 130	130	< 6600	6,600	< 110	110	< 140	140	< 140	140
tert-Butylbenzene	11,000	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 340	340	< 7.2	7.2
Tetrachloroethene	1,300	15,000	18,000	< 8.8	8.8	< 6.3	6.3	**1,700**	440	**1,400**	330	< 5.7	5.7	**2,700**	340	**1,500**	350
Tetrahydrofuran (THF)				< 18	18	< 13	13	< 13	13	< 660	660	< 11	11	< 14	14	< 14	14
Toluene	700	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**220**	200	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
trans-1,2-Dichloroethene	190	75,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 190	190	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
trans-1,3-Dichloropropene				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
trans-1,4-dichloro-2-butene				< 18	18	< 13	13	< 13	13	< 660	660	< 11	11	< 680	680	< 14	14
Trichloroethene	470	1,700	6,400	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	**99**	68	**3**	2.9
Trichlorofluoromethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Trichlorotrifluoroethane				< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	< 330	330	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Vinyl Chloride	30	99	480	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**230**	33	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Total Xylenes	260	100,000	100,000	< 8.8	8.8	< 6.3	6.3	< 6.3	6.3	**3,200**	250	< 5.7	5.7	< 7.2	7.2	< 7.2	7.2
Total BTEX Concentration				**0.0**		**0.0**		**0.0**		**750.0**		**0.0**		**0.0**		**0.0**	
Total VOCs Concentration				**0.0**		**0.0**		**1700.0**		**22640.0**		**0.0**		**2804.2**		**1503.0**	

Notes:
* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
RL - Reporting Limit
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

Table 2
145-11 Liberty Avenue, Queens, New York
Phase II Soil Sample
Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Residential Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1		SB2		SB3		SB4		SB4		SB5		SB6	
				(0-2')		(0-2')		(0-2')		(0-2')		(2-4')		(0-2')		(0-2')	
				5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026	
	µg/Kg	µg/Kg	µg/Kg	µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,2,4,5-Tetrachlorobenzene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
1,2,4-Trichlorobenzene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
1,2-Dichlorobenzene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
1,2-Diphenylhydrazine				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
1,3-Dichlorobenzene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
1,4-Dichlorobenzene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,2'-Oxybis(1-Chloropropane)				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,4,5-Trichlorophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,4,6-Trichlorophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,4-Dichlorophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,4-Dimethylphenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,4-Dinitrophenol				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
2,4-Dinitrotoluene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2,6-Dinitrotoluene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2-Chloronaphthalene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2-Chlorophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2-Methylnaphthalene				< 270	270	< 250	250	< 260	260	**3,800**	270	< 240	240	< 240	240	< 260	260
2-Methylphenol (o-cresol)	330	100,000	100,000	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
2-Nitroaniline				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
2-Nitrophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
3&4-Methylphenol (m&p-cresol)	330	100,000	100,000	< 330	330	< 330	330	< 330	330	< 330	330	< 330	330	< 330	330	< 330	330
3,3'-Dichlorobenzidine				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
3-Nitroaniline				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
4,6-Dinitro-2-methylphenol				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
4-Bromophenyl phenyl ether				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
4-Chloro-3-methylphenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
4-Chloroaniline				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
4-Chlorophenyl phenyl ether				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
4-Nitroaniline				< 620	620	< 580	580	< 580	580	< 610	610	< 540	540	< 560	560	< 580	580
4-Nitrophenol				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Acenaphthene	20,000	100,000	100,000	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Acenaphthylene	100,000	100,000	100,000	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Acetophenone				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Aniline				< 39	39	< 36	36	< 37	37	< 38	38	< 34	34	< 35	35	< 36	36
Anthracene	100,000	100,000	100,000	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Benz(a)anthracene	1,000	1,000	1,400	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Benzidine				< 270	270	< 250	250	**1,000**	260	< 270	270	< 240	240	**320**	240	**310**	260
Benzo(a)pyrene	1,000	1,000	1,000	**1,100**	270	< 250	250	**1,300**	260	< 270	270	< 240	240	**330**	240	**330**	260
Benzo(b)fluoranthene	1,000	1,000	1,400	**1,200**	270	< 250	250	**1,500**	260	< 270	270	< 240	240	**470**	240	**410**	260
Benzo(ghi)perylene	640	1,200	4,900	**580**	270	< 250	250	**830**	260	< 270	270	< 240	240	**300**	240	< 260	260
Benzo(k)fluoranthene	800	1,200	4,900	**430**	270	< 250	250	**530**	260	< 270	270	< 240	240	< 240	240	< 260	260
Benzoic acid				< 770	770	< 730	730	< 730	730	< 770	770	< 670	670	< 700	700	< 730	730
Benzyl butyl phthalate				< 270	270	< 250	250	< 260	260	**450**	270	< 240	240	< 240	240	< 260	260
Bis(2-chloroethoxy)methane				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Bis(2-chloroethyl)ether				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Bis(2-ethylhexyl)phthalate				< 390	390	< 360	360	< 370	370	**5,300**	380	< 340	340	< 350	350	< 360	360
Carbazole				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Chrysene	1,000	1,200	4,900	< 270	270	< 250	250	**850**	260	< 270	270	< 240	240	**350**	240	**320**	260
Dibenz(a,h)anthracene	330	330	330	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Dibenzofuran	2,100	4,200	18,000	< 270	270	< 250	250	< 260	260	**270**	270	< 240	240	< 240	240	< 260	260
Diethyl phthalate				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Dimethylphthalate				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Di-n-butylphthalate				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Di-n-octylphthalate				< 270	270	< 250	250	< 260	260	**380**	270	< 240	240	< 240	240	< 260	260
Fluoranthene	85,000	100,000	100,000	< 270	270	< 250	250	**1,200**	260	**400**	270	< 240	240	**400**	240	**380**	260
Fluorene	30,000	100,000	100,000	< 270	270	< 250	250	< 260	260	**610**	270	< 240	240	< 240	240	< 260	260
Hexachlorobenzene	330		330	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Hexachlorobutadiene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Hexachlorocyclopentadiene				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Hexachloroethane				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Indeno(1,2,3-cd)pyrene	500	500	1,400	**710**	270	< 250	250	**990**	260	< 270	270	< 240	240	**260**	240	< 260	260
Isophorone				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Naphthalene	12,000	84,000	100,000	< 270	270	< 250	250	< 260	260	**950**	270	< 240	240	< 240	240	< 260	260
Nitrobenzene				< 80	80	< 80	80	< 80	80	< 80	80	< 80	80	< 80	80	< 80	80
N-Nitrosodimethylamine				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
N-Nitrosodi-n-propylamine				< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
N-Nitrosodiphenylamine				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Pentachloronitrobenzene				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Pentachlorophenol	800	800	1,300	< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Phenanthrene	1,100	1,200	4,900	< 270	270	< 250	250	**630**	260	**2,000**	270	< 240	240	**250**	240	**330**	260
Phenol	330	100,000	100,000	< 270	270	< 250	250	< 260	260	< 270	270	< 240	240	< 240	240	< 260	260
Pyrene	64,000	100,000	100,000	< 270	270	< 250	250	**1,000**	260	**900**	270	< 240	240	**400**	240	**370**	260
Pyridine				< 390	390	< 360	360	< 370	370	< 380	380	< 340	340	< 350	350	< 360	360
Total SVOCs				**4,020**		**0**		**9,830**		**15,060**		**0**		**3,080**		**2,450**	

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

- Not Analyzed

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

Table 3
145-11 Liberty Avenue, Queens, New York
Phase II Soil Sample
Analytical Results
Metals

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Residential Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1		SB2		SB3		SB4		SB5	
				(0-2')		(0-2')		(0-2')		(0-2')		(0-2')	
				5/4/2026		5/4/2026		5/4/2026		5/4/2026		5/4/2026	
				µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
	mg/Kg	mg/Kg	mg/Kg	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Arsenic	13	16	16	**6.42**	0.75	**5.94**	0.75	**4.8**	0.74	**5.01**	0.69	**6.67**	0.75
Barium	410	410	410	**383**	0.38	**104**	0.38	**116**	0.37	**135**	0.35	**141**	0.37
Cadmium	2.5	2.5	2.5	**0.43**	0.38	**0.46**	0.38	**0.85**	0.37	**1.13**	0.35	**1.09**	0.37
Chromium	30	30	110	**19**	0.38	**19.8**	0.38	**13.9**	0.37	**26.1**	0.35	**32.8**	0.37
Lead	63	400	400	**1,420**	0.38	**199**	0.38	**136**	0.37	**177**	0.35	**302**	0.37
Mercury	0.18	0.30	0.30	**0.0917**	0.088	**0.137**	0.082	**0.164**	0.082	< 0.087	0.087	**0.102**	0.081
Selenium	3.9	22	110	< 1.5	1.5	< 1.5	1.5	< 1.5	1.5	< 1.4	1.4	< 1.5	1.5
Zinc	109	1,300	6,600	< 0.38	0.38	< 0.38	0.38	< 0.37	0.37	< 0.35	0.35	< 0.37	0.37

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

Table 4
145-11 Liberty Avenue, Queens, New York
Phase II Groundwater Analytical Results
Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards	GW1	
		5/4/206	
		µg/L	
	µg/L	Result	RL
1,1,1,2-Tetrachloroethane	5	< 1.0	1.0
1,1,1-Trichloroethane	5	< 1.0	1.0
1,1,2,2-Tetrachloroethane	5	< 0.50	0.50
1,1,2-Trichloroethane	1	< 1.0	1.0
1,1-Dichloroethane	5	< 1.0	1.0
1,1-Dichloroethene	5	< 1.0	1.0
1,1-Dichloropropene	5	< 1.0	1.0
1,2,3-Trichlorobenzene		< 1.0	1.0
1,2,3-Trichloropropane	0.04	< 0.25	0.25
1,2,4-Trichlorobenzene		< 1.0	1.0
1,2,4-Trimethylbenzene	5	< 1.0	1.0
1,2-Dibromo-3-chloropropane	0.04	< 0.50	0.50
1,2-Dibromoethane	0.0006	< 0.25	0.25
1,2-Dichlorobenzene		< 1.0	1.0
1,2-Dichloroethane	0.6	< 0.60	0.60
1,2-Dichloropropane	1	< 1.0	1.0
1,3,5-Trimethylbenzene	5	< 1.0	1.0
1,3-Dichlorobenzene	3	< 1.0	1.0
1,3-Dichloropropane	5	< 1.0	1.0
1,4-Dichlorobenzene		< 1.0	1.0
2,2-Dichloropropane	5	< 1.0	1.0
2-Chlorotoluene	5	< 1.0	1.0
2-Hexanone	50	< 5.0	5.0
2-Isopropyltoluene	5	< 1.0	1.0
4-Chlorotoluene	5	< 1.0	1.0
4-Methyl-2-pentanone		< 5.0	5.0
Acetone	50	< 25	25
Acrolein	5	< 5.0	5.0
Acrylonitrile	5	< 5.0	5.0
Benzene	1	< 0.70	0.70
Bromobenzene	5	< 1.0	1.0
Bromochloromethane	5	< 1.0	1.0
Bromodichloromethane	50	< 0.50	0.50
Bromoform	50	< 1.0	1.0
Bromomethane	5	< 1.0	1.0
Carbon Disulfide		< 5.0	5.0
Carbon tetrachloride	5	< 1.0	1.0
Chlorobenzene	5	< 1.0	1.0
Chloroethane	5	< 1.0	1.0
Chloroform	7	< 1.0	1.0
Chloromethane	5	< 1.0	1.0
cis-1,2-Dichloroethene	5	< 1.0	1.0
cis-1,3-Dichloropropene	0.4	< 0.40	0.40
Dibromochloromethane	50	< 0.50	0.50
Dibromomethane	5	< 1.0	1.0
Dichlorodifluoromethane	5	< 1.0	1.0
Ethylbenzene	5	< 1.0	1.0
Hexachlorobutadiene	0.5	< 0.40	0.40
Isopropylbenzene	5	< 1.0	1.0
m&p-Xylene		< 1.0	1.0
Methyl ethyl ketone	50	< 5.0	5.0
Methyl t-butyl ether (MTBE)		< 1.0	1.0
Methylene chloride	5	< 1.0	1.0
Naphthalene	10	< 1.0	1.0
n-Butylbenzene	5	< 1.0	1.0
n-Propylbenzene	5	< 1.0	1.0
o-Xylene	5	< 1.0	1.0
p-Isopropyltoluene	5	< 1.0	1.0
sec-Butylbenzene	5	< 1.0	1.0
Styrene	5	< 1.0	1.0
Tert-butyl alcohol		< 50	50
tert-Butylbenzene	5	< 1.0	1.0
Tetrachloroethene	5	**3.2**	1.0
Tetrahydrofuran (THF)	50	< 2.5	2.5
Toluene	5	< 1.0	1.0
trans-1,2-Dichloroethene	5	< 1.0	1.0
trans-1,3-Dichloropropene	0.4	< 0.40	0.40
trans-1,4-dichloro-2-butene	5	< 5.0	5.0
Trichloroethene	5	< 1.0	1.0
Trichlorofluoromethane	5	< 1.0	1.0
Trichlorotrifluoroethane	5	< 1.0	1.0
Vinyl chloride	2	< 1.0	1.0
Total Xylenes	5	< 1.0	1.0

Notes:
RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

Table 5
145-11 Liberty Avenue, Queens, New York
Phase II
Soil Vapor Analytical Results
Volatile Organic Compounds

VOCs - TO15 Full List	NYSDOH Soil Vapor Intrusion Matrices A, B, C, D, E &F (Sub-slab guidance levels) ($\mu g/m^3$)	SS1		SV2		SV3		SV4		SV5	
		5/4/20206		5/4/2026		5/4/2026		5/4/2026		5/4/2026	
		µg/m3		µg/m3		µg/m3		µg/m3		µg/m3	
		Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,1,1-Trichloroethane	100	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,1,2,2-Tetrachloroethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,1,2-Trichloroethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,1-Dichloroethane	~	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02
1,1-Dichloroethene	6	< 1.00	1.00	< 1.00	1.00	< 1.00	1.00	< 1.00	1.00	< 1.00	1.00
1,2,4-Trichlorobenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,2,4-Trimethylbenzene	60	**14.1**	5.01	**13.1**	5.01	**15.7**	5.01	**16.1**	5.01	**20.8**	5.01
1,2-Dibromoethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,2-Dichlorobenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,2-Dichloroethane	~	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02	< 5.02	5.02
1,2-Dichloropropane	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
1,2-Dichlorotetrafluoroethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,3,5-Trimethylbenzene	60	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	**5.75**	5.01	**5.45**	5.01
1,3-Butadiene	~	< 5.00	5.00	< 5.00	5.00	**5.93**	5.00	< 5.00	5.00	**10.8**	5.00
1,3-Dichlorobenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,4-Dichlorobenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
1,4-Dioxane	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
2-Hexanone	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	**12.9**	4.99
4-Ethyltoluene	~	**11.7**	5.01	**13.1**	5.01	**16.3**	5.01	**21**	5.01	**18.6**	5.01
4-Isopropyltoluene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
4-Methyl-2-pentanone	~	< 4.99	4.99	**7.66**	4.99	**19.6**	4.99	< 4.99	4.99	**35.2**	4.99
Acetone	~	**20.2**	5.01	**89.7**	5.01	**101**	5.01	**114**	5.01	**217**	5.01
Acrylonitrile	~	< 5.01	5.01	< 5.01	5.01	**19.1**	5.01	< 5.01	5.01	**7.05**	5.01
Benzene	60	< 5.01	5.01	< 5.01	5.01	**12**	5.01	**5.3**	5.01	**10.3**	5.01
Benzyl Chloride	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Bromodichloromethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Bromoform	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Bromomethane	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Carbon Disulfide	~	< 5.01	5.01	< 5.01	5.01	**71.6**	5.01	**11**	5.01	**14.3**	5.01
Carbon Tetrachloride	6	**20.9**	1.00	**11**	1.00	**8.24**	1.00	**1.23**	1.00	**1.98**	1.00
Chlorobenzene	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Chloroethane	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Chloroform	~	**19**	4.98	**13.4**	4.98	**18.5**	4.98	**36.3**	4.98	**5.9**	4.98
Chloromethane	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
cis-1,2-Dichloroethene	6	**3.43**	1.00	**241**	1.00	**11.8**	1.00	**5.35**	1.00	**26.5**	1.00
cis-1,3-Dichloropropene	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
Cyclohexane	60	< 4.99	4.99	< 4.99	4.99	**5.09**	4.99	< 4.99	4.99	< 4.99	4.99
Dibromochloromethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Dichlorodifluromethane	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
Ethanol	~	**7.42**	5.01	**55.6**	5.01	**37.1**	5.01	**102**	5.01	**51.2**	5.01
Ethyl Acetate	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Ethylbenzene	60	< 4.99	4.99	**178**	4.99	**25.6**	4.99	**19.9**	4.99	**185**	4.99
Heptane	200	< 5.00	5.00	**8.44**	5.00	**12.6**	5.00	**7.09**	5.00	**13.6**	5.00
Hexachlorobutadiene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Hexane	200	< 5.00	5.00	**5.85**	5.00	**12.3**	5.00	**6.66**	5.00	**14.2**	5.00
Isooctane	60	< 4.99	4.99	**5.73**	4.99	**10.7**	4.99	**40.7**	4.99	< 4.99	4.99
Isopropylalcohol	~	< 5.01	5.01	**8.13**	5.01	**11.9**	5.01	**7.47**	5.01	**11.4**	5.01
Isopropylbenzene	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Xylene (m&p)	200	**14.9**	4.99	**673**	4.99	**99.8**	4.99	**68.6**	4.99	**660**	4.99
Methyl Ethyl Ketone	~	< 5.01	5.01	**13.5**	5.01	**16.2**	5.01	**11.6**	5.01	**47.5**	5.01
MTBE	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Methylene Chloride	100	< 15.0	15.0	< 15.0	15.0	< 15.0	15.0	< 15.0	15.0	< 15.0	15.0
Napthalene	60	< 5.23	5.23	< 5.23	5.23	< 5.23	5.23	< 5.23	5.23	**7.12**	5.23
n-Butylbenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Xylene (o)	60	**5.12**	4.99	**226**	4.99	**33.9**	4.99	**30.7**	4.99	**213**	4.99
Propylene	~	< 5.01	5.01	**19.8**	5.01	**19.8**	5.01	**13**	5.01	**73.1**	5.01
sec-Butylbenzene	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Styrene	~	< 4.98	4.98	< 4.98	4.98	< 4.98	4.98	< 4.98	4.98	< 4.98	4.98
Tetrachloroethene	100	**16,900**	18.8	**4,070**	18.8	**4,890**	18.8	**1,170**	1.25	**1,600**	2.50
Tetrahydrofuran	~	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01	< 5.01	5.01
Toluene	300	**11.6**	5.01	**22.9**	5.01	**73.4**	5.01	**53.5**	5.01	**24.7**	5.01
trans-1,2-Dichloroethene	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
trans-1,3-Dichloropropene	~	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99	< 4.99	4.99
Trichloroethene	6	**145**	0.99	**107**	0.99	**82.7**	0.99	**21.8**	0.99	**50.4**	0.99
Trichlorofluoromethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Trichlorotrifluoroethane	~	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00	< 5.00	5.00
Vinyl Chloride	6	< 1.00	1.00	< 1.00	1.00	**1.84**	1.00	< 1.00	1.00	< 1.00	1.00
Total BTEX VOCs		**31.62**		**1099.90**		**244.70**		**178.00**		**1093.00**	
Total CVOCs		**17069.33**		**4429**		**4994.58**		**1198.38**		**1678.88**	
Total VOCs		**17173.37**		**5782.91**		**5632.7**		**1769.05**		**3338**	

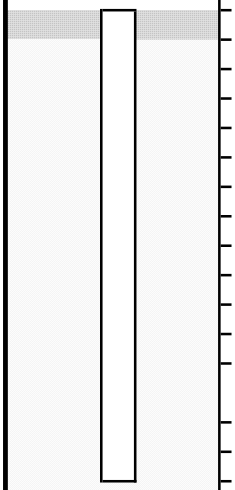
Notes:
All Guidance Values and analyte detections are reported in micrograms per cubic meter (µg/m3).
NA = No guidance value or standard available
CVOC = Chlorinated Volatile Organic Compounds
BTEX = Benzene, Ethylbenzene, Toluene, o-Xylene and m&p Xylene
RL - Reporting Limit
Bold Cell - This analyte is a detection but not an exceedance of the NYSDOH Soil Vapor Matrices
Highlighted Row - These analytes are included in the NYSDOH Soil Vapor / Indoor Air Matrices A, B & C (May 2017)
Highlighted Row - These analytes are included in the NYSDOH Soil Vapor/indoor Air Matrices D,E & F (February 2024)

APPENDIX A
Soil Boring Logs

Geologic Boring Log Details

SB1

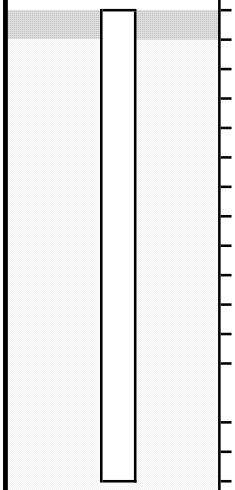
Location: Performed in parking lot; 5ft from rear (Lot 35), 75ft from east (Brisbin Street) boundaries		Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY	Date / DTW / Groundwater depth	Ground Elevation
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT		Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026		
Completion Depth: 15 Feet	Geologist Thomas Gallo		

SB1 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0 to 5	33		0.0	10" - brown sandy silt with small layer of ash 23" - brown sandy silt, trace clay **Retained soil sample SB1 (0-2')*
	5 to 10	45		0.0	45" - fine-coarse brown sand with rock
	10 to 15	43		0.0	43" - fine-coarse brown sand with rock

Geologic Boring Log Details

SB2

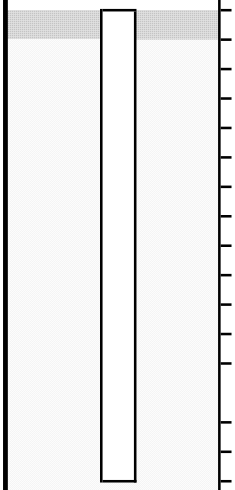
Location: Performed in parking lot; 30ft from rear (Lot 35), 8ft from east (Brisbin Street) boundaries		Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY	Date / DTW / Groundwater depth	Ground Elevation
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT		Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026		
Completion Depth: 15 Feet	Geologist Thomas Gallo		

SB2 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0 to 5	36		0.0	29" - brown sandy silt, trace clay 7" - fine-med brown sand **Retained soil sample SB2 (0-2')*
	5 to 10	42		0.0	42" - med-coarse brown sand with rock
	10 to 15	40		0.0	40" - med-coarse brown sand with rock

Geologic Boring Log Details

SB3

Location: Performed in parking lot; 65ft from rear (Lot 35), 17ft from west (Lot 46) boundaries		Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY	Date / DTW / Groundwater depth	Ground Elevation
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT		Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026		
Completion Depth: 15 Feet	Geologist Thomas Gallo		

SB3 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0 to 5	33		0.0	7" - brown sandy silt, small layer of ash 16" - brown sandy silt with trace clay 10" - fine-med brown silty sand **Retained soil sample SB3 (0-2')*
	5 to 10	52		0.0	52" - fine-coarse brown sand with rock
	10 to 15	43		0.0	43" - fine-coarse brown sand with rock

Geologic Boring Log Details

SB4

Location: Performed in existing building; 85ft from rear (Lot 35), 35ft from east (Brisbin Street) boundaries		Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY	Date / DTW	Ground Elevation
		Groundwater depth	
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT		Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026		
Completion Depth: 15 Feet	Geologist Thomas Gallo		

SB4 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0 to 5	21		3.5	5" - brown sandy silt 3" - stained brown sandy silt, PID 3.5 PPM 13" - fine-med brown sand **Retained soil sample SB4 (0-2') and SB4 (2-4')*
	5 to 10	47		2.4	47" - fine-coarse brown sand with rock
	10 to 15	47		1.5	47" - fine-coarse brown sand with rock

Geologic Boring Log Details

SB5

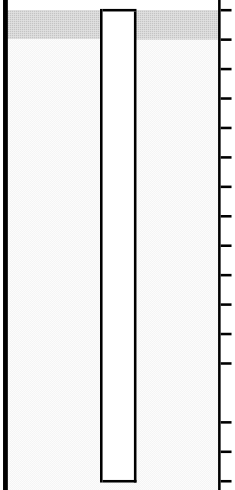
Location: Performed in smaller corner parking lot; 9ft from front (Liberty Avenue), 23ft from east (Brisbin Street) boundaries			Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY		Date / DTW	Ground Elevation
			Groundwater depth	
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT			Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026			
Completion Depth: 5 Feet	Geologist Thomas Gallo			

SB5 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0				
	to	42		0.0	13" - brown sandy silt with brick fragments and 7" - brown sandy silt 22" - fine-coarse brown sand *refusal at 5ft* **Retained soil sample SB5 (0-2')*
	5				

Geologic Boring Log Details

SB6

Location: Performed in parking lot; 45ft from front (Lloyd Road), 12ft from west (Lot 46) boundaries		Depth to Water (ft. from grade.)	Site Elevation Datum
Site Name: Remedial Investigation Site	Address: 145-11 Liberty Avenue, Brooklyn, NY	Date / DTW	Ground Elevation
		Groundwater depth	
Drilling Company: Coastal Environmental Solutions	Method: Geoprobe 7822 DT		Well Specifications
Date Started: 5/4/2026	Date Completed: 5/4/2026		
Completion Depth: 15 Feet	Geologist Thomas Gallo		

SB6 (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (in.)	Blow per 6 in.	PID (ppm)	SOIL DESCRIPTION
	0 to 5	37		0.0	37" - med brown sand **Retained soil sample SB6 (0-2')*
	5 to 10	46		0.0	46" - med-coarse brown sand with gravel
	10 to 15	39		0.0	39" - med-coarse brown sand with gravel

APPENDIX B
Laboratory Reports

PHOENIX
Environmental Laboratories, Inc.

Tuesday, May 19, 2026

Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Project ID: 145-11 LIBERTY AVENUE, QUEENS
SDG ID: GCV90208
Sample ID#s: CV90208 - CV90212, CV90214 - CV90215

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

May 19, 2026

SDG I.D.: GCV90208

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Sample Id Cross Reference

May 19, 2026

SDG I.D.: GCV90208

Project ID: 145-11 LIBERTY AVENUE, QUEENS

Client Id	Lab Id	Matrix	Col Date
SB1 (0-2`)	CV90208	SOIL	05/04/26 9:45
SB2 (0-2`)	CV90209	SOIL	05/04/26 13:45
SB3 (0-2`)	CV90210	SOIL	05/04/26 9:00
SB4 (0-2`)	CV90211	SOIL	05/04/26 10:40
SB4 (2-4`)	CV90212	SOIL	05/04/26 10:50
SB5 (0-2`)	CV90214	SOIL	05/04/26 13:10
SB6 (0-2`)	CV90215	SOIL	05/04/26 8:00

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	9:45
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90208

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB1 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.38	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Arsenic	6.42	0.75	mg/Kg	1	05/08/26	TH	SW6010D	
Barium	383	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Cadmium	0.43	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Chromium	19.0	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Mercury	0.0917	0.088	mg/Kg	1	05/07/26	KG/ZT	SW7473	
Lead	1420	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Selenium	< 1.5	1.5	mg/Kg	1	05/08/26	TH	SW6010D	
Percent Solid	85		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Total Metals Digest	Completed				05/07/26	C/AG/BF	SW3050B	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromoethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB1 (0-2`)

Phoenix I.D.: CV90208

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,2-Dichlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichloropropane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
2,2-Dichloropropane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Hexanone	ND	44	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	1
4-Chlorotoluene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	44	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	18	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromochloromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Isopropylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
m&p-Xylene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	44	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	18	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	18	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Butylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Propylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
o-Xylene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
sec-Butylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Styrene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrachloroethene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	18	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB1 (0-2`)

Phoenix I.D.: CV90208

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Toluene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	18	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichloroethene	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorofluoromethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	107		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	81		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	93		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	100	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	107		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	81		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	93		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	35	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	8.8	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	35	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	180	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	05/18/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dichlorophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dimethylphenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dinitrophenol	ND	390	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2-Chloronaphthalene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2-Chlorophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2-Methylnaphthalene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	
2-Nitroaniline	ND	390	ug/Kg	1	05/18/26	MR	SW8270E	
2-Nitrophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB1 (0-2`)

Phoenix I.D.: CV90208

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/18/26	MR	SW8270E
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
3-Nitroaniline	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
4-Chloroaniline	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
4-Nitroaniline	ND	620	ug/Kg	1	05/18/26	MR	SW8270E
4-Nitrophenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Acenaphthene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Acenaphthylene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Acetophenone	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Aniline	ND	39	ug/Kg	1	05/18/26	MR	SW8270E
Anthracene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzidine	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(a)anthracene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(a)pyrene	1100	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(b)fluoranthene	1200	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(ghi)perylene	580	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(k)fluoranthene	430	270	ug/Kg	1	05/18/26	MR	SW8270E
Benzoic acid	ND	770	ug/Kg	1	05/18/26	MR	SW8270E
Benzyl butyl phthalate	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Carbazole	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Chrysene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Dibenzofuran	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Diethyl phthalate	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Dimethylphthalate	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Di-n-butylphthalate	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Di-n-octylphthalate	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Fluoranthene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Fluorene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorobenzene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorobutadiene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Hexachloroethane	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	710	270	ug/Kg	1	05/18/26	MR	SW8270E
Isophorone	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Naphthalene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/18/26	MR	SW8270E
N-Nitrosodimethylamine	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Pentachloronitrobenzene	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
Pentachlorophenol	ND	390	ug/Kg	1	05/18/26	MR	SW8270E

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB1 (0-2`)

Phoenix I.D.: CV90208

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Phenol	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Pyrene	ND	270	ug/Kg	1	05/18/26	MR	SW8270E
Pyridine	ND	390	ug/Kg	1	05/18/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	75		%	1	05/18/26	MR	30 - 130 %
% 2-Fluorobiphenyl	56		%	1	05/18/26	MR	30 - 130 %
% 2-Fluorophenol	47		%	1	05/18/26	MR	30 - 130 %
% Nitrobenzene-d5	70		%	1	05/18/26	MR	30 - 130 %
% Phenol-d5	55		%	1	05/18/26	MR	30 - 130 %
% Terphenyl-d14	54		%	1	05/18/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

May 19, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	13:45
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90209

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB2 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.38	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Arsenic	5.94	0.75	mg/Kg	1	05/08/26	TH	SW6010D	
Barium	104	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Cadmium	0.46	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Chromium	19.8	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Mercury	0.137	0.082	mg/Kg	1	05/07/26	KG/ZT	SW7473	
Lead	199	0.38	mg/Kg	1	05/08/26	TH	SW6010D	
Selenium	< 1.5	1.5	mg/Kg	1	05/08/26	TH	SW6010D	
Percent Solid	91		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Total Metals Digest	Completed				05/07/26	C/AG/BF	SW3050B	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromoethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB2 (0-2`)

Phoenix I.D.: CV90209

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,2-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2,2-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Hexanone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	1
4-Chlorotoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromochloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Isopropylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
m&p-Xylene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Propylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
o-Xylene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
sec-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Styrene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrachloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB2 (0-2`)

Phoenix I.D.: CV90209

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Toluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorofluoromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	100		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	89		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	90		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	94		%	1	05/06/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	94	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	100		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	89		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	90		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	94		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	25	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	25	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	130	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dichlorophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dimethylphenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrophenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chloronaphthalene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chlorophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylnaphthalene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitroaniline	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitrophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB2 (0-2`)

Phoenix I.D.: CV90209

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/16/26	MR	SW8270E
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
3-Nitroaniline	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloroaniline	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitroaniline	ND	580	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitrophenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthylene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Acetophenone	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Aniline	ND	36	ug/Kg	1	05/16/26	MR	SW8270E
Anthracene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzidine	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)anthracene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)pyrene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(b)fluoranthene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(ghi)perylene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(k)fluoranthene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Benzoic acid	ND	730	ug/Kg	1	05/16/26	MR	SW8270E
Benzyl butyl phthalate	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Carbazole	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Chrysene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Dibenzofuran	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Diethyl phthalate	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Dimethylphthalate	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-butylphthalate	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-octylphthalate	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Fluoranthene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Fluorene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobenzene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobutadiene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Hexachloroethane	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Isophorone	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Naphthalene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodimethylamine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Pentachloronitrobenzene	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Pentachlorophenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Phenol	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Pyrene	ND	250	ug/Kg	1	05/16/26	MR	SW8270E
Pyridine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	58		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorobiphenyl	60		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorophenol	49		%	1	05/16/26	MR	30 - 130 %
% Nitrobenzene-d5	54		%	1	05/16/26	MR	30 - 130 %
% Phenol-d5	50		%	1	05/16/26	MR	30 - 130 %
% Terphenyl-d14	35		%	1	05/16/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
May 19, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	9:00
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90210

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB3 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.37	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Arsenic	4.80	0.74	mg/Kg	1	05/08/26	TH	SW6010D	
Barium	116	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Cadmium	0.85	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Chromium	13.9	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Mercury	0.164	0.082	mg/Kg	1	05/07/26	KG/ZT	SW7473	
Lead	136	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Selenium	< 1.5	1.5	mg/Kg	1	05/08/26	TH	SW6010D	
Percent Solid	91		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Total Metals Digest	Completed				05/07/26	C/AG/BF	SW3050B	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromoethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB3 (0-2`)

Phoenix I.D.: CV90210

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,2-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2,2-Dichloropropane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Hexanone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	1
4-Chlorotoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromochloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Isopropylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
m&p-Xylene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	31	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Propylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
o-Xylene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
sec-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Styrene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrachloroethene	1700	440	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB3 (0-2`)

Phoenix I.D.: CV90210

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Toluene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichloroethene	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorofluoromethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	105		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	83		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	91		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	05/07/26	JLI	70 - 130 %	
% Bromofluorobenzene (50x)	95		%	50	05/07/26	JLI	70 - 130 %	
% Dibromofluoromethane (50x)	84		%	50	05/07/26	JLI	70 - 130 %	
% Toluene-d8 (50x)	95		%	50	05/07/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	94	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	105		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	83		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	91		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	25	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	6.3	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	25	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	130	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	05/18/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dichlorophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dimethylphenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dinitrophenol	ND	370	ug/Kg	1	05/18/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2-Chloronaphthalene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	
2-Chlorophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB3 (0-2`)

Phoenix I.D.: CV90210

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Methylnaphthalene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
2-Nitroaniline	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
2-Nitrophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/18/26	MR	SW8270E
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
3-Nitroaniline	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
4-Chloroaniline	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
4-Nitroaniline	ND	580	ug/Kg	1	05/18/26	MR	SW8270E
4-Nitrophenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Acenaphthene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Acenaphthylene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Acetophenone	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Aniline	ND	37	ug/Kg	1	05/18/26	MR	SW8270E
Anthracene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzidine	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(a)anthracene	1000	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(a)pyrene	1300	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(b)fluoranthene	1500	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(ghi)perylene	830	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzo(k)fluoranthene	530	260	ug/Kg	1	05/18/26	MR	SW8270E
Benzoic acid	ND	730	ug/Kg	1	05/18/26	MR	SW8270E
Benzyl butyl phthalate	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Carbazole	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Chrysene	850	260	ug/Kg	1	05/18/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Dibenzofuran	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Diethyl phthalate	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Dimethylphthalate	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Di-n-butylphthalate	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Di-n-octylphthalate	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Fluoranthene	1200	260	ug/Kg	1	05/18/26	MR	SW8270E
Fluorene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorobenzene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorobutadiene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Hexachloroethane	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	990	260	ug/Kg	1	05/18/26	MR	SW8270E
Isophorone	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Naphthalene	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/18/26	MR	SW8270E
N-Nitrosodimethylamine	ND	370	ug/Kg	1	05/18/26	MR	SW8270E

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB3 (0-2`)

Phoenix I.D.: CV90210

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Pentachloronitrobenzene	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Pentachlorophenol	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
Phenanthrene	630	260	ug/Kg	1	05/18/26	MR	SW8270E
Phenol	ND	260	ug/Kg	1	05/18/26	MR	SW8270E
Pyrene	1000	260	ug/Kg	1	05/18/26	MR	SW8270E
Pyridine	ND	370	ug/Kg	1	05/18/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	75		%	1	05/18/26	MR	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	05/18/26	MR	30 - 130 %
% 2-Fluorophenol	52		%	1	05/18/26	MR	30 - 130 %
% Nitrobenzene-d5	73		%	1	05/18/26	MR	30 - 130 %
% Phenol-d5	59		%	1	05/18/26	MR	30 - 130 %
% Terphenyl-d14	57		%	1	05/18/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

May 19, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	10:40
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90211

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.35	0.35	mg/Kg	1	05/08/26	TH	SW6010D	
Arsenic	5.01	0.69	mg/Kg	1	05/08/26	TH	SW6010D	
Barium	135	0.35	mg/Kg	1	05/08/26	TH	SW6010D	
Cadmium	1.13	0.35	mg/Kg	1	05/08/26	TH	SW6010D	
Chromium	26.1	0.35	mg/Kg	1	05/08/26	TH	SW6010D	
Mercury	< 0.087	0.087	mg/Kg	1	05/07/26	KG/ZT	SW7473	
Lead	177	0.35	mg/Kg	1	05/08/26	TH	SW6010D	
Selenium	< 1.4	1.4	mg/Kg	1	05/08/26	TH	SW6010D	
Percent Solid	86		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Total Metals Digest	Completed				05/07/26	C/AG/BF	SW3050B	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1-Dichloroethane	ND	270	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1-Dichloroethene	ND	240	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1-Dichloropropene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	4000	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dibromoethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (0-2`)

Phoenix I.D.: CV90211

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,2-Dichlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dichloroethane	ND	20	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dichloropropane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	3100	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,3-Dichloropropane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
2,2-Dichloropropane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
2-Chlorotoluene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
2-Hexanone	ND	1600	ug/Kg	50	05/07/26	JLI	SW8260D	
2-Isopropyltoluene	200	130	ug/Kg	50	05/07/26	JLI	SW8260D	1
4-Chlorotoluene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	1600	ug/Kg	50	05/07/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	50	05/07/26	JLI	SW8260D	
Acrylonitrile	ND	660	ug/Kg	50	05/07/26	JLI	SW8260D	
Benzene	ND	60	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromochloromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromodichloromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromoform	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromomethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Carbon Disulfide	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Carbon tetrachloride	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Chlorobenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Chloroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Chloroform	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Chloromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
cis-1,2-Dichloroethene	440	190	ug/Kg	50	05/07/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Dibromochloromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Dibromomethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Ethylbenzene	1100	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Hexachlorobutadiene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Isopropylbenzene	500	330	ug/Kg	50	05/07/26	JLI	SW8260D	
m&p-Xylene	1200	250	ug/Kg	50	05/07/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	100	ug/Kg	50	05/07/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	100	ug/Kg	50	05/07/26	JLI	SW8260D	
Methylene chloride	ND	50	ug/Kg	50	05/07/26	JLI	SW8260D	
Naphthalene	3100	330	ug/Kg	50	05/07/26	JLI	SW8260D	
n-Butylbenzene	1700	330	ug/Kg	50	05/07/26	JLI	SW8260D	
n-Propylbenzene	1600	330	ug/Kg	50	05/07/26	JLI	SW8260D	
o-Xylene	2000	250	ug/Kg	50	05/07/26	JLI	SW8260D	
p-Isopropyltoluene	750	330	ug/Kg	50	05/07/26	JLI	SW8260D	
sec-Butylbenzene	1100	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Styrene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
tert-Butylbenzene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrachloroethene	1400	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	660	ug/Kg	50	05/07/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (0-2`)

Phoenix I.D.: CV90211

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Toluene	220	200	ug/Kg	50	05/07/26	JLI	SW8260D	
Total Xylenes	3200	250	ug/Kg	50	05/07/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	190	ug/Kg	50	05/07/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	660	ug/Kg	50	05/07/26	JLI	SW8260D	
Trichloroethene	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Trichlorofluoromethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Vinyl chloride	230	33	ug/Kg	50	05/07/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	05/07/26	JLI	70 - 130 %	
% Bromofluorobenzene (50x)	106		%	50	05/07/26	JLI	70 - 130 %	
% Dibromofluoromethane (50x)	82		%	50	05/07/26	JLI	70 - 130 %	
% Toluene-d8 (50x)	95		%	50	05/07/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	100	ug/kg	50	05/07/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	05/07/26	JLI	70 - 130 %	
% Bromofluorobenzene (50x)	106		%	50	05/07/26	JLI	70 - 130 %	
% Dibromofluoromethane (50x)	82		%	50	05/07/26	JLI	70 - 130 %	
% Toluene-d8 (50x)	95		%	50	05/07/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1300	ug/Kg	50	05/07/26	JLI	SW8260D	
Acrolein	ND	330	ug/Kg	50	05/07/26	JLI	SW8260D	
Acrylonitrile	ND	1300	ug/Kg	50	05/07/26	JLI	SW8260D	
Tert-butyl alcohol	ND	6600	ug/Kg	50	05/07/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	05/16/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dichlorophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dimethylphenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrophenol	ND	380	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chloronaphthalene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chlorophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylnaphthalene	3800	270	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitroaniline	ND	380	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitrophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (0-2`)

Phoenix I.D.: CV90211

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/16/26	MR	SW8270E
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
3-Nitroaniline	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloroaniline	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitroaniline	ND	610	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitrophenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthylene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Acetophenone	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Aniline	ND	38	ug/Kg	1	05/16/26	MR	SW8270E
Anthracene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzidine	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)anthracene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)pyrene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(b)fluoranthene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(ghi)perylene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(k)fluoranthene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Benzoic acid	ND	770	ug/Kg	1	05/16/26	MR	SW8270E
Benzyl butyl phthalate	450	270	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	5300	380	ug/Kg	1	05/16/26	MR	SW8270E
Carbazole	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
Chrysene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Dibenzofuran	270	270	ug/Kg	1	05/16/26	MR	SW8270E
Diethyl phthalate	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Dimethylphthalate	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-butylphthalate	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-octylphthalate	380	270	ug/Kg	1	05/16/26	MR	SW8270E
Fluoranthene	400	270	ug/Kg	1	05/16/26	MR	SW8270E
Fluorene	610	270	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobenzene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobutadiene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Hexachloroethane	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Isophorone	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Naphthalene	950	270	ug/Kg	1	05/16/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodimethylamine	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
Pentachloronitrobenzene	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
Pentachlorophenol	ND	380	ug/Kg	1	05/16/26	MR	SW8270E

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	2000	270	ug/Kg	1	05/16/26	MR	SW8270E
Phenol	ND	270	ug/Kg	1	05/16/26	MR	SW8270E
Pyrene	900	270	ug/Kg	1	05/16/26	MR	SW8270E
Pyridine	ND	380	ug/Kg	1	05/16/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	50		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorobiphenyl	55		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorophenol	53		%	1	05/16/26	MR	30 - 130 %
% Nitrobenzene-d5	55		%	1	05/16/26	MR	30 - 130 %
% Phenol-d5	52		%	1	05/16/26	MR	30 - 130 %
% Terphenyl-d14	65		%	1	05/16/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

May 19, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	10:50
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90212

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (2-4`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Percent Solid	97		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromoethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichloropropane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
2,2-Dichloropropane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (2-4`)

Phoenix I.D.: CV90212

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
2-Hexanone	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	1
4-Chlorotoluene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	11	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromochloromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Isopropylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
m&p-Xylene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	11	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Butylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Propylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
o-Xylene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
sec-Butylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Styrene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrachloroethene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	05/06/26	JLI	SW8260D	
Toluene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichloroethene	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorofluoromethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (2-4`)

Phoenix I.D.: CV90212

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	90		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	94		%	1	05/06/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	86	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	90		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	94		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	23	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	5.7	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	23	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	110	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dimethylphenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrophenol	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chloronaphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylnaphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylphenol (o-cresol)	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitroaniline	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitrophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/16/26	MR	SW8270E	
3,3'-Dichlorobenzidine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
3-Nitroaniline	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
4,6-Dinitro-2-methylphenol	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
4-Bromophenyl phenyl ether	ND	340	ug/Kg	1	05/16/26	MR	SW8270E	
4-Chloro-3-methylphenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
4-Chloroaniline	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
4-Chlorophenyl phenyl ether	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
4-Nitroaniline	ND	540	ug/Kg	1	05/16/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB4 (2-4`)

Phoenix I.D.: CV90212

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Nitrophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthylene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acetophenone	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Aniline	ND	34	ug/Kg	1	05/16/26	MR	SW8270E
Anthracene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzidine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)anthracene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)pyrene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(b)fluoranthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(ghi)perylene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(k)fluoranthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzoic acid	ND	670	ug/Kg	1	05/16/26	MR	SW8270E
Benzyl butyl phthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Carbazole	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Chrysene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Dibenzofuran	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Diethyl phthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Dimethylphthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-butylphthalate	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-octylphthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Fluoranthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Fluorene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobutadiene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachloroethane	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Isophorone	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Naphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodimethylamine	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Pentachloronitrobenzene	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Pentachlorophenol	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
Phenanthrene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Phenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Pyrene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Pyridine	ND	340	ug/Kg	1	05/16/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	70		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorobiphenyl	70		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorophenol	59		%	1	05/16/26	MR	30 - 130 %
% Nitrobenzene-d5	64		%	1	05/16/26	MR	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Phenol-d5	60		%	1	05/16/26	MR	30 - 130 %
% Terphenyl-d14	43		%	1	05/16/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

May 19, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	13:10
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90214

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB5 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.37	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Arsenic	6.67	0.75	mg/Kg	1	05/08/26	TH	SW6010D	
Barium	141	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Cadmium	1.09	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Chromium	32.8	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Mercury	0.102	0.081	mg/Kg	1	05/07/26	KG/ZT	SW7473	
Lead	302	0.37	mg/Kg	1	05/08/26	TH	SW6010D	
Selenium	< 1.5	1.5	mg/Kg	1	05/08/26	TH	SW6010D	
Percent Solid	93		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Total Metals Digest	Completed				05/07/26	C/AG/BF	SW3050B	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dibromoethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB5 (0-2`)

Phoenix I.D.: CV90214

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,2-Dichlorobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,2-Dichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
1,3-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
2,2-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
2-Hexanone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	1
4-Chlorotoluene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
Bromochloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	5.2	4.3	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
Isopropylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
m&p-Xylene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
n-Butylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
n-Propylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
o-Xylene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
sec-Butylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
Styrene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	340	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrachloroethene	2700	340	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB5 (0-2`)

Phoenix I.D.: CV90214

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Toluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	680	ug/Kg	50	05/07/26	JLI	SW8260D	
Trichloroethene	99	68	ug/Kg	50	05/07/26	JLI	SW8260D	
Trichlorofluoromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	103		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	80		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	94		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	90		%	1	05/06/26	JLI	70 - 130 %	
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	05/07/26	JLI	70 - 130 %	
% Bromofluorobenzene (50x)	95		%	50	05/07/26	JLI	70 - 130 %	
% Dibromofluoromethane (50x)	84		%	50	05/07/26	JLI	70 - 130 %	
% Toluene-d8 (50x)	96		%	50	05/07/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	100	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	103		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	80		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	94		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	90		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	140	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	05/16/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dichlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dimethylphenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrophenol	ND	350	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chloronaphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chlorophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB5 (0-2`)

Phoenix I.D.: CV90214

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Methylnaphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
2-Methylphenol (o-cresol)	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
2-Nitroaniline	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
2-Nitrophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/16/26	MR	SW8270E
3,3'-Dichlorobenzidine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
3-Nitroaniline	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloro-3-methylphenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloroaniline	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitroaniline	ND	560	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitrophenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthylene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Acetophenone	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Aniline	ND	35	ug/Kg	1	05/16/26	MR	SW8270E
Anthracene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzidine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)anthracene	320	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)pyrene	330	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(b)fluoranthene	470	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(ghi)perylene	300	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(k)fluoranthene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Benzoic acid	ND	700	ug/Kg	1	05/16/26	MR	SW8270E
Benzyl butyl phthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Carbazole	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Chrysene	350	240	ug/Kg	1	05/16/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Dibenzofuran	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Diethyl phthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Dimethylphthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-butylphthalate	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-octylphthalate	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Fluoranthene	400	240	ug/Kg	1	05/16/26	MR	SW8270E
Fluorene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobenzene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobutadiene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Hexachloroethane	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	260	240	ug/Kg	1	05/16/26	MR	SW8270E
Isophorone	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Naphthalene	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodimethylamine	ND	350	ug/Kg	1	05/16/26	MR	SW8270E

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB5 (0-2`)

Phoenix I.D.: CV90214

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
N-Nitrosodi-n-propylamine	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Pentachloronitrobenzene	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Pentachlorophenol	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
Phenanthrene	250	240	ug/Kg	1	05/16/26	MR	SW8270E
Phenol	ND	240	ug/Kg	1	05/16/26	MR	SW8270E
Pyrene	400	240	ug/Kg	1	05/16/26	MR	SW8270E
Pyridine	ND	350	ug/Kg	1	05/16/26	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	74		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorobiphenyl	87		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorophenol	39		%	1	05/16/26	MR	30 - 130 %
% Nitrobenzene-d5	71		%	1	05/16/26	MR	30 - 130 %
% Phenol-d5	52		%	1	05/16/26	MR	30 - 130 %
% Terphenyl-d14	57		%	1	05/16/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Please be advised that the NY 375 soil criteria for chromium are based on hexavalent chromium and trivalent chromium.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Volatile Comment:
There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 19, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 19, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:	TG	05/04/26	8:00
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90208
Phoenix ID: CV90215

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB6 (0-2`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Percent Solid	90		%		05/05/26	CV	SW846-%Solid	
Field Extraction	Completed				05/04/26		SW5035A	1
Soil Extraction for SVOA	Completed				05/15/26	B/A/U	SW3546	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,1-Trichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2,2-Tetrachloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1,2-Trichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloroethene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,1-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,3-Trichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trichlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2,4-Trimethylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromo-3-chloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dibromoethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,2-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3,5-Trimethylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,3-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
1,4-Dichlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
2,2-Dichloropropane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Chlorotoluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB6 (0-2`)

Phoenix I.D.: CV90215

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
2-Hexanone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
2-Isopropyltoluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	1
4-Chlorotoluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
4-Methyl-2-pentanone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
Acetone	ND	30	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Benzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromochloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromodichloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromoform	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Bromomethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon Disulfide	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Carbon tetrachloride	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chlorobenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloroform	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Chloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,2-Dichloroethene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
cis-1,3-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromochloromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dibromomethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Dichlorodifluoromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Ethylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Hexachlorobutadiene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Isopropylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
m&p-Xylene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl Ethyl Ketone	ND	36	ug/Kg	1	05/06/26	JLI	SW8260D	
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Methylene chloride	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Naphthalene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Butylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
n-Propylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
o-Xylene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
p-Isopropyltoluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
sec-Butylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Styrene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
tert-Butylbenzene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Tetrachloroethene	1500	350	ug/Kg	50	05/07/26	JLI	SW8260D	
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Toluene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Total Xylenes	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,2-Dichloroethene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,3-Dichloropropene	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichloroethene	3.0	2.9	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorofluoromethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Trichlorotrifluoroethane	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Vinyl chloride	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	

Ver 1

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB6 (0-2`)

Phoenix I.D.: CV90215

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	85		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	91		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	05/07/26	JLI	70 - 130 %	
% Bromofluorobenzene (50x)	96		%	50	05/07/26	JLI	70 - 130 %	
% Dibromofluoromethane (50x)	86		%	50	05/07/26	JLI	70 - 130 %	
% Toluene-d8 (50x)	96		%	50	05/07/26	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	100	ug/kg	1	05/06/26	JLI	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101		%	1	05/06/26	JLI	70 - 130 %	
% Bromofluorobenzene	85		%	1	05/06/26	JLI	70 - 130 %	
% Dibromofluoromethane	91		%	1	05/06/26	JLI	70 - 130 %	
% Toluene-d8	93		%	1	05/06/26	JLI	70 - 130 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrolein	ND	7.2	ug/Kg	1	05/06/26	JLI	SW8260D	
Acrylonitrile	ND	29	ug/Kg	1	05/06/26	JLI	SW8260D	
Tert-butyl alcohol	ND	140	ug/Kg	1	05/06/26	JLI	SW8260D	
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Dichlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
1,3-Dichlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
1,4-Dichlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,2'-Oxybis(1-Chloropropane)	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	1
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dichlorophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dimethylphenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrophenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
2,4-Dinitrotoluene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2,6-Dinitrotoluene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chloronaphthalene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2-Chlorophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylnaphthalene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitroaniline	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
2-Nitrophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
3&4-Methylphenol (m&p-cresol)	ND	330	ug/Kg	1	05/16/26	MR	SW8270E	
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	05/16/26	MR	SW8270E	
3-Nitroaniline	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	05/16/26	MR	SW8270E	

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB6 (0-2`)

Phoenix I.D.: CV90215

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
4-Chloroaniline	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitroaniline	ND	580	ug/Kg	1	05/16/26	MR	SW8270E
4-Nitrophenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Acenaphthylene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Acetophenone	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Aniline	ND	36	ug/Kg	1	05/16/26	MR	SW8270E
Anthracene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzidine	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)anthracene	310	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(a)pyrene	330	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(b)fluoranthene	410	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(ghi)perylene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzo(k)fluoranthene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Benzoic acid	ND	730	ug/Kg	1	05/16/26	MR	SW8270E
Benzyl butyl phthalate	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Carbazole	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Chrysene	320	260	ug/Kg	1	05/16/26	MR	SW8270E
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Dibenzofuran	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Diethyl phthalate	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Dimethylphthalate	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-butylphthalate	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Di-n-octylphthalate	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Fluoranthene	380	260	ug/Kg	1	05/16/26	MR	SW8270E
Fluorene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobenzene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorobutadiene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Hexachloroethane	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Isophorone	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Naphthalene	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Nitrobenzene	ND	80	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodimethylamine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Pentachloronitrobenzene	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Pentachlorophenol	ND	360	ug/Kg	1	05/16/26	MR	SW8270E
Phenanthrene	330	260	ug/Kg	1	05/16/26	MR	SW8270E
Phenol	ND	260	ug/Kg	1	05/16/26	MR	SW8270E
Pyrene	370	260	ug/Kg	1	05/16/26	MR	SW8270E
Pyridine	ND	360	ug/Kg	1	05/16/26	MR	SW8270E

QA/QC Surrogates

Project ID: 145-11 LIBERTY AVENUE, QUEENS
Client ID: SB6 (0-2`)

Phoenix I.D.: CV90215

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2,4,6-Tribromophenol	75		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	05/16/26	MR	30 - 130 %
% 2-Fluorophenol	32		%	1	05/16/26	MR	30 - 130 %
% Nitrobenzene-d5	57		%	1	05/16/26	MR	30 - 130 %
% Phenol-d5	46		%	1	05/16/26	MR	30 - 130 %
% Terphenyl-d14	48		%	1	05/16/26	MR	30 - 130 %

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

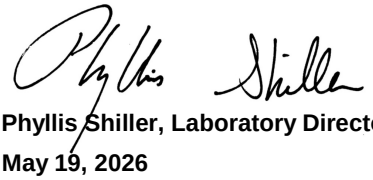
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

May 19, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

QA/QC Report

May 19, 2026

QA/QC Data

SDG I.D.: GCV90208

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 839427 (mg/kg), QC Sample No: CV90830 (CV90208, CV90209, CV90210, CV90211, CV90214)														
Mercury - Soil	BRL	0.075	0.115	0.104	NC	94.4			98.9			70 - 130	30	
Comment:														
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.														
QA/QC Batch 839461 (mg/kg), QC Sample No: CV89955 (CV90208, CV90209, CV90210, CV90211, CV90214)														
ICP Metals - Soil														
Arsenic	BRL	0.67	21.2	20.2	4.80	101	91.8	9.5	96.7			75 - 125	30	
Barium	BRL	0.33	1630	2070	23.8	108	99.1	8.6	NC			75 - 125	30	
Cadmium	BRL	0.33	15.3	10.5	37.2	108	97.4	10.3	97.1			75 - 125	30	r
Chromium	BRL	0.33	105	96.1	8.90	110	100	9.5	114			75 - 125	30	
Lead	BRL	0.33	5300	4750	10.9	105	97.3	7.6	NC			75 - 125	30	
Selenium	BRL	1.3	<1.7	<1.7	NC	103	94.5	8.6	86.5			75 - 125	30	
Silver	BRL	0.33	6.33	4.07	43.5	108	99.3	8.4	96.8			75 - 125	30	r
Comment:														
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.														

r = This parameter is outside laboratory RPD specified recovery limits.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

QA/QC Report

May 19, 2026

QA/QC Data

SDG I.D.: GCV90208

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 840913 (ug/kg), QC Sample No: CV90212 (CV90208, CV90209, CV90210, CV90211, CV90212, CV90214, CV90215)											
Semivolatiles - Soil											
1,2,4,5-Tetrachlorobenzene	ND	230	53	67	23.3	67	71	5.8	40 - 140	30	
1,2,4-Trichlorobenzene	ND	230	51	64	22.6	65	65	0.0	40 - 140	30	
1,2-Dichlorobenzene	ND	180	51	57	11.1	58	58	0.0	40 - 140	30	
1,2-Diphenylhydrazine	ND	230	57	64	11.6	65	71	8.8	40 - 140	30	
1,3-Dichlorobenzene	ND	230	50	56	11.3	57	56	1.8	40 - 140	30	
1,4-Dichlorobenzene	ND	230	51	57	11.1	58	58	0.0	40 - 140	30	
2,2'-Oxybis(1-Chloropropane)	ND	230	51	58	12.8	59	58	1.7	40 - 140	30	
2,4,5-Trichlorophenol	ND	230	60	70	15.4	70	77	9.5	40 - 140	30	
2,4,6-Trichlorophenol	ND	130	60	69	14.0	68	74	8.5	30 - 130	30	
2,4-Dichlorophenol	ND	130	55	68	21.1	68	73	7.1	30 - 130	30	
2,4-Dimethylphenol	ND	230	56	70	22.2	68	73	7.1	30 - 130	30	
2,4-Dinitrophenol	ND	230	69	82	17.2	77	79	2.6	30 - 130	30	
2,4-Dinitrotoluene	ND	130	58	67	14.4	69	74	7.0	30 - 130	30	
2,6-Dinitrotoluene	ND	130	60	71	16.8	71	75	5.5	40 - 140	30	
2-Chloronaphthalene	ND	230	60	68	12.5	68	75	9.8	40 - 140	30	
2-Chlorophenol	ND	230	56	64	13.3	63	65	3.1	30 - 130	30	
2-Methylnaphthalene	ND	230	59	75	23.9	73	79	7.9	40 - 140	30	
2-Methylphenol (o-cresol)	ND	230	58	68	15.9	69	73	5.6	40 - 140	30	
2-Nitroaniline	ND	330	83	98	16.6	98	106	7.8	40 - 140	30	
2-Nitrophenol	ND	230	50	61	19.8	63	64	1.6	40 - 140	30	
3&4-Methylphenol (m&p-cresol)	ND	230	59	67	12.7	66	70	5.9	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	69	79	13.5	67	74	9.9	40 - 140	30	
3-Nitroaniline	ND	330	65	75	14.3	76	80	5.1	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	65	77	16.9	78	82	5.0	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	56	64	13.3	66	69	4.4	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	55	72	26.8	71	77	8.1	30 - 130	30	
4-Chloroaniline	ND	230	50	62	21.4	56	60	6.9	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	230	55	63	13.6	63	68	7.6	40 - 140	30	
4-Nitroaniline	ND	230	59	67	12.7	68	73	7.1	40 - 140	30	
4-Nitrophenol	ND	230	58	67	14.4	66	69	4.4	30 - 130	30	
Acenaphthene	ND	230	57	63	10.0	63	69	9.1	30 - 130	30	
Acenaphthylene	ND	130	54	60	10.5	59	65	9.7	40 - 140	30	
Acetophenone	ND	230	51	58	12.8	58	60	3.4	40 - 140	30	
Aniline	ND	330	50	57	13.1	52	53	1.9	40 - 140	30	
Anthracene	ND	230	63	69	9.1	72	75	4.1	40 - 140	30	
Benzidine	ND	330	50	55	9.5	23	22	4.4	40 - 140	30	m
Benzo(a)anthracene	ND	230	60	69	14.0	70	75	6.9	40 - 140	30	
Benzo(a)pyrene	ND	130	56	63	11.8	66	69	4.4	40 - 140	30	
Benzo(b)fluoranthene	ND	160	55	63	13.6	61	66	7.9	40 - 140	30	
Benzo(ghi)perylene	ND	230	44	54	20.4	60	70	15.4	40 - 140	30	
Benzo(k)fluoranthene	ND	230	55	62	12.0	59	63	6.6	40 - 140	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzoic Acid	ND	670	52	68	26.7	48	49	2.1	30 - 130	30	
Benzyl butyl phthalate	ND	230	66	77	15.4	86	94	8.9	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	52	64	20.7	64	66	3.1	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	52	59	12.6	60	59	1.7	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	64	76	17.1	85	93	9.0	40 - 140	30	
Carbazole	ND	230	65	74	12.9	74	78	5.3	40 - 140	30	
Chrysene	ND	230	61	70	13.7	69	75	8.3	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	54	63	15.4	68	76	11.1	40 - 140	30	
Dibenzofuran	ND	230	62	70	12.1	69	76	9.7	40 - 140	30	
Diethyl phthalate	ND	230	63	71	11.9	73	77	5.3	40 - 140	30	
Dimethylphthalate	ND	230	55	62	12.0	63	68	7.6	40 - 140	30	
Di-n-butylphthalate	ND	670	61	69	12.3	66	71	7.3	40 - 140	30	
Di-n-octylphthalate	ND	230	68	78	13.7	85	92	7.9	40 - 140	30	
Fluoranthene	ND	230	60	69	14.0	60	67	11.0	40 - 140	30	
Fluorene	ND	230	61	68	10.9	69	75	8.3	40 - 140	30	
Hexachlorobenzene	ND	130	55	63	13.6	66	69	4.4	40 - 140	30	
Hexachlorobutadiene	ND	230	51	63	21.1	64	64	0.0	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	34	46	30.0	52	55	5.6	40 - 140	30	l
Hexachloroethane	ND	130	54	61	12.2	61	60	1.7	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	59	69	15.6	84	91	8.0	40 - 140	30	
Isophorone	ND	130	51	63	21.1	62	67	7.8	40 - 140	30	
Naphthalene	ND	230	54	67	21.5	66	68	3.0	40 - 140	30	
Nitrobenzene	ND	130	54	61	12.2	61	62	1.6	40 - 140	30	
N-Nitrosodimethylamine	ND	230	37	42	12.7	44	43	2.3	40 - 140	30	l
N-Nitrosodi-n-propylamine	ND	130	50	57	13.1	57	59	3.4	40 - 140	30	
N-Nitrosodiphenylamine	ND	130	55	62	12.0	62	67	7.8	40 - 140	30	
Pentachloronitrobenzene	ND	230	53	61	14.0	64	67	4.6	40 - 140	30	
Pentachlorophenol	ND	230	58	67	14.4	63	65	3.1	30 - 130	30	
Phenanthrene	ND	130	62	70	12.1	72	76	5.4	40 - 140	30	
Phenol	ND	230	61	68	10.9	68	69	1.5	30 - 130	30	
Pyrene	ND	230	57	66	14.6	46	50	8.3	30 - 130	30	
Pyridine	ND	230	31	36	14.9	38	39	2.6	40 - 140	30	l,m
% 2,4,6-Tribromophenol	70	%	56	64	13.3	64	69	7.5	30 - 130	30	
% 2-Fluorobiphenyl	63	%	60	66	9.5	64	72	11.8	30 - 130	30	
% 2-Fluorophenol	48	%	53	60	12.4	60	62	3.3	30 - 130	30	
% Nitrobenzene-d5	55	%	54	60	10.5	59	60	1.7	30 - 130	30	
% Phenol-d5	52	%	54	60	10.5	59	62	5.0	30 - 130	30	
% Terphenyl-d14	51	%	44	59	29.1	39	42	7.4	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 839378 (ug/kg), QC Sample No: CV90208 (CV90208, CV90209, CV90210, CV90212, CV90214, CV90215)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	97	97	0.0	97	100	3.0	70 - 130	20	
1,1,1-Trichloroethane	ND	5.0	94	93	1.1	94	95	1.1	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	3.0	101	102	1.0	118	119	0.8	70 - 130	20	
1,1,2-Trichloroethane	ND	5.0	101	101	0.0	96	96	0.0	70 - 130	20	
1,1-Dichloroethane	ND	5.0	96	94	2.1	97	95	2.1	70 - 130	20	
1,1-Dichloroethene	ND	5.0	97	97	0.0	94	93	1.1	70 - 130	20	
1,1-Dichloropropene	ND	5.0	98	97	1.0	90	87	3.4	70 - 130	20	
1,2,3-Trichlorobenzene	ND	5.0	104	104	0.0	47	39	18.6	70 - 130	20	m
1,2,3-Trichloropropane	ND	5.0	102	100	2.0	115	119	3.4	70 - 130	20	

QA/QC Data

SDG I.D.: GCV90208

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,4-Trichlorobenzene	ND	5.0	106	107	0.9	44	39	12.0	70 - 130	20	m
1,2,4-Trimethylbenzene	ND	1.0	104	104	0.0	100	98	2.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	5.0	88	83	5.8	84	81	3.6	70 - 130	20	
1,2-Dibromoethane	ND	5.0	102	99	3.0	92	90	2.2	70 - 130	20	
1,2-Dichlorobenzene	ND	5.0	104	104	0.0	80	75	6.5	70 - 130	20	
1,2-Dichloroethane	ND	5.0	97	97	0.0	93	90	3.3	70 - 130	20	
1,2-Dichloropropane	ND	5.0	98	97	1.0	97	95	2.1	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	106	104	1.9	111	111	0.0	70 - 130	20	
1,3-Dichlorobenzene	ND	5.0	106	106	0.0	78	73	6.6	70 - 130	20	
1,3-Dichloropropane	ND	5.0	104	103	1.0	101	99	2.0	70 - 130	20	
1,4-Dichlorobenzene	ND	5.0	105	105	0.0	70	68	2.9	70 - 130	20	m
1,4-dioxane	ND	100	103	103	0.0	100	111	10.4	70 - 130	20	
2,2-Dichloropropane	ND	5.0	84	86	2.4	84	83	1.2	70 - 130	20	
2-Chlorotoluene	ND	5.0	106	104	1.9	102	101	1.0	70 - 130	20	
2-Hexanone	ND	25	86	83	3.6	79	76	3.9	70 - 130	20	
2-Isopropyltoluene	ND	5.0	106	105	0.9	112	108	3.6	70 - 130	20	
4-Chlorotoluene	ND	5.0	104	103	1.0	86	83	3.6	70 - 130	20	
4-Methyl-2-pentanone	ND	25	90	89	1.1	87	85	2.3	70 - 130	20	
Acetone	ND	10	75	74	1.3	69	67	2.9	70 - 130	20	m
Acrolein	ND	25	87	87	0.0	49	42	15.4	70 - 130	20	m
Acrylonitrile	ND	5.0	90	89	1.1	83	80	3.7	70 - 130	20	
Benzene	ND	1.0	101	100	1.0	94	92	2.2	70 - 130	20	
Bromobenzene	ND	5.0	104	104	0.0	90	87	3.4	70 - 130	20	
Bromochloromethane	ND	5.0	97	97	0.0	92	90	2.2	70 - 130	20	
Bromodichloromethane	ND	5.0	95	96	1.0	90	91	1.1	70 - 130	20	
Bromoform	ND	5.0	85	84	1.2	74	74	0.0	70 - 130	20	
Bromomethane	ND	5.0	105	106	0.9	103	101	2.0	70 - 130	20	
Carbon Disulfide	ND	5.0	98	97	1.0	74	69	7.0	70 - 130	20	m
Carbon tetrachloride	ND	5.0	86	88	2.3	85	87	2.3	70 - 130	20	
Chlorobenzene	ND	5.0	103	102	1.0	83	81	2.4	70 - 130	20	
Chloroethane	ND	5.0	111	110	0.9	110	110	0.0	70 - 130	20	
Chloroform	ND	5.0	96	96	0.0	97	95	2.1	70 - 130	20	
Chloromethane	ND	5.0	101	102	1.0	99	97	2.0	70 - 130	20	
cis-1,2-Dichloroethene	ND	5.0	103	101	2.0	90	87	3.4	70 - 130	20	
cis-1,3-Dichloropropene	ND	5.0	97	96	1.0	80	78	2.5	70 - 130	20	
Dibromochloromethane	ND	3.0	91	91	0.0	87	89	2.3	70 - 130	20	
Dibromomethane	ND	5.0	97	97	0.0	89	85	4.6	70 - 130	20	
Dichlorodifluoromethane	ND	5.0	110	109	0.9	105	105	0.0	70 - 130	20	
Ethylbenzene	ND	1.0	104	103	1.0	95	95	0.0	70 - 130	20	
Hexachlorobutadiene	ND	5.0	104	102	1.9	73	57	24.6	70 - 130	20	m,r
Isopropylbenzene	ND	1.0	105	103	1.9	116	121	4.2	70 - 130	20	
m&p-Xylene	ND	2.0	104	103	1.0	92	90	2.2	70 - 130	20	
Methyl ethyl ketone	ND	5.0	82	80	2.5	78	76	2.6	70 - 130	20	
Methyl t-butyl ether (MTBE)	ND	1.0	93	93	0.0	97	96	1.0	70 - 130	20	
Methylene chloride	ND	5.0	95	94	1.1	97	96	1.0	70 - 130	20	
Naphthalene	ND	5.0	104	102	1.9	37	32	14.5	70 - 130	20	m
n-Butylbenzene	ND	1.0	108	108	0.0	84	80	4.9	70 - 130	20	
n-Propylbenzene	ND	1.0	105	104	1.0	105	104	1.0	70 - 130	20	
o-Xylene	ND	2.0	100	99	1.0	91	90	1.1	70 - 130	20	
p-Isopropyltoluene	ND	1.0	106	106	0.0	105	101	3.9	70 - 130	20	
sec-Butylbenzene	ND	1.0	105	104	1.0	108	104	3.8	70 - 130	20	
Styrene	ND	5.0	103	102	1.0	72	70	2.8	70 - 130	20	
tert-butyl alcohol	ND	100	86	89	3.4	93	99	6.3	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
tert-Butylbenzene	ND	1.0	105	104	1.0	119	116	2.6	70 - 130	20	
Tetrachloroethene	ND	5.0	98	95	3.1	91	89	2.2	70 - 130	20	
Tetrahydrofuran (THF)	ND	5.0	93	91	2.2	93	90	3.3	70 - 130	20	
Toluene	ND	1.0	98	97	1.0	87	84	3.5	70 - 130	20	
trans-1,2-Dichloroethene	ND	5.0	99	97	2.0	82	78	5.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	5.0	96	95	1.0	72	68	5.7	70 - 130	20	m
trans-1,4-dichloro-2-butene	ND	5.0	88	87	1.1	76	73	4.0	70 - 130	20	
Trichloroethene	ND	5.0	101	100	1.0	88	86	2.3	70 - 130	20	
Trichlorofluoromethane	ND	5.0	100	99	1.0	100	101	1.0	70 - 130	20	
Trichlorotrifluoroethane	ND	5.0	107	103	3.8	106	108	1.9	70 - 130	20	
Vinyl chloride	ND	5.0	102	101	1.0	98	93	5.2	70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0	102	101	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	97	97	0.0	91	89	2.2	70 - 130	20	
% Dibromofluoromethane	87	%	90	89	1.1	93	93	0.0	70 - 130	20	
% Toluene-d8	94	%	98	99	1.0	99	98	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 839420H (ug/kg), QC Sample No: CV91846 50X (CV90210 (50X) , CV90211 (50X) , CV90214 (50X) , CV90215 (50X))

Volatiles - Soil (High Level)

1,1,1,2-Tetrachloroethane	ND	250	98	99	1.0	94	95	1.1	70 - 130	20	
1,1,1-Trichloroethane	ND	250	94	98	4.2	96	95	1.0	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	250	103	109	5.7	104	102	1.9	70 - 130	20	
1,1,2-Trichloroethane	ND	250	100	103	3.0	103	100	3.0	70 - 130	20	
1,1-Dichloroethane	ND	250	96	101	5.1	99	98	1.0	70 - 130	20	
1,1-Dichloroethene	ND	250	71	73	2.8	73	73	0.0	70 - 130	20	
1,1-Dichloropropene	ND	250	101	104	2.9	103	102	1.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	250	110	110	0.0	108	105	2.8	70 - 130	20	
1,2,3-Trichloropropane	ND	250	102	108	5.7	104	103	1.0	70 - 130	20	
1,2,4-Trichlorobenzene	ND	250	112	113	0.9	110	108	1.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	250	106	109	2.8	108	108	0.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	250	90	89	1.1	82	80	2.5	70 - 130	20	
1,2-Dibromoethane	ND	250	102	104	1.9	101	101	0.0	70 - 130	20	
1,2-Dichlorobenzene	ND	250	108	111	2.7	110	107	2.8	70 - 130	20	
1,2-Dichloroethane	ND	250	97	100	3.0	99	98	1.0	70 - 130	20	
1,2-Dichloropropane	ND	250	98	102	4.0	101	100	1.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	250	108	112	3.6	111	110	0.9	70 - 130	20	
1,3-Dichlorobenzene	ND	250	110	111	0.9	111	110	0.9	70 - 130	20	
1,3-Dichloropropane	ND	250	105	108	2.8	107	106	0.9	70 - 130	20	
1,4-Dichlorobenzene	ND	250	109	111	1.8	110	109	0.9	70 - 130	20	
1,4-dioxane	ND	5000	102	100	2.0	100	99	1.0	70 - 130	20	
2,2-Dichloropropane	ND	250	85	88	3.5	79	80	1.3	70 - 130	20	
2-Chlorotoluene	ND	250	109	110	0.9	110	110	0.0	70 - 130	20	
2-Hexanone	ND	1300	82	88	7.1	84	82	2.4	70 - 130	20	
2-Isopropyltoluene	ND	250	108	112	3.6	110	110	0.0	70 - 130	20	
4-Chlorotoluene	ND	250	107	109	1.9	109	108	0.9	70 - 130	20	
4-Methyl-2-pentanone	ND	1300	86	91	5.6	88	86	2.3	70 - 130	20	
Acetone	ND	500	58	62	6.7	56	60	6.9	70 - 130	20	l,m
Acrolein	ND	1300	73	76	4.0	73	70	4.2	70 - 130	20	
Acrylonitrile	ND	250	88	96	8.7	92	90	2.2	70 - 130	20	
Benzene	ND	250	103	107	3.8	106	105	0.9	70 - 130	20	
Bromobenzene	ND	250	106	108	1.9	108	106	1.9	70 - 130	20	
Bromochloromethane	ND	250	97	102	5.0	100	99	1.0	70 - 130	20	

QA/QC Data

SDG I.D.: GCV90208

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromodichloromethane	ND	250	93	96	3.2	90	90	0.0	70 - 130	20	
Bromoform	ND	250	81	81	0.0	70	73	4.2	70 - 130	20	
Bromomethane	ND	250	81	84	3.6	82	82	0.0	70 - 130	20	
Carbon Disulfide	ND	250	72	74	2.7	71	72	1.4	70 - 130	20	
Carbon tetrachloride	ND	250	85	91	6.8	83	83	0.0	70 - 130	20	
Chlorobenzene	ND	250	107	107	0.0	107	106	0.9	70 - 130	20	
Chloroethane	ND	250	28	28	0.0	27	28	3.6	70 - 130	20	l,m
Chloroform	ND	250	97	102	5.0	100	99	1.0	70 - 130	20	
Chloromethane	ND	250	101	104	2.9	101	100	1.0	70 - 130	20	
cis-1,2-Dichloroethene	ND	250	105	105	0.0	106	107	0.9	70 - 130	20	
cis-1,3-Dichloropropene	ND	250	94	97	3.1	92	93	1.1	70 - 130	20	
Dibromochloromethane	ND	150	90	90	0.0	82	85	3.6	70 - 130	20	
Dibromomethane	ND	250	97	100	3.0	99	97	2.0	70 - 130	20	
Dichlorodifluoromethane	ND	250	105	107	1.9	99	99	0.0	70 - 130	20	
Ethylbenzene	ND	250	109	110	0.9	110	110	0.0	70 - 130	20	
Hexachlorobutadiene	ND	250	107	108	0.9	105	103	1.9	70 - 130	20	
Isopropylbenzene	ND	250	107	111	3.7	110	109	0.9	70 - 130	20	
m&p-Xylene	ND	250	108	109	0.9	108	109	0.9	70 - 130	20	
Methyl ethyl ketone	ND	250	77	84	8.7	83	80	3.7	70 - 130	20	
Methyl t-butyl ether (MTBE)	ND	250	93	98	5.2	96	95	1.0	70 - 130	20	
Methylene chloride	ND	250	90	93	3.3	93	91	2.2	70 - 130	20	
Naphthalene	ND	250	107	110	2.8	111	108	2.7	70 - 130	20	
n-Butylbenzene	ND	250	111	115	3.5	114	113	0.9	70 - 130	20	
n-Propylbenzene	ND	250	108	112	3.6	110	110	0.0	70 - 130	20	
o-Xylene	ND	250	105	105	0.0	104	105	1.0	70 - 130	20	
p-Isopropyltoluene	ND	250	109	112	2.7	111	110	0.9	70 - 130	20	
sec-Butylbenzene	ND	250	108	111	2.7	110	110	0.0	70 - 130	20	
Styrene	ND	250	106	108	1.9	107	108	0.9	70 - 130	20	
tert-butyl alcohol	ND	5000	80	79	1.3	83	85	2.4	70 - 130	20	
tert-Butylbenzene	ND	250	107	111	3.7	110	110	0.0	70 - 130	20	
Tetrachloroethene	ND	250	101	103	2.0	101	100	1.0	70 - 130	20	
Tetrahydrofuran (THF)	ND	250	90	98	8.5	94	91	3.2	70 - 130	20	
Toluene	ND	250	100	103	3.0	103	102	1.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	250	97	100	3.0	98	99	1.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	250	93	94	1.1	89	90	1.1	70 - 130	20	
trans-1,4-dichloro-2-butene	ND	250	84	89	5.8	78	77	1.3	70 - 130	20	
Trichloroethene	ND	250	102	104	1.9	103	103	0.0	70 - 130	20	
Trichlorofluoromethane	ND	250	34	34	0.0	35	34	2.9	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	250	81	80	1.2	83	81	2.4	70 - 130	20	
Vinyl chloride	ND	250	105	109	3.7	107	106	0.9	70 - 130	20	
% 1,2-dichlorobenzene-d4	99	%	101	101	0.0	101	100	1.0	70 - 130	20	
% Bromofluorobenzene	94	%	97	97	0.0	96	97	1.0	70 - 130	20	
% Dibromofluoromethane	85	%	88	91	3.4	89	87	2.3	70 - 130	20	
% Toluene-d8	95	%	98	99	1.0	99	99	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCV90208

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
May 19, 2026

Tuesday, May 19, 2026

Criteria: NY: 375, 375GWP, 375RRS, 375RS

State: NY

Sample Criteria Exceedances Report

GCV90208 - BRUSSEE

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CV90208	$8270-SMR	Benzo(b)fluoranthene	NY / 375-6.8 Semivolatiles / Residential	1200	270	1000	1000	ug/Kg
CV90208	$8270-SMR	Indeno(1,2,3-cd)pyrene	NY / 375-6.8 Semivolatiles / Residential	710	270	500	500	ug/Kg
CV90208	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Residential	1100	270	1000	1000	ug/Kg
CV90208	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Residential Restricted	1100	270	1000	1000	ug/Kg
CV90208	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	1100	270	1000	1000	ug/Kg
CV90208	$8270-SMR	Benzo(b)fluoranthene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	1200	270	1000	1000	ug/Kg
CV90208	$8270-SMR	Indeno(1,2,3-cd)pyrene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	710	270	500	500	ug/Kg
CV90208	PB-SM	Lead	NY / 375-6.8 Metals / Ground Water Protection	1420	0.38	450	450	mg/Kg
CV90208	PB-SM	Lead	NY / 375-6.8 Metals / Residential	1420	0.38	400	400	mg/Kg
CV90208	PB-SM	Lead	NY / 375-6.8 Metals / Residential Restricted	1420	0.38	400	400	mg/Kg
CV90208	PB-SM	Lead	NY / 375-6.8 Metals / Unrestricted Use Soil	1420	0.38	63	63	mg/Kg
CV90209	PB-SM	Lead	NY / 375-6.8 Metals / Unrestricted Use Soil	199	0.38	63	63	mg/Kg
CV90210	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Ground Water Protection	1700	440	1300	1300	ug/Kg
CV90210	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	1700	440	1300	1300	ug/Kg
CV90210	$8270-SMR	Indeno(1,2,3-cd)pyrene	NY / 375-6.8 Semivolatiles / Residential	990	260	500	500	ug/Kg
CV90210	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Residential	1300	260	1000	1000	ug/Kg
CV90210	$8270-SMR	Benzo(b)fluoranthene	NY / 375-6.8 Semivolatiles / Residential	1500	260	1000	1000	ug/Kg
CV90210	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Residential Restricted	1300	260	1000	1000	ug/Kg
CV90210	$8270-SMR	Benzo(b)fluoranthene	NY / 375-6.8 Semivolatiles / Residential Restricted	1500	260	1400	1400	ug/Kg
CV90210	$8270-SMR	Benzo(a)pyrene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	1300	260	1000	1000	ug/Kg
CV90210	$8270-SMR	Benzo(b)fluoranthene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	1500	260	1000	1000	ug/Kg
CV90210	$8270-SMR	Benzo(ghi)perylene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	830	260	640	640	ug/Kg
CV90210	$8270-SMR	Indeno(1,2,3-cd)pyrene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	990	260	500	500	ug/Kg
CV90210	PB-SM	Lead	NY / 375-6.8 Metals / Unrestricted Use Soil	136	0.37	63	63	mg/Kg
CV90211	$8260SMRNY	Vinyl chloride	NY / 375-6.8 Volatiles / Ground Water Protection	230	33	30	30	ug/Kg
CV90211	$8260SMRNY	Vinyl chloride	NY / 375-6.8 Volatiles / Residential	230	33	99	99	ug/Kg
CV90211	$8260SMRNY	Vinyl chloride	NY / 375-6.8 Volatiles / Unrestricted Use Soil	230	33	20	20	ug/Kg
CV90211	$8260SMRNY	cis-1,2-Dichloroethene	NY / 375-6.8 Volatiles / Ground Water Protection	440	190	190	190	ug/Kg
CV90211	$8260SMRNY	cis-1,2-Dichloroethene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	440	190	190	190	ug/Kg
CV90211	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Ground Water Protection	1400	330	1300	1300	ug/Kg
CV90211	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	1400	330	1300	1300	ug/Kg
CV90211	$8260SMRNY	Ethylbenzene	NY / 375-6.8 Volatiles / Ground Water Protection	1100	330	1000	1000	ug/Kg
CV90211	$8260SMRNY	Ethylbenzene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	1100	330	1000	1000	ug/Kg
CV90211	$8260SMRNY	Total Xylenes	NY / 375-6.8 Volatiles / Ground Water Protection	3200	250	1200	1200	ug/Kg
CV90211	$8260SMRNY	Total Xylenes	NY / 375-6.8 Volatiles / Unrestricted Use Soil	3200	250	260	260	ug/Kg
CV90211	$8270-SMR	Phenanthrene	NY / 375-6.8 Semivolatiles / Residential	2000	270	1200	1200	ug/Kg
CV90211	$8270-SMR	Phenanthrene	NY / 375-6.8 Semivolatiles / Unrestricted Use Soil	2000	270	1100	1100	ug/Kg
CV90211	PB-SM	Lead	NY / 375-6.8 Metals / Unrestricted Use Soil	177	0.35	63	63	mg/Kg
CV90214	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Ground Water Protection	2700	340	1300	1300	ug/Kg

Tuesday, May 19, 2026

Sample Criteria Exceedances Report

GCV90208 - BRUSSEE

Criteria: NY: 375, 375GWP, 375RRS, 375RS

State: NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CV90214	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	2700	340	1300	1300	ug/Kg
CV90214	PB-SM	Lead	NY / 375-6.8 Metals / Unrestricted Use Soil	302	0.37	63	63	mg/Kg
CV90215	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Ground Water Protection	1500	350	1300	1300	ug/Kg
CV90215	$8260SMRNY	Tetrachloroethene	NY / 375-6.8 Volatiles / Unrestricted Use Soil	1500	350	1300	1300	ug/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

May 19, 2026 SDG I.D.: GCV90208

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

SVOA Narration

CHEM06 05/18/26-1: CV90208, CV90210

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: Bis(2-chloroethyl)ether 0.530 (0.7)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: % 2,4,6-Tribromophenol 23%H (20%), 2-Nitroaniline 33%L (20%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.
The following Continuing Calibration compounds did not meet recommended response factors: Bis(2-chloroethyl)ether 0.506 (0.7)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM19 05/15/26-1: CV90209, CV90211, CV90212, CV90214, CV90215

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.088 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: Benzo(ghi)perylene 32%L (20%), N-Nitrosodimethylamine 30%L (20%), Pyridine 33%L (20%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.
The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.091 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM26 05/06/26-1: CV90208, CV90209, CV90210, CV90212, CV90214, CV90215

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 33% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,1,2-Trichloroethane 0.199 (0.2)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: Acetone 22%L (20%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM26 05/06/26-2: CV90210, CV90211, CV90214, CV90215

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

May 19, 2026 SDG I.D.: GCV90208

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 33% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,1,2-Trichloroethane 0.199 (0.2)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: Acetone 22%L (20%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

May 19, 2026

SDG I.D.: GCV90208

The samples in this delivery group were received at 1.8°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 5 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: Makrina Nolan, makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Contact Options:
[ ] Phone:
[ ] Fax:
[ ] Email:

Customer: Brussee Environmental Corp
Address: 797 North Country Road, Rocky Point NY

Project: 145-11 Liberty Avenue, Queens
Report to: REC
Invoice to: REC
QUOTE # :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: Thomas Gallo Date: 5/4/26

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	*MS/MSD (May be billable at analysis unit rate)	VOCs 8260	SVOCs 8270	RCRA Metals	GL Amber 8 oz. [ ] w/H_3PO_4 [ ] $NAHSO_4$	Soil VOA Vials [X] methanol [X] H_2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H_2SO_4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H_2SO_4 [ ] 250ml [ ] 250ml [ ] 500ml	PL NAOH 250ml	PL HNO_3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
90208	SB1 (0-2')	S	5/4	9:45		X	X	X			3	1								
90209	SB2 (0-2')	S	5/4	13:45		X	X	X			3	1								
90210	SB3 (0-2')	S	5/4	9:00		X	X	X			3	1								
90211	SB4 (0-2')	S	5/4	10:40		X	X	X			3	1								
90212	SB4 (2-4')	S	5/4	10:50		X	X				3	1								
90213	SB4 (13-15')	S	5/4	11:00							3	1								
90214	SB5 (0-2')	S	5/4	13:10		X	X	X			3	1								
90215	SB6 (0-2')	S	5/4	8:00		X	X				3	1								

Relinquished by:	Accepted by:	Date:	Time:
T. Gallo		5/5/26	1320
	Raymond Brown	5/5/26	1638

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[ ] 4 Days*
[ ] 5 Days*
[X] Standard
*** SURCHARGE APPLIES**

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] Impact to GW soil screen Criteria
[ ] GW Criteria

NY
[ ] TOGS GW
[ ] CP-51 SOIL
[X] 375SCO Unrestricted Soil
[X] 375SCO Residential Soil
[X] 375SCO Residential Restricted Soil
[ ] 375SCO Commercial Soil
[ ] 375SCO Industrial Soil
[ ] Subpart 5 DW

PA
[ ] Clean Fill Limits
[ ] PA-GW
[ ] Reg Fill Limits
[ ] PA Soil Restricted
[ ] PA Soil non-restricted

State Samples Collected? NY

Comments, Special Requirements or Regulations:
Place SB4 (13-15') on hold

Data Format:
[ ] Phoenix Std Report
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] NJ Hazsite EDD
[ ] NY EZ EDD (ASP)
[ ] Other

Data Package:
[ ] NJ Reduced Deliv. *
[ ] NY Enhanced (ASP B) *
[ ] Other

MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

PEL-111 Rev 1/2023

PHOENIX
Environmental Laboratories, Inc.

Friday, May 08, 2026

Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Project ID: **145-11 LIBERTY AVENUE**
SDG ID: **GCV90207**
Sample ID#s: **CV90207**

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

May 08, 2026

SDG I.D.: GCV90207

8260 Volatile Organics:
1,2-Dibromoethane, 1,2,3 Trichloropropane, and 1,2-Dibromo-3-chloropropane do not meet NY TOGS GA criteria, these compounds are analyzed by GC/ECD method 504 or 8011 to achieve this criteria.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Sample Id Cross Reference

May 08, 2026

SDG I.D.: GCV90207

Project ID: 145-11 LIBERTY AVENUE

Client Id	Lab Id	Matrix	Col Date
GW1	CV90207	GROUND WATER	05/04/26 8:50

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 08, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	TG	05/04/26	8:50
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCV90207
Phoenix ID: CV90207

Project ID: 145-11 LIBERTY AVENUE
Client ID: GW1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/06/26	MH	SW8260D	
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,1-Dichloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,1-Dichloroethene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,1-Dichloropropene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,2,3-Trichloropropane	ND	0.25	ug/L	1	05/06/26	MH	SW8260D	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/06/26	MH	SW8260D	
1,2-Dibromoethane	ND	0.25	ug/L	1	05/06/26	MH	SW8260D	
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,2-Dichloroethane	ND	0.60	ug/L	1	05/06/26	MH	SW8260D	
1,2-Dichloropropane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,3-Dichloropropane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
2,2-Dichloropropane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
2-Chlorotoluene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
2-Hexanone	ND	5.0	ug/L	1	05/06/26	MH	SW8260D	
2-Isopropyltoluene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	1
4-Chlorotoluene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/06/26	MH	SW8260D	

Project ID: 145-11 LIBERTY AVENUE
Client ID: GW1

Phoenix I.D.: CV90207

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	25	ug/L	1	05/06/26	MH	SW8260D	
Acrylonitrile	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Benzene	ND	0.70	ug/L	1	05/06/26	MH	SW8260D	
Bromobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Bromochloromethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Bromodichloromethane	ND	0.50	ug/L	1	05/06/26	MH	SW8260D	
Bromoform	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Bromomethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Carbon Disulfide	ND	5.0	ug/L	1	05/06/26	MH	SW8260D	
Carbon tetrachloride	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Chlorobenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Chloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Chloroform	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Chloromethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/06/26	MH	SW8260D	
Dibromochloromethane	ND	0.50	ug/L	1	05/06/26	MH	SW8260D	
Dibromomethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Ethylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Hexachlorobutadiene	ND	0.40	ug/L	1	05/06/26	MH	SW8260D	
Isopropylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
m&p-Xylene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Methyl ethyl ketone	ND	5.0	ug/L	1	05/06/26	MH	SW8260D	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Methylene chloride	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Naphthalene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
n-Butylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
n-Propylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
o-Xylene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
p-Isopropyltoluene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
sec-Butylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Styrene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
tert-Butylbenzene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Tetrachloroethene	3.2	1.0	ug/L	1	05/06/26	MH	SW8260D	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/06/26	MH	SW8260D	1
Toluene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Total Xylenes	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/06/26	MH	SW8260D	
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/06/26	MH	SW8260D	
Trichloroethene	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Trichlorofluoromethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
Vinyl chloride	ND	1.0	ug/L	1	05/06/26	MH	SW8260D	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	108		%	1	05/06/26	MH	70 - 130 %	
% Bromofluorobenzene	88		%	1	05/06/26	MH	70 - 130 %	
% Dibromofluoromethane	108		%	1	05/06/26	MH	70 - 130 %	

Ver 1

Project ID: 145-11 LIBERTY AVENUE
Client ID: GW1

Phoenix I.D.: CV90207

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	108		%	1	05/06/26	MH	70 - 130 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/06/26	MH	SW8260D
Acrolein	ND	5.0	ug/L	1	05/06/26	MH	SW8260D
Acrylonitrile	ND	5.0	ug/L	1	05/06/26	MH	SW8260D
Tert-butyl alcohol	ND	50	ug/L	1	05/06/26	MH	SW8260D

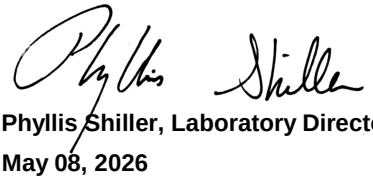
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

May 08, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 08, 2026

QA/QC Data

SDG I.D.: GCV90207

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 839206 (ug/L), QC Sample No: CV89780 (CV90207)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	109	107	1.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	101	7.6				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	106	2.9				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	105	106	0.9				70 - 130	20
1,1-Dichloroethane	ND	1.0	107	98	8.8				70 - 130	20
1,1-Dichloroethene	ND	1.0	105	97	7.9				70 - 130	20
1,1-Dichloropropene	ND	1.0	96	97	1.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	113	116	2.6				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	108	110	1.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	108	112	3.6				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	107	108	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	103	108	4.7				70 - 130	20
1,2-Dibromoethane	ND	1.0	107	107	0.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	101	103	2.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	103	102	1.0				70 - 130	20
1,2-Dichloropropane	ND	1.0	102	103	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	113	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	103	106	2.9				70 - 130	20
1,3-Dichloropropane	ND	1.0	107	106	0.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	105	1.9				70 - 130	20
2,2-Dichloropropane	ND	1.0	108	103	4.7				70 - 130	20
2-Chlorotoluene	ND	1.0	108	108	0.0				70 - 130	20
2-Hexanone	ND	5.0	113	110	2.7				70 - 130	20
2-Isopropyltoluene	ND	1.0	112	113	0.9				70 - 130	20
4-Chlorotoluene	ND	1.0	108	108	0.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	110	112	1.8				70 - 130	20
Acetone	ND	5.0	112	107	4.6				70 - 130	20
Acrolein	ND	5.0	112	107	4.6				70 - 130	20
Acrylonitrile	ND	5.0	109	104	4.7				70 - 130	20
Benzene	ND	0.70	88	100	12.8				70 - 130	20
Bromobenzene	ND	1.0	101	104	2.9				70 - 130	20
Bromochloromethane	ND	1.0	107	99	7.8				70 - 130	20
Bromodichloromethane	ND	0.50	105	103	1.9				70 - 130	20
Bromoform	ND	1.0	112	109	2.7				70 - 130	20
Bromomethane	ND	1.0	103	98	5.0				70 - 130	20
Carbon Disulfide	ND	1.0	110	99	10.5				70 - 130	20
Carbon tetrachloride	ND	1.0	106	100	5.8				70 - 130	20
Chlorobenzene	ND	1.0	103	101	2.0				70 - 130	20
Chloroethane	ND	1.0	112	103	8.4				70 - 130	20
Chloroform	ND	1.0	107	99	7.8				70 - 130	20
Chloromethane	ND	1.0	113	104	8.3				70 - 130	20

QA/QC Data

SDG I.D.: GCV90207

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
cis-1,2-Dichloroethene	ND	1.0	107	100	6.8				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	109	108	0.9				70 - 130	20	
Dibromochloromethane	ND	0.50	105	102	2.9				70 - 130	20	
Dibromomethane	ND	1.0	100	100	0.0				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	106	98	7.8				70 - 130	20	
Ethylbenzene	ND	1.0	105	102	2.9				70 - 130	20	
Hexachlorobutadiene	ND	0.40	107	106	0.9				70 - 130	20	
Isopropylbenzene	ND	1.0	109	111	1.8				70 - 130	20	
m&p-Xylene	ND	1.0	109	105	3.7				70 - 130	20	
Methyl ethyl ketone	ND	5.0	115	111	3.5				70 - 130	20	
Methyl t-butyl ether (MTBE)	ND	1.0	107	102	4.8				70 - 130	20	
Methylene chloride	ND	1.0	100	93	7.3				70 - 130	20	
Naphthalene	ND	1.0	112	115	2.6				70 - 130	20	
n-Butylbenzene	ND	1.0	114	114	0.0				70 - 130	20	
n-Propylbenzene	ND	1.0	107	108	0.9				70 - 130	20	
o-Xylene	ND	1.0	107	105	1.9				70 - 130	20	
p-Isopropyltoluene	ND	1.0	113	114	0.9				70 - 130	20	
sec-Butylbenzene	ND	1.0	109	110	0.9				70 - 130	20	
Styrene	ND	1.0	113	112	0.9				70 - 130	20	
tert-butyl alcohol	ND	10	103	99	4.0				70 - 130	20	
tert-Butylbenzene	ND	1.0	109	111	1.8				70 - 130	20	
Tetrachloroethene	ND	1.0	98	97	1.0				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	112	107	4.6				70 - 130	20	
Toluene	ND	1.0	99	98	1.0				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	109	95	13.7				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	111	114	2.7				70 - 130	20	
trans-1,4-dichloro-2-butene	ND	5.0	53	54	1.9				70 - 130	20	I
Trichloroethene	ND	1.0	102	101	1.0				70 - 130	20	
Trichlorofluoromethane	ND	1.0	108	100	7.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	110	105	4.7				70 - 130	20	
Vinyl chloride	ND	1.0	111	103	7.5				70 - 130	20	
% 1,2-dichlorobenzene-d4	105	%	100	98	2.0				70 - 130	20	
% Bromofluorobenzene	89	%	102	99	3.0				70 - 130	20	
% Dibromofluoromethane	98	%	103	96	7.0				70 - 130	20	
% Toluene-d8	104	%	98	99	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
May 08, 2026

Friday, May 08, 2026

Criteria: NY: GW

State: NY

Sample Criteria Exceedances Report

GCV90207 - BRUSSEE

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CV90207	$8260GWR	1,2-Dibromoethane	NY / TOGS - Water Quality / GA Criteria	ND	0.25	0.0006	0.0006	ug/L
CV90207	$8260GWR	1,2-Dibromo-3-chloropropane	NY / TOGS - Water Quality / GA Criteria	ND	0.50	0.04	0.04	ug/L
CV90207	$8260GWR	1,2,3-Trichloropropane	NY / TOGS - Water Quality / GA Criteria	ND	0.25	0.04	0.04	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

May 08, 2026 SDG I.D.: GCV90207

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 05/05/26-1: CV90207

The following Initial Calibration compounds did not meet RSD% criteria: Styrene 21% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Continuing Calibration compounds did not meet % deviation criteria: trans-1,4-dichloro-2-butene 25%H (20%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

May 08, 2026

SDG I.D.: GCV90207

The samples in this delivery group were received at 1.8°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☑ No ☐
Temp 8 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: Makrina Nolan, makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Contact Options:
☐ Phone:
☐ Fax:
☒ Email:

Customer: Brusser Environmental Corp
Address: 1797 North Country Road
Rocky Point NY

Project: 145-11 Liberty Avenue
Report to: BEC
Invoice to: BEC
QUOTE # :

Project P.O:

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Thomas Gallo Date: 5/4/26

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	*MS/MSD (May be billable at analysis unit rate)	VOCs 8260	GL Amber 8 oz. [ ] w/H_3PO_4 [ ] $NAHSO_4$	Soil VOA Vials [ ] methanol [ ] H_2O	GL Soil container ( )oz	GL Soil container ( )oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [ ] As is [ ] H_2SO_4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H_2SO_4 [ ] 250ml [ ] 500ml	PL NAOH 250ml	PL HNO_3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
90207	GW1	GW	5/4	8:50		X					3							

Relinquished by:	Accepted by:	Date:	Time:
		5/5/26	1320
		5/5/26	1638

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☐ 4 Days*
☐ 5 Days*
☒ Standard
* SURCHARGE APPLIES

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential Restricted Soil
☐ 375SCO Commercial Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

PA
☐ Clean Fill Limits
☐ PA-GW
☐ Reg Fill Limits
☐ PA Soil Restricted
☐ PA Soil non-restricted

State Samples Collected? NY

Comments, Special Requirements or Regulations:
Compare to NY375 GWP Standards

Data Format:
☐ Phoenix Std Report ☐ EQuIS
☒ Excel ☐ NJ Hazsite EDD
☒ PDF ☐ NY EZ EDD (ASP)
☐ GIS/Key ☐ Other

Data Package:
☐ NJ Reduced Deliv. * ☐ Other
☐ NY Enhanced (ASP B) *

MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

PEL-111 Rev 1/2023

PHOENIX
Environmental Laboratories, Inc.

Monday, May 11, 2026

Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Project ID: **145-11 LIBERTY AVENUE**
SDG ID: **GCV90196**
Sample ID#s: CV90196 - CV90200

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

May 11, 2026

SDG I.D.: GCV90196

Project ID: 145-11 LIBERTY AVENUE

Client Id	Lab Id	Matrix	Col Date
SV4	CV90196	AIR	05/04/26 13:36
SV5	CV90197	AIR	05/04/26 13:52
SV3	CV90198	AIR	05/04/26 13:55
SV2	CV90199	AIR	05/04/26 13:41
SV1	CV90200	AIR	05/04/26 13:57

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

Analysis Report

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	TG	05/04/26	13:36
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	49254				

Laboratory Data

SDG ID: GCV90196
Phoenix ID: CV90196

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV4

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	1
1,1,1-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1,2,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	
1,1,2-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,1-Dichloroethene	ND	*0.252*	ND	*1.00*	05/07/26	LD	5	
1,2,4-Trichlorobenzene	ND	*0.674*	ND	*5.00*	05/07/26	LD	5	
1,2,4-Trimethylbenzene	3.28	*1.02*	16.1	*5.01*	05/07/26	LD	5	
1,2-Dibromoethane(EDB)	ND	*0.651*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,2-dichloropropane	ND	*1.08*	ND	*4.99*	05/07/26	LD	5	
1,2-Dichlorotetrafluoroethane	ND	*0.716*	ND	*5.00*	05/07/26	LD	5	
1,3,5-Trimethylbenzene	1.17	*1.02*	5.75	*5.01*	05/07/26	LD	5	
1,3-Butadiene	ND	*2.26*	ND	*5.00*	05/07/26	LD	5	
1,3-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dioxane	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
2-Hexanone(MBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	1
4-Ethyltoluene	4.28	*1.02*	21.0	*5.01*	05/07/26	LD	5	1
4-Isopropyltoluene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
4-Methyl-2-pentanone(MIBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	
Acetone	48.2	*2.11*	114	*5.01*	05/07/26	LD	5	
Acrylonitrile	ND	*2.31*	ND	*5.01*	05/07/26	LD	5	
Benzene	1.66	*1.57*	5.30	*5.01*	05/07/26	LD	5	
Benzyl chloride	ND	*0.966*	ND	*5.00*	05/07/26	LD	5	

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV4

Phoenix I.D.: CV90196

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.747*	ND	*5.00*	05/07/26	LD	5	
Bromoform	ND	*0.484*	ND	*5.00*	05/07/26	LD	5	
Bromomethane	ND	*1.29*	ND	*5.01*	05/07/26	LD	5	
Carbon Disulfide	3.53	*1.61*	11.0	*5.01*	05/07/26	LD	5	
Carbon Tetrachloride	0.195	*0.159*	1.23	*1.00*	05/07/26	LD	5	
Chlorobenzene	ND	*1.09*	ND	*5.01*	05/07/26	LD	5	
Chloroethane	ND	*1.90*	ND	*5.01*	05/07/26	LD	5	
Chloroform	7.43	*1.02*	36.3	*4.98*	05/07/26	LD	5	
Chloromethane	ND	*2.42*	ND	*4.99*	05/07/26	LD	5	
Cis-1,2-Dichloroethene	1.35	*0.252*	5.35	*1.00*	05/07/26	LD	5	
cis-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Cyclohexane	ND	*1.45*	ND	*4.99*	05/07/26	LD	5	
Dibromochloromethane	ND	*0.587*	ND	*5.00*	05/07/26	LD	5	
Dichlorodifluoromethane	ND	*1.01*	ND	*4.99*	05/07/26	LD	5	
Ethanol	54.3	*2.66*	102	*5.01*	05/07/26	LD	5	1
Ethyl acetate	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	1
Ethylbenzene	4.58	*1.15*	19.9	*4.99*	05/07/26	LD	5	
Heptane	1.73	*1.22*	7.09	*5.00*	05/07/26	LD	5	
Hexachlorobutadiene	ND	*0.469*	ND	*5.00*	05/07/26	LD	5	
Hexane	1.89	*1.42*	6.66	*5.00*	05/07/26	LD	5	
Isooctane	8.74	*1.07*	40.7	*4.99*	05/07/26	LD	5	
Isopropylalcohol	3.04	*2.04*	7.47	*5.01*	05/07/26	LD	5	
Isopropylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
m,p-Xylene	15.8	*1.15*	68.6	*4.99*	05/07/26	LD	5	
Methyl Ethyl Ketone	3.92	*1.70*	11.6	*5.01*	05/07/26	LD	5	
Methyl tert-butyl ether(MTBE)	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
Methylene Chloride	ND	*4.32*	ND	*15.0*	05/07/26	LD	5	
Naphthalene	ND	*1.00*	ND	*5.23*	05/07/26	LD	5	
n-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
o-Xylene	7.08	*1.15*	30.7	*4.99*	05/07/26	LD	5	
Propylene	7.55	*2.91*	13.0	*5.01*	05/07/26	LD	5	1
sec-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
Styrene	ND	*1.17*	ND	*4.98*	05/07/26	LD	5	
Tetrachloroethene	173	*0.184*	1170	*1.25*	05/07/26	LD	5	
Tetrahydrofuran	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	1
Toluene	14.2	*1.33*	53.5	*5.01*	05/07/26	LD	5	
Trans-1,2-Dichloroethene	ND	*1.26*	ND	*4.99*	05/07/26	LD	5	
trans-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Trichloroethene	4.06	*0.185*	21.8	*0.99*	05/07/26	LD	5	
Trichlorofluoromethane	ND	*0.891*	ND	*5.00*	05/07/26	LD	5	
Trichlorotrifluoroethane	ND	*0.653*	ND	*5.00*	05/07/26	LD	5	
Vinyl Chloride	ND	*0.390*	ND	*1.00*	05/07/26	LD	5	
QA/QC Surrogates/Internals								
% Bromofluorobenzene (5x)	101	*%*	101	*%*	05/07/26	LD	5	
% IS-1,4-Difluorobenzene (5x)	145	*%*	145	*%*	05/07/26	LD	5	3
% IS-Bromochloromethane (5x)	141	*%*	141	*%*	05/07/26	LD	5	3
% IS-Chlorobenzene-d5 (5x)	152	*%*	152	*%*	05/07/26	LD	5	3

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV4

Phoenix I.D.: CV90196

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.
3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

May 11, 2026

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

Analysis Report

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	TG	05/04/26	13:52
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	214				

Laboratory Data

SDG ID: GCV90196
Phoenix ID: CV90197

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	1
1,1,1-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1,2,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	
1,1,2-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,1-Dichloroethene	ND	*0.252*	ND	*1.00*	05/07/26	LD	5	
1,2,4-Trichlorobenzene	ND	*0.674*	ND	*5.00*	05/07/26	LD	5	
1,2,4-Trimethylbenzene	4.24	*1.02*	20.8	*5.01*	05/07/26	LD	5	
1,2-Dibromoethane(EDB)	ND	*0.651*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,2-dichloropropane	ND	*1.08*	ND	*4.99*	05/07/26	LD	5	
1,2-Dichlorotetrafluoroethane	ND	*0.716*	ND	*5.00*	05/07/26	LD	5	
1,3,5-Trimethylbenzene	1.11	*1.02*	5.45	*5.01*	05/07/26	LD	5	
1,3-Butadiene	4.90	*2.26*	10.8	*5.00*	05/07/26	LD	5	
1,3-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dioxane	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
2-Hexanone(MBK)	3.14	*1.22*	12.9	*4.99*	05/07/26	LD	5	1
4-Ethyltoluene	3.78	*1.02*	18.6	*5.01*	05/07/26	LD	5	1
4-Isopropyltoluene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
4-Methyl-2-pentanone(MIBK)	8.60	*1.22*	35.2	*4.99*	05/07/26	LD	5	
Acetone	91.2	*2.11*	217	*5.01*	05/07/26	LD	5	
Acrylonitrile	3.25	*2.31*	7.05	*5.01*	05/07/26	LD	5	
Benzene	3.23	*1.57*	10.3	*5.01*	05/07/26	LD	5	
Benzyl chloride	ND	*0.966*	ND	*5.00*	05/07/26	LD	5	

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV5

Phoenix I.D.: CV90197

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.747*	ND	*5.00*	05/07/26	LD	5	
Bromoform	ND	*0.484*	ND	*5.00*	05/07/26	LD	5	
Bromomethane	ND	*1.29*	ND	*5.01*	05/07/26	LD	5	
Carbon Disulfide	4.59	*1.61*	14.3	*5.01*	05/07/26	LD	5	
Carbon Tetrachloride	0.315	*0.159*	1.98	*1.00*	05/07/26	LD	5	
Chlorobenzene	ND	*1.09*	ND	*5.01*	05/07/26	LD	5	
Chloroethane	ND	*1.90*	ND	*5.01*	05/07/26	LD	5	
Chloroform	1.21	*1.02*	5.90	*4.98*	05/07/26	LD	5	
Chloromethane	ND	*2.42*	ND	*4.99*	05/07/26	LD	5	
Cis-1,2-Dichloroethene	6.69	*0.252*	26.5	*1.00*	05/07/26	LD	5	
cis-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Cyclohexane	ND	*1.45*	ND	*4.99*	05/07/26	LD	5	
Dibromochloromethane	ND	*0.587*	ND	*5.00*	05/07/26	LD	5	
Dichlorodifluoromethane	ND	*1.01*	ND	*4.99*	05/07/26	LD	5	
Ethanol	27.2	*2.66*	51.2	*5.01*	05/07/26	LD	5	1
Ethyl acetate	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	1
Ethylbenzene	42.7	*1.15*	185	*4.99*	05/07/26	LD	5	
Heptane	3.31	*1.22*	13.6	*5.00*	05/07/26	LD	5	
Hexachlorobutadiene	ND	*0.469*	ND	*5.00*	05/07/26	LD	5	
Hexane	4.04	*1.42*	14.2	*5.00*	05/07/26	LD	5	
Isooctane	ND	*1.07*	ND	*4.99*	05/07/26	LD	5	
Isopropylalcohol	4.64	*2.04*	11.4	*5.01*	05/07/26	LD	5	
Isopropylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
m,p-Xylene	152	*1.15*	660	*4.99*	05/07/26	LD	5	
Methyl Ethyl Ketone	16.1	*1.70*	47.5	*5.01*	05/07/26	LD	5	
Methyl tert-butyl ether(MTBE)	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
Methylene Chloride	ND	*4.32*	ND	*15.0*	05/07/26	LD	5	
Naphthalene	1.36	*1.00*	7.12	*5.23*	05/07/26	LD	5	
n-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
o-Xylene	49.0	*1.15*	213	*4.99*	05/07/26	LD	5	
Propylene	42.5	*2.91*	73.1	*5.01*	05/07/26	LD	5	1
sec-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
Styrene	ND	*1.17*	ND	*4.98*	05/07/26	LD	5	
Tetrachloroethene	236	*0.369*	1600	*2.50*	05/07/26	LD	10	
Tetrahydrofuran	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	1
Toluene	6.55	*1.33*	24.7	*5.01*	05/07/26	LD	5	
Trans-1,2-Dichloroethene	ND	*1.26*	ND	*4.99*	05/07/26	LD	5	
trans-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Trichloroethene	9.39	*0.185*	50.4	*0.99*	05/07/26	LD	5	
Trichlorofluoromethane	ND	*0.891*	ND	*5.00*	05/07/26	LD	5	
Trichlorotrifluoroethane	ND	*0.653*	ND	*5.00*	05/07/26	LD	5	
Vinyl Chloride	ND	*0.390*	ND	*1.00*	05/07/26	LD	5	
QA/QC Surrogates/Internals								
% Bromofluorobenzene (5x)	101	*%*	101	*%*	05/07/26	LD	5	
% IS-1,4-Difluorobenzene (5x)	145	*%*	145	*%*	05/07/26	LD	5	3
% IS-Bromochloromethane (5x)	140	*%*	140	*%*	05/07/26	LD	5	
% IS-Chlorobenzene-d5 (5x)	157	*%*	157	*%*	05/07/26	LD	5	3
% Bromofluorobenzene (10x)	85	*%*	85	*%*	05/07/26	LD	10	
% IS-1,4-Difluorobenzene (10x)	87	*%*	87	*%*	05/07/26	LD	10	

Ver 1

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV5

Phoenix I.D.: CV90197

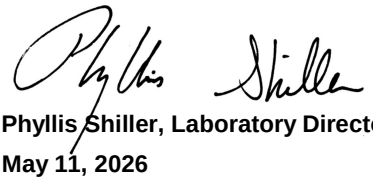
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
% IS-Bromochloromethane (10x)	86	%	86	%	05/07/26	LD	10
% IS-Chlorobenzene-d5 (10x)	113	%	113	%	05/07/26	LD	10

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.
3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 11, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

Analysis Report

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	TG	05/04/26	13:55
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	5583				

Laboratory Data

SDG ID: GCV90196
Phoenix ID: CV90198

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV3

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	1
1,1,1-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1,2,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	
1,1,2-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,1-Dichloroethene	ND	*0.252*	ND	*1.00*	05/07/26	LD	5	
1,2,4-Trichlorobenzene	ND	*0.674*	ND	*5.00*	05/07/26	LD	5	
1,2,4-Trimethylbenzene	3.20	*1.02*	15.7	*5.01*	05/07/26	LD	5	
1,2-Dibromoethane(EDB)	ND	*0.651*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,2-dichloropropane	ND	*1.08*	ND	*4.99*	05/07/26	LD	5	
1,2-Dichlorotetrafluoroethane	ND	*0.716*	ND	*5.00*	05/07/26	LD	5	
1,3,5-Trimethylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
1,3-Butadiene	2.68	*2.26*	5.93	*5.00*	05/07/26	LD	5	
1,3-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dioxane	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
2-Hexanone(MBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	1
4-Ethyltoluene	3.32	*1.02*	16.3	*5.01*	05/07/26	LD	5	1
4-Isopropyltoluene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
4-Methyl-2-pentanone(MIBK)	4.78	*1.22*	19.6	*4.99*	05/07/26	LD	5	
Acetone	42.6	*2.11*	101	*5.01*	05/07/26	LD	5	
Acrylonitrile	8.80	*2.31*	19.1	*5.01*	05/07/26	LD	5	
Benzene	3.76	*1.57*	12.0	*5.01*	05/07/26	LD	5	
Benzyl chloride	ND	*0.966*	ND	*5.00*	05/07/26	LD	5	

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV3

Phoenix I.D.: CV90198

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.747*	ND	*5.00*	05/07/26	LD	5	
Bromoform	ND	*0.484*	ND	*5.00*	05/07/26	LD	5	
Bromomethane	ND	*1.29*	ND	*5.01*	05/07/26	LD	5	
Carbon Disulfide	23.0	*1.61*	71.6	*5.01*	05/07/26	LD	5	
Carbon Tetrachloride	1.31	*0.159*	8.24	*1.00*	05/07/26	LD	5	
Chlorobenzene	ND	*1.09*	ND	*5.01*	05/07/26	LD	5	
Chloroethane	ND	*1.90*	ND	*5.01*	05/07/26	LD	5	
Chloroform	3.79	*1.02*	18.5	*4.98*	05/07/26	LD	5	
Chloromethane	ND	*2.42*	ND	*4.99*	05/07/26	LD	5	
Cis-1,2-Dichloroethene	2.98	*0.252*	11.8	*1.00*	05/07/26	LD	5	
cis-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Cyclohexane	1.48	*1.45*	5.09	*4.99*	05/07/26	LD	5	
Dibromochloromethane	ND	*0.587*	ND	*5.00*	05/07/26	LD	5	
Dichlorodifluoromethane	ND	*1.01*	ND	*4.99*	05/07/26	LD	5	
Ethanol	19.7	*2.66*	37.1	*5.01*	05/07/26	LD	5	1
Ethyl acetate	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	1
Ethylbenzene	5.89	*1.15*	25.6	*4.99*	05/07/26	LD	5	
Heptane	3.08	*1.22*	12.6	*5.00*	05/07/26	LD	5	
Hexachlorobutadiene	ND	*0.469*	ND	*5.00*	05/07/26	LD	5	
Hexane	3.50	*1.42*	12.3	*5.00*	05/07/26	LD	5	
Isooctane	2.29	*1.07*	10.7	*4.99*	05/07/26	LD	5	
Isopropylalcohol	4.86	*2.04*	11.9	*5.01*	05/07/26	LD	5	
Isopropylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
m,p-Xylene	23.0	*1.15*	100	*4.99*	05/07/26	LD	5	
Methyl Ethyl Ketone	5.50	*1.70*	16.2	*5.01*	05/07/26	LD	5	
Methyl tert-butyl ether(MTBE)	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
Methylene Chloride	ND	*4.32*	ND	*15.0*	05/07/26	LD	5	
Naphthalene	ND	*1.00*	ND	*5.23*	05/07/26	LD	5	
n-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
o-Xylene	7.81	*1.15*	33.9	*4.99*	05/07/26	LD	5	
Propylene	11.5	*2.91*	19.8	*5.01*	05/07/26	LD	5	1
sec-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
Styrene	ND	*1.17*	ND	*4.98*	05/07/26	LD	5	
Tetrachloroethene	722	*2.77*	4890	*18.8*	05/08/26	LD	75	
Tetrahydrofuran	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	1
Toluene	19.5	*1.33*	73.4	*5.01*	05/07/26	LD	5	
Trans-1,2-Dichloroethene	ND	*1.26*	ND	*4.99*	05/07/26	LD	5	
trans-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Trichloroethene	15.4	*0.185*	82.7	*0.99*	05/07/26	LD	5	
Trichlorofluoromethane	ND	*0.891*	ND	*5.00*	05/07/26	LD	5	
Trichlorotrifluoroethane	ND	*0.653*	ND	*5.00*	05/07/26	LD	5	
Vinyl Chloride	0.720	*0.390*	1.84	*1.00*	05/07/26	LD	5	
QA/QC Surrogates/Internals								
% Bromofluorobenzene (5x)	96	*%*	96	*%*	05/07/26	LD	5	
% IS-1,4-Difluorobenzene (5x)	149	*%*	149	*%*	05/07/26	LD	5	3
% IS-Bromochloromethane (5x)	142	*%*	142	*%*	05/07/26	LD	5	3
% IS-Chlorobenzene-d5 (5x)	163	*%*	163	*%*	05/07/26	LD	5	3
% Bromofluorobenzene (75x)	93	*%*	93	*%*	05/08/26	LD	75	
% IS-1,4-Difluorobenzene (75x)	74	*%*	74	*%*	05/08/26	LD	75	

Ver 1

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV3

Phoenix I.D.: CV90198

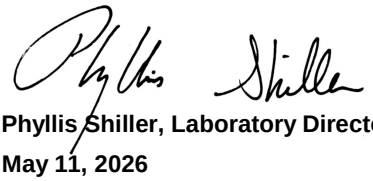
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
% IS-Bromochloromethane (75x)	76	%	76	%	05/08/26	LD	75
% IS-Chlorobenzene-d5 (75x)	83	%	83	%	05/08/26	LD	75

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.
3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 11, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

Analysis Report

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	TG	05/04/26	13:41
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	53465				

Laboratory Data

SDG ID: GCV90196
Phoenix ID: CV90199

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV2

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	1
1,1,1-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1,2,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	
1,1,2-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,1-Dichloroethene	ND	*0.252*	ND	*1.00*	05/07/26	LD	5	
1,2,4-Trichlorobenzene	ND	*0.674*	ND	*5.00*	05/07/26	LD	5	
1,2,4-Trimethylbenzene	2.67	*1.02*	13.1	*5.01*	05/07/26	LD	5	
1,2-Dibromoethane(EDB)	ND	*0.651*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,2-dichloropropane	ND	*1.08*	ND	*4.99*	05/07/26	LD	5	
1,2-Dichlorotetrafluoroethane	ND	*0.716*	ND	*5.00*	05/07/26	LD	5	
1,3,5-Trimethylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
1,3-Butadiene	ND	*2.26*	ND	*5.00*	05/07/26	LD	5	
1,3-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dioxane	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
2-Hexanone(MBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	1
4-Ethyltoluene	2.66	*1.02*	13.1	*5.01*	05/07/26	LD	5	1
4-Isopropyltoluene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
4-Methyl-2-pentanone(MIBK)	1.87	*1.22*	7.66	*4.99*	05/07/26	LD	5	
Acetone	37.8	*2.11*	89.7	*5.01*	05/07/26	LD	5	
Acrylonitrile	ND	*2.31*	ND	*5.01*	05/07/26	LD	5	
Benzene	ND	*1.57*	ND	*5.01*	05/07/26	LD	5	
Benzyl chloride	ND	*0.966*	ND	*5.00*	05/07/26	LD	5	

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV2

Phoenix I.D.: CV90199

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.747*	ND	*5.00*	05/07/26	LD	5	
Bromoform	ND	*0.484*	ND	*5.00*	05/07/26	LD	5	
Bromomethane	ND	*1.29*	ND	*5.01*	05/07/26	LD	5	
Carbon Disulfide	ND	*1.61*	ND	*5.01*	05/07/26	LD	5	
Carbon Tetrachloride	1.75	*0.159*	11.0	*1.00*	05/07/26	LD	5	
Chlorobenzene	ND	*1.09*	ND	*5.01*	05/07/26	LD	5	
Chloroethane	ND	*1.90*	ND	*5.01*	05/07/26	LD	5	
Chloroform	2.75	*1.02*	13.4	*4.98*	05/07/26	LD	5	
Chloromethane	ND	*2.42*	ND	*4.99*	05/07/26	LD	5	
Cis-1,2-Dichloroethene	60.7	*0.252*	241	*1.00*	05/07/26	LD	5	
cis-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Cyclohexane	ND	*1.45*	ND	*4.99*	05/07/26	LD	5	
Dibromochloromethane	ND	*0.587*	ND	*5.00*	05/07/26	LD	5	
Dichlorodifluoromethane	ND	*1.01*	ND	*4.99*	05/07/26	LD	5	
Ethanol	29.5	*2.66*	55.6	*5.01*	05/07/26	LD	5	1
Ethyl acetate	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	1
Ethylbenzene	41.1	*1.15*	178	*4.99*	05/07/26	LD	5	
Heptane	2.06	*1.22*	8.44	*5.00*	05/07/26	LD	5	
Hexachlorobutadiene	ND	*0.469*	ND	*5.00*	05/07/26	LD	5	
Hexane	1.66	*1.42*	5.85	*5.00*	05/07/26	LD	5	
Isooctane	1.23	*1.07*	5.73	*4.99*	05/07/26	LD	5	
Isopropylalcohol	3.31	*2.04*	8.13	*5.01*	05/07/26	LD	5	
Isopropylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
m,p-Xylene	155	*1.15*	673	*4.99*	05/07/26	LD	5	
Methyl Ethyl Ketone	4.59	*1.70*	13.5	*5.01*	05/07/26	LD	5	
Methyl tert-butyl ether(MTBE)	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
Methylene Chloride	ND	*4.32*	ND	*15.0*	05/07/26	LD	5	
Naphthalene	ND	*1.00*	ND	*5.23*	05/07/26	LD	5	
n-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
o-Xylene	52.1	*1.15*	226	*4.99*	05/07/26	LD	5	
Propylene	11.5	*2.91*	19.8	*5.01*	05/07/26	LD	5	1
sec-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
Styrene	ND	*1.17*	ND	*4.98*	05/07/26	LD	5	
Tetrachloroethene	601	*2.77*	4070	*18.8*	05/08/26	LD	75	
Tetrahydrofuran	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	1
Toluene	6.07	*1.33*	22.9	*5.01*	05/07/26	LD	5	
Trans-1,2-Dichloroethene	ND	*1.26*	ND	*4.99*	05/07/26	LD	5	
trans-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Trichloroethene	20.0	*0.185*	107	*0.99*	05/07/26	LD	5	
Trichlorofluoromethane	ND	*0.891*	ND	*5.00*	05/07/26	LD	5	
Trichlorotrifluoroethane	ND	*0.653*	ND	*5.00*	05/07/26	LD	5	
Vinyl Chloride	ND	*0.390*	ND	*1.00*	05/07/26	LD	5	
QA/QC Surrogates/Internals								
% Bromofluorobenzene (5x)	91	*%*	91	*%*	05/07/26	LD	5	
% IS-1,4-Difluorobenzene (5x)	147	*%*	147	*%*	05/07/26	LD	5	3
% IS-Bromochloromethane (5x)	143	*%*	143	*%*	05/07/26	LD	5	3
% IS-Chlorobenzene-d5 (5x)	178	*%*	178	*%*	05/07/26	LD	5	3
% Bromofluorobenzene (75x)	94	*%*	94	*%*	05/08/26	LD	75	
% IS-1,4-Difluorobenzene (75x)	74	*%*	74	*%*	05/08/26	LD	75	

Ver 1

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV2

Phoenix I.D.: CV90199

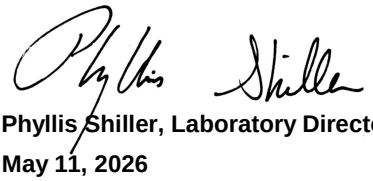
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
% IS-Bromochloromethane (75x)	76	%	76	%	05/08/26	LD	75
% IS-Chlorobenzene-d5 (75x)	83	%	83	%	05/08/26	LD	75

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.
3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 11, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

Analysis Report

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	TG	05/04/26	13:57
Location Code:	BRUSSEE	Received by:	SR1	05/05/26	16:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	23871				

Laboratory Data

SDG ID: GCV90196
Phoenix ID: CV90200

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	1
1,1,1-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1,2,2-Tetrachloroethane	ND	*0.729*	ND	*5.00*	05/07/26	LD	5	
1,1,2-Trichloroethane	ND	*0.917*	ND	*5.00*	05/07/26	LD	5	
1,1-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,1-Dichloroethene	ND	*0.252*	ND	*1.00*	05/07/26	LD	5	
1,2,4-Trichlorobenzene	ND	*0.674*	ND	*5.00*	05/07/26	LD	5	
1,2,4-Trimethylbenzene	2.86	*1.02*	14.1	*5.01*	05/07/26	LD	5	
1,2-Dibromoethane(EDB)	ND	*0.651*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,2-Dichloroethane	ND	*1.24*	ND	*5.02*	05/07/26	LD	5	
1,2-dichloropropane	ND	*1.08*	ND	*4.99*	05/07/26	LD	5	
1,2-Dichlorotetrafluoroethane	ND	*0.716*	ND	*5.00*	05/07/26	LD	5	
1,3,5-Trimethylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
1,3-Butadiene	ND	*2.26*	ND	*5.00*	05/07/26	LD	5	
1,3-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dichlorobenzene	ND	*0.832*	ND	*5.00*	05/07/26	LD	5	
1,4-Dioxane	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
2-Hexanone(MBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	1
4-Ethyltoluene	2.39	*1.02*	11.7	*5.01*	05/07/26	LD	5	1
4-Isopropyltoluene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
4-Methyl-2-pentanone(MIBK)	ND	*1.22*	ND	*4.99*	05/07/26	LD	5	
Acetone	8.52	*2.11*	20.2	*5.01*	05/07/26	LD	5	
Acrylonitrile	ND	*2.31*	ND	*5.01*	05/07/26	LD	5	
Benzene	ND	*1.57*	ND	*5.01*	05/07/26	LD	5	
Benzyl chloride	ND	*0.966*	ND	*5.00*	05/07/26	LD	5	

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV1

Phoenix I.D.: CV90200

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.747*	ND	*5.00*	05/07/26	LD	5	
Bromoform	ND	*0.484*	ND	*5.00*	05/07/26	LD	5	
Bromomethane	ND	*1.29*	ND	*5.01*	05/07/26	LD	5	
Carbon Disulfide	ND	*1.61*	ND	*5.01*	05/07/26	LD	5	
Carbon Tetrachloride	3.32	*0.159*	20.9	*1.00*	05/07/26	LD	5	
Chlorobenzene	ND	*1.09*	ND	*5.01*	05/07/26	LD	5	
Chloroethane	ND	*1.90*	ND	*5.01*	05/07/26	LD	5	
Chloroform	3.89	*1.02*	19.0	*4.98*	05/07/26	LD	5	
Chloromethane	ND	*2.42*	ND	*4.99*	05/07/26	LD	5	
Cis-1,2-Dichloroethene	0.865	*0.252*	3.43	*1.00*	05/07/26	LD	5	
cis-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Cyclohexane	ND	*1.45*	ND	*4.99*	05/07/26	LD	5	
Dibromochloromethane	ND	*0.587*	ND	*5.00*	05/07/26	LD	5	
Dichlorodifluoromethane	ND	*1.01*	ND	*4.99*	05/07/26	LD	5	
Ethanol	3.94	*2.66*	7.42	*5.01*	05/07/26	LD	5	1
Ethyl acetate	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	1
Ethylbenzene	ND	*1.15*	ND	*4.99*	05/07/26	LD	5	
Heptane	ND	*1.22*	ND	*5.00*	05/07/26	LD	5	
Hexachlorobutadiene	ND	*0.469*	ND	*5.00*	05/07/26	LD	5	
Hexane	ND	*1.42*	ND	*5.00*	05/07/26	LD	5	
Isooctane	ND	*1.07*	ND	*4.99*	05/07/26	LD	5	
Isopropylalcohol	ND	*2.04*	ND	*5.01*	05/07/26	LD	5	
Isopropylbenzene	ND	*1.02*	ND	*5.01*	05/07/26	LD	5	
m,p-Xylene	3.43	*1.15*	14.9	*4.99*	05/07/26	LD	5	
Methyl Ethyl Ketone	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	
Methyl tert-butyl ether(MTBE)	ND	*1.39*	ND	*5.01*	05/07/26	LD	5	
Methylene Chloride	ND	*4.32*	ND	*15.0*	05/07/26	LD	5	
Naphthalene	ND	*1.00*	ND	*5.23*	05/07/26	LD	5	
n-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
o-Xylene	1.18	*1.15*	5.12	*4.99*	05/07/26	LD	5	
Propylene	ND	*2.91*	ND	*5.01*	05/07/26	LD	5	1
sec-Butylbenzene	ND	*0.911*	ND	*5.00*	05/07/26	LD	5	1
Styrene	ND	*1.17*	ND	*4.98*	05/07/26	LD	5	
Tetrachloroethene	2500	*2.77*	16900	*18.8*	05/08/26	LD	75	
Tetrahydrofuran	ND	*1.70*	ND	*5.01*	05/07/26	LD	5	1
Toluene	3.07	*1.33*	11.6	*5.01*	05/07/26	LD	5	
Trans-1,2-Dichloroethene	ND	*1.26*	ND	*4.99*	05/07/26	LD	5	
trans-1,3-Dichloropropene	ND	*1.10*	ND	*4.99*	05/07/26	LD	5	
Trichloroethene	27.0	*0.185*	145	*0.99*	05/07/26	LD	5	
Trichlorofluoromethane	ND	*0.891*	ND	*5.00*	05/07/26	LD	5	
Trichlorotrifluoroethane	ND	*0.653*	ND	*5.00*	05/07/26	LD	5	
Vinyl Chloride	ND	*0.390*	ND	*1.00*	05/07/26	LD	5	
QA/QC Surrogates/Internals								
% Bromofluorobenzene (5x)	103	*%*	103	*%*	05/07/26	LD	5	
% IS-1,4-Difluorobenzene (5x)	142	*%*	142	*%*	05/07/26	LD	5	3
% IS-Bromochloromethane (5x)	138	*%*	138	*%*	05/07/26	LD	5	
% IS-Chlorobenzene-d5 (5x)	145	*%*	145	*%*	05/07/26	LD	5	3
% Bromofluorobenzene (75x)	95	*%*	95	*%*	05/08/26	LD	75	
% IS-1,4-Difluorobenzene (75x)	72	*%*	72	*%*	05/08/26	LD	75	

Ver 1

Project ID: 145-11 LIBERTY AVENUE
Client ID: SV1

Phoenix I.D.: CV90200

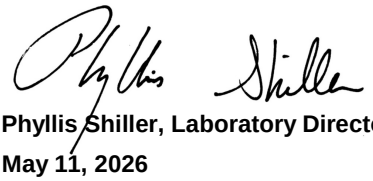
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
% IS-Bromochloromethane (75x)	75	%	75	%	05/08/26	LD	75
% IS-Chlorobenzene-d5 (75x)	77	%	77	%	05/08/26	LD	75

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.
3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 11, 2026
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Canister Sampling Information

May 11, 2026

FOR: Attn: Mr Kevin Brussee
Brussee Environmental Corp
1150 Lincoln Avenue – Suite 4
Holbrook, NY 11741

Location Code: BRUSSEE

SDG I.D.: GCV90196

Project ID: 145-11 LIBERTY AVENUE

						Laboratory					Field			
Client Id	Lab Id	Canister Id	Canister Type	Reg. Id	Chk Out Date	Out Hg	In Hg	Out Flow	In Flow	Flow RPD	Start Hg	End Hg	Sampling Start Date	Sampling End Date
SV4	CV90196	49254	6.0L	19857	05/01/26	-30	-8	43	45	4.5	-30	-8	05/04/26 11:55	05/04/26 13:36
SV5	CV90197	214	6.0L	10655	05/01/26	-30	-7	43	42	2.4	-29	-7	05/04/26 11:58	05/04/26 13:52
SV3	CV90198	5583	6.0L	7024	05/01/26	-30	-6	42	44	4.7	-30	-6	05/04/26 12:02	05/04/26 13:55
SV2	CV90199	53465	6.0L	22570	05/01/26	-30	-8.5	43	44	2.3	-29	-8	05/04/26 12:00	05/04/26 13:41
SV1	CV90200	23871	6.0L	10756	05/01/26	-30	-7	43	46	6.7	-28	-7	05/04/26 12:08	05/04/26 13:57

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

QA/QC Report

May 11, 2026

QA/QC Data

SDG I.D.: GCV90196

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 839240 (ppbv), QC Sample No: CV91064 (CV90196 (5X) , CV90197 (5X) , CV90198 (5X) , CV90199 (5X) , CV90200 (5X))													
Volatiles													
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	95	ND	ND	ND	ND	NC	70 - 130	25	
1,1,1-Trichloroethane	ND	0.200	ND	1.09	96	ND	ND	ND	ND	NC	70 - 130	25	
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37	115	ND	ND	ND	ND	NC	70 - 130	25	
1,1,2-Trichloroethane	ND	0.200	ND	1.09	104	ND	ND	ND	ND	NC	70 - 130	25	
1,1-Dichloroethane	ND	0.200	ND	0.81	110	ND	ND	ND	ND	NC	70 - 130	25	
1,1-Dichloroethene	ND	0.200	ND	0.79	110	ND	ND	ND	ND	NC	70 - 130	25	
1,2,4-Trichlorobenzene	ND	0.490	ND	3.63	119	ND	ND	ND	ND	NC	70 - 130	25	
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	123	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dibromoethane(EDB)	ND	0.190	ND	1.46	103	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichlorobenzene	ND	0.200	ND	1.20	110	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichloroethane	ND	0.200	ND	0.81	103	ND	ND	ND	ND	NC	70 - 130	25	
1,2-dichloropropane	ND	0.190	ND	0.88	108	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichlorotetrafluoroethane	ND	0.200	ND	1.40	114	ND	ND	ND	ND	NC	70 - 130	25	
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	113	ND	ND	ND	ND	NC	70 - 130	25	
1,3-Butadiene	ND	0.200	ND	0.44	125	ND	ND	ND	ND	NC	70 - 130	25	
1,3-Dichlorobenzene	ND	0.200	ND	1.20	111	ND	ND	ND	ND	NC	70 - 130	25	
1,4-Dichlorobenzene	ND	0.200	ND	1.20	114	ND	ND	ND	ND	NC	70 - 130	25	
1,4-Dioxane	ND	0.200	ND	0.72	125	ND	ND	ND	ND	NC	70 - 130	25	
2,2,4-Trimethylpentane	ND	0.200	ND	0.93	118	ND	ND	ND	ND	NC	70 - 130	25	
2-Hexanone(MBK)	ND	0.244	ND	1.00	141	ND	ND	ND	ND	NC	70 - 130	25	I
4-Ethyltoluene	ND	0.200	ND	0.98	119	ND	ND	ND	ND	NC	70 - 130	25	
4-Isopropyltoluene	ND	0.182	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25	
4-Methyl-2-pentanone(MIBK)	ND	0.500	ND	2.05	131	ND	ND	ND	ND	NC	70 - 130	25	I
Acetone	ND	5.00	ND	11.9	98	40.8	42.3	17.2	17.8	NC	70 - 130	25	
Acrylonitrile	ND	0.461	ND	1.00	162	4.21	4.01	1.94	1.85	NC	70 - 130	25	I
Benzene	ND	0.200	ND	0.64	113	0.72	0.67	0.227	0.211	NC	70 - 130	25	
Benzyl chloride	ND	0.193	ND	1.00	122	ND	ND	ND	ND	NC	70 - 130	25	
Bromodichloromethane	ND	0.200	ND	1.34	97	ND	ND	ND	ND	NC	70 - 130	25	
Bromoform	ND	0.200	ND	2.07	102	ND	ND	ND	ND	NC	70 - 130	25	
Bromomethane	ND	0.200	ND	0.78	111	ND	ND	ND	ND	NC	70 - 130	25	
Carbon Disulfide	ND	0.500	ND	1.56	107	ND	ND	ND	ND	NC	70 - 130	25	
Carbon Tetrachloride	ND	0.200	ND	1.26	97	ND	ND	ND	ND	NC	70 - 130	25	
Chlorobenzene	ND	0.200	ND	0.92	103	ND	ND	ND	ND	NC	70 - 130	25	
Chloroethane	ND	0.500	ND	1.32	114	ND	ND	ND	ND	NC	70 - 130	25	
Chloroform	ND	0.200	ND	0.98	100	1.79	1.81	0.367	0.371	NC	70 - 130	25	
Chloromethane	ND	0.500	ND	1.03	126	2.06	2.11	0.999	1.02	NC	70 - 130	25	
Cis-1,2-Dichloroethene	ND	0.200	ND	0.79	111	ND	ND	ND	ND	NC	70 - 130	25	
cis-1,3-Dichloropropene	ND	0.200	ND	0.91	115	ND	ND	ND	ND	NC	70 - 130	25	
Cyclohexane	ND	0.200	ND	0.69	105	ND	ND	ND	ND	NC	70 - 130	25	
Dibromochloromethane	ND	0.200	ND	1.70	100	ND	ND	ND	ND	NC	70 - 130	25	

QA/QC Data

SDG I.D.: GCV90196

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits	
Dichlorodifluoromethane	ND	0.500	ND	2.47	107	2.62	ND	0.531	ND	NC	70 - 130	25	
Ethanol	ND	5.00	ND	9.42	120	1380 E	1390	734 E	737	0.4	70 - 130	25	
Ethyl acetate	ND	0.278	ND	1.00	122	16.0	16.0	4.45	4.44	0.2	70 - 130	25	
Ethylbenzene	ND	0.200	ND	0.87	113	ND	ND	ND	ND	NC	70 - 130	25	
Heptane	ND	0.200	ND	0.82	123	3.33	3.53	0.814	0.861	NC	70 - 130	25	
Hexachlorobutadiene	ND	0.200	ND	2.13	104	ND	ND	ND	ND	NC	70 - 130	25	
Hexane	ND	0.200	ND	0.70	125	ND	ND	ND	ND	NC	70 - 130	25	
Isopropylalcohol	ND	5.00	ND	12.3	118	14.7	14.4	5.98	5.86	NC	70 - 130	25	
Isopropylbenzene	ND	0.204	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25	
m,p-Xylene	ND	0.500	ND	2.17	118	ND	ND	ND	ND	NC	70 - 130	25	
Methyl Ethyl Ketone	ND	0.500	ND	1.47	121	2.33	2.25	0.791	0.762	NC	70 - 130	25	
Methyl tert-butyl ether(MTBE)	ND	0.200	ND	0.72	116	ND	ND	ND	ND	NC	70 - 130	25	
Methylene Chloride	ND	0.500	ND	1.74	108	ND	ND	ND	ND	NC	70 - 130	25	
Naphthalene	ND	0.490	ND	2.56	127	ND	ND	ND	ND	NC	70 - 130	25	
n-Butylbenzene	ND	0.182	ND	1.00	120	ND	ND	ND	ND	NC	70 - 130	25	
o-Xylene	ND	0.200	ND	0.87	116	ND	ND	ND	ND	NC	70 - 130	25	
Propylene	ND	0.581	ND	1.00	116	ND	ND	ND	ND	NC	70 - 130	25	
sec-Butylbenzene	ND	0.182	ND	1.00	117	ND	ND	ND	ND	NC	70 - 130	25	
Styrene	ND	0.200	ND	0.85	121	2.26	2.16	0.532	0.507	NC	70 - 130	25	
Tetrachloroethene	ND	0.200	ND	1.36	98	ND	ND	ND	ND	NC	70 - 130	25	
Tetrahydrofuran	ND	5.00	ND	14.7	134	ND	ND	ND	ND	NC	70 - 130	25	I
Toluene	ND	0.200	ND	0.75	110	7.08	7.16	1.88	1.90	1.1	70 - 130	25	
Trans-1,2-Dichloroethene	ND	0.200	ND	0.79	107	ND	ND	ND	ND	NC	70 - 130	25	
trans-1,3-Dichloropropene	ND	0.200	ND	0.91	112	ND	ND	ND	ND	NC	70 - 130	25	
Trichloroethene	ND	0.200	ND	1.07	101	ND	ND	ND	ND	NC	70 - 130	25	
Trichlorofluoromethane	ND	0.200	ND	1.12	94	1.20	1.20	0.213	0.214	NC	70 - 130	25	
Trichlorotrifluoroethane	ND	0.200	ND	1.53	104	ND	ND	ND	ND	NC	70 - 130	25	
Vinyl Chloride	ND	0.200	ND	0.51	120	ND	ND	ND	ND	NC	70 - 130	25	
% Bromofluorobenzene	95	%	95	%	97	101	98	101	98	NC	70 - 130	25	
% IS-1,4-Difluorobenzene	91	%	91	%	102	91	91	91	91	NC	60 - 140	25	
% IS-Bromochloromethane	94	%	94	%	97	89	91	89	91	NC	60 - 140	25	
% IS-Chlorobenzene-d5	95	%	95	%	110	92	94	92	94	NC	60 - 140	25	

QA/QC Batch 839464 (ppbv), QC Sample No: CV91064 (CV90197 (10X) , CV90198 (75X) , CV90199 (75X) , CV90200 (75X))

Volatiles

Tetrachloroethene	ND	0.200	ND	1.36	98	ND	ND	ND	ND	NC	70 - 130	25	
% Bromofluorobenzene	95	%	95	%	97	101	98	101	98	NC	70 - 130	25	
% IS-1,4-Difluorobenzene	91	%	91	%	102	91	91	91	91	NC	60 - 140	25	
% IS-Bromochloromethane	94	%	94	%	97	89	91	89	91	NC	60 - 140	25	
% IS-Chlorobenzene-d5	95	%	95	%	110	92	94	92	94	NC	60 - 140	25	

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
May 11, 2026

Monday, May 11, 2026

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCV90196 - BRUSSEE

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

May 11, 2026 SDG I.D.: GCV90196

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

AIRSIM

CHEM39 05/06/26-1: CV90196, CV90197, CV90198, CV90199, CV90200

The following Continuing Calibration compounds did not meet % deviation criteria: Ethanol 144%H (30%), Naphthalene 44%L (30%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: Ethanol 144%H (30%), Naphthalene 44%L (30%)

CHAIN OF CUSTODY RECORD
AIR ANALYSES

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax: 860.645.0823
BRUSSEE
860-645-1102
email: greg@phoenixlabs.com

P.O. # |

Data Delivery:
☐ Fax #:
☒ Email:
☐ Phone #:

Report to:	Jessica Johnson	Project Name: 145-11 Liberty Avenue	Data Format: (Circle) Equis Excel Other:
Customer:	Brussee Environmental Corp	Invoice to: BEC	Requested Deliverable: RCP ASP CAT B
Address:	1150 Lincoln Avenue – Suite 4		MCP NJ Deliverables
19189	Holbrook, NY 11741	Sampled by: Thomas Gallo	Quote Number:

Phoenix ID #	Client Sample ID	Canister ID #	Canister Size (L)	Outgoing Canister Pressure (" Hg)	Incoming Canister Pressure ("Hg)	Flow Regulator ID #	Flow Controller Setting (mL/min)	Sampling Start Time	Sampling End Time	Sample Start Date	Canister Pressure at Start (" Hg)	Canister Pressure at End ("Hg)	Ambient/Indoor Air	Soil Gas	Grab (G) Composite (C)	TO-15	APH	
		THIS SECTION FOR LAB USE ONLY											MATRIX			ANALYSES		
90196	SV4	49254	6.0L	-30	-8	19857	43	11:55	13:36	5/4	-30	-8		X		X		
90197	SV5	214	6.0L	-30	-7	10655	43	11:58	13:52	5/4	-29	-7		X		X		
90198	SV3	5583	6.0L	-30	-6	7024	42	12:02	13:55	5/4	-30	-6		X		X		
90199	SV2	53465	6.0L	-30	-8.5	22570	43	12:00	13:41	5/4	-29	-8		X		X		
90200	SS1	23871	6.0L	-30	-7	10756	43	12:08	13:57	5/4	-28	-7		X		X		
	Did Not Use	*53546	6.0L	-30		22599	43											

Relinquished by:	Accepted by:	Date:	Time:
		5/5/24	1320
		5/5/24	10:38

I attest that all media released by Phoenix Environmental Laboratories, Inc. have been received in good working condition and agree to the terms and conditions as listed on the back of this document:

Signature: _____ Date: _____

State Where Samples Collected: NY

SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION:

(6) - 6.0L 2 hr , 6 Connectors

* Rec unused

Turnaround Time:
1 Day* ☐
2 Day* ☐
3 Day* ☐
4 Day* ☐
5 Day* ☐
Standard ☒
*SURCHARGES MAY APPLY

Requested Criteria: (Please Circle)

CT:	MA:	NJ:	NY:	PA:	VT:
TAC I/C TAC RES SVVC I/C SVVC RES GWV I/C GWV CES	**Indoor Air:** Residential Ind/Commercial **Soil Gas:** Residential Ind/Commercial	**Indoor Air:** Residential Ind/Commercial **Soil Gas:** Residential Ind/Commercial	Vapor Intrusion	**Indoor Air** Residential Non-residential	**Indoor Air** Residential Industrial **Sub-slab** Residential Industrial

APPENDIX C
GPR Report

Coastal Environmental Solutions, Inc.
79 Cedarhurst Ave, Medford, NY 11763
www.CoastalEnvSolutions.com

GEOPHYSICAL INVESTIGATION REPORT

145-11 Liberty Ave, Queens, NY
Date of Investigation: 05/04/2026

Prepared for:
Brussee Environmental Corp.

Prepared By:
Dennis Bertolli
Director of Geophysical Operations

1.0 INTRODUCTION

On 05/04/2026, Coastal Environmental Solutions, Inc (Coastal) personnel performed a limited Geophysical Investigation at 145-11 Liberty Ave, Queens, NY. The areas of interest included the lot surrounding the building on site and areas within the building as directed by the client. Surface conditions consisted of asphalt and concrete.

2.0 SCOPE OF WORK

1. Clear locations across the site for the purpose of soil boring, soil vapor, and temporary monitoring well installations.

3.0 STANDARD EQUIPMENT

ImpulseRadar PinPointR Ultra-Wide Band (UWB) Penetrating Radar System

Ground Penetrating RADAR (GPR) is a non-destructive geophysical method that produces a continuous cross-sectional profile of subsurface features in real time. GPR operates by transmitting both high and low frequency electromagnetic wave pulses down into the ground through a transmitter in the antenna. The transmitted electromagnetic waves reflect off materials with contrasting dielectric properties from surrounding medium such as underground storage tanks, utilities, distinct contacts between different earth materials, and other various subsurface objects. The antenna receiver collects the reflected electromagnetic waves which are then interpreted by the operator.

The ImpulseRadar PinPointR UWB GPR utilizes a dual band 400/800 MHz HS antenna mounted to a stroller frame which rolls over the surface. The total depth of penetration achieved with the antenna can be up to 10 feet but widely varies based on site-specific subsurface conditions. Conductive materials in the soil attenuate the GPR signal causing a decrease in effective depth of penetration and clarity.

Proceq GP8000 GPR System

The Proceq GP8000 is a portable concrete scanner capable of inspecting the shallow subsurface below concrete surfaces in areas that larger equipment cannot reach. The GP8000 measures approximately the size of a shoebox and provides a high quality GPR image with its modulated 200-4000Mhz frequency to a maximum depth of approximately 30 inches below grade surface. This device is better suited than a cart-mounted GPR unit for identifying smaller objects within the subsurface such as mesh, rebar or post tension cable reinforcement, conduits smaller than 1” in diameter, and small voids.

Vivax-Metrotech vLoc3-Pro Receiver/Transmitter

The vLoc3-Pro Receiver is a hand-operated antenna capable of detecting electromagnetic (EM) fields emitted from a source. The EM antenna can detect pipes and cables in the ground at depths of up to 20 feet using active or passive tracing techniques. Passive tracing is the act of locating an underground utility through the detection of electrical or radio signals travelling along conductive utilities. Active tracing is used in conjunction with the Transmitter that is directly connected to the target utility or to a conductive rodder within a non-conductive line. A signal is sent through the

utility at a specific frequency that can be detected by the Receiver. The detectability of a target utility depends on many factors including access to the target utility, grounding, depth of utility, conductivity, and other site-specific factors. Disclaimer: This unit detects the EM field around a wire and does not indicate the current or voltage traveling through a line. An assessment from a licensed electrician regarding the status of an electrical circuit will always be advised.

TW-6 Pipe and Cable Locator

The TW-6 Pipe and Cable locator is a handheld magnetometer which utilizes a transmitter-receiver pair attached to opposite ends of a handle and carried approximately 1-2ft from the surface. The magnetometer induces an electromagnetic (EM) field into the ground that is generated by the transmitter. Once the induced EM field passes through a buried metallic object, it generates a secondary EM field which is detected by the receiver, generating an audible tone. Based on the calibration of the magnetometer, the audible tone reflects the strongest response as the highest pitched sound, trailing off on all sides of the peak. This piece of technology can be used to detect subsurface features such as metallic USTs, large diameter conductive pipes, and buried manholes, especially in areas in which traditional GPR methods cannot be utilized, such as overgrown or uneven surfaces.

4.0 METHODOLOGY

1. A subsurface investigation is performed in close proximity to the client proposed locations. Active and passive detection methods are utilized with the VLoc3-Pro receiver/transmitter. Coastal personnel will directly connected to all accessible and traceable pipes, conduits, valve covers, and any other relevant surface feature throughout the site. A passive scan is performed throughout the site to detect any potential underground utilities that cannot be located with active scan.
2. (If applicable) The TW-6 is utilized to sweep accessible areas around suspect locations in 3-to-5-foot spacings for readings that may represent a buried metallic anomaly. Upon detection of a reading, the approximate size and shape of the anomalous area is marked on the surface to be investigated further with GPR.
3. GPR is utilized to further characterize the approximate dimensions, depth, and shape of the anomalies located with the TW-6 (if applicable) and all other detections. The remainder of the areas around the suspected locations are scanned with GPR in 3-to-5-foot spacing to locate any anomalous features not previously detected such as non-conductive piping and former excavations.
4. If permitted to utilize spray paint, all findings are marked on the surface utilizing the American Public Works Association (APWA) recommended color code, seen below. If not allowed to use paint, chalk or tape are used to temporarily mark findings on a finished surface.

WHITE	Proposed Excavation
PINK	Temporary Survey Markings (Approximate UST Locations, Soil Boring Locations)
RED	Electric Power Lines, Cables, Conduit and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum or Gaseous Materials
ORANGE	Communication, Alarm or Signal Lines, Cables or Conduit
BLUE	Water (Domestic and Fire Lines)

PURPLE	Irrigation, Slurry, Reclaimed Water
GREEN	Sewers and Drain Lines

5.0 SUMMARY OF FINDINGS

Geophysical Investigation

Coastal personnel conducted a limited Geophysical Investigation within all accessible areas as indicated by the client. A thorough investigation occurred around the area indicated as the scope of work, beginning with a visual inspection of the site to identify surface features and other relevant findings prior to utilizing our equipment.

Coastal identified many features related to utilities and other subsurface detections across the site. All detections were marked ahead of clearing the proposed soil boring, vapor, and well locations as the site was very busy with structures. Features discovered included electrical, drainage, and one Underground Storage Tank (which was detected but not marked in field as it was not nearby any proposed boring locations).

Limitations

The effective depth of GPR penetration was limited to approximately 4 feet below the grade surfaces. The limiting factor was likely due to soil conductivity attenuating the GPR signal, shallow bedrock containing moisture, or non-conductive materials utilized for the utilities. The GPR broadcasts its signal directly down through the center of the antenna and is unable to be effectively used directly against a wall. The TW-6 is unable to be utilized within close proximity to any solid metallic or metal-reinforced features such as parked vehicles, exterior walls, and over metal-reinforced concrete.

Disclaimer

The subsurface investigation was performed by Coastal after considering the limits of the scope of work and the time constraint for the investigation. The investigation that is described in this report was undertaken in accordance with current accepted standards and practices of the geophysical survey industry. The results and interpretations that are presented are based on professional judgment and are as accurate as can reasonably be achieved. However, no geophysical equipment can accurately depict all subsurface features due to the geology and environmental conditions of the subsurface. Any intrusive work in proximity to identified anomalies should be carefully considered and cross-referenced with all available site-specific documentation. Coastal is not liable for the use, interpretation, or application of the data and information in this report.

ATTACHMENTS



Photo 1. View of one of the cleared soil borings outside of the building on site.



Photo 2. One of the multiple drainage structures on site.



Photo 3. Drainage and electrical structures outside of the building.



Photo 4. Proposed vapor and boring locations.

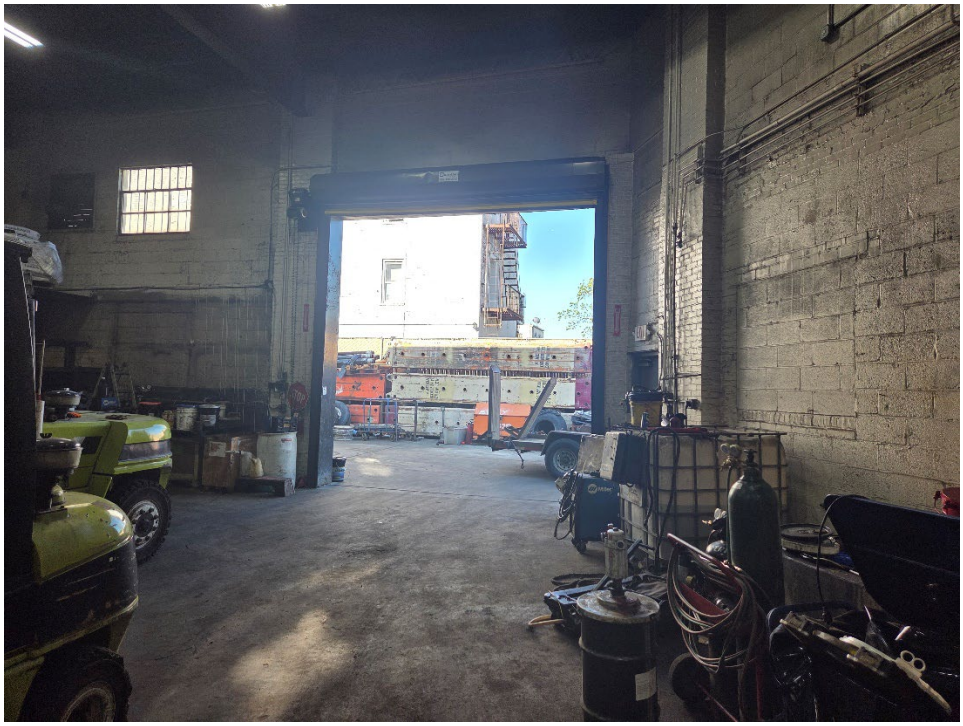
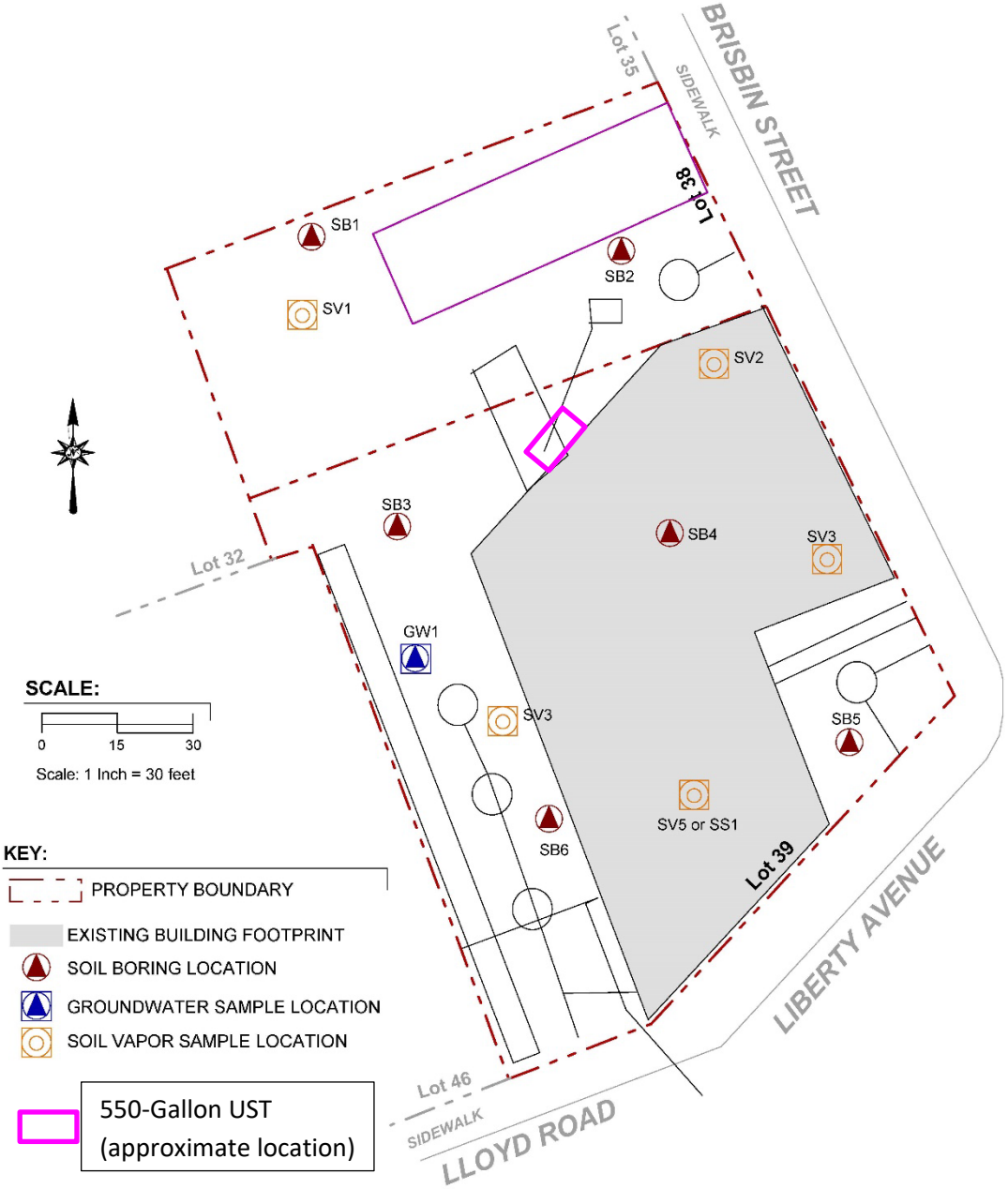


Photo 5. Area cleared within the building on site,



Photo 6. Fill port and access hatch above a known UST detected outside of the building.



797 North Country Road
Rocky Point, NY 11778
Phone: 631-504-6000

Figure No. 1

Site Name: Almedia Concrete Equipment, Inc.

Site Address: 145-11 Liberty Avenue, Queens, NY

Drawing Title: Proposed Samping Locations

APPENDIX B
Field Sampling Plan

HALEY ALDRICH

www.haleyaldrich.com

FIELD SAMPLING PLAN
145-11 LIBERTY AVENUE
QUEENS, NEW YORK

by
H & A of New York Engineering and Geology, LLP
New York, New York

for
GRUN JAMAICA 1 LLC
Brooklyn, New York

File No. 0215824
June 2026

Table of Contents

Page

List of Appendices iv

1. Introduction 1

2. Field Program 2

3. Utility Clearance 3

4. Field Data Recording 6

4.1 WRITTEN FIELD DATA 6
4.2 ELECTRONIC DATA 7

5. Aquifer Characterization 9

5.1 PROCEDURE 9

6. Sample Collection for Laboratory Analysis 10

6.1 SOIL SAMPLE COLLECTION FOR LABORATORY ANALYSIS 10
6.1.1 Preparatory Requirements 10
6.1.2 Soil Classification 10
6.1.3 Soil Sampling 12
6.1.4 Sampling Techniques 12
6.2 GROUNDWATER SAMPLE COLLECTION FOR LABORATORY ANALYSIS 12
6.2.1 Preparatory Requirements 13
6.2.2 Well Development 13
6.2.3 Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method) 14
6.2.4 Sampling Techniques 14
6.3 SOIL VAPOR SAMPLING 17
6.3.1 Preparatory Requirements 17
6.3.2 Sampling Techniques 17
6.4 SAMPLE HANDLING AND SHIPPING 18
6.4.1 Sample Handling 18
6.4.2 Sample Labeling 18
6.4.3 Field Code 19
6.4.4 Packaging 19
6.4.5 Chain-of-Custody Records 20
6.4.6 Shipment 21

7. Field Instruments – Use and Calibration 22

7.1 GENERAL PROCEDURE DISCUSSION 22
7.2 DECONTAMINATION OF MONITORING EQUIPMENT 23

Table of Contents

Page

7.3 DISPOSAL OF WASH SOLUTIONS AND CONTAMINATED EQUIPMENT 23

8. Investigation-Derived Waste Disposal 24

8.1 RATIONALE/ASSUMPTIONS 24
8.2 PROCEDURE 24

References ii

List of Appendices

Appendix	Title
A	Field Forms

1. Introduction

This Field Sampling Plan (FSP) has been prepared as a component of the Remedial Investigation Work Plan (RIWP) for the property located at 145-11 Liberty Avenue in Queens, New York (the "Site"). This document was prepared to establish field procedures for field data collection to be performed in support of the RIWP for the Site.

The RIWP includes this FSP, a Quality Assurance Project Plan (QAPP), a Health and Safety Plan (HASP), and a Community Air Monitoring Plan (CAMP), which are included as part of this plan by reference.

The standard operating procedures (SOPs) included as components of this plan will provide the procedures necessary to meet the project objectives. The SOPs will be used as reference for the methods to be employed for field sample collection and handling and the management of field data collected in the execution of the approved RIWP. The SOPs include numerous methods to execute the tasks of the RIWP. The Project Manager will select the appropriate method as required by field conditions and/or the objective of the respective project task at the time of sample collection. Field procedures will be conducted in general accordance with the New York State Department of Environmental Conservation (NYSDEC) *Technical Guidance for Site Investigation and Remediation (DER-10)* and the *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) under NYSDEC's Part 375 Remedial Programs*, when applicable.

2. Field Program

This FSP provides the general purpose of sampling as well as procedural information. The RIWP contains the details on sampling and analysis (locations, depths, frequency, analyte lists, etc.).

The field program has been designed to acquire the necessary data to comply with the RIWP, and includes the following tasks:

- Soil sampling;
- Groundwater sampling;
- Soil vapor sampling;
- Sampling of investigation-derived waste (IDW) as needed for disposal.

Based on the findings of the May 2026 Phase II Site Investigation, primary contaminants of concern (COCs) at the Site are lead, polyaromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs) including trichloroethane (PCE). Petroleum-related VOCs include benzene, toluene, ethylbenzene and xylenes (BTEX), trichloroethane (TCE), and PCE were detected at limited concentrations in soil vapor.

Previous investigations did not comprehensively delineate the extent of soil, groundwater, and soil vapor contamination at the Site. A Remedial Investigation (RI) will be performed upon acceptance of the Site into the BCP and approval of the RIWP, which will include additional targeted soil, groundwater, and soil vapor sampling. Results of the additional sample analyses will be used to confirm the results of the previous Site characterization activities, potentially identify an on-Site/off-Site source, and determine a course for Remedial Action.

These SOPs presented herein may be changed as required, dependent on Site conditions or equipment limitations at the time of sample collection. If the procedures employed differ from the SOP, the deviations will be documented in the associated sampling report.

3. Utility Clearance

Invasive remedial activities, such as excavation or remedial construction activities, require the location of underground utilities prior to initiating work. Such clearance is sound practice in that it minimizes the potential for damage to underground facilities and, more importantly, is protective of the health and safety of personnel. Under no circumstances will invasive activities be allowed to proceed without obtaining proper utility clearance by the appropriate public agencies and/or private entities. This clearance requirement applies to all work on both public and private property, whether located in a dense urban area or a seemingly out-of-the-way rural location.

The drilling contractor performing the work will be responsible for obtaining utility clearance.

Utility clearance is required by law, and obtaining clearance includes contacting a public or private central clearance agency via a "one-call" telephone service and providing the proposed exploration location information. It is important to note that public utility agencies may not, and usually do not, have information regarding utility locations on private property.

Before beginning subsurface work at any proposed exploration locations, it is critical that all readily available information on underground utilities and structures be obtained. This includes publicly available information as well as information in the possession of private landowners. Any drawings obtained must be reviewed in detail for information pertaining to underground utilities.

Using the information obtained, the Site should be viewed in detail for physical evidence of buried lines or structures, including pavement cuts and patches, variation in or lack of vegetation, variations in grading, etc. Care must also be taken to avoid overhead utilities as well. Presence of surface elements of buried utilities should be documented, such as manholes, gas or water service valves, catch basins, monuments, or other evidence.

Overhead utility lines must be considered when choosing exploration and excavation locations. Most states require a minimum of 10 feet (ft) of clearance between equipment and energized wires. Such separation requirements may also be voltage-based and may vary depending on state or municipality regulations. In evaluating clearance from overhead lines, the same restrictions may apply to "drops," or wires on a utility pole connecting overhead and underground lines.

Using the information obtained and observations made, proposed exploration or construction locations should be marked in the field. Marking locations can be accomplished using spray paint on the ground, stakes, or other means. All markings of proposed locations should be made in white, in accordance with the generally accepted universal color code for facilities identification (American Public Works Association [APWA] 4/99):

- White: Proposed Excavation or Drilling location
- Pink: Temporary Survey Markings
- Red: Electrical Power Lines, Cables, Conduit and Lighting Cables
- Yellow: Gas, Oil, Steam, Petroleum or Gaseous Materials
- Orange: Communication, Alarm or Signal Lines, Cables or Conduits

- Blue: Potable Water
- Purple: Reclaimed Water, Irrigation and Slurry Lines
- Green: Sewers and Drain Lines

In order to effectively evaluate the proposed locations with these entities, detailed, accurate measurements between the proposed locations and existing surface features should be obtained. Such features can be buildings, street intersections, utility poles, guardrails, etc.

Obtaining the utility clearance generally involves the designated "one-call" underground facilities protection organization for the area and the landowner, and one or both of the following methods:

- A third-party utility locator company will be utilized to locate underground utilities outside of the public right-of-way; and/or
- "Soft dig" excavation techniques to confirm or deny the presence of underground utilities in the area.

The proposed locations should be evaluated in light of the information available for existing underground facilities. The detailed measurement information described above will be required by the "one-call" agency. The owners of the applicable, participating underground utilities are obligated to mark their respective facilities at the Site in the colors described above. Utility stake-out activities will typically not commence for approximately 72 hours after the initial request is made.

The public and private utility entities generally only mark the locations of their respective underground facilities within public rights-of-way. Determination of the locations of these facilities on private property will be the responsibility of the property owner or Contractor. If available information does not contain sufficient detail to locate underground facilities with a reasonable amount of confidence, alternate measures may be appropriate, as described below. In some cases, the memory of a long-time employee of a facility on private property may be the best or only source of information. It is incumbent on the Consultant or Contractor to exercise caution and use good judgement when faced with uncertainty.

Note: It is important to note that not all utilities are participants in the "one-call" agency or process. As such, inquiries must be made with the "one-call" agency to determine which entities do not participate, so they can be contacted independently.

Most utility stakeouts have a limited time period for which they remain valid, typically two to three weeks. It is critical that this time period be considered to prevent expiration of clearance prior to completion of the invasive activities and the need to repeat the stake-out process.

Care must be exercised to document receipt of notice from the involved agencies of the presence or absence of utilities in the vicinity of the proposed locations.

Most agencies will generally provide a telephone or fax communication indicating the lack of facilities in the project area. If contact is not made by all of the agencies identified by the "one-call" process, do not assume that such utilities are not present. Recontact the "one-call" agency to determine the status.

For complicated sites with multiple proposed locations and multiple utilities, it is advisable to arrange an on-Site meeting with utility representatives. This will minimize the potential for miscommunication amongst the involved parties.

Completion of the utility stake out process is not a guarantee that underground facilities will not be encountered in excavations or boreholes; in fact, most "one-call" agencies and individual utilities do not offer guarantees, nor do they accept liability for damage that might occur. In areas outside the public right-of-way, a utility locating service may be utilized to locate underground utilities. It is advisable that any invasive activities proceed with extreme caution in the upper 4 to 5 ft in the event the clearance has failed to identify an existing facility. This may necessitate hand-excavation or probing to confirm potential presence of shallow utilities. If uncertainty exists for any given utility, extra activities can be initiated to solve utility clearance concerns. These options include:

- Screening the proposed work areas with utility locating devices and/or hiring a utility locating service to perform this task.
- Hand digging, augering, or probing to expose or reveal shallow utilities and confirm presence and location. In northern climates, this may require advancing to below the frost line, typically at least 4 ft.
- Using "soft dig" techniques that utilize specialized tools and compressed air to excavate soils and locate utilities. This technique is effective in locating utilities to a depth of 4 to 5 ft.

Equipment/Materials:

- White spray paint
- Wooden stakes, painted white or containing white flagging
- Color-code key
- Available drawings

4. Field Data Recording

This procedure describes the protocol for documenting the investigation activities in the field. Field data serves as the cornerstone for an environmental project, not only for Site characterization but for additional phases of investigation or remedial design. Producing defensible data includes proper and appropriate recording of field data as it is obtained in a manner to preserve the information for future use. This procedure provides guidelines for accurate, thorough collection and preservation of written and electronic field data.

Field data to be recorded during the project generally includes, but is not limited to, the following:

- general field observations;
- numeric field measurements and instrument readings;
- quantity estimates;
- sample locations and corresponding sample numbers;
- relevant comments and details pertaining to the samples collected;
- documentation of activities, procedures, and progress achieved;
- contractor pay item quantities;
- weather conditions;
- a listing of personnel involved in site-related activities;
- a log of conversations, site meetings, and other communications; and,
- field decisions and pertinent information associated with the decisions.

4.1 Written Field Data

Written field data will be collected using a standardized, pre-printed field log form. In general, the use of a field log form is preferable as it prompts field personnel to make appropriate observations and record data in a standardized format. This promotes completeness and consistency from one person to the next. Otherwise, electronic data collection using a handheld device produces equal completeness and consistency using a preformatted log form.

In the absence of an appropriate pre-printed form, the data should be recorded in an organized and structured manner in a dedicated project field logbook. Logbooks must be hardcover, bound so that pages cannot be added or removed, and should be made from high-grade 50 percent rag paper with a water-resistant surface.

The following are guidelines for use of field log forms and logbooks:

1. Information must be factual and complete.
2. All entries will be made in black indelible ink with a ballpoint pen and will be written legibly. Do not use “rollerball” or felt tip-style pens, since the water-soluble ink can run or smear in the presence of moisture.

3. Field log forms should be consecutively numbered.
4. Each day's work must start on a new form/page.
5. At the end of each day, the current log book page or forms must be signed and dated by the field personnel making the entries.
6. Make data entries immediately upon obtaining the data. Do not make temporary notes in other locations for later transfer; this only increases the potential for error or loss of data.
7. Entry errors are to be crossed out with a single line and initialed by the person making the correction.
8. Do not leave blanks on log forms; if no entry is applicable for a given data field, indicate so with "NA" or a dash ("--").
9. At the earliest practical time, photocopies or typed versions of log forms and logbook pages should be made and placed in the project file as a backup in the event the book or forms are lost or damaged.
10. Logbooks should be dedicated to one project only, i.e., do not record data from multiple projects in one logbook.

4.2 Electronic Data

Electronic data recording involves electronic measurement of field information through the use of monitoring instruments, sensors, gauges, and equipment controls. The following is a list of guidelines for proper recording and management of electronic field data:

1. Field data management should follow the requirements of a project-specific data management plan (DMP), if applicable.
2. Use only instruments that have been calibrated in accordance with manufacturer's recommendations.
3. Usage of instruments, controls, and computers for the purpose of obtaining field data should only be performed by personnel properly trained and experienced in the use of the equipment and software.
4. Use only fully-licensed software on personal computers and laptops.
5. Loss of electronic files may mean loss of irreplaceable data. Every effort should be made to back up electronic files obtained in the field as soon as practical. A backup file placed on the file server will minimize the potential for loss.
6. Electronic files, once transferred from field instruments or laptops to office computers, should be protected if possible, to prevent unwanted or inadvertent manipulation or modification of data. Several levels of protection are usually available for spreadsheets, including making a file "read-only" or assigning a password to access the file.
7. Protect CDs from exposure to moisture, excessive heat or cold, magnetic fields, or other potentially damaging conditions.
8. Remote monitoring is often used to obtain stored electronic data from site environmental systems. A thorough discussion of this type of electronic field data recording is beyond the scope of this Section. Such on-site systems are generally capable of storing a limited amount of

data as a comma-delimited or spreadsheet file. Users must remotely access the monitoring equipment files via modem or other access and download the data. In order to minimize the potential for loss of data, access and downloading of data should be performed frequently enough to ensure the data storage capacity of the remote equipment is not exceeded.

Equipment/Materials:

- Appropriate field log forms, or iPad® or equivalent with preformatted log forms
- Indelible ballpoint pen (do not use “rollerball” or felt-tip style pens)
- Straight edge
- Pocket calculator
- Laptop computer (if required)

5. Aquifer Characterization

This procedure describes the measurement of water levels in groundwater monitoring.

A synoptic gauging round will be completed to obtain water levels in monitoring wells. Water levels will be acquired in a manner that provides accurate data that can be used to calculate vertical and horizontal hydraulic gradients and other hydrogeologic parameters. Accuracy in obtaining the measurements is critical to ensure the usability of the data.

5.1 Procedure

In order to provide reliable data, water level monitoring events should be collected over as short a period of time as practical. Barometric pressure can affect groundwater levels; therefore, observation of significant weather changes during the period of water level measurements must be noted. Rainfall events and groundwater pumping can also affect groundwater level measurements. Personnel collecting water level data must note if any of these controls are in effect during the groundwater level collection period. Due to possible changes during the groundwater level collection period, it is imperative that the time of data collection at each station be accurately recorded. Water levels will also be collected prior to any sample collection that day.

The depth to groundwater will be measured with an electronic depth-indicating probe. Prior to obtaining a measurement, a fixed reference point on the well casing will be established for each well to be measured. Unless otherwise established, the reference point is typically established and marked on the north side of the well casing. Do not use protective casings or flush-mounted road boxes as a reference, due to the potential for damage or settlement. The elevation of the reference point shall be obtained by accepted surveying methods, to the nearest 0.01 ft.

The water level probe will be lowered into the well until the meter indicates (via indicator light or tone) that the water has been reached. The probe will be raised above the water level and slowly lowered again until water is indicated. The cable will be held against the side of the inner protective casing at the point designated for water level measurements and a depth reading taken. This procedure will be followed three times or until a consistent value is obtained. The value will be recorded to the nearest 0.01 ft on the Groundwater Level Monitoring Report form. Upon completion, the probe will be raised to the surface and, together with the amount of cable that entered the well casing, will be decontaminated in accordance with the methods described in Equipment Decontamination Procedure.

Equipment/Materials:

- Battery-operated, non-stretch electronic water level probe with permanent markings at 0.01 ft. increments, such as the Solinst Model 101 or equivalent.
- The calibrated cable on the depth indicator will be checked against a surveyor's steel tape once per quarter year. A new cable will be installed if the cable has changed by more than 0.01 percent (0.01 ft for a 100-ft cable). See also the Field Instruments – Use and Calibration Procedure.
- Groundwater Level Monitoring Report form.

6. Sample Collection for Laboratory Analysis

6.1 SOIL SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following procedure is an introduction to soil sampling techniques and an outline of field staff responsibilities. All samples will be collected with dedicated sampling equipment.

6.1.1 Preparatory Requirements

Prior to the beginning of any remedial investigation or remedial measures activities, staff must attend a project briefing for the purpose of reviewing the project work plan, site and utility plans, drawings, applicable regulations, sampling location, depth, and criteria, site contacts, and other related documents. Health and safety concerns will be documented in a Site-specific HASP.

A file folder for the field activities should be created and maintained such that all relevant documents and log forms likely to be useful for the completion of field activities by others are readily available in the event of personnel changes.

6.1.2 Soil Classification

The stratigraphic log is a factual description of the soil at the borehole location and is relied upon to interpret the soil characteristics and their influence and significance in the subsurface environment. The accuracy of the stratigraphic log is to be verified by the person responsible for interpreting subsurface conditions. An accurate description of the soil stratigraphy is essential for a reasonable understanding of the subsurface conditions. Confirmation of the field description by examination of representative soil samples by the project geologist, hydrogeologist, or geotechnical engineer (whenever practicable) is recommended.

The ability to describe and classify soil correctly is a skill that is learned from a person with experience and by systematic training and comparison of laboratory results to field descriptions.

6.1.2.1 Data Recording

Several methods for classifying and describing soils or unconsolidated sediments are in relatively widespread use. The Unified Soil Classification System (USCS) is the most common. With the USCS, a soil is first classified according to whether it is predominantly coarse-grained or fine-grained.

The description of fill soil is similar to that of natural undisturbed soil except that it is identified as fill and not classified by USCS group, relative density, or consistency. Those logging soils must attempt to distinguish between soils that have been placed (i.e., fill) and not naturally present and soils that have been naturally present but disturbed (i.e., disturbed native).

It is necessary to identify and group soil samples consistently to determine the subsurface pattern or changes and non-conformities in soil stratigraphy in the field at the time of drilling. The stratigraphy in each borehole during drilling is to be compared to the stratigraphy found at the previously completed

boreholes to ensure that patterns or changes in soil stratigraphy are noted and that consistent terminology is used.

Visual examination, physical observations, and manual tests (adapted from ASTM D2488, visual-manual procedures) are used to classify and group soil samples in the field and are summarized in this subsection. ASTM D2488 should be reviewed for detailed explanations of the procedures. Visual-manual procedures used for soil identification and classification include:

- Visual determination of grain size, soil gradation, and percentage fines;
- Dry strength, dilatancy, toughness, and plasticity (thread or ribbon test) tests for identification of inorganic fine-grained soil (e.g., CL, CH, ML, or MH); and
- Soil compressive strength and consistency estimates based on thumb indent and pocket penetrometer (preferred) methods.

Soil characteristics like plasticity, strength, and dilatancy should be determined using the H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) Soil Identification Field Form.

6.1.2.2 Field Sample Screening

Upon the collection of soil samples, the soil is screened with a photoionization detector (PID) for the presence of organic vapor. This is accomplished by running the PID across the soil sample. The highest reading and sustained readings are recorded.

Note: The PID measurement must be done upwind of the excavating equipment or any running engines so that exhaust fumes will not affect the measurements.

Another method of field screening is headspace measurements. This consists of placing a portion of the soil sample in a sealable glass jar, placing aluminum foil over the jar top, and tightening the lid. Alternatively, plastic sealable bags may be utilized for a field screen in lieu of glass containers. The jar should only be partially filled. Shake the jar and set aside for at least 30 minutes. After the sample has equilibrated, the lid of the jar can be opened; the foil is punctured with the PID probe, and the air (headspace) above the soil sample is monitored. This headspace reading on the field form or in the field book is recorded. All headspace measurements must be completed under similar conditions to allow comparability of results. Soil classification and PID readings will be recorded in the daily field report.

Equipment/Materials:

- Pocket knife or small spatula
- Small handheld lens
- Stratigraphic Log (Overburden) (Form 2001)
- Tape measure
- When sampling for PFAS, acceptable materials for sampling include stainless steel, high-density polyethylene (HDPE), polyvinyl chloride (PVC), silicone, acetate, and polypropylene.

6.1.3 Soil Sampling

Soil samples will be collected from acetate liners installed by a track-mounted direct-push drill rig (Geoprobe®) operated by a licensed operator. Soil samples will be collected using a stainless-steel trowel or sampling spoon into laboratory-provided sample containers. If it is necessary to relocate any proposed sampling location due to terrain, utilities, access, etc., the Project Manager must be notified, and an alternate location will be selected.

Prior to use and between each sampling location at an environmental site, the sampling equipment must be decontaminated. All decontamination must be conducted in accordance with the project-specific plans or the methods presented in the SOPs.

6.1.4 Sampling Techniques

The following procedure describes typical soil sample collection methods for submission of samples to a laboratory for chemical analysis. The primary goal of soil sampling is to collect representative samples for examination and chemical analysis (if required).

Environmental soil samples obtained for chemical analyses are collected with special attention given to the rationale behind determining the precise zone to sample, the specifics of the method of soil extraction and the requisite decontamination procedures. Preservation, handling, and glassware for environmental soil samples vary considerably depending upon several factors, including the analytical method to be conducted and the analytical laboratory being used.

6.1.4.1 Grab Versus Composite Samples

A grab sample is collected to identify and quantify conditions at a specific location or interval. The sample is comprised of the minimum amount of soil necessary to make up the volume of the sample dictated by the required sample analyses. Composite samples may be obtained from several locations or along a linear trend (in a test pit or excavation). Sampling may occur within or across stratification.

6.2 GROUNDWATER SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following section describes two techniques for groundwater sampling: “Low-Stress/Low-Flow Methods” and “Typical Sampling Methods.”

“Low-Stress/Low-Flow” methods will be employed when collecting groundwater samples for the evaluation of volatile constituents (i.e., dissolved oxygen [DO]) or in fine-grained formations where sediment/colloid transport is possible. Analyses typically sensitive to colloidal transport issues include polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and metals.

The “Typical Sampling Methods” will be employed where parameters less sensitive to turbidity/sediment issues are being collected (general chemistry, pesticides, and other SVOCs).

Note: If non-aqueous phase liquids (NAPL) (light or dense) are detected in a monitoring well, groundwater sample collection will not be conducted, and the Project Manager must be contacted to determine a course of action.

6.2.1 Preparatory Requirements

- Verify well identification and location using borehole log details and location layout figures. Note the condition of the well and record any necessary repair work required.
- Prior to opening the well cap, measure the breathing space above the well casing with a handheld organic vapor analyzer to establish baseline breathing space VOC levels. Repeat this measurement once the well cap is opened. If either of these measurements exceeds the air quality criteria in the HASP, field personnel should adjust their personal protective equipment (PPE) accordingly.
- Prior to commencing the groundwater purging/sampling, a water level must be obtained to determine the well volume for hydraulic purposes. In some settings, it may be necessary to allow the water level time to equilibrate. This condition exists if a water-tight seal exists at the well cap and the water level has fluctuated above the top of screen, creating a vacuum or pressurized area in this air space. Three water level checks will verify that static water level conditions have been achieved.
- Calculate the volume of water in the well. Typically, overburden well volumes consider only the quantity of water standing in the well screen and riser; bedrock well volumes are calculated on the quantity of water within the open core hole and within the overburden casing.

6.2.2 Well Development

Well development is completed to remove fine-grained materials from the well but in such a manner as to not introduce fines from the formation into the sand pack. Well development continues until the well responds to water level changes in the formation (i.e., a good hydraulic connection is established between the well and formation) and the well produces clear, sediment-free water to the extent practical.

- Attach the appropriate pump and lower tubing into the well.
- Gauge well and calculate one well volume. Turn on the pump. If the well runs dry, shut off the pump and allow it to recover.
- Surging will be performed by raising and lowering the pump several times to pull fine-grained material from the well. Periodically measure turbidity level using a La Motte turbidity reader.
- The second and third steps will be repeated until turbidity is less than 50 nephelometric turbidity units (NTU) or when 10 well volumes have been removed.
- All water generated during cleaning and development procedures will be collected and contained on site in 55-gallon drums for future analysis and appropriate disposal.

Equipment:

- Appropriate health and safety equipment
- Knife
- Power source (generator)
- Field book
- Well Development Form (Form 3006)

- Well keys
- Graduated pails
- Pump and tubing
- Cleaning supplies (including non-phosphate soap, buckets, brushes, laboratory-supplied distilled/deionized water, tap water, cleaning solvent, aluminum foil, plastic sheeting, etc.)
- Water level meter

6.2.3 Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method)

The preferred method for groundwater sampling will be the low stress/low flow method described below.

- Slowly lower the pump, safety cable, tubing, and electrical lines into the well to the depth specified by the project requirements. The pump intake must be at the midpoint of the well screen to prevent disturbance and resuspension of any sediment in the screen base.
- Before starting the pump, measure the water level again with the pump in the well, leaving the water level measuring device in the well when completed.
- Purge the well at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level should be monitored approximately every five minutes, or as appropriate. A steady flow rate should be maintained that results in a drawdown of 0.3 ft or less. The rate of pumping should not exceed the natural flow rate conditions of the well. Care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record adjustments made to the pumping rates and water levels immediately after each adjustment.
- During the purging of the well, monitor and record the field indicator parameters (pH, temperature, conductivity, oxidation-reduction [redox] reaction potential [ORP], DO, and turbidity) approximately every five minutes. Stabilization is considered to be achieved when the final groundwater flow rate is achieved, and three consecutive readings for each parameter are within the following limits:
  - pH: 0.1 pH units of the average value of the three readings;
  - Temperature: 3 percent of the average value of the three readings;
  - Conductivity: 0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity less than 1 mS/cm and 0.01 mS/cm of the average value of the three readings for conductivity greater than 1 mS/cm;
  - ORP: 10 millivolts (mV) of the average value of the three readings;
  - DO: 10 percent of the average value of the three readings; and
  - Turbidity: 10 percent of the average value of the three readings, or a final value of less than 50 NTU.
- The pump must not be removed from the well between purging and sampling.

6.2.4 Sampling Techniques

- If an alternate pump is utilized, the first pump discharge volumes should be discarded to allow the equipment a period of acclimation to the groundwater.

- Samples are collected directly from the pump, with the groundwater being discharged directly into the appropriate sample container. Avoid handling the interior of the bottle or bottle cap, and don new gloves for each well sampled to avoid contamination of the sample.
- Order of sample collection:
  - PFAS
  - VOC
  - 1,4-dioxane
  - SVOC
  - Total Analyte List (TAL) metals
- No sampling equipment components or sample containers should come in contact with aluminum foil, low-density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials, including plumbers' tape and sample bottle cap liners with a PTFE layer.
- For low-stress/low-flow sampling, samples should be collected at a flow rate between 100 and 500 mL/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft.
- The pumping rate used to collect a sample for VOC should not exceed 100 mL/min. Samples should be transferred directly to the final container, 40-mL glass vials completely full and topped with a Teflon™ cap. Once capped, the vial must be inverted and tapped to check for headspace/air presence (bubbles). If air is present, the sample will be discarded and recollected until free of air.
- All samples must be labeled with:
  - A unique sample number
  - Date and time
  - Parameters to be analyzed
  - Project reference ID
  - Samplers initials
- Labels should be written in indelible ink and secured to the bottle with clear tape.

Equipment/Materials:

- pH meter, conductivity meter, DO meter, ORP meter, nephelometer, temperature gauge
- Field filtration units (if required)
- Purging/sampling equipment
  - Bladder pump
- Water level probe
- Sampling materials (containers, log book/forms, coolers, chain of custody [COC])
- Work Plan
- HASP
- When sampling for PFAS, acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene.

Note: 1,4-dioxane and PFAS purge and sample techniques will be conducted following the NYSDEC guidance documents (see Appendix D of the RIWP). Acceptable groundwater pumps include a stainless-steel inertia pump with HDPE tubing, a bladder pump equipped with HDPE tubing and silicone tubing, and/or a stainless-steel bailer with stainless-steel ball or bladder pump (identified as PFAS-free) with HDPE tubing.

Field Notes:

- Field notes must document all the events, equipment used, and measurements collected during the sampling activities. Section 2.0 describes the data/recording procedure for field activities.
- The logbook should document the following for each well sampled:
  - Identification of well
  - Well depth
  - Static water level depth and measurement technique
  - Sounded well depth
  - Presence of immiscible layers and detection/collection method
  - Well yield – high or low
  - Purge volume and pumping rate
  - Time well purged
  - Measured field parameters
  - Purge/sampling device used
  - Well sampling sequence
  - Sampling appearance
  - Sample odors
  - Sample volume
  - Types of sample containers and sample identification
  - Preservative(s) used
  - Parameters requested for analysis
  - Field analysis data and method(s)
  - Sample distribution and transporter
  - Laboratory shipped to
  - COC number for shipment to laboratory
  - Field observations on sampling event
  - Name collector(s)
  - Climatic conditions, including air temperature
  - Problems encountered and any deviations made from the established sampling protocol.

Standard log forms for documentation and reporting groundwater purging and sampling events are presented on the Groundwater Sampling Record, Low Flow Groundwater Sampling Form, and Low Flow

Monitored Natural Attenuation (MNA) Field Sampling Form. Refer to Appendix A for example field forms.

Groundwater/Decon Fluid Disposal:

- Groundwater disposal methods will vary on a case-by-case basis but may range from:
  - Off-Site treatment at private treatment/disposal facilities or publicly owned treatment facilities
  - On-Site treatment at facility-operated facilities
  - Direct discharge to the surrounding ground surface, allowing groundwater infiltration to the underlying subsurface regime
- Decontamination fluids should be segregated and collected separately from wash waters/groundwater containers.

6.3 SOIL VAPOR SAMPLING

The following procedure is an introduction to soil vapor sampling techniques and an outline of field staff responsibilities.

6.3.1 Preparatory Requirements

Prior to collecting the field sample, ensure the stainless steel oil vapor probe has been installed to the desired depth and sealed completely to the surface using a material such as bentonite. As part of the vapor intrusion evaluation, a tracer gas should be used in accordance with New York State Department of Health (NYSDOH) protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring should be performed a second time to confirm the integrity of the probe seals.

6.3.2 Sampling Techniques

Samples will be collected in appropriately sized Summa canisters that have been certified clean by the laboratory, and samples will be analyzed using U.S. Environmental Protection Agency (EPA) Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 liters per minute (L/min). One to three implant volumes shall be purged prior to the collection of any soil-gas samples. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and COC protocols.

6.4 SAMPLE HANDLING AND SHIPPING

Sample management is the continuous care given to each sample from the point of collection to receipt at the analytical laboratory. Good sample management ensures that samples are properly recorded, properly labeled, and not lost, broken, or exposed to conditions that may affect the sample's integrity.

All sample submissions must be accompanied by a COC document to record sample collection and submission. Personnel performing sampling tasks must check the sample preparation and preservation requirements to ensure compliance with the QAPP.

The following sections provide the minimum standards for sample management.

6.4.1 Sample Handling

Prior to entering the field area where sampling is to be conducted, especially at sites with defined exclusion zones, the sampler should ensure that all materials necessary to complete the sampling are on hand. If samples must be maintained at a specified temperature after collection, dedicated coolers and ice must be available for use. Conversely, when sampling in cold weather, proper protection of water samples, trip blanks, and field blanks must be considered. Sample preservation will involve pH adjustment, cooling to 4 degrees Celsius, and sample filtration and preservation.

6.4.2 Sample Labeling

Samples must be properly labeled immediately upon collection.

Note that the data shown on the sample label is the minimum data required. The sample label data requirements are listed below for clarity:

- Project name
- Sample name/number/unique identifier
- Sampler's initials
- Date of sample collection
- Time of sample collection
- Analysis required
- Preservatives

To ensure that samples are not confused, a clear notation should be made on the container with a permanent marker. If the containers are too soiled for marking, the container can be put into a “zip lock” bag, which can then be labeled.

All sample names will be as follows:

- Sample unique identifier: Enter the sample name or number. There should be NO slashes, spaces, or periods in the date.

- Date: Enter the six-digit date when the sample was collected. Note that for one-digit days, months, and/or years, add zeros so that the format is MMDDYY (050210). There should be NO slashes, dashes, or periods in the date.

The QA/QC samples will be numbered consecutively as collected with a sample name, date, and number of sample collected throughout the day (i.e., when multiple QA/QC samples are collected in one day).

Examples of this naming convention are as follows:

Sample Name:	Comments
TB-050202-0001	TRIP BLANK
TB-050202-0002	TRIP BLANK
FD-050202-0001	FIELD DUPLICATE
FD-050202-0002	FIELD DUPLICATE

Note: The QA/QC Sample # resets to 0001 EACH DAY. This will avoid having to look back to the previous day for the correct sequential number.

6.4.3 Field Code

The field code will be written in the "Comments" field on the chain of custody for EVERY sample but will not be a part of the actual sample name. Enter the one/two-character code for the type of sample (must be in CAPITALS):

N	Normal Field Sample
FD	Field Duplicate (note sample number [i.e., 0001] substituted for time)
TB	Trip Blank (note sample number [i.e., 0001] substituted for time)
EB	Equipment Blank (note sample number [i.e., 0001] substituted for time)
FB	Field Blank (note sample number [i.e., 0001] substituted for time)
KD	Known Duplicate
FS	Field Spike Sample
MS	Matrix Spike Sample (note on "Comments" field of COC – laboratory to spike matrix).
MD	Matrix Spike Duplicate Sample (note on "Comments" field of COC – laboratory to spike matrix).
RM	Reference Material

The sample labeling – both chain and sample bottles must be EXACTLY as detailed above. In addition, the Field Sample Key for each sample collected must be filled out.

6.4.4 Packaging

Sample container preparation and packing for shipment should be completed in a well-organized and clean area, free of any potential cross-contamination. The following is a list of standard guidelines that must be followed when packing samples for shipment.

- Double-bag ice in "zip lock" bags.
- Double-check to ensure trip and temperature blanks have been included for all shipments containing VOCs, or where otherwise specified in the QAPP.

- Enclose the COC form in a "zip lock" bag.
- Ensure custody seals (two, minimum) are placed on each cooler. Coolers with hinged lids should have both seals placed on the opening edge of the lid. Coolers with "free" lids should have seals placed on opposite diagonal corners of the lid. Place clear tape over custody seals.
- Containers should be wiped clean of all debris/water using paper towels (paper towels must be disposed of with other contaminated materials).
- Clear, wide packing tape should be placed over the sample label for protection.
- Do not bulk pack. Each sample must be individually padded.
- Large glass containers (1 Liter and up) require much more space between containers.
- Ice is not a packing material due to the reduction in volume when it melts.

Note: Never store sterile sample containers in enclosures containing equipment that uses any form of fuel or volatile petroleum-based product. When conducting sampling in freezing conditions at sites without a heated storage area (free of potential cross-contaminants), unused trip blanks should be isolated from coolers immediately after receipt. Trip blanks should be double-bagged and kept from freezing.

6.4.5 Chain-of-Custody Records

COC forms will be completed for all samples collected. The form documents the transfer of sample containers. The COC record, completed at the time of sampling, will contain, but not be limited to, the sample number, date and time of sampling, and the name of the sampler. The COC document will be signed and dated by the sampler when transferring the samples.

Each sample cooler being shipped to the laboratory will contain a COC form. The cooler will be sealed properly for shipment. The laboratory will maintain a copy for its records. One copy will be returned with the data deliverables package.

The following list provides guidance for the completion and handling of all COCs:

- COCs used should be a Haley & Aldrich or New York standard form or supplied by the analytical laboratory.
- COCs must be completed in black ballpoint ink only.
- COCs must be completed neatly using printed text.
- If a simple mistake is made, cross out the error with a single line and initial and date the correction.
- Each separate sample entry must be sequentially numbered.
- If numerous repetitive entries must be made in the same column, place a continuous vertical arrow between the first entry and the next different entry.
- When more than one COC form is used for a single shipment, each form must be consecutively numbered using the "Page ___ of ___" format.
- If necessary, place additional instructions directly onto the COC in the Comment section. Do not enclose separate instructions.

- Include a contact name and phone number on the COC in case there is a problem with the shipment.
- Before using an acronym on a COC, define clearly the full interpretation of your designation (i.e., polychlorinated biphenyls [PCBs]).

6.4.6 Shipment

Prior to the start of the field sampling, the carrier should be contacted to determine if pickup will be at the field Site location. If pick-up is not available at the Site, the nearest pick-up or drop-off location should be determined. Sample shipments must not be left at unsecured drop locations.

Copies of all shipment manifests must be maintained in the field file.

7. Field Instruments – Use and Calibration

A significant number of field activities involve the use of electronic instruments to monitor environmental conditions and for health and safety purposes. It is imperative that the instruments are used and maintained properly to optimize their performance and minimize the potential for inaccuracies in the data obtained. This section provides guidance on the usage, maintenance, and calibration of electronic field equipment.

- All monitoring equipment will be in proper working order and operated in accordance with manufacturer's recommendations.
- Field personnel will be responsible for ensuring that the equipment is maintained and calibrated in the field in accordance with manufacturer's recommendations.
- Instruments will be operated only by personnel trained in the proper usage and calibration.
- Personnel must be aware of the range of conditions, such as temperature and humidity, for instrument operation. Usage of instruments in conditions outside these ranges will only proceed with approval of the Project Manager and/or Health and Safety Officer as appropriate.
- Instruments that contain radioactive source material, such as x-ray fluorescence (XRF) analyzers or moisture-density gauges, require specific transportation, handling, and usage procedures that are generally associated with a license from the Nuclear Regulatory Commission (NRC) or an NRC-Agreement State. Under no circumstance will operation of such instruments be allowed on site unless by properly authorized and trained personnel, using the proper personal dosimetry badges or monitoring instruments.

7.1 GENERAL PROCEDURE DISCUSSION

Care must be taken to minimize the potential for transfer of contaminated materials to the ground or onto other materials. Regardless of the size or nature of the equipment being decontaminated, the process will utilize a series of steps that involve removal of gross material (dirt, grease, oil, etc.), washing with a detergent, and multiple rinsing steps. In lieu of a series of washes and rinse steps, steam cleaning with low-volume, high-pressure equipment (i.e., steam cleaner) is acceptable.

Exploration equipment, and all monitoring equipment in contact with the sampling media must be decontaminated prior to initiating Site activities, in between exploration locations to minimize cross-contamination, and prior to mobilizing off Site after completion of Site work.

The following specific decontamination procedure is recommended for sampling equipment and tools:

- Brush loose soil off equipment;
- Wash equipment with laboratory-grade detergent (i.e., Alconox or equivalent);
- Rinse with tap water;
- Rinse equipment with distilled water;
- Allow water to evaporate before reusing equipment; and
- Wrap equipment in aluminum foil when not being used.

7.2 DECONTAMINATION OF MONITORING EQUIPMENT

Because monitoring equipment is difficult to decontaminate, care should be exercised to prevent contamination. Sensitive monitoring instruments should be protected when they are at risk of exposure to contaminants. This may include enclosing them in plastic bags, allowing an opening for the sample intake. Ventilation ports should not be covered.

If contamination does occur, decontamination of the equipment will be required; however, immersion in decontamination fluids is not possible. As such, care must be taken to wipe the instruments down with detergent-wetted wipes or sponges, and then with deionized water-wetted wipes or sponges.

7.3 DISPOSAL OF WASH SOLUTIONS AND CONTAMINATED EQUIPMENT

All contaminated wash water, rinses, solids, and materials used in the decontamination process that cannot be effectively decontaminated (such as polyethylene sheeting) will be containerized and disposed of in accordance with applicable regulations. All containers will be labeled with an indelible marker as to contents and date of placement in the container, and any appropriate stickers required (such as PCBs). Storage of decontamination wastes on site will not exceed 90 days under any circumstances.

Equipment/Materials:

Decontamination equipment and solutions are generally selected based on ease of decontamination and disposability.

- Polyethylene sheeting;
- Metal racks to hold equipment;
- Soft-bristle scrub brushes or long-handle brushes for removing gross contamination and scrubbing with wash solutions;
- Large galvanized wash tubs, stock tanks, or wading pools for wash and rinse solutions;
- Plastic buckets or garden sprayers for rinse solutions;
- Large plastic garbage cans or other similar containers lined with plastic bags can be used to store contaminated clothing;
- Contaminated liquids and solids should be segregated and containerized in New York State Department of Transportation (NYSDOT)-approved plastic or metal drums, appropriate for off-Site shipping/disposal if necessary.

8. Investigation-Derived Waste Disposal

8.1 RATIONALE/ASSUMPTIONS

This procedure applies to the disposition of IDW, including soils and/or groundwater. IDW is dealt with the following "Best Management Practices" and is not considered a listed waste due to the lack of generator knowledge concerning chemical source, chemical origin, and timing of chemical introduction to the subsurface.

Consequently, waste sampling and characterization are performed to determine if the wastes exhibit a characteristic of hazardous waste. The disposal of soil cuttings, test pit soils, and/or purged groundwater will be reviewed on a case-by-case basis prior to initiation of field activities. Two scenarios typically exist:

- When no information is available in the area of activity or investigation, and impacted media/soils are identified. Activities such as new construction and /or maintenance below grade may encounter environmental conditions that were unknown.
- Disposal Required/Containerization Required – When sufficient Site information regarding the investigative Site conditions warrants that all materials handled will be contained and disposed.

If a known listed hazardous and/or characteristically hazardous waste/contaminated environmental media is being handled, then handling must be performed in accordance with Resource Conservation and Recovery Act (RCRA) Subtitle C (reference 2, Part V, Section 1(a),(b),(c)).

The following outlines the waste characterization procedures to be employed when IDW disposal is required.

The following procedure describes the techniques for characterization of IDW for disposal purposes. IDW may consist of soil cuttings (augering, boring, well installation soils, test pit soils), rock core or rock flour (from coring and reaming operations), groundwater (from well development, purging, and sampling activities), decontamination fluids, personal protective equipment (PPE), and disposal equipment (DE).

8.2 PROCEDURE

The procedures for handling and characterization of field activity-generated wastes are:

A.) Soil Cuttings - Soils removed from boring activities will be contained within an approved container, suitable for transportation and disposal.

- Once placed into the approved container, any free liquids (i.e., groundwater) will be removed for disposal as waste fluids or solidified within the approved container using a solidification agent such as Speedy Dri (or equivalent).
- Contained soils will be screened for the presence of VOCs using a PID; this data will be logged for future reference.
- Once screened, full, and closed, the container will be labeled and placed into the container storage area. At a minimum, the following information will be shown on each container

label: date of filling/generation, Site name, source of soils (i.e., borehole or well), and contact.

- Prior to container closure, representative samples from the containers will be collected for waste characterization purposes and submitted to the project laboratory.
- Typically, at a location where an undetermined Site-specific parameter group exists, sampling and analysis may consist of the full RCRA Waste Characterization (ignitability, corrosivity, reactivity, toxicity), or a subset of the above based upon data collected, historical information, and generator knowledge.

B.) Groundwater - Purging and sampling groundwater, which requires disposal, will be contained.

- Containment may be performed in 55-gallon drums, tanks suitable for temporary storage (i.e., Nalgene tanks 500 to 1,000 gallons), or, if large volumes of groundwater are anticipated, tanker trailers (5,000 to 10,000 gallons ±), or drilling "Frac" tanks may be utilized (20,000 gallons ±). In all cases, the container/tank used for groundwater storage must be clean before use, such that cross-contamination does not occur.

C.) Decon Waters/Decon Fluids - Decon waters and/or fluids will be segregated, contained, and disposed accordingly.

- Decon waters may be disposed of with the containerized groundwater once analytical results have been acquired.

D.) PPE/DE – A number of disposal options exist for spent PPE/DE generated from investigation tasks. The options typically employed are:

- Immediately disposed of within on-Site dumpster/municipal trash; or
- If known to be contaminated with RCRA hazardous waste, dispose off-Site at a RCRA Subtitle C facility.
- Spent Solvent/Acid Rinses - The need for sampling must be determined in consultation with the waste management organization handling the materials. If known that only the solvent and/or acids are present, then direct disposal/treatment using media-specific options may be possible without sampling (i.e., incineration).
- PPE/DE – Typically not sampled and included with the disposal of the solid wastes.

Equipment/Materials:

- Sample spoons, trier, auger,
- Sample mixing bowl,
- Sampling bailer, or pump,
- Sample glassware.

References

1. American Public Works Association, April 1999, Uniform Color Code (http://www.apwa.net/)
2. ASTM Standard D 2487, “Classification of Soils for Engineering Purposes (Unified Soil Classification System)”.
3. ASTM 4750 Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well)
4. ASTM D6000 Guide for Presentation of Water Level Information from Ground Water Sites
5. ASTM D5474: Guide for Selection of Data Elements for Groundwater Investigations
6. ASTM D4696: Guide for Pore-liquid Sampling from the Vadose Zone
7. ASTM D5979: Guide for Conceptualization and Characterization of Groundwater Systems
8. ASTM D5903: Guide for Planning and Preparing for a Groundwater Sampling Event
9. ASTM D4448: Standard Guide for Sampling Groundwater Wells
10. ASTM D6001: Standard Guide for Direct Push Water Sampling for Geo-environmental Investigations.
11. ASTM (1991), Standard D1452-80, “Practice for Soil Investigation and Sampling by Auger Borings”, Annual Book of ASTM Standard, Section 4, Volume 04.08.
12. ASTM Standards on Environmental Sampling (1995), Standard D 2488-93, “Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)”
13. ASTM Standards on Environmental Sampling (1995), Standard D 4700-91, “Guide for Soil Sampling from the Vadose Zone”.
14. ASTM Standards on Environmental Sampling (1995), Standard D 1586-92, “Test Method for Penetration Test and Split-Barrel Sampling of Soils”.
15. ASTM D5088 - Practice for Decontamination of Field Equipment Used at Non-Radioactive Waste Sites
16. Geotechnical Gauge, Manufactured by W.F. McCollough, Beltsville, MD.
17. New York State Code Rule 753
18. New York State Department of Environmental Conservation Technical Guidance for Site Investigation and Remediation, DER-10, (3 May 2010).

19. New York State Department of Environmental Conservation, Division of Environmental Remediation, Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) under NYSDEC Part 375 Remedial Program (January 2021).

20. Sand Grading Chart, by Geological Specialty Company, Northport, Alabama.

21. USEPA Office of Solid Waste- SW846 Chapter 9 Sampling Plan, Chapter 10 Sampling Methods (September 1986).

22. USEPA (1986), RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER-9950.1.

23. USEPA (1987), A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001.

24. USEPA (1988), Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER-9950.1.

25. USEPA RCRA - Guidance and Policies: Management of Remediation Waste Under RCRA (October 1998).

26. USEPA RCRA - Management of Contaminated Media (October 1998).

27. USEPA CERCLA Guidance (Options Relevant to RCRA Facilities): Guide to Management of Investigation - Derived Wastes (January 1992).

28. USEPA: Low-flow (Minimal Drawdown) Groundwater Sampling Procedures (EPA/540/S-95/504)

29. USEPA: RCRA Groundwater Monitoring: Draft Technical guidance (EPA/530 R 93 001)

30. The Occupational Safety and Health Administration's (OSHA) Excavation and Trenching Standard Title 29 of the Code of Federal Regulation (CFR) Part 1926.650.

APPENDIX A
Field Forms

EQUIPMENT CALIBRATION LOG

Project: _____

Location: _____

Model Name: _____

Model Number: _____ **Serial Number:** _____

Cal. Standards: _____

_____

_____

Instruments will be calibrated in accordance with manufacturer's recommendations at least once per day.

Date	Time	Calibration Satandard Solution	Calibration Result	Calibrated by

Other Comments: _____

_____

_____

_____

_____

_____

_____

_____

Groundwater Field Sampling Form

Location:

Job Number: _____
Well ID: _____
Field Sampling Crew: _____

Date: _____
Start Time: _____
Finished Time: _____

Initial Depth to Water: _____
Well Depth: _____
Depth to top of screen: _____
Depth to bottom of screen: _____
Depth of Pump Intake: _____

Purging Device: _____
Tubing present in well? _____
Tubing type: _____

Time Elapsed (24 hour)	Depth to Water (from casing)	Pump Setting (ml/min or gal/min)	Purge Rate (ml/min or gal/min)	Cumulative Purge Volume (liters or gallons)	Temperature (degrees Celsius)	pH	Conductivity us/cm	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments

Comments:

HALEY ALDRICH

SAMPLE IDENTIFICATION KEY

Page of

PROJECT _____ **H&A FILE NO.** _____

LOCATION _____ **PROJECT MGR.** _____

CLIENT _____

CONTRACTOR _____

Sample ID	Parent Sample ID	Location ID	Sample Date	Sample Time (military)	Sample Type Code	Filtered (Water Only T/D/N)	Composite Y/N	Soil Type	Depth To Top Of Sample	Depth To Bottom Of Sample	C.O.C. Number	Notes	Collected By

Notes:

Common Sample Type Codes:

N Normal Environmental Samp	WG Groundwater	WS Surface Water	SO Soil	GS Soil Gas	SE Sediment
WQ Water for Quality Control	FD Field Duplicate	EB Equipment Blank	TB Trip Blank	MS Matris Spike	MSD Matrix Spike Duplicate

see Memorandum dated 08/08/05 from Melanie Satanek "Sample Labeling for Submission to Analytical Laboratory" for less common codes

DAILY FIELD REPORT

Page of

Project		Report No.	
Location		Date	
Client		Page	of
Contractor		File No.	
Weather		Temperature	

Field Representative(s)	Time on site	Report/Travel/Other	Total hours

Distribution:

Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO.

Page 1 of

PROJECT
LOCATION
CLIENT
CONTRACTOR
DRILLER

PROJECT MGR.
FIELD REP.
DATE STARTED
DATE FINISHED

Elevation ft. Datum

Boring Location

Item	Casing	Sampler	Core Barrel
Type			
Inside Diameter (in.)			
Hammer Weight (lb.)			
Hammer Fall (in.)			

Rig Make & Model

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☐ Winch
☐ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☐ None

Casing Advance: Type Method Depth

Drilling Notes:

Depth (ft.)	Casing Blows	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft)	Elev./ Depth (ft)	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
Date					

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft.) _____
Rock Cored (Linear ft.) _____
Number of Samples _____

BORING NO.

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification

Form #3000

APPENDIX C
Quality Assurance Project Plan

HALEY ALDRICH

www.haleyaldrich.com

QUALITY ASSURANCE PROJECT PLAN
PROPOSED 145-11 LIBERTY AVENUE REDEVELOPMENT SITE
145-11 LIBERTY AVENUE
QUEEBS, NEW YORK

by
by H & A of New York Engineering and Geology, LLP
New York, New York

for
GFL NYC LLC
Brooklyn, New York

File No. 0215824
June 2026



Executive Summary

This Quality Assurance Project Plan outlines the scope of the quality assurance and quality control activities associated with the site monitoring activities associated with the Remedial Investigation Work Plan for 145-11 Liberty Avenue & 10208 Brisbin Street in Brooklyn, New York (Site).

Protocols for sample collection, sample handling and storage, chain of custody procedures, and laboratory and field analyses are described herein or are specifically referenced to related project documents.

Table of Contents

Page

Executive Summary i
List of Tables v
List of Attachments v

1. Project Description 1

1.1 PROJECT OBJECTIVES 1
1.2 SITE DESCRIPTION AND HISTORY 1
1.3 LABORATORY PARAMETERS 1
1.4 SAMPLING LOCATIONS 2

2. Project Organization and Responsibilities 3

2.1 PROJECT TEAM 3
2.2 MANAGEMENT RESPONSIBILITIES 3
2.3 QUALITY ASSURANCE RESPONSIBILITIES 3
2.3.1 Quality Assurance Officer 3
2.3.2 Data Validation Staff 4
2.4 LABORATORY RESPONSIBILITIES 4
2.4.1 Laboratory Project Manager 4
2.4.2 Laboratory Operations Manager 4
2.4.3 Laboratory QA Officer 4
2.4.4 Laboratory Sample Custodian 4
2.4.5 Laboratory Technical Personnel 5
2.5 FIELD RESPONSIBILITIES 5
2.5.1 Field Coordinator 5
2.5.2 Field Team Personnel 5

3. Sampling Procedures 6

3.1 SAMPLE CONTAINERS 6
3.2 SAMPLE LABELING 6
3.3 FIELD QC SAMPLE COLLECTION 6
3.3.1 Field Duplicate Sample Collection 6

4. Custody Procedures 8

4.1 FIELD CUSTODY PROCEDURES 8
4.1.1 Field Procedures 9
4.1.2 Transfer of Custody and Shipment Procedures 9
4.2 LABORATORY CHAIN OF CUSTODY PROCEDURES 10
4.3 STORAGE OF SAMPLES 10
4.4 FINAL PROJECT FILES CUSTODY PROCEDURES 10

Table of Contents

Page

5. Calibration Procedures and Frequency 12

5.1 FIELD INSTRUMENT CALIBRATION PROCEDURES 12
5.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES 12

6. Analytical Procedures 13

6.1 FIELD ANALYTICAL PROCEDURES 13
6.2 LABORATORY ANALYTICAL PROCEDURES 13
6.2.1 List of Project Target Compounds and Laboratory Detection Limits 13
6.2.2 List of Method-Specific Quality Control Criteria 13

7. Internal Quality Control Checks 14

7.1 FIELD QUALITY CONTROL 14
7.1.1 Field Blanks 14
7.1.2 Trip Blanks 14
7.2 LABORATORY PROCEDURES 14
7.2.1 Field Duplicate Samples 14
7.2.2 Matrix Spike Samples 15
7.2.3 Laboratory Control Sample Analyses 15
7.2.4 Surrogate Compound/Internal Standard Recoveries 15
7.2.5 Calibration Verification Standards 16
7.2.6 Laboratory Method Blank Analyses 16

8. Data Quality Objectives 17

8.1 PRECISION 17
8.1.1 Definition 17
8.1.2 Field Precision Sample Objectives 17
8.1.3 Laboratory Precision Sample Objectives 17
8.2 ACCURACY 18
8.2.1 Definition 18
8.2.2 Field Accuracy Objectives 18
8.3 LABORATORY ACCURACY OBJECTIVES 18
8.4 REPRESENTATIVENESS 19
8.4.1 Definition 19
8.4.2 Measures to Ensure Representativeness of Field Data 19
8.5 COMPLETENESS 19
8.5.1 Definition 19
8.5.2 Field Completeness Objectives 19
8.5.3 Laboratory Completeness Objectives 19
8.6 COMPARABILITY 20
8.6.1 Definition 20
8.6.2 Measures to Ensure Comparability of Laboratory Data 20

Table of Contents

Page

8.7 LEVEL OF QUALITY CONTROL EFFORT 20

9. Data Reduction, Validation, and Reporting 22

9.1 DATA REDUCTION 22
9.1.1 Field Data Reduction Procedures 22
9.1.2 Laboratory Data Reduction Procedures 22
9.1.3 Quality Control Data 22
9.2 DATA VALIDATION 22
9.3 DATA REPORTING 23

10. Performance and System Audits 24

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS 24
10.1.1 Internal Field Audit Responsibilities 24
10.1.2 External Field Audit Responsibilities 24
10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS 24
10.2.1 Internal Laboratory Audit Responsibilities 24
10.2.2 External Laboratory Audit Responsibilities 25

11. Preventive Maintenance 26

11.1 FIELD INSTRUMENT PREVENTIVE MAINTENANCE 26
11.2 LABORATORY INSTRUMENT PREVENTIVE MAINTENANCE 26

12. Specific Routine Procedures Used to Assess Data Precision, Accuracy, and Completeness 27

12.1 FIELD MEASUREMENTS 27
12.2 LABORATORY DATA 27

13. Quality Assurance Reports 28

References 29

List of Tables

Table No.	Title
1	Summary of Analysis Method, Preservation Method, Holding Time, Sample Size Requirements, and Sample Containers
2	Minimum Reporting Limits

List of Attachments

Attachment	Title
A	Resumes

1. Project Description

This Quality Assurance Project Plan (QAPP) has been prepared as a component of the Remedial Investigation Work Plan (RIWP) for the proposed 145-11 Liberty Avenue Redevelopment Site located at 145-11 Liberty Avenue & 10208 Brisbin Street in Queens, New York (Site).

1.1 PROJECT OBJECTIVES

The primary objective for data collection activities is to collect sufficient data necessary to characterize the subsurface conditions at the Site and determine the nature and extent of contamination.

1.2 SITE DESCRIPTION AND HISTORY

The general Site description and Site history are provided in the Site Description and History Summary that accompanies the RIWP appended to the Brownfield Cleanup Program (BCP) Application for the Site and incorporated herein by reference.

1.3 LABORATORY PARAMETERS

The laboratory parameters for soil include:

- Target Compound List (TCL) volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Methods 8260D/5035;
- TCL semi-volatile organic compounds (SVOCs) by USEPA Method 8270E;
- Total Analyte List (TAL) metals by USEPA Method 6010D;
- TCL polychlorinated biphenyls (PCBs) by USEPA Method 8082A;
- TCL pesticides by USEPA Method 8081B;
- Per- and polyfluoroalkyl substances (PFAS) by USEPA Method 1633; and
- 1,4-dioxane by USEPA Method 8270E.

The laboratory parameters for groundwater include:

- TCL VOCs by USEPA Method 8260D;
- TCL SVOCs by USEPA Method 8270;
- Total and dissolved metals by USEPA Methods 6010/6020;
- Total PCBs by USEPA Method 8082;
- TCL pesticides by USEPA Method 8081B;
- 1,4-dioxane by USEPA Method 8270E-SIM; and
- PFAS by USEPA Method 1633a.

Note: PFAS sampling techniques will be conducted in accordance with the NYSDEC-issued April 2023 "Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs."

During the collection of groundwater samples, pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP) will be measured until stabilized.

The laboratory parameter for soil vapor includes:

- VOCs using USEPA Method TO-15

Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

1.4 SAMPLING LOCATIONS

The RIWP provides the locations of soil borings, soil vapor implants, and groundwater monitoring wells that will be sampled (as applicable).

2. Project Organization and Responsibilities

This section defines the roles and responsibilities of the individuals who will perform the RIWP monitoring activities. A New York State Department of Health (NYSDOH)-certified analytical laboratory will perform the analyses of environmental samples collected at the Site.

2.1 PROJECT TEAM

The following project personnel are anticipated for oversight of the RIWP implementation. Project team resumes are included in Attachment A.

NYSDEC Project Manager	TBD
NYSDOH Project Manager	TBD
Qualified Environmental Professional (QEP)	James M. Bellew
Project Manager	Laura Keim
Haley & Aldrich of New York* Health and Safety Director	Brian Fitzpatrick, CHMM
Health and Safety Officer (HSO)	Brian Ferguson
Quality Assurance (QA) Officer	Sebastian Sotomayor
Third-Party Validator	Katherine Miller

**H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York)*

2.2 MANAGEMENT RESPONSIBILITIES

The Project Manager is responsible for managing the implementation of the RIWP and monitoring and coordinating the collection of data. The Project Manager is responsible for technical quality control (QC) and project oversight. The Project Manager's responsibilities include the following:

- Acquire and apply technical and corporate resources as needed to ensure performance within budget and schedule restraints;
- Review work performed to ensure quality, responsiveness, and timeliness;
- Communicate with the client point of contact concerning the progress of the monitoring activities;
- Assure corrective actions are taken for deficiencies cited during audits of RIWP monitoring activities; and
- Assure compliance with the Site Health and Safety Plan (HASP).

2.3 QUALITY ASSURANCE RESPONSIBILITIES

The QA team will consist of a QA Officer and the Data Validation Staff. QA responsibilities are described in the following sections.

2.3.1 Quality Assurance Officer

The QA Officer reports directly to the Project Manager and will be responsible for overseeing the review of field and laboratory data. Additional responsibilities include the following:

- Assure the application and effectiveness of the QAPP by the analytical laboratory and the project staff;
- Provide input to the Project Manager as to corrective actions that may be required as a result of the above-mentioned evaluations; and
- Prepare and/or review data validation and audit reports.

The QA Officer will be assisted by the Data Validation Staff in the evaluation and validation of field and laboratory-generated data.

2.3.2 Data Validation Staff

The Data Validation Staff will be independent of the laboratory and familiar with the analytical procedures performed. The validation will include a review of each validation criterion as prescribed by the guidelines presented in Section 9.2 of this document and will be presented in a Data Usability Summary Report (DUSR) for submittal to the QA Officer.

2.4 LABORATORY RESPONSIBILITIES

Laboratory services to support the RIWP monitoring include the following personnel.

2.4.1 Laboratory Project Manager

The Laboratory Project Manager will report directly to the QA Officer and Project Manager and will be responsible for ensuring all resources of the laboratory are available on an as-required basis. The Laboratory Project Manager will also be responsible for the approval of the final analytical reports.

2.4.2 Laboratory Operations Manager

The Laboratory Operations Manager will report to the Laboratory Project Manager and will be responsible for coordinating laboratory analysis, supervising in-house chain of custody (COC) reports, scheduling sample analyses, overseeing data review, and overseeing preparation of analytical reports.

2.4.3 Laboratory QA Officer

The Laboratory QA Officer will have sole responsibility for the review and validation of the analytical laboratory data. The Laboratory QA Officer will provide Case Narrative descriptions of any data quality issues encountered during the analyses conducted by the laboratory. The QA Officer will also define appropriate QA procedures, overseeing QA/QC documentation.

2.4.4 Laboratory Sample Custodian

The Laboratory Sample Custodian will report to the Laboratory Operations Manager and will be responsible for the following:

- Receive and inspect the incoming sample containers;
- Record the condition of the incoming sample containers;
- Sign appropriate documents;

- Verify COC and its correctness;
- Notify the Project Manager and Operations Manager of sample receipt and inspection;
- Assign a unique identification number and enter each into the sample receiving log;
- Initiate transfer of samples to laboratory analytical sections; and
- Control and monitor access/storage of samples and extracts.

2.4.5 Laboratory Technical Personnel

The Laboratory Technical Personnel will have the primary responsibility for the performance of sample analysis and the execution of the QA procedures developed to determine the data quality. These activities will include the proper preparation and analysis of the project samples in accordance with the laboratory's Quality Assurance Manual (QAM) and associated Standard Operating Procedures (SOPs).

2.5 FIELD RESPONSIBILITIES

2.5.1 Field Coordinator

The Field Coordinator is responsible for the overall operation of the field team and reports directly to the Project Manager. The Field Coordinator works with the project HSO to conduct operations in compliance with the project HASP. The Field Coordinator will facilitate communication and coordinate efforts between the Project Manager and the field team members.

Other responsibilities include the following:

- Develop and implement field-related work plans, ensuring schedule compliance, and adhering to management-developed project requirements;
- Coordinate and manage field staff;
- Perform field system audits;
- Oversee QC for technical data provided by the field staff;
- Prepare and approve text and graphics required for field team efforts;
- Coordinate and oversee technical efforts of subcontractors assisting the field team;
- Identify problems in the field, resolve difficulties in consultation with the Project QA Officer and Project Manager, and implement and document corrective action procedures; and
- Participate in preparation of the final reports.

2.5.2 Field Team Personnel

Field Team Personnel will be responsible for the following:

- Perform field activities as detailed in the RIWP and in compliance with the Field Sampling Plan (FSP) and this QAPP.
- Immediately report any accidents and/or unsafe conditions to the Site HSO and take reasonable precautions to prevent injury.

3. Sampling Procedures

The FSP provides the SOPs for sampling required by the RIWP. Sampling will be conducted in general accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation (DER-10) and the NYSDEC's "Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs," dated April 2023, as applicable.

3.1 SAMPLE CONTAINERS

Sample containers for each sampling task will be provided by the laboratory performing the analysis. The containers will be cleaned by the manufacturer to meet or exceed the analyte specifications established in the USEPA's "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers," April 1992, OSWER Directive #9240.0-0.5A. Certificates of analysis for each lot of sample containers used will be maintained by the laboratory.

The appropriate sample containers, preservation method, maximum holding times, and handling requirements for each sampling task are provided in Table 1.

3.2 SAMPLE LABELING

Each sample will be labeled with a unique sample identifier that will facilitate tracking and cross-referencing of sample information. Equipment rinse blanks and field duplicate samples will also be numbered with a unique sample identifier to prevent analytical bias of field QC samples.

Refer to the FSP for the sample labeling procedures.

3.3 Field QC SAMPLE COLLECTION

3.3.1 Field Duplicate Sample Collection

3.3.1.1 Water Samples

Field duplicate samples will be collected by filling the first sample container to the proper level, sealing, and then repeating for the second set of sample containers.

1. The samples are properly labeled as specified in Section 3.2.
2. Steps 1 through 4 are repeated for the bottles for each analysis. The samples are collected in order of decreasing analyte volatility as detailed in Section 3.3.1.
3. COC documents are executed.
4. The samples will be handled as specified in Table 1.

3.3.1.2 Soil Samples

Soil field duplicates will be collected as specified in the following procedure:

1. Soils will be sampled directly from acetate liners.
2. Soil for VOC analysis will be removed from the sampling device as specified in the FSP.
3. Soil for non-VOC analysis will be removed from the sampling device and collected into clean laboratory-provided containers.

4. Custody Procedures

Sample custody is addressed in three parts: field sample collection, laboratory analysis, and final project files. Custody of a sample begins when it is collected by or transferred to an individual and ends when that individual relinquishes or disposes of the sample.

A sample is under custody if:

1. The item is in actual possession of a person;
2. The item is in the view of the person after being in actual possession of the person;
3. The item was in actual possession and subsequently stored to prevent tampering; or
4. The item is in a designated and identified secure area.

4.1 FIELD CUSTODY PROCEDURES

Field personnel will keep written records of field activities on applicable preprinted field forms or in a bound field notebook to record data collecting activities. These records will be written legibly in ink and will contain pertinent field data and observations. Entry errors or changes will be crossed out with a single line, dated, and initialed by the person making the correction. Field forms and notebooks will be periodically reviewed by the Field Coordinator.

The beginning of each entry in the logbook or preprinted field form will contain the following information:

- Date;
- Start time;
- Weather;
- Names of field personnel (including subcontractors);
- Level of personal protection used at the Site; and
- Names of all visitors and the purpose of their visit.

For each measurement and sample collected, the following information will be recorded:

- Detailed description of sample location;
- Equipment used to collect the sample or make the measurement and the date equipment was calibrated;
- Time sample was collected;
- Description of the sample conditions;
- Depth sample was collected (if applicable);
- Volume and number of containers filled with the sample; and
- Sampler's identification.

4.1.1 Field Procedures

The following procedure describes the process to maintain the integrity of the samples:

- Upon collection, samples are placed in the proper containers. In general, samples collected for organic analysis will be placed in pre-cleaned glass containers and samples collected for inorganic analysis will be placed in pre-cleaned plastic (polyethylene) bottles. Refer to the FSP for sample packaging procedures.
- Samples will be assigned a unique sample number and will be affixed to a sample label. Refer to the FSP for sample labeling procedures.
- Samples will be properly and appropriately preserved by field personnel in order to minimize loss of the constituent(s) of interest due to physical, chemical, or biological mechanisms.
- Appropriate volumes will be collected to ensure that the appropriate reporting limits can be successfully achieved and that the required QC sample analyses can be performed. Minimum reporting limits for each analytical method are presented in Table 2.

4.1.2 Transfer of Custody and Shipment Procedures

- A COC record will be completed at the time of sample collection and will accompany each shipment of project samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. Sample transfer will require the individuals relinquishing and receiving the samples to sign, date, and note the time of sample transfer on the COC record.
- Samples will be shipped or delivered in a timely fashion to the laboratory so that holding times and/or analysis times as prescribed by the methodology can be met.
- Samples will be transported in containers (coolers) that will maintain the refrigeration temperature for those parameters for which refrigeration is required in the prescribed preservation protocols.
- Samples will be placed in an upright position and limited to one layer of samples per cooler. Additional bubble wrap or packaging material will be added to fill the cooler. Shipping containers will be secured with strapping tape and custody tape for shipment to the laboratory.
- When samples are split with the NYSDEC representatives, a separate COC will be prepared and marked to indicate with whom the samples are shared. The person relinquishing the samples will require the representative's signature acknowledging sample receipt.
- If samples are sent by a commercial carrier, a bill of lading will be used. A copy of the bill of lading will be retained as part of the permanent record. Commercial carriers will not sign the custody record as long as the custody record is sealed inside the sample cooler and the custody tape remains intact.
- Samples will be picked up by a laboratory courier or transported to the laboratory the same day they are collected unless collected on a weekend or holiday. In these cases, the samples will be stored in a secure location until delivery to the laboratory. Additional ice will be added to the cooler as needed to maintain proper preservation temperatures.

4.2 LABORATORY CHAIN OF CUSTODY PROCEDURES

A Sample Custodian will be designated by the laboratory and will have the responsibility to receive all incoming samples. Once received, the custodian will document if the sample is received in good condition (i.e., unbroken, cooled, etc.) and that the associated paperwork, such as COC forms, has been completed. The custodian will sign the COC forms.

The custodian will also document if sufficient sample volume has been received to complete the analytical program. The Sample Custodian will then place the samples into secure, limited-access storage (refrigerated storage, if required). The Sample Custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number will then be entered into the sample-receiving log, with the verified time and date of receipt also noted.

Consistent with the analyses requested on the COC form, analyses by the laboratory's analysts will begin in accordance with the appropriate methodologies. Samples will be removed from secure storage, with internal COC sign-out procedures followed.

4.3 STORAGE OF SAMPLES

Empty sample bottles will be returned to secure and limited-access storage after the available volume has been consumed by the analysis. Upon completion of the entire analytical work effort, samples will be disposed of by the sample custodian. The length of time that samples are held will be at least 30 days after reports have been submitted. Disposal of remaining samples will be completed in compliance with all federal, state, and local requirements.

4.4 FINAL PROJECT FILES CUSTODY PROCEDURES

The final project files will be the central repository for all documents with information relevant to sampling and analysis activities as described in this QAPP. The Haley & Aldrich of New York Project Manager will be the custodian of the project file. The project files, including all relevant records, reports, logs, field notebooks, pictures, subcontractor reports, and data reviews, will be maintained in a secured, limited-access area and under the custody of the Project Director or their designee.

The final project file will include the following:

- Project plans and drawings;
- Field data records;
- Sample identification documents and soil boring/monitoring well logs;
- All COC documentation;
- Correspondence;
- References, literature;
- Laboratory data deliverables;
- Data validation and assessment reports;
- Progress reports and QA reports; and

- A final report.

The laboratory will be responsible for maintaining analytical logbooks, laboratory data, and sample COC documents. Raw laboratory data files and copies of hard copy reports will be inventoried and maintained by the laboratory for a period of six years, at which time the laboratory will contact the Haley & Aldrich of New York Project Manager regarding the disposition of the project-related files.

5. Calibration Procedures and Frequency

5.1 FIELD INSTRUMENT CALIBRATION PROCEDURES

Several field instruments will be used for both on-Site screening of samples and for health and safety monitoring, as described in the HASP. On-Site air monitoring for health and safety purposes may be accomplished using a vapor detection device, such as a photoionization detector.

Field instruments will be calibrated at the beginning of each day and checked during field activities to verify performance. Instrument-specific calibration procedures will be performed in accordance with the instrument manufacturer's requirements.

5.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES

Reference materials of known purity and quality will be utilized for the analysis of environmental samples. The laboratory will carefully monitor the preparation and use of reference materials, including solutions, standards, and reagents, through well-documented procedures.

All solid chemicals and acids/bases used by the laboratory will be rated as "reagent-grade" or better. All gases will be "high" purity or better. All Standard Reference Materials (SRMs) or Performance Evaluation (PE) materials will be obtained from approved vendors of the National Institute of Standards and Technology (NIST; formerly National Bureau of Standards), the USEPA Environmental Monitoring Support Laboratories (EMSL), or reliable Cooperative Research and Development Agreement (CRADA)-certified commercial sources.

6. Analytical Procedures

Analytical procedures to be utilized for analysis of environmental samples will be based on referenced USEPA analytical protocols and/or project-specific SOP.

6.1 FIELD ANALYTICAL PROCEDURES

Field analytical procedures include the measurement of pH, temperature, ORP, DO, and specific conductivity during sampling of groundwater, and the qualitative measurement of VOCs during the collection of soil samples.

6.2 LABORATORY ANALYTICAL PROCEDURES

Laboratory analyses will be based on the USEPA methodology requirements promulgated in:

- "Test Methods for Evaluating Solid Waste," SW-846 USEPA, Office of Solid Waste, and promulgated updates, 1986.

6.2.1 List of Project Target Compounds and Laboratory Detection Limits

The method detection limits (MDLs) studies are performed by the laboratories in accordance with the procedures established in the Code of Federal Regulations, Title 40, Part 136.

Laboratory parameters for soil samples are listed in the RIWP. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

6.2.2 List of Method-Specific Quality Control Criteria

The laboratory SOPs include a section that presents the minimum QC requirements for the project analyses. Section 7 references the frequency of the associated QC samples for each sampling effort and matrix.

7. Internal Quality Control Checks

This section presents the internal QC checks that will be employed for field and laboratory measurements.

7.1 FIELD QUALITY CONTROL

7.1.1 Field Blanks

Internal QC checks will include analysis of field blanks to validate equipment cleanliness. Whenever possible, dedicated equipment will be employed to reduce the possibility of cross-contamination of samples.

7.1.2 Trip Blanks

Trip blanks samples will be prepared by the project laboratory using ASTM Type II or equivalent water placed within pre-cleaned 40 milliliter (mL) VOC vials equipped with Teflon™ septa. Trip blanks will accompany each sample delivery group (SDG) of environmental samples collected for analysis of VOCs.

Trip blank samples will be placed in each cooler that stores and transports project samples that are to be analyzed for VOCs.

7.2 LABORATORY PROCEDURES

Procedures which contribute to maintenance of overall laboratory QA/QC include appropriately cleaned sample containers, proper sample identification and logging, applicable sample preservation, storage, and analysis within prescribed holding times, and use of controlled materials.

7.2.1 Field Duplicate Samples

The precision or reproducibility of the data generated will be monitored through the use of field duplicate samples. Field duplicate analysis will be performed at a frequency of one in 20 project samples.

Precision will be measured in terms of the absolute value of the relative percent difference (RPD) as expressed by the following equation:

$$RPD = [|R1-R2|/[(R1+R2)/2]] \; X \; 100\%$$

Acceptance criteria for duplicate analyses performed on solid matrices will be 100 percent, and aqueous matrices will be 35 percent (or the absolute difference rule was satisfied if detects were less than five times the reporting limit [RL]). RPD values outside these limits will require an evaluation of the sampling and/or analysis procedures by the project QA Officer and/or laboratory QA Director. Corrective actions may include re-analysis of additional sample aliquots and/or qualification of the data for use.

7.2.2 Matrix Spike Samples

Ten percent of each project sample matrix for each analytical method performed will be spiked with known concentrations of the specific target compounds/analytes.

The amount of the compound recovered from the sample compared to the amount added will be expressed as a percent recovery. The percent recovery of an analyte is an indication of the accuracy of an analysis within the site-specific sample matrix. Percent recovery will be calculated for matrix spike and matrix spike duplicate (MS/MSD) samples using the following equation.

$$\%\ Recovery = \frac{Spiked\ Sample - Background}{Known\ Value\ of\ Spike} x100\%$$

If the QC value falls outside the control limits (upper or lower control limit) due to sample matrix effects, the results will be reported with appropriate data qualifiers. To determine the effect a non-compliant MS recovery has on the reported results, the recovery data will be evaluated as part of the validation process.

7.2.3 Laboratory Control Sample Analyses

The laboratory will perform laboratory control sample (LCS) analyses prepared from SRMs. The SRMs will be supplied from an independent manufacturer and traceable to NIST materials with known concentrations of each target analyte to be determined by the analytical methods performed. In cases where an independently supplied SRM is not available, the LCS may be prepared by the laboratory from a reagent lot other than that used for instrument calibration.

The laboratory will evaluate LCS analyses in terms of percent recovery using the most recent laboratory-generated control limits.

LCS recoveries that do not meet acceptance criteria will be deemed invalid. Analysis of project samples will cease until an acceptable LCS analysis has been performed. If sample analysis is performed in association with an out-of-control LCS sample analysis, the data will be deemed invalid.

Corrective actions will be initiated by the Haley & Aldrich of New York QA Officer and/or Laboratory QA Officer to investigate the problem. After the problem has been identified and corrected, the solution will be noted in the instrument run logbook, and re-analysis of project samples will be performed, if possible.

The analytical anomaly will be noted in the SDG Case Narrative and reviewed by the Data Validator. The Data Validator will confirm that appropriate corrective actions were implemented and recommend the applicable use of the affected data.

7.2.4 Surrogate Compound/Internal Standard Recoveries

For VOCs, surrogates will be added to each sample prior to analysis to establish purge and trap efficiency. Quantitation will be accomplished via internal standardization techniques.

The recovery of surrogate compounds and internal standards will be monitored by laboratory personnel to assess possible Site-specific matrix effects on instrument performance. For SVOC analyses, surrogates will be added to the raw sample to assess extraction efficiency. Internal standards will be added to all sample extracts and instrument calibration standards immediately before analysis for quantitation via internal standardization techniques.

Method-specific QC limits are provided in the attached laboratory method SOPs. Surrogate compound/internal standard recoveries that do not fall within accepted QC limits for the analytical methodology performed will have the analytical results flagged with data qualifiers as appropriate by the laboratory and will not be noted in the laboratory report Case Narrative.

To ascertain the effect non-compliant surrogate compound/internal standard recoveries may have on the reported results, the recovery data will be evaluated as part of the validation process. The Data Validator will provide recommendations for corrective actions, including but not limited to additional data qualification.

7.2.5 Calibration Verification Standards

Calibration verification (CV) standards will be utilized to confirm instrument calibrations and performance throughout the analytical process. CV standards will be prepared as prescribed by the respective analytical protocols. Continuing calibration will be verified by compliance with method-specific criteria prior to additional analysis of project samples.

Non-compliant analysis of CV standards will require immediate corrective action by the project Laboratory QA Officer and/or designated personnel. Corrective action may include re-analysis of each affected project sample, a detailed description of the problem, the corrective action undertaken, the person who performed the action, and the resolution of the problem.

7.2.6 Laboratory Method Blank Analyses

Method blank sample analysis will be performed as part of each analytical batch for each methodology performed. If target compounds are detected in the method blank samples, the reported results will be flagged by the laboratory in accordance with SOPs. The Data Validator will provide recommendations for corrective actions, including but not limited to additional data qualification.

8. Data Quality Objectives

Sampling that will be performed as described in the RIWP is designed to produce data of the quality necessary to achieve the minimum standard requirements of the field and laboratory analytical objectives described below. These data are being obtained with the primary objective of assessing levels of contaminants of concern associated with the Site.

The overall project data quality objective (DQO) is to implement procedures for field data collection, sample collection, handling, and laboratory analysis and reporting that achieve the project objectives. The following section is a general discussion of the criteria that will be used to measure achievement of the project DQO.

8.1 PRECISION

8.1.1 Definition

Precision is defined as a quantitative measure of the degree to which two or more measurements are in agreement. Precision will be determined by collecting and analyzing field duplicate samples and by creating and analyzing laboratory duplicates from one or more of the field samples. The overall precision of measurement data is a mixture of sampling and analytical factors. The analytical results from the field duplicate samples will provide data on sampling precision. The results from duplicate samples created by the laboratory will provide data on analytical precision. The measurement of precision will be stated in terms of the RPD; RPD is defined as the absolute difference of duplicate measurements divided by the mean of these analyses, normalized to a percentage.

8.1.2 Field Precision Sample Objectives

Field precision will be assessed through the collection and measurement of field duplicate samples at a rate of one duplicate per 20 investigative samples. The RPD criteria for the project field duplicate samples will be +/- 100 percent for soil and +/- 35 percent for groundwater for parameters of analysis detected at concentrations greater than five times the laboratory RL.

8.1.3 Laboratory Precision Sample Objectives

Laboratory precision will be assessed through the analysis of LCS and laboratory control duplicate samples (LCSD) and MS/MSD samples for groundwater and soil samples and the analysis of laboratory duplicate samples for air and soil vapor samples. Air and soil vapor laboratory duplicate sample analyses will be performed by analyzing the same Summa canister twice. The RPD criteria for the air/soil vapor laboratory duplicate samples will be +/- 35 percent for parameters of analysis detected at concentrations greater than five times the laboratory RL.

8.2 ACCURACY

8.2.1 Definition

Accuracy relates to the bias in a measurement system. Bias is the difference between the observed and the "true" value. Sources of error are the sampling process, field contamination, preservation techniques, sample handling, sample matrix, sample preparation, and analytical procedure limitations.

8.2.2 Field Accuracy Objectives

Sampling bias will be assessed by evaluating the results of field equipment rinse and trip blanks. Equipment rinse and trip blanks will be collected as appropriate based on sampling and analytical methods for each sampling effort.

If non-dedicated sampling equipment is used, equipment rinse blanks will be collected by passing ASTM Type II water over and/or through the respective sampling equipment utilized during each sampling effort. One equipment rinse blank will be collected for each type of non-dedicated sampling equipment used for the sampling effort. Equipment rinse blanks will be analyzed for each target parameter for the respective sampling effort for which environmental media have been collected.

Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.

Trip blank samples will be prepared by the laboratory and provided with each shipping container, which includes containers for the collection of groundwater samples for the analysis of VOCs. Trip blank samples will be analyzed for each VOC for which groundwater samples have been collected for analysis.

8.3 LABORATORY ACCURACY OBJECTIVES

Analytical bias will be assessed through the use of LCS and Site-specific MS sample analyses. LCS analyses will be performed with each analytical batch of project samples to determine the accuracy of the analytical system.

One set of MS/MSD analyses will be performed with each batch of 20 project samples collected for analysis to assess the accuracy of the identification and quantification of analytes within the Site-specific sample matrices. Additional sample volume will be collected at sample locations selected for the preparation of MS/MSD samples so that the standard laboratory RLs are achieved.

The accuracy of analyses that include a sample extraction procedure will be evaluated through the use of system monitoring or surrogate compounds. Surrogate compounds will be added to each sample, standard, blank, and QC sample prior to sample preparation and analysis. Surrogate compound percent recoveries will provide information on the effect of the sample matrix on the accuracy of the analyses.

8.4 REPRESENTATIVENESS

8.4.1 Definition

Representativeness expresses the degree to which sample data represent a characteristic of a population, a parameter variation at a sampling point, or an environmental condition. Representativeness is a qualitative parameter that is dependent upon the design of the sampling program. The representativeness criterion is satisfied through the proper selection of sampling locations, the quantity of samples, and the use of appropriate procedures to collect and analyze the samples.

8.4.2 Measures to Ensure Representativeness of Field Data

Representativeness will be addressed by prescribing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

8.5 COMPLETENESS

8.5.1 Definition

Completeness is a measure of the amount of valid (usable) data obtained from a measuring system compared to the total amount anticipated to be obtained. The completeness goal for all data uses is that a sufficient amount of valid data be generated so that determinations can be made related to the intended data use with a sufficient degree of confidence. Valid data is determined by independent confirmation of compliance with method-specific and project-specific data quality objectives. The calculation of data set completeness will be performed using the following equation.

$$\frac{Number\ of\ Valid\ Sample\ Results}{Total\ Number\ of\ Samples\ Planned}\ X\ 100 = \%\ Complete$$

8.5.2 Field Completeness Objectives

Completeness is a measure of the amount of valid measurements obtained from measurements taken in this project versus the number planned. The field completeness objective for this project will be greater than 90 percent.

8.5.3 Laboratory Completeness Objectives

Laboratory data completeness objective is a measure of the amount of valid data obtained from laboratory measurements. The evaluation of the data completeness will be performed at the conclusion of each sampling and analysis effort.

The completeness of the data generated will be determined by comparing the amount of valid data based on independent validation with the total laboratory dataset. The completeness goal will be greater than 90 percent.

8.6 COMPARABILITY

8.6.1 Definition

Comparability is a qualitative parameter expressing the confidence with which one dataset can be compared to another.

8.6.2 Measures to Ensure Comparability of Laboratory Data

Comparability of laboratory data will be measured from the analysis of SRM obtained from either USEPA CRADA suppliers or the NIST. The reported analytical data will also be presented in standard units of mass of contaminant within a known volume of environmental media. The standard units for various sample matrices are as follows:

- Solid Matrices – micrograms per kilogram (µg/kg) for PFAS analyses; milligrams per kilogram (mg/kg) of media (dry weight).
- Aqueous Matrices – nanograms per liter (ng/L) for PFAS analyses; micrograms per liter (µg/L) of media for organic analyses, and milligrams per liter (mg/L) for inorganic analyses.

8.7 LEVEL OF QUALITY CONTROL EFFORT

If non-dedicated sampling equipment is used, equipment rinse blanks will be prepared by field personnel and submitted for analysis of target parameters. Equipment rinse blank samples will be analyzed to check for potential cross-contamination between sampling locations that may be introduced during the investigation. One equipment rinse blank will be collected per sampling event to the extent that non-dedicated sampling equipment is used.

If necessary, a separate equipment rinse blank sample will be collected for PFAS to assess potential contamination introduced from utilized equipment.

Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.

Trip blanks will be used to assess the potential for contamination during sample storage and shipment. Trip blanks will be provided with the sample containers to be used for the collection of groundwater samples for the analysis of VOCs. Trip blanks will be preserved and handled in the same manner as the project samples. One trip blank will be included along with each shipping container containing project samples to be analyzed for VOCs.

Method blank samples will be prepared by the laboratory and analyzed concurrently with all project samples to assess potential contamination introduced during the analytical process.

Field duplicate samples will be collected and analyzed to determine sampling and analytical reproducibility. One field duplicate will be collected for every 20 or fewer investigative samples collected for off-Site laboratory analysis.

MS will provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected. One MS/MSD will be collected for every 20 or fewer investigative samples per sample matrix.

Note: Soil MS/MSD samples require triple sample volume for VOC only. Aqueous MS/MSD samples require triple the normal sample volume for VOC analysis and double the volume for the remaining parameters.

9. Data Reduction, Validation, and Reporting

Data generated by the laboratory operation will be reduced and validated prior to reporting in accordance with the following procedures:

9.1 DATA REDUCTION

9.1.1 Field Data Reduction Procedures

Field data reduction procedures will be minimal in scope compared to those implemented in the laboratory setting. The pH, conductivity, temperature, turbidity, DO, ORP, and breathing zone VOC readings collected in the field will be generated from direct read instruments. The data will be written into field logbooks immediately after measurements are taken. If errors are made, data will be legibly crossed out, initialed and dated by the field member, and corrected in a space adjacent to the original entry.

9.1.2 Laboratory Data Reduction Procedures

Laboratory data reduction procedures are provided by the appropriate chapter of USEPA's "Test Methods for Evaluating Solid Waste," SW-846, Third Edition. Errors will be noted; corrections made with the original notations crossed out legibly. Analytical results for soil samples will be calculated and reported on a dry-weight basis.

9.1.3 Quality Control Data

QC data (e.g., laboratory duplicates, surrogates, MSs, and MSDs) will be compared to the method acceptance criteria. Data determined to be acceptable will be entered into the laboratory information management system.

Unacceptable data will be appropriately qualified in the project report. Case narratives will be prepared, which will include information concerning data that fell outside acceptance limits and any other anomalous conditions encountered during sample analysis.

9.2 DATA VALIDATION

Data validation procedures of the analytical data will be performed by the Haley & Aldrich QA Officer or designee using the following documents as guidance for the review process:

- "[US]EPA National Functional Guidelines for Organic Data Review," "Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15," "Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs," and the "[US]EPA National Functional Guidelines for Inorganic Data Review."
- The specific data qualifiers used will be applied to the reported results as presented and defined in the USEPA National Functional Guidelines. Validation will be performed by qualified personnel at the direction of the Haley & Aldrich of New York QA Officer. Tier 1 data validation (the equivalent of USEPA's Stage 2A validation) will be performed to evaluate data quality.

- The completeness of each data package will be evaluated by the Data Validator. Completeness checks will be administered on all data to determine that the deliverables are consistent with the NYSDEC Analytical Services Protocol (ASP) Category A and Category B data package requirements. The validator will determine whether the required items are present and request copies of missing deliverables (if necessary) from the laboratory.

9.3 DATA REPORTING

Data reporting procedures will be carried out for field and laboratory operations as indicated below:

- Field Data Reporting: Field data reporting will be conducted principally through the transmission of report sheets containing tabulated results of measurements made in the field and documentation of field calibration activities.
- Laboratory Data Reporting: The laboratory data reporting package will enable data validation based on the protocols described above. The final laboratory data report format will include the QA/QC sample analysis deliverables to enable the development of a DUSR based on NYSDEC DER-10 Appendix 2B.

10. Performance and System Audits

A performance audit is an independent quantitative comparison with data routinely obtained in the field or the laboratory. Performance audits include two separate, independent parts: internal and external audits.

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS

10.1.1 Internal Field Audit Responsibilities

Internal audits of field activities will be initiated at the discretion of the Project Manager and will include the review of sampling and field measurements. The audits will verify that all procedures are being followed. Internal field audits will be conducted periodically during the project. The audits will include examination of the following:

- Field sampling records, screening results, instrument operating records;
- Sample collection;
- Handling and packaging in compliance with procedures;
- Maintenance of QA procedures; and
- COC reports.

10.1.2 External Field Audit Responsibilities

External audits may be conducted by the Project Coordinator at any time during the field operations. These audits may or may not be announced and are at the discretion of the NYSDEC. The external field audits can include (but are not limited to) the following:

- Sampling equipment decontamination procedures;
- Sample bottle preparation procedures;
- Sampling procedures;
- Examination of HASPs;
- Procedures for verification of field duplicates; and
- Field screening practices.

10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS

10.2.1 Internal Laboratory Audit Responsibilities

The laboratory system audits are typically conducted by the Laboratory QA Officer or designee on an annual basis. The system audit will include an examination of laboratory documentation, including sample receiving logs, sample storage, COC procedures, sample preparation, and analysis and instrument operating records.

At the conclusion of internal system audits, reports will be provided to the laboratory's operating divisions for appropriate comment and remedial/corrective action where necessary. Records of audits and corrective actions will be maintained by the Laboratory QA Officer.

10.2.2 External Laboratory Audit Responsibilities

External audits will be conducted as required by the NYSDOH or designee. External audits may include any of the following:

- Review of laboratory analytical procedures;
- Laboratory on-site visits; and
- Submission of performance evaluation samples for analysis.

Failure of any of the above audit procedures can lead to laboratory de-certification. An audit may consist of, but not be limited to:

- Sample receipt procedures;
- Custody, sample security, and log-in procedures;
- Review of instrument calibration logs;
- Review of QA procedures;
- Review of log books;
- Review of analytical SOPs; and
- Personnel interviews.

A review of a data package from samples recently analyzed by the laboratory can include (but not be limited to) the following:

- Comparison of the resulting data to the SOP or method;
- Verification of initial and continuing calibrations within control limits;
- Verification of surrogate recoveries and instrument timing results;
- Review of extended quantitation reports for comparisons of library spectra to instrument spectra, where applicable; and
- Assurance that samples are run within holding times.

11. Preventive Maintenance

11.1 FIELD INSTRUMENT PREVENTIVE MAINTENANCE

The field equipment preventive maintenance program is designed to ensure the effective completion of the sampling effort and to minimize equipment downtime. Program implementation is concentrated in three areas:

- Maintenance responsibilities;
- Maintenance schedules; and
- Inventory of critical spare parts and equipment.

The maintenance responsibilities for field equipment will be assigned to the task leaders in charge of specific field operations. Field personnel will be responsible for daily field checks and calibrations and for reporting any problems with the equipment. The maintenance schedule will follow the manufacturer's recommendations. In addition, the field personnel will be responsible for determining that an inventory of spare parts will be maintained with the field equipment. The inventory will primarily contain parts that are subject to frequent failure, have limited useful lifetimes, and/or cannot be obtained in a timely manner.

11.2 LABORATORY INSTRUMENT PREVENTIVE MAINTENANCE

Analytical instruments at the laboratory will undergo routine and/or preventive maintenance. The extent of the preventive maintenance will be a function of the complexity of the equipment.

Generally, annual preventive maintenance service will involve cleaning, adjusting, inspecting, and testing procedures designed to reduce instrument failure and/or extend useful instrument life. Between visits, routine operator maintenance and cleaning will be performed according to manufacturer's specifications by laboratory personnel.

12. Specific Routine Procedures Used to Assess Data Precision, Accuracy, and Completeness

12.1 FIELD MEASUREMENTS

Field-generated information will be reviewed by the Field Coordinator and typically includes evaluation of bound logbooks/forms, data entry, and calculation checks. Field data will be assessed by the Project Coordinator, who will review the field results for compliance with the established QC criteria that are specified in Section 7 of this QAPP. The accuracy of pH and specific conductance will be assessed using daily instrument calibration, calibration check, and blank data. Accuracy will be measured by determining the percent recovery (% R) of calibration check standards. Precision of the pH and specific conductance measurements will be assessed on the basis of the reproducibility of duplicate readings of a field sample and will be measured by determining the RPD. Accuracy and precision of the soil VOC screening will be determined using duplicate readings of calibration checks. Field data completeness will be calculated using the following equation:

$$Completeness = \frac{Valid\ (usable)\ Data\ Obtained}{Total\ Data\ Planned} \ X\ 100$$

12.2 LABORATORY DATA

Laboratory data will be assessed by the Haley & Aldrich of New York QA Officer or designee, who will review the laboratory results for compliance with the established QC criteria that are specified in Sections 7 and 8 of this QAPP.

13. Quality Assurance Reports

Critically important to the successful implementation of this QAPP is a reporting system that provides the means by which the program can be reviewed, problems identified, and programmatic changes made to improve the plan.

QA reports to management can include:

- Audit reports and internal and external audits with responses;
- Performance evaluation sample results, internal and external sources; and
- Daily QA/QC exception reports/corrective actions.

QA/QC corrective action reports will be prepared by the Haley & Aldrich of New York QA Officer when appropriate and presented to the project and/or laboratory management personnel so that performance criteria can be monitored for all analyses from each analytical department. The updated trend/QA charts prepared by the laboratory QA personnel will be distributed and reviewed by various levels of the laboratory management.

References

1. New York State Department of Environmental Conservation, 1991. Analytical Services Protocol (ASP), Bureau of Environmental Investigation, with updates.

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

3. New York State Department of Environmental Conservation, 2023. Division of Environmental Remediation, Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs. April.

4. United States Environmental Protection Agency, 1991. Preparation Aids for the Development of Category I Quality Assurance Project Plans. U.S. EPA/600/8-91/003, Risk Reduction Engineering Laboratory, Office of Research and Development, Cincinnati, Ohio. February.

5. United States Environmental Protection Agency, 1992. Specifications and Guidance for Contaminant-Free Sample Containers. OSWER Directive 9240.0-05A. April.

6. United States Environmental Protection Agency, 1993. Data Quality Objectives Process for Superfund Interim Final Guidance. U.S. EPA/540/R-93-071, Office of Solid Waste and Emergency Response (OSWER). September.

7. United States Environmental Protection Agency, 1999. EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations. EPA QA/R-5 Interim Final. November.

8. United States Environmental Protection Agency. National Functional Guidelines for Inorganic Data Review. U.S. EPA 540/R-2017-001.

9. United States Environmental Protection Agency. National Functional Guidelines for Organic Data Review. U.S. EPA 540/R-2017-002.

10. United States Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Office of Solid Waste, U.S. EPA, SW-846, November 1986, with updates.

TABLES

TABLE 1
SUMMARY OF ANALYSIS METHOD, PRESERVATION METHOD, HOLDING TIME, SAMPLE SIZE REQUIREMENTS, AND SAMPLE CONTAINERS
145-11 Liberty Avenue
Queens, NY

Analysis/Method[3]	Sample Type	Preservation	Holding Time	Volume/Weight	Container[4]
Volatile Organic Compounds/8260C	Soil	1 - 1 Vial MeOH/2 Vial Water, Cool, 4 ± 2 °C	14 days[1]	120 mL	3 - 40ml glass vials
Semivolatile Organic Compounds/8270D	Soil	Cool, 4 ± 2 °C	14 days extraction / 40 days analysis	250 mL	1 - 8 oz Glass
Pesticides/8081B	Soil	Cool, 4 ± 2 °C	14 days extraction / 40 days analysis	250 mL	1 - 4 oz Glass
Polychlorinated Biphenyls/8082A	Soil	Cool, 4 ± 2 °C	14 days extraction / 40 days analysis	250 mL	1 - 4 oz Glass
Metals/6010D	Soil	Cool, 4 ± 2 °C	180 days	60 mL	1 - 4 oz Glass
PFAS/1633	Soil	Cool, 4 ± 2 °C	28 days extraction / 40 days analysis	To be determined by laboratory	1 - HDPE container
1,4-Dioxane/8270	Soil	Cool, 4 ± 2 °C	14 days extraction / 40 days analysis	250 mL	1 - 8 oz Glass
Volatile Organic Compounds/8260C	Groundwater	HCl, Cool, 4 ± 2 °C	14 days	120 mL	3 - 40 mL glass vials
Semivolatile Organic Compounds/8270D	Groundwater	Cool, 4 ± 2 °C	7 days extraction / 40 days analysis	500 mL	2 - 250 mL amber glass
TAL Metals/6020	Groundwater	HNO_3Cool, 4 ± 2 °C	180 days	500 mL	1 - 500 mL plastic bottle
TCL Pesticides/8081B	Groundwater	Cool, 4 ± 2 °C	7 days	1000 mL	2 - 500 mL amber glass
PFAS/1633	Groundwater	H2O Cool, 4 ± 2 °C	28 days extraction / 28 days analysis	To be determined by laboratory	2 - HDPE container
1,4-Dioxane/8270SIM	Groundwater	Cool, 4 ± 2 °C	7 days extraction / 40 days analysis	500 mL	1 - 500 mL plastic bottle
Volatile Organic Compounds/TO-15	Soil Vapor	N/A	30 days	2.7 - 6 L	1 - 2.7 L Summa Canister

Notes:
1. Terracores and encores must be frozen within 48 hours of collection
2. Refer to text for additional information.
3. Equivalent method can be used.
4. Volume may vary by laboratory and/or equivalent method.

Date Created: 08/02/23
Created By: Mitch Ostrowski
File: PM14945-1
Page: 1

Table 2. Minimum Reporting Limits
TCL Volatiles - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,1-Dichloroethane	75-34-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Chloroform	67-66-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Carbon tetrachloride	56-23-5	0.5	0.134	ug/l	63-132	20	63-132	20	20			
1,2-Dichloropropane	78-87-5	1	0.137	ug/l	70-130	20	70-130	20	20			
Dibromochloromethane	124-48-1	0.5	0.149	ug/l	63-130	20	63-130	20	20			
1,1,2-Trichloroethane	79-00-5	1.5	0.5	ug/l	70-130	20	70-130	20	20			
Tetrachloroethene	127-18-4	0.5	0.181	ug/l	70-130	20	70-130	20	20			
Chlorobenzene	108-90-7	2.5	0.7	ug/l	75-130	20	75-130	20	20			
Trichlorofluoromethane	75-69-4	2.5	0.7	ug/l	62-150	20	62-150	20	20			
1,2-Dichloroethane	107-06-2	0.5	0.132	ug/l	70-130	20	70-130	20	20			
1,1,1-Trichloroethane	71-55-6	2.5	0.7	ug/l	67-130	20	67-130	20	20			
Bromodichloromethane	75-27-4	0.5	0.192	ug/l	67-130	20	67-130	20	20			
trans-1,3-Dichloropropene	10061-02-6	0.5	0.164	ug/l	70-130	20	70-130	20	20			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.144	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20			
1,1-Dichloropropene	563-58-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Bromoform	75-25-2	2	0.65	ug/l	54-136	20	54-136	20	20			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.167	ug/l	67-130	20	67-130	20	20			
Benzene	71-43-2	0.5	0.159	ug/l	70-130	20	70-130	20	20			
Toluene	108-88-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Ethylbenzene	100-41-4	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Chloromethane	74-87-3	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Bromomethane	74-83-9	2.5	0.7	ug/l	39-139	20	39-139	20	20			
Vinyl chloride	75-01-4	1	0.0714	ug/l	55-140	20	55-140	20	20			
Chloroethane	75-00-3	2.5	0.7	ug/l	55-138	20	55-138	20	20			
1,1-Dichloroethene	75-35-4	0.5	0.169	ug/l	61-145	20	61-145	20	20			
trans-1,2-Dichloroethene	156-60-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Trichloroethene	79-01-6	0.5	0.175	ug/l	70-130	20	70-130	20	20			
1,2-Dichlorobenzene	95-50-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,3-Dichlorobenzene	541-73-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,4-Dichlorobenzene	106-46-7	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Methyl tert butyl ether	1634-04-4	2.5	0.7	ug/l	63-130	20	63-130	20	20			
p/m-Xylene	179601-23-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
o-Xylene	95-47-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Xylene (Total)	1330-20-7	2.5	0.7	ug/l				20	20			
cis-1,2-Dichloroethene	156-59-2	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dichloroethene (total)	540-59-0	2.5	0.7	ug/l				20	20			
Dibromomethane	74-95-3	5	1	ug/l	70-130	20	70-130	20	20			
1,2,3-Trichloropropane	96-18-4	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Acrylonitrile	107-13-1	5	1.5	ug/l	70-130	20	70-130	20	20			
Styrene	100-42-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/02/23
Created By: Mitch Ostrowski
File: PM14945-1
Page: 2

Table 2. Minimum Reporting Limits
TCL Volatiles - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dichlorodifluoromethane	75-71-8	5	1	ug/l	36-147	20	36-147	20	20			
Acetone	67-64-1	5	1.46	ug/l	58-148	20	58-148	20	20			
Carbon disulfide	75-15-0	5	1	ug/l	51-130	20	51-130	20	20			
2-Butanone	78-93-3	5	1.94	ug/l	63-138	20	63-138	20	20			
Vinyl acetate	108-05-4	5	1	ug/l	70-130	20	70-130	20	20			
4-Methyl-2-pentanone	108-10-1	5	1	ug/l	59-130	20	59-130	20	20			
2-Hexanone	591-78-6	5	1	ug/l	57-130	20	57-130	20	20			
Bromochloromethane	74-97-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			
2,2-Dichloropropane	594-20-7	2.5	0.7	ug/l	63-133	20	63-133	20	20			
1,2-Dibromoethane	106-93-4	2	0.65	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropane	142-28-9	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,1,1,2-Tetrachloroethane	630-20-6	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Bromobenzene	108-86-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
n-Butylbenzene	104-51-8	2.5	0.7	ug/l	53-136	20	53-136	20	20			
sec-Butylbenzene	135-98-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
tert-Butylbenzene	98-06-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
o-Chlorotoluene	95-49-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
p-Chlorotoluene	106-43-4	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dibromo-3-chloropropane	96-12-8	2.5	0.7	ug/l	41-144	20	41-144	20	20			
Hexachlorobutadiene	87-68-3	2.5	0.7	ug/l	63-130	20	63-130	20	20			
Isopropylbenzene	98-82-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
p-Isopropyltoluene	99-87-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Naphthalene	91-20-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
n-Propylbenzene	103-65-1	2.5	0.7	ug/l	69-130	20	69-130	20	20			
1,2,3-Trichlorobenzene	87-61-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2,4-Trichlorobenzene	120-82-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,3,5-Trimethylbenzene	108-67-8	2.5	0.7	ug/l	64-130	20	64-130	20	20			
1,2,4-Trimethylbenzene	95-63-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,4-Dioxane	123-91-1	250	60.8	ug/l	56-162	20	56-162	20	20			
1,4-Diethylbenzene	105-05-5	2	0.7	ug/l	70-130	20	70-130	20	20			
4-Ethyltoluene	622-96-8	2	0.7	ug/l	70-130	20	70-130	20	20			
1,2,4,5-Tetramethylbenzene	95-93-2	2	0.542	ug/l	70-130	20	70-130	20	20			
Ethyl ether	60-29-7	2.5	0.7	ug/l	59-134	20	59-134	20	20			
trans-1,4-Dichloro-2-butene	110-57-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/02/23
Created By: Mitch Ostrowski
File: PM14945-1
Page: 1

Table 2. Minimum Reporting Limits
TCL Volatiles - EPA 8260D/5035 High&Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	5	2.29	ug/kg	70-130	30	70-130	30	30			
1,1-Dichloroethane	75-34-3	1	0.145	ug/kg	70-130	30	70-130	30	30			
Chloroform	67-66-3	1.5	0.14	ug/kg	70-130	30	70-130	30	30			
Carbon tetrachloride	56-23-5	1	0.23	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloropropane	78-87-5	1	0.125	ug/kg	70-130	30	70-130	30	30			
Dibromochloromethane	124-48-1	1	0.14	ug/kg	70-130	30	70-130	30	30			
1,1,2-Trichloroethane	79-00-5	1	0.267	ug/kg	70-130	30	70-130	30	30			
Tetrachloroethene	127-18-4	0.5	0.196	ug/kg	70-130	30	70-130	30	30			
Chlorobenzene	108-90-7	0.5	0.127	ug/kg	70-130	30	70-130	30	30			
Trichlorofluoromethane	75-69-4	4	0.695	ug/kg	70-139	30	70-139	30	30			
1,2-Dichloroethane	107-06-2	1	0.257	ug/kg	70-130	30	70-130	30	30			
1,1,1-Trichloroethane	71-55-6	0.5	0.167	ug/kg	70-130	30	70-130	30	30			
Bromodichloromethane	75-27-4	0.5	0.109	ug/kg	70-130	30	70-130	30	30			
trans-1,3-Dichloropropene	10061-02-6	1	0.273	ug/kg	70-130	30	70-130	30	30			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.158	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropene, Total	542-75-6	0.5	0.158	ug/kg				30	30			
1,1-Dichloropropene	563-58-6	0.5	0.159	ug/kg	70-130	30	70-130	30	30			
Bromoform	75-25-2	4	0.246	ug/kg	70-130	30	70-130	30	30			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Benzene	71-43-2	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Toluene	108-88-3	1	0.543	ug/kg	70-130	30	70-130	30	30			
Ethylbenzene	100-41-4	1	0.141	ug/kg	70-130	30	70-130	30	30			
Chloromethane	74-87-3	4	0.932	ug/kg	52-130	30	52-130	30	30			
Bromomethane	74-83-9	2	0.581	ug/kg	57-147	30	57-147	30	30			
Vinyl chloride	75-01-4	1	0.335	ug/kg	67-130	30	67-130	30	30			
Chloroethane	75-00-3	2	0.452	ug/kg	50-151	30	50-151	30	30			
1,1-Dichloroethene	75-35-4	1	0.238	ug/kg	65-135	30	65-135	30	30			
trans-1,2-Dichloroethene	156-60-5	1.5	0.137	ug/kg	70-130	30	70-130	30	30			
Trichloroethene	79-01-6	0.5	0.137	ug/kg	70-130	30	70-130	30	30			
1,2-Dichlorobenzene	95-50-1	2	0.144	ug/kg	70-130	30	70-130	30	30			
1,3-Dichlorobenzene	541-73-1	2	0.148	ug/kg	70-130	30	70-130	30	30			
1,4-Dichlorobenzene	106-46-7	2	0.171	ug/kg	70-130	30	70-130	30	30			
Methyl tert butyl ether	1634-04-4	2	0.201	ug/kg	66-130	30	66-130	30	30			
p/m-Xylene	179601-23-1	2	0.56	ug/kg	70-130	30	70-130	30	30			
o-Xylene	95-47-6	1	0.291	ug/kg	70-130	30	70-130	30	30			
Xylene (Total)	1330-20-7	1	0.291	ug/kg				30	30			
cis-1,2-Dichloroethene	156-59-2	1	0.175	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloroethene (total)	540-59-0	1	0.137	ug/kg				30	30			
Dibromomethane	74-95-3	2	0.238	ug/kg	70-130	30	70-130	30	30			
Styrene	100-42-5	1	0.196	ug/kg	70-130	30	70-130	30	30			
Dichlorodifluoromethane	75-71-8	10	0.915	ug/kg	30-146	30	30-146	30	30			
Acetone	67-64-1	10	4.811	ug/kg	54-140	30	54-140	30	30			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/02/23
Created By: Mitch Ostrowski
File: PM14945-1
Page: 2

Table 2. Minimum Reporting Limits
TCL Volatiles - EPA 8260D/5035 High&Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Carbon disulfide	75-15-0	10	4.55	ug/kg	59-130	30	59-130	30	30			
2-Butanone	78-93-3	10	2.22	ug/kg	70-130	30	70-130	30	30			
Vinyl acetate	108-05-4	10	2.15	ug/kg	70-130	30	70-130	30	30			
4-Methyl-2-pentanone	108-10-1	10	1.28	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichloropropane	96-18-4	2	0.127	ug/kg	68-130	30	68-130	30	30			
2-Hexanone	591-78-6	10	1.18	ug/kg	70-130	30	70-130	30	30			
Bromochloromethane	74-97-5	2	0.205	ug/kg	70-130	30	70-130	30	30			
2,2-Dichloropropane	594-20-7	2	0.202	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromoethane	106-93-4	1	0.279	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropane	142-28-9	2	0.167	ug/kg	69-130	30	69-130	30	30			
1,1,1,2-Tetrachloroethane	630-20-6	0.5	0.132	ug/kg	70-130	30	70-130	30	30			
Bromobenzene	108-86-1	2	0.145	ug/kg	70-130	30	70-130	30	30			
n-Butylbenzene	104-51-8	1	0.167	ug/kg	70-130	30	70-130	30	30			
sec-Butylbenzene	135-98-8	1	0.146	ug/kg	70-130	30	70-130	30	30			
tert-Butylbenzene	98-06-6	2	0.118	ug/kg	70-130	30	70-130	30	30			
o-Chlorotoluene	95-49-8	2	0.191	ug/kg	70-130	30	70-130	30	30			
p-Chlorotoluene	106-43-4	2	0.108	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromo-3-chloropropane	96-12-8	3	0.998	ug/kg	68-130	30	68-130	30	30			
Hexachlorobutadiene	87-68-3	4	0.169	ug/kg	67-130	30	67-130	30	30			
Isopropylbenzene	98-82-8	1	0.109	ug/kg	70-130	30	70-130	30	30			
p-Isopropyltoluene	99-87-6	1	0.109	ug/kg	70-130	30	70-130	30	30			
Naphthalene	91-20-3	4	0.65	ug/kg	70-130	30	70-130	30	30			
Acrylonitrile	107-13-1	4	1.15	ug/kg	70-130	30	70-130	30	30			
n-Propylbenzene	103-65-1	1	0.171	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichlorobenzene	87-61-6	2	0.322	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trichlorobenzene	120-82-1	2	0.272	ug/kg	70-130	30	70-130	30	30			
1,3,5-Trimethylbenzene	108-67-8	2	0.193	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trimethylbenzene	95-63-6	2	0.334	ug/kg	70-130	30	70-130	30	30			
1,4-Dioxane	123-91-1	80	35.1	ug/kg	65-136	30	65-136	30	30			
1,4-Diethylbenzene	105-05-5	2	0.177	ug/kg	70-130	30	70-130	30	30			
4-Ethyltoluene	622-96-8	2	0.384	ug/kg	70-130	30	70-130	30	30			
1,2,4,5-Tetramethylbenzene	95-93-2	2	0.191	ug/kg	70-130	30	70-130	30	30			
Ethyl ether	60-29-7	2	0.341	ug/kg	67-130	30	67-130	30	30			
trans-1,4-Dichloro-2-butene	110-57-6	5	1.42	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
2-Chloroethoxyethane												
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
NYTCL Semivolatiles - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	133.6	17.3012	ug/kg	31-137	50	31-137	50	50			
1,2,4-Trichlorobenzene	120-82-1	167	19.1048	ug/kg	38-107	50	38-107	50	50			
Hexachlorobenzene	118-74-1	100.2	18.704	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethyl)ether	111-44-4	150.3	22.6452	ug/kg	40-140	50	40-140	50	50			
2-Chloronaphthalene	91-58-7	167	16.5664	ug/kg	40-140	50	40-140	50	50			
1,2-Dichlorobenzene	95-50-1	167	29.9932	ug/kg	40-140	50	40-140	50	50			
1,3-Dichlorobenzene	541-73-1	167	28.724	ug/kg	40-140	50	40-140	50	50			
1,4-Dichlorobenzene	106-46-7	167	29.1582	ug/kg	28-104	50	28-104	50	50			
3,3'-Dichlorobenzidine	91-94-1	167	44.422	ug/kg	40-140	50	40-140	50	50			
2,4-Dinitrotoluene	121-14-2	167	33.4	ug/kg	40-132	50	40-132	50	50			
2,6-Dinitrotoluene	606-20-2	167	28.6572	ug/kg	40-140	50	40-140	50	50			
Fluoranthene	206-44-0	100.2	19.1716	ug/kg	40-140	50	40-140	50	50			
4-Chlorophenyl phenyl ether	7005-72-3	167	17.869	ug/kg	40-140	50	40-140	50	50			
4-Bromophenyl phenyl ether	101-55-3	167	25.4842	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroisopropyl)ether	108-60-1	200.4	28.5236	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethoxy)methane	111-91-1	180.36	16.7334	ug/kg	40-117	50	40-117	50	50			
Hexachlorobutadiene	87-68-3	167	24.4488	ug/kg	40-140	50	40-140	50	50			
Hexachlorocyclopentadiene	77-47-4	477.62	151.302	ug/kg	40-140	50	40-140	50	50			
Hexachloroethane	67-72-1	133.6	27.0206	ug/kg	40-140	50	40-140	50	50			
Isophorone	78-59-1	150.3	21.6766	ug/kg	40-140	50	40-140	50	50			
Naphthalene	91-20-3	167	20.3406	ug/kg	40-140	50	40-140	50	50			
Nitrobenzene	98-95-3	150.3	24.716	ug/kg	40-140	50	40-140	50	50			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	133.6	19.0046	ug/kg	36-157	50	36-157	50	50			
n-Nitrosodi-n-propylamine	621-64-7	167	25.7848	ug/kg	32-121	50	32-121	50	50			
Bis(2-Ethylhexyl)phthalate	117-81-7	167	57.782	ug/kg	40-140	50	40-140	50	50			
Butyl benzyl phthalate	85-68-7	167	42.084	ug/kg	40-140	50	40-140	50	50			
Di-n-butylphthalate	84-74-2	167	31.6632	ug/kg	40-140	50	40-140	50	50			
Di-n-octylphthalate	117-84-0	167	56.78	ug/kg	40-140	50	40-140	50	50			
Diethyl phthalate	84-66-2	167	15.4642	ug/kg	40-140	50	40-140	50	50			
Dimethyl phthalate	131-11-3	167	35.07	ug/kg	40-140	50	40-140	50	50			
Benzo(a)anthracene	56-55-3	100.2	18.8042	ug/kg	40-140	50	40-140	50	50			
Benzo(a)pyrene	50-32-8	133.6	40.748	ug/kg	40-140	50	40-140	50	50			
Benzo(b)fluoranthene	205-99-2	100.2	28.1228	ug/kg	40-140	50	40-140	50	50			
Benzo(k)fluoranthene	207-08-9	100.2	26.72	ug/kg	40-140	50	40-140	50	50			
Chrysene	218-01-9	100.2	17.368	ug/kg	40-140	50	40-140	50	50			
Acenaphthylene	208-96-8	133.6	25.7848	ug/kg	40-140	50	40-140	50	50			
Anthracene	120-12-7	100.2	32.565	ug/kg	40-140	50	40-140	50	50			
Benzo(ghi)perylene	191-24-2	133.6	19.6392	ug/kg	40-140	50	40-140	50	50			
Fluorene	86-73-7	167	16.2324	ug/kg	40-140	50	40-140	50	50			
Phenanthrene	85-01-8	100.2	20.3072	ug/kg	40-140	50	40-140	50	50			
Dibenzo(a,h)anthracene	53-70-3	100.2	19.3052	ug/kg	40-140	50	40-140	50	50			
Indeno(1,2,3-cd)Pyrene	193-39-5	133.6	23.2798	ug/kg	40-140	50	40-140	50	50			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 2

Table 2. Minimum Reporting Limits
NYTCL Semivolatiles - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Pyrene	129-00-0	100.2	16.5998	ug/kg	35-142	50	35-142	50	50			
Biphenyl	92-52-4	380.76	21.71	ug/kg	37-127	50	37-127	50	50			
4-Chloroaniline	106-47-8	167	30.394	ug/kg	40-140	50	40-140	50	50			
2-Nitroaniline	88-74-4	167	32.1976	ug/kg	47-134	50	47-134	50	50			
3-Nitroaniline	99-09-2	167	31.4962	ug/kg	26-129	50	26-129	50	50			
4-Nitroaniline	100-01-6	167	69.138	ug/kg	41-125	50	41-125	50	50			
Dibenzofuran	132-64-9	167	15.7982	ug/kg	40-140	50	40-140	50	50			
2-Methylnaphthalene	91-57-6	200.4	20.1736	ug/kg	40-140	50	40-140	50	50			
Acetophenone	98-86-2	167	20.6746	ug/kg	14-144	50	14-144	50	50			
2,4,6-Trichlorophenol	88-06-2	100.2	31.6632	ug/kg	30-130	50	30-130	50	50			
P-Chloro-M-Cresol	59-50-7	167	24.883	ug/kg	26-103	50	26-103	50	50			
2-Chlorophenol	95-57-8	167	19.7394	ug/kg	25-102	50	25-102	50	50			
2,4-Dichlorophenol	120-83-2	150.3	26.8536	ug/kg	30-130	50	30-130	50	50			
2,4-Dimethylphenol	105-67-9	167	55.11	ug/kg	30-130	50	30-130	50	50			
2-Nitrophenol	88-75-5	360.72	62.792	ug/kg	30-130	50	30-130	50	50			
4-Nitrophenol	100-02-7	233.8	68.136	ug/kg	11-114	50	11-114	50	50			
2,4-Dinitrophenol	51-28-5	801.6	77.822	ug/kg	4-130	50	4-130	50	50			
4,6-Dinitro-o-cresol	534-52-1	434.2	80.16	ug/kg	10-130	50	10-130	50	50			
Pentachlorophenol	87-86-5	133.6	36.74	ug/kg	17-109	50	17-109	50	50			
Phenol	108-95-2	167	25.217	ug/kg	26-90	50	26-90	50	50			
2-Methylphenol	95-48-7	167	25.885	ug/kg	30-130.	50	30-130.	50	50			
3-Methylphenol/4-Methylphenol	106-44-5	240.48	26.1522	ug/kg	30-130	50	30-130	50	50			
2,4,5-Trichlorophenol	95-95-4	167	31.9972	ug/kg	30-130	50	30-130	50	50			
Benzoic Acid	65-85-0	541.08	169.004	ug/kg	10-110	50	10-110	50	50			
Benzyl Alcohol	100-51-6	167	51.102	ug/kg	40-140	50	40-140	50	50			
Carbazole	86-74-8	167	16.2324	ug/kg	54-128	50	54-128	50	50			
1,4-Dioxane	123-91-1	25.05	7.682	ug/kg	40-140	50	40-140	50	50			
2-Fluorophenol	*367-12-4*									*25-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*30-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-136*		
4-Terphenyl-d14	*1718-51-0*									*18-120*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
NYTCL Semivolatiles - EPA 8270E (LVI) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 250ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	2.002	0.44408	ug/l	37-111	30	37-111	30	30			
1,2,4-Trichlorobenzene	120-82-1	5.0232	0.49868	ug/l	39-98	30	39-98	30	30			
Hexachlorobenzene	118-74-1	2.002	0.46592	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethyl)ether	111-44-4	2.002	0.50596	ug/l	40-140	30	40-140	30	30			
2-Chloronaphthalene	91-58-7	2.002	0.4368	ug/l	40-140	30	40-140	30	30			
1,2-Dichlorobenzene	95-50-1	2.002	0.455	ug/l	40-140	30	40-140	30	30			
1,3-Dichlorobenzene	541-73-1	2.002	0.40404	ug/l	40-140	30	40-140	30	30			
1,4-Dichlorobenzene	106-46-7	2.002	0.43316	ug/l	36-97	30	36-97	30	30			
3,3'-Dichlorobenzidine	91-94-1	5.0232	1.62344	ug/l	40-140	30	40-140	30	30			
2,4-Dinitrotoluene	121-14-2	5.0232	1.1648	ug/l	48-143	30	48-143	30	30			
2,6-Dinitrotoluene	606-20-2	5.0232	0.93184	ug/l	40-140	30	40-140	30	30			
Fluoranthene	206-44-0	2.002	0.257348	ug/l	40-140	30	40-140	30	30			
4-Chlorophenyl phenyl ether	7005-72-3	2.002	0.48776	ug/l	40-140	30	40-140	30	30			
4-Bromophenyl phenyl ether	101-55-3	2.002	0.37856	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroisopropyl)ether	108-60-1	2.002	0.5278	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethoxy)methane	111-91-1	5.0232	0.50232	ug/l	40-140	30	40-140	30	30			
Hexachlorobutadiene	87-68-3	2.002	0.65884	ug/l	40-140	30	40-140	30	30			
Hexachlorocyclopentadiene	77-47-4	20.02	0.68796	ug/l	40-140	30	40-140	30	30			
Hexachloroethane	67-72-1	2.002	0.58604	ug/l	40-140	30	40-140	30	30			
Isophorone	78-59-1	5.0232	1.20484	ug/l	40-140	30	40-140	30	30			
Naphthalene	91-20-3	2.002	0.46592	ug/l	40-140	30	40-140	30	30			
Nitrobenzene	98-95-3	2.002	0.77168	ug/l	40-140	30	40-140	30	30			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	2.002	0.4186	ug/l	40-140	30	40-140	30	30			
n-Nitrosodi-n-propylamine	621-64-7	5.0232	0.64428	ug/l	29-132	30	29-132	30	30			
Bis(2-Ethylhexyl)phthalate	117-81-7	3.003	1.53608	ug/l	40-140	30	40-140	30	30			
Butyl benzyl phthalate	85-68-7	5.0232	1.17208	ug/l	40-140	30	40-140	30	30			
Di-n-butylphthalate	84-74-2	5.0232	0.38948	ug/l	40-140	30	40-140	30	30			
Di-n-octylphthalate	117-84-0	5.0232	1.274	ug/l	40-140	30	40-140	30	30			
Diethyl phthalate	84-66-2	5.0232	0.3822	ug/l	40-140	30	40-140	30	30			
Dimethyl phthalate	131-11-3	5.0232	1.82	ug/l	40-140	30	40-140	30	30			
Benzo(a)anthracene	56-55-3	2.002	0.32578	ug/l	40-140	30	40-140	30	30			
Benzo(a)pyrene	50-32-8	2.002	0.40768	ug/l	40-140	30	40-140	30	30			
Benzo(b)fluoranthene	205-99-2	2.002	0.355264	ug/l	40-140	30	40-140	30	30			
Benzo(k)fluoranthene	207-08-9	2.002	0.37492	ug/l	40-140	30	40-140	30	30			
Chrysene	218-01-9	2.002	0.341068	ug/l	40-140	30	40-140	30	30			
Acenaphthylene	208-96-8	2.002	0.46592	ug/l	45-123	30	45-123	30	30			
Anthracene	120-12-7	2.002	0.32942	ug/l	40-140	30	40-140	30	30			
Benzo(ghi)perylene	191-24-2	2.002	0.296296	ug/l	40-140	30	40-140	30	30			
Fluorene	86-73-7	2.002	0.41496	ug/l	40-140	30	40-140	30	30			
Phenanthrene	85-01-8	2.002	0.33124	ug/l	40-140	30	40-140	30	30			
Dibenzo(a,h)anthracene	53-70-3	2.002	0.323232	ug/l	40-140	30	40-140	30	30			
Indeno(1,2,3-cd)Pyrene	193-39-5	2.002	0.39676	ug/l	40-140	30	40-140	30	30			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 2

Table 2. Minimum Reporting Limits
NYTCL Semivolatiles - EPA 8270E (LVI) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 250ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Pyrene	129-00-0	2.002	0.279552	ug/l	26-127	30	26-127	30	30			
Biphenyl	92-52-4	2.002	0.45864	ug/l	40-140	30	40-140	30	30			
4-Chloroaniline	106-47-8	5.0232	1.07016	ug/l	40-140	30	40-140	30	30			
2-Nitroaniline	88-74-4	5.0232	0.49868	ug/l	52-143	30	52-143	30	30			
3-Nitroaniline	99-09-2	5.0232	0.81536	ug/l	25-145	30	25-145	30	30			
4-Nitroaniline	100-01-6	5.0232	0.8008	ug/l	51-143	30	51-143	30	30			
Dibenzofuran	132-64-9	2.002	0.49868	ug/l	40-140	30	40-140	30	30			
2-Methylnaphthalene	91-57-6	2.002	0.455	ug/l	40-140	30	40-140	30	30			
Acetophenone	98-86-2	5.0232	0.5278	ug/l	39-129	30	39-129	30	30			
2,4,6-Trichlorophenol	88-06-2	5.0232	0.61152	ug/l	30-130	30	30-130	30	30			
P-Chloro-M-Cresol	59-50-7	2.002	0.35126	ug/l	23-97	30	23-97	30	30			
2-Chlorophenol	95-57-8	2.002	0.48048	ug/l	27-123	30	27-123	30	30			
2,4-Dichlorophenol	120-83-2	5.0232	0.41132	ug/l	30-130	30	30-130	30	30			
2,4-Dimethylphenol	105-67-9	5.0232	1.77996	ug/l	30-130	30	30-130	30	30			
2-Nitrophenol	88-75-5	10.01	0.84812	ug/l	30-130	30	30-130	30	30			
4-Nitrophenol	100-02-7	10.01	0.6734	ug/l	10-80	30	10-80	30	30			
2,4-Dinitrophenol	51-28-5	20.02	6.6612	ug/l	20-130	30	20-130	30	30			
4,6-Dinitro-o-cresol	534-52-1	10.01	1.81636	ug/l	20-164	30	20-164	30	30			
Pentachlorophenol	87-86-5	10.01	1.79452	ug/l	9-103	30	9-103	30	30			
Phenol	108-95-2	5.0232	0.56784	ug/l	12-110	30	12-110	30	30			
2-Methylphenol	95-48-7	5.0232	0.4914	ug/l	30-130	30	30-130	30	30			
3-Methylphenol/4-Methylphenol	106-44-5	5.0232	0.48048	ug/l	30-130	30	30-130	30	30			
2,4,5-Trichlorophenol	95-95-4	5.0232	0.77532	ug/l	30-130	30	30-130	30	30			
Benzoic Acid	65-85-0	50.232	2.66084	ug/l	10-164	30	10-164	30	30			
Benzyl Alcohol	100-51-6	2.002	0.58968	ug/l	26-116	30	26-116	30	30			
Carbazole	86-74-8	2.002	0.4914	ug/l	55-144	30	55-144	30	30			
2-Fluorophenol	*367-12-4*									*21-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*15-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-120*		
4-Terphenyl-d14	*1718-51-0*									*41-149*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
METALS by 6010D (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Aluminum, Total	7429-90-5	4	1.08	mg/kg	48-151		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Antimony, Total	7440-36-0	2	0.152	mg/kg	1-208		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Arsenic, Total	7440-38-2	0.4	0.0832	mg/kg	79-121		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Barium, Total	7440-39-3	0.4	0.0696	mg/kg	83-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Beryllium, Total	7440-41-7	0.2	0.0132	mg/kg	83-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Cadmium, Total	7440-43-9	0.4	0.0392	mg/kg	83-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Calcium, Total	7440-70-2	4	1.4	mg/kg	81-119		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Chromium, Total	7440-47-3	0.4	0.0384	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Cobalt, Total	7440-48-4	0.8	0.0664	mg/kg	84-115		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Copper, Total	7440-50-8	0.4	0.1032	mg/kg	81-118		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Iron, Total	7439-89-6	2	0.3612	mg/kg	45-155		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Lead, TCLP	7439-92-1	0.5	0.027	mg/l	75-125	20	75-125	20	20		180 days	1 - Glass 250ml/8oz unpreserved
Lead, Total	7439-92-1	2	0.1072	mg/kg	81-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Lead, TCLP	7439-92-1	0.5	0.027	mg/l	75-125	20	75-125	20	20		180 days	1 - Plastic 500ml unpreserved
Magnesium, Total	7439-95-4	4	0.616	mg/kg	76-124		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Manganese, Total	7439-96-5	0.4	0.0636	mg/kg	81-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Nickel, Total	7440-02-0	1	0.0968	mg/kg	83-117		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Potassium, Total	7440-09-7	100	5.76	mg/kg	71-129		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Selenium, Total	7782-49-2	0.8	0.1032	mg/kg	78-122		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Silver, Total	7440-22-4	0.2	0.1132	mg/kg	75-124		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Sodium, Total	7440-23-5	80	1.26	mg/kg	72-127		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Thallium, Total	7440-28-0	0.8	0.126	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Vanadium, Total	7440-62-2	0.4	0.0812	mg/kg	78-122		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved
Zinc, Total	7440-66-6	2	0.1172	mg/kg	82-118		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
METALS by 6020B (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Aluminum, Total	7429-90-5	10	3.27	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Antimony, Total	7440-36-0	4	0.429	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Arsenic, Total	7440-38-2	0.5	0.165	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Barium, Total	7440-39-3	0.5	0.173	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Beryllium, Total	7440-41-7	0.5	0.107	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cadmium, Total	7440-43-9	0.2	0.0599	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Calcium, Total	7440-70-2	100	39.4	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Chromium, Total	7440-47-3	1	0.178	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cobalt, Total	7440-48-4	0.5	0.163	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Copper, Total	7440-50-8	1	0.384	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Iron, Total	7439-89-6	50	19.1	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Lead, Total	7439-92-1	1	0.343	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Magnesium, Total	7439-95-4	70	24.2	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Manganese, Total	7439-96-5	1	0.44	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Nickel, Total	7440-02-0	2	0.556	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Potassium, Total	7440-09-7	100	30.9	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Selenium, Total	7782-49-2	5	1.73	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Silver, Total	7440-22-4	0.4	0.163	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Sodium, Total	7440-23-5	100	29.3	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Thallium, Total	7440-28-0	1	0.143	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Vanadium, Total	7440-62-2	5	1.57	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Zinc, Total	7440-66-6	10	3.41	ug/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
TCL PCBs - EPA 8082A (SOIL)

Holding Time: 365 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Aroclor 1016	12674-11-2	50	4.44	ug/kg	40-140	50	40-140	50	50			
Aroclor 1221	11104-28-2	50	5.01	ug/kg	40-140	50	40-140	50	50			
Aroclor 1232	11141-16-5	50	10.6	ug/kg	40-140	50	40-140	50	50			
Aroclor 1242	53469-21-9	50	6.74	ug/kg	40-140	50	40-140	50	50			
Aroclor 1248	12672-29-6	50	7.5	ug/kg	40-140	50	40-140	50	50			
Aroclor 1254	11097-69-1	50	5.47	ug/kg	40-140	50	40-140	50	50			
Aroclor 1260	11096-82-5	50	9.24	ug/kg	40-140	50	40-140	50	50			
Aroclor 1262	37324-23-5	50	6.35	ug/kg	40-140	50	40-140	50	50			
Aroclor 1268	11100-14-4	50	5.18	ug/kg	40-140	50	40-140	50	50			
PCBs, Total	1336-36-3	50	4.44	ug/kg				50	50			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
TCL PCBs - EPA 8082A (LVI) (WATER)

Holding Time: 365 days
Container/Sample Preservation: 2 - Amber 120ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Aroclor 1016	12674-11-2	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1221	11104-28-2	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1232	11141-16-5	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1242	53469-21-9	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1248	12672-29-6	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1254	11097-69-1	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1260	11096-82-5	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1262	37324-23-5	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
Aroclor 1268	11100-14-4	0.0000714	0.000061047	mg/l	40-140	50	40-140	50	50			
PCBs, Total	1336-36-3	0.0000714	0.000061047	mg/l				50	50			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
TCL Pesticides - EPA 8081B (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 120ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Delta-BHC	319-86-8	1.6008	0.31349	ug/kg	30-150	30	30-150	50	50			
Delta-BHC	319-86-8	0.02	0.00467	ug/l	30-150	20	30-150	30	30			
Lindane	58-89-9	0.667	0.298149	ug/kg	30-150	30	30-150	50	50			
Lindane	58-89-9	0.02	0.00434	ug/l	30-150	20	30-150	30	30			
Alpha-BHC	319-84-6	0.667	0.189428	ug/kg	30-150	30	30-150	50	50			
Alpha-BHC	319-84-6	0.02	0.00439	ug/l	30-150	20	30-150	30	30			
Beta-BHC	319-85-7	1.6008	0.60697	ug/kg	30-150	30	30-150	50	50			
Beta-BHC	319-85-7	0.02	0.0056	ug/l	30-150	20	30-150	30	30			
Heptachlor	76-44-8	0.02	0.0031	ug/l	30-150	20	30-150	30	30			
Heptachlor	76-44-8	0.8004	0.358846	ug/kg	30-150	30	30-150	50	50			
Aldrin	309-00-2	1.6008	0.563615	ug/kg	30-150	30	30-150	50	50			
Aldrin	309-00-2	0.02	0.00216	ug/l	30-150	20	30-150	30	30			
Heptachlor epoxide	1024-57-3	3.0015	0.90045	ug/kg	30-150	30	30-150	50	50			
Heptachlor epoxide	1024-57-3	0.02	0.00415	ug/l	30-150	20	30-150	30	30			
Endrin	72-20-8	0.667	0.27347	ug/kg	30-150	30	30-150	50	50			
Endrin	72-20-8	0.04	0.00429	ug/l	30-150	20	30-150	30	30			
Endrin aldehyde	7421-93-4	2.001	0.70035	ug/kg	30-150	30	30-150	50	50			
Endrin aldehyde	7421-93-4	0.04	0.0081	ug/l	30-150	20	30-150	30	30			
Endrin ketone	53494-70-5	0.04	0.00477	ug/l	30-150	20	30-150	30	30			
Endrin ketone	53494-70-5	1.6008	0.412206	ug/kg	30-150	30	30-150	50	50			
Dieldrin	60-57-1	0.04	0.00429	ug/l	30-150	20	30-150	30	30			
Dieldrin	60-57-1	1.0005	0.50025	ug/kg	30-150	30	30-150	50	50			
4,4'-DDE	72-55-9	1.6008	0.370185	ug/kg	30-150	30	30-150	50	50			
4,4'-DDE	72-55-9	0.04	0.00381	ug/l	30-150	20	30-150	30	30			
4,4'-DDD	72-54-8	1.6008	0.570952	ug/kg	30-150	30	30-150	50	50			
4,4'-DDD	72-54-8	0.04	0.00464	ug/l	30-150	20	30-150	30	30			
4,4'-DDT	50-29-3	1.6008	1.28731	ug/kg	30-150	30	30-150	50	50			
4,4'-DDT	50-29-3	0.04	0.00432	ug/l	30-150	20	30-150	30	30			
Endosulfan I	959-98-8	0.02	0.00345	ug/l	30-150	20	30-150	30	30			
Endosulfan I	959-98-8	1.6008	0.378189	ug/kg	30-150	30	30-150	50	50			
Endosulfan II	33213-65-9	0.04	0.00519	ug/l	30-150	20	30-150	30	30			
Endosulfan II	33213-65-9	1.6008	0.534934	ug/kg	30-150	30	30-150	50	50			
Endosulfan sulfate	1031-07-8	0.04	0.00481	ug/l	30-150	20	30-150	30	30			
Endosulfan sulfate	1031-07-8	0.667	0.317492	ug/kg	30-150	30	30-150	50	50			
Methoxychlor	72-43-5	3.0015	0.9338	ug/kg	30-150	30	30-150	50	50			
Methoxychlor	72-43-5	0.2	0.00684	ug/l	30-150	20	30-150	30	30			
Toxaphene	8001-35-2	30.015	8.4042	ug/kg	30-150	30	30-150	50	50			
Toxaphene	8001-35-2	0.2	0.0627	ug/l	30-150	20	30-150	30	30			
cis-Chlordane	5103-71-9	2.001	0.557612	ug/kg	30-150	30	30-150	50	50			
cis-Chlordane	5103-71-9	0.02	0.00666	ug/l	30-150	20	30-150	30	30			
trans-Chlordane	5103-74-2	0.02	0.00627	ug/l	30-150	20	30-150	30	30			
trans-Chlordane	5103-74-2	2.001	0.528264	ug/kg	30-150	30	30-150	50	50			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 2

Table 2. Minimum Reporting Limits
TCL Pesticides - EPA 8081B (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 120ml unpreserved
vvvvvvv

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Chlordane	57-74-9	13.34	5.30265	ug/kg	30-150	30	30-150	50	50			
Chlordane	57-74-9	0.2	0.0463	ug/l	30-150	20	30-150	30	30			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
METALS by 7471B (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Mercury, Total	7439-97-6	0.08	0.05216	mg/kg	72-128		80-120	20	20		28 days	Metals Only-Glass 60mL/2oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
METALS by 7470A (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Mercury, Total	7439-97-6	0.2	0.0915	ug/l	80-120		75-125	20	20		28 days	1 - Plastic 500ml HNO3 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
1,4 Dioxane via EPA 8270E-SIM (ug/L) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 250ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,4-Dioxane	123-91-1	0.15	0.0339	ug/l	40-140	30	40-140	30	30			
1,4-Dioxane-d8	*17647-74-4*									*15-110*		
1,4-Dioxane-d8 (IS)	17647-74-4			ug/l								

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container
Cyanide, Total	57-12-5	5	1.8	ug/l	85-115	20	80-120	20	20	9010C/9012B	14 days	1 - Plastic 250ml NaOH preserved
Chromium, Hexavalent	18540-29-9	0.8	0.16	mg/kg	80-120	20	75-125	20	20	7196A	30 days	1 - Glass 120ml/4oz unpreserved
Chromium, Hexavalent	18540-29-9	10	3	ug/l	85-115	20	85-115	20	20	7196A	24 hours	1 - Plastic 500ml unpreserved
Cyanide, Total	57-12-5	1	0.212	mg/kg	80-120	35	75-125	35	35	9010C/9012B	14 days	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Table 2. Minimum Reporting Limits
PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 3 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluorobutanoic Acid (PFBA)	375-22-4	6.4	1.024	ng/l	40-150	30	40-150	30	30			
Perfluorobutanoic Acid (PFBA)	375-22-4	0.8	0.0504	ng/g	40-150	30	40-150	30	30			
Perfluoropentanoic Acid (PFPeA)	2706-90-3	0.4	0.056	ng/g	40-150	30	40-150	30	30			
Perfluoropentanoic Acid (PFPeA)	2706-90-3	3.2	0.856	ng/l	40-150	30	40-150	30	30			
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.2	0.0432	ng/g	40-150	30	40-150	30	30			
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	1.6	0.536	ng/l	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	0.8	0.0808	ng/g	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	6.4	1.672	ng/l	40-150	30	40-150	30	30			
Perfluorohexanoic Acid (PFHxA)	307-24-4	0.2	0.0464	ng/g	40-150	30	40-150	30	30			
Perfluorohexanoic Acid (PFHxA)	307-24-4	1.6	0.472	ng/l	40-150	30	40-150	30	30			
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	1.6	0.28	ng/l	40-150	30	40-150	30	30			
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	0.2	0.0232	ng/g	40-150	30	40-150	30	30			
Perfluoroheptanoic Acid (PFHpA)	375-85-9	1.6	0.32	ng/l	40-150	30	40-150	30	30			
Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.2	0.0232	ng/g	40-150	30	40-150	30	30			
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	0.2	0.0592	ng/g	40-150	30	40-150	30	30			
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	1.6	0.384	ng/l	40-150	30	40-150	30	30			
Perfluorooctanoic Acid (PFOA)	335-67-1	1.6	0.696	ng/l	40-150	30	40-150	30	30			
Perfluorooctanoic Acid (PFOA)	335-67-1	0.2	0.052	ng/g	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	0.8	0.28	ng/g	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	6.4	2.16	ng/l	40-150	30	40-150	30	30			
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	0.2	0.0368	ng/g	40-150	30	40-150	30	30			
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	1.6	0.432	ng/l	40-150	30	40-150	30	30			
Perfluorononanoic Acid (PFNA)	375-95-1	1.6	0.504	ng/l	40-150	30	40-150	30	30			
Perfluorononanoic Acid (PFNA)	375-95-1	0.2	0.0784	ng/g	40-150	30	40-150	30	30			
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.6	0.728	ng/l	40-150	30	40-150	30	30			
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.2	0.0792	ng/g	40-150	30	40-150	30	30			
Perfluorodecanoic Acid (PFDA)	335-76-2	1.6	0.648	ng/l	40-150	30	40-150	30	30			
Perfluorodecanoic Acid (PFDA)	335-76-2	0.2	0.0752	ng/g	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	0.8	0.3872	ng/g	40-150	30	40-150	30	30			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	6.4	2.488	ng/l	40-150	30	40-150	30	30			
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	0.2	0.0424	ng/g	40-150	30	40-150	30	30			
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	1.6	0.496	ng/l	40-150	30	40-150	30	30			
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSA	2355-31-9	0.2	0.1	ng/g	40-150	30	40-150	30	30			
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSA	2355-31-9	1.6	0.872	ng/l	40-150	30	40-150	30	30			
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	1.6	0.696	ng/l	40-150	30	40-150	30	30			
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.2	0.0512	ng/g	40-150	30	40-150	30	30			
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	1.6	0.368	ng/l	40-150	30	40-150	30	30			
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	0.2	0.032	ng/g	40-150	30	40-150	30	30			
Perfluorooctanesulfonamide (FOSA)	754-91-6	1.6	0.432	ng/l	40-150	30	40-150	30	30			
Perfluorooctanesulfonamide (FOSA)	754-91-6	0.2	0.0432	ng/g	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	1.6	0.864	ng/l	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	0.2	0.0824	ng/g	40-150	30	40-150	30	30			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 2

Table 2. Minimum Reporting Limits
PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 3 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluorododecanoic Acid (PFDoA)	307-55-1	1.6	0.736	ng/l	40-150	30	40-150	30	30			
Perfluorododecanoic Acid (PFDoA)	307-55-1	0.2	0.0408	ng/g	40-150	30	40-150	30	30			
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	1.6	0.6	ng/l	40-150	30	40-150	30	30			
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.2	0.0528	ng/g	40-150	30	40-150	30	30			
Perfluorotetradecanoic Acid (PFTA)	376-06-7	0.2	0.1064	ng/g	40-150	30	40-150	30	30			
Perfluorotetradecanoic Acid (PFTA)	376-06-7	1.6	0.424	ng/l	40-150	30	40-150	30	30			
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pr	13252-13-6	0.8	0.0984	ng/g	40-150	30	40-150	30	30			
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pr	13252-13-6	6.4	0.896	ng/l	40-150	30	40-150	30	30			
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4	6.4	1.008	ng/l	40-150	30	40-150	30	30			
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4	0.8	0.1464	ng/g	40-150	30	40-150	30	30			
Perfluorododecane Sulfonic Acid (PFDoDS)	79780-39-5	0.2	0.0384	ng/g	40-150	30	40-150	30	30			
Perfluorododecane Sulfonic Acid (PFDoDS)	79780-39-5	1.6	0.608	ng/l	40-150	30	40-150	30	30			
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF	756426-58-1	0.8	0.196	ng/g	40-150	30	40-150	30	30			
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF	756426-58-1	6.4	1.32	ng/l	40-150	30	40-150	30	30			
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl	763051-92-9	6.4	1.32	ng/l	40-150	30	40-150	30	30			
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl	763051-92-9	0.8	0.1672	ng/g	40-150	30	40-150	30	30			
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8	0.2	0.1	ng/g	40-150	30	40-150	30	30			
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8	1.6	0.696	ng/l	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2	0.2	0.112	ng/g	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2	1.6	0.736	ng/l	40-150	30	40-150	30	30			
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7	16	3.76	ng/l	40-150	30	40-150	30	30			
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7	2	0.2504	ng/g	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2	16	1.96	ng/l	40-150	30	40-150	30	30			
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2	2	0.5104	ng/g	40-150	30	40-150	30	30			
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1	3.2	0.456	ng/l	40-150	30	40-150	30	30			
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1	0.4	0.0408	ng/g	40-150	30	40-150	30	30			
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5	0.4	0.0312	ng/g	40-150	30	40-150	30	30			
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5	3.2	0.424	ng/l	40-150	30	40-150	30	30			
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7	0.4	0.0832	ng/g	40-150	30	40-150	30	30			
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7	3.2	0.352	ng/l	40-150	30	40-150	30	30			
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6	3.2	1.888	ng/l	40-150	30	40-150	30	30			
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6	0.4	0.0952	ng/g	40-150	30	40-150	30	30			
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5	1	0.144	ng/g	40-150	30	40-150	30	30			
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5	8	2.64	ng/l	40-150	30	40-150	30	30			
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3	40	9.36	ng/l	40-150	30	40-150	30	30			
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3	5	0.5048	ng/g	40-150	30	40-150	30	30			
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4	40	6.312	ng/l	40-150	30	40-150	30	30			
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4	5	1.76	ng/g	40-150	30	40-150	30	30			
Perfluoro[13C4]Butanoic Acid (MPFBA)	*NONE*									*20-150*		
Perfluoro[13C4]Butanoic Acid (MPFBA)	*NONE*									*20-150*		
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	*NONE*									*20-150*		
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	*NONE*									*20-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 3

Table 2. Minimum Reporting Limits
PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 3 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	*NONE*									*20-150*		
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-	*NONE*									*20-150*		
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	*NONE*									*20-150*		
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	*NONE*									*20-150*		
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	*NONE*									*20-150*		
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	*NONE*									*20-150*		
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	*NONE*									*20-150*		
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	*NONE*									*20-150*		
Perfluoro[13C8]Octanoic Acid (M8PFOA)	*NONE*									*20-150*		
Perfluoro[13C8]Octanoic Acid (M8PFOA)	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-	*NONE*									*20-150*		
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	*NONE*									*20-150*		
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	*NONE*									*20-150*		
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	*NONE*									*20-150*		
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	*NONE*									*20-150*		
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	*NONE*									*20-150*		
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-	*NONE*									*20-150*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-	*NONE*									*20-150*		
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid	*NONE*									*20-150*		
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid	*NONE*									*20-150*		
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	*NONE*									*20-150*		
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	*NONE*									*20-150*		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	*NONE*									*20-150*		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	*NONE*									*20-150*		
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (	*NONE*									*20-150*		
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (	*NONE*									*20-150*		
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	*NONE*									*20-150*		
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	*NONE*									*20-150*		
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	*NONE*									*20-150*		
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	*NONE*									*20-150*		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-1	*NONE*									*20-150*		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-1	*NONE*									*20-150*		
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	*NONE*									*20-150*		
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	*NONE*									*20-150*		
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	*NONE*									*20-150*		
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	*NONE*									*20-150*		
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-o	*1265205-95-5*									*20-150*		
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-o	*1265205-95-5*									*20-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 4

Table 2. Minimum Reporting Limits
PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 3 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (	*NONE*									*20-150*		
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (	*NONE*									*20-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Table 2. Minimum Reporting Limits
Volatile Organics in Air: TO-15 (AIR)

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 1

Holding Time: 30 days
Container/Sample Preservation: 1 - Canister - 2.7 Liter

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,1,1-Trichloroethane	71-55-6	0.2	0.0614	ppbV	70-130			25	25			
1,1,2,2-Tetrachloroethane	79-34-5	0.2	0.052	ppbV	70-130			25	25			
1,1,2-Trichloroethane	79-00-5	0.2	0.0582	ppbV	70-130			25	25			
1,1-Dichloroethane	75-34-3	0.2	0.0568	ppbV	70-130			25	25			
1,1-Dichloroethene	75-35-4	0.2	0.0568	ppbV	70-130			25	25			
1,2,3-Trimethylbenzene	526-73-8	0.2	0.0576	ppbV	70-130			25	25			
1,2,4-Trichlorobenzene	120-82-1	0.2	0.1	ppbV	70-130			25	25			
1,2,4-Trimethylbenzene	95-63-6	0.2	0.0577	ppbV	70-130			25	25			
1,2,4,5-Tetramethylbenzene	95-93-2	0.2	0.135	ppbV	70-130			25	25			
1,2-Dibromoethane	106-93-4	0.2	0.0544	ppbV	70-130			25	25			
1,2-Dichlorobenzene	95-50-1	0.2	0.0619	ppbV	70-130			25	25			
1,2-Dichloroethane	107-06-2	0.2	0.0787	ppbV	70-130			25	25			
1,2-Dichloropropane	78-87-5	0.2	0.0631	ppbV	70-130			25	25			
1,3,5-Trimethylbenzene	108-67-8	0.2	0.06	ppbV	70-130			25	25			
1,3-Butadiene	106-99-0	0.2	0.0619	ppbV	70-130			25	25			
1,3-Dichlorobenzene	541-73-1	0.2	0.0777	ppbV	70-130			25	25			
1,4-Dichlorobenzene	106-46-7	0.2	0.0826	ppbV	70-130			25	25			
1,4-Dioxane	123-91-1	0.2	0.0538	ppbV	70-130			25	25			
2,2,4-Trimethylpentane	540-84-1	0.2	0.0692	ppbV	70-130			25	25			
2-Butanone	78-93-3	0.5	0.099	ppbV	70-130			25	25			
2-Hexanone	591-78-6	0.2	0.0912	ppbV	70-130			25	25			
2-Methylthiophene	554-14-3	0.2	0.0622	ppbV	70-130			25	25			
3-Methylthiophene	616-44-4	0.2	0.0634	ppbV	70-130			25	25			
3-Chloropropene	107-05-1	0.2	0.086	ppbV	70-130			25	25			
2-Ethylthiophene	872-55-9	0.2	0.0612	ppbV	70-130			25	25			
4-Ethyltoluene	622-96-8	0.2	0.0554	ppbV	70-130			25	25			
Acetone	67-64-1	1	0.515	ppbV	40-160			25	25			
Benzene	71-43-2	0.2	0.0643	ppbV	70-130			25	25			
Benzyl chloride	100-44-7	0.2	0.0939	ppbV	70-130			25	25			
Benzothiophene	95-15-8	0.5	0.273	ppbV	70-130			25	25			
Bromodichloromethane	75-27-4	0.2	0.0689	ppbV	70-130			25	25			
Bromoform	75-25-2	0.2	0.0596	ppbV	70-130			25	25			
Bromomethane	74-83-9	0.2	0.0547	ppbV	70-130			25	25			
Carbon disulfide	75-15-0	0.2	0.0465	ppbV	70-130			25	25			
Carbon tetrachloride	56-23-5	0.2	0.0686	ppbV	70-130			25	25			
Chlorobenzene	108-90-7	0.2	0.0516	ppbV	70-130			25	25			
Chloroethane	75-00-3	0.2	0.0649	ppbV	70-130			25	25			
Chloroform	67-66-3	0.2	0.0552	ppbV	70-130			25	25			
Chloromethane	74-87-3	0.2	0.0576	ppbV	70-130			25	25			
cis-1,2-Dichloroethene	156-59-2	0.2	0.0595	ppbV	70-130			25	25			
cis-1,3-Dichloropropene	10061-01-5	0.2	0.0674	ppbV	70-130			25	25			
Cyclohexane	110-82-7	0.2	0.0728	ppbV	70-130			25	25			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 2

Table 2. Minimum Reporting Limits
Volatile Organics in Air: TO-15 (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Canister - 2.7 Liter

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dibromochloromethane	124-48-1	0.2	0.0566	ppbV	70-130			25	25			
Dichlorodifluoromethane	75-71-8	0.2	0.0757	ppbV	70-130			25	25			
Ethyl Alcohol	GCDAI06	5	1.74	ppbV	40-160			25	25			
Ethyl Acetate	141-78-6	0.5	0.297	ppbV	70-130			25	25			
Ethylbenzene	100-41-4	0.2	0.0575	ppbV	70-130			25	25			
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	0.2	0.0506	ppbV	70-130			25	25			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0.2	0.0504	ppbV	70-130			25	25			
Hexachlorobutadiene	87-68-3	0.2	0.0607	ppbV	70-130			25	25			
iso-Propyl Alcohol	67-63-0	0.5	0.272	ppbV	40-160			25	25			
Methylene chloride	75-09-2	0.5	0.125	ppbV	70-130			25	25			
4-Methyl-2-pentanone	108-10-1	0.5	0.19	ppbV	70-130			25	25			
Methyl tert butyl ether	1634-04-4	0.2	0.045	ppbV	70-130			25	25			
Methyl Methacrylate	80-62-6	0.5	0.226	ppbV	40-160			25	25			
p/m-Xylene	179601-23-1	0.4	0.125	ppbV	70-130			25	25			
o-Xylene	95-47-6	0.2	0.0621	ppbV	70-130			25	25			
Xylene (Total)	1330-20-7	0.2	0.0621	ppbV				25	25			
Heptane	142-82-5	0.2	0.0828	ppbV	70-130			25	25			
n-Heptane	142-82-5	0.2	0.0828	ppbV	70-130			25	25			
n-Hexane	110-54-3	0.2	0.0743	ppbV	70-130			25	25			
Propylene	115-07-1	0.5	0.135	ppbV	70-130			25	25			
Styrene	100-42-5	0.2	0.0596	ppbV	70-130			25	25			
Tetrachloroethene	127-18-4	0.2	0.0627	ppbV	70-130			25	25			
Thiophene	110-02-1	0.2	0.052	ppbV	70-130			25	25			
Tetrahydrofuran	109-99-9	0.5	0.117	ppbV	70-130			25	25			
Toluene	108-88-3	0.2	0.0867	ppbV	70-130			25	25			
trans-1,2-Dichloroethene	156-60-5	0.2	0.0755	ppbV	70-130			25	25			
1,2-Dichloroethene (total)	540-59-0	0.2	0.0595	ppbV				25	25			
trans-1,3-Dichloropropene	10061-02-6	0.2	0.0783	ppbV	70-130			25	25			
1,3-Dichloropropene, Total	542-75-6	0.2	0.0674	ppbV				25	25			
Trichloroethene	79-01-6	0.2	0.0548	ppbV	70-130			25	25			
Trichlorofluoromethane	75-69-4	0.2	0.0787	ppbV	70-130			25	25			
Vinyl acetate	108-05-4	1	0.323	ppbV	70-130			25	25			
Vinyl bromide	593-60-2	0.2	0.0722	ppbV	70-130			25	25			
Vinyl chloride	75-01-4	0.2	0.0582	ppbV	70-130			25	25			
Naphthalene	91-20-3	0.2	0.078	ppbV	70-130			25	25			
Total HC As Hexane	NONE	10	0.0743	ppbV	70-130			25	25			
Total VOCs As Toluene	NONE	10	0.0867	ppbV	70-130			25	25			
Propane	74-98-6	0.5	0.152	ppbV	70-130			25	25			
Acrylonitrile	107-13-1	0.5	0.0894	ppbV	70-130			25	25			
Acrolein	107-02-8	0.5	0.149	ppbV	60-113			25	25			
1,1,1,2-Tetrachloroethane	630-20-6	0.2	0.0508	ppbV	70-130			25	25			
Isopropylbenzene	98-82-8	0.2	0.0621	ppbV	70-130			25	25			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

Date Created: 08/01/23
Created By: Mitch Ostrowski
File: PM14940-1
Page: 3

Table 2. Minimum Reporting Limits
Volatile Organics in Air: TO-15 (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Canister - 2.7 Liter

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,2,3-Trichloropropane	96-18-4	0.2	0.0575	ppbV	70-130			25	25			
Acetonitrile	75-05-8	0.2	0.101	ppbV	70-130			25	25			
Bromobenzene	108-86-1	0.2	0.0579	ppbV	70-130			25	25			
Chlorodifluoromethane	75-45-6	0.2	0.0463	ppbV	70-130			25	25			
Dichlorofluoromethane	75-43-4	0.2	0.112	ppbV	70-130			25	25			
Dibromomethane	74-95-3	0.2	0.0598	ppbV	70-130			25	25			
Pentane	109-66-0	0.2	0.113	ppbV	70-130			25	25			
Octane	111-65-9	0.2	0.0676	ppbV	70-130			25	25			
Tertiary-Amyl Methyl Ether	994-05-8	0.2	0.0672	ppbV	70-130			25	25			
o-Chlorotoluene	95-49-8	0.2	0.0761	ppbV	70-130			25	25			
p-Chlorotoluene	106-43-4	0.2	0.0765	ppbV	70-130			25	25			
2,2-Dichloropropane	594-20-7	0.2	0.0429	ppbV	70-130			25	25			
1,1-Dichloropropene	563-58-6	0.2	0.0593	ppbV	70-130			25	25			
Isopropyl Ether	108-20-3	0.2	0.0631	ppbV	70-130			25	25			
Ethyl-Tert-Butyl-Ether	637-92-3	0.2	0.0731	ppbV	70-130			25	25			
1,2,3-Trichlorobenzene	87-61-6	0.2	0.0738	ppbV	70-130			25	25			
Ethyl ether	60-29-7	0.2	0.0853	ppbV	70-130			25	25			
n-Butylbenzene	104-51-8	0.2	0.0536	ppbV	70-130			25	25			
sec-Butylbenzene	135-98-8	0.2	0.0547	ppbV	70-130			25	25			
tert-Butylbenzene	98-06-6	0.2	0.0551	ppbV	70-130			25	25			
1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.0624	ppbV	70-130			25	25			
p-Isopropyltoluene	99-87-6	0.2	0.0567	ppbV	70-130			25	25			
n-Propylbenzene	103-65-1	0.2	0.0633	ppbV	70-130			25	25			
1,3-Dichloropropane	142-28-9	0.2	0.0536	ppbV	70-130			25	25			
Methanol	67-56-1	5	3.029	ppbV	70-130			25	25			
Acetaldehyde	75-07-0	2.5	1.73	ppbV	70-130			25	25			
Butane	106-97-8	0.2	0.08	ppbV	70-130			25	25			
Nonane (C9)	111-84-2	0.2	0.0737	ppbV	70-130			25	25			
Decane (C10)	124-18-5	0.2	0.0697	ppbV	70-130			25	25			
Undecane	1120-21-4	0.2	0.0709	ppbV	70-130			25	25			
Indane	496-11-7	0.2	0.0591	ppbV	70-130			25	25			
Indene	95-13-6	0.2	0.0711	ppbV	70-130			25	25			
1-Methylnaphthalene	90-12-0	1	0.264	ppbV	70-130			25	25			
Dodecane (C12)	112-40-3	0.2	0.0891	ppbV	70-130			25	25			
Butyl Acetate	123-86-4	0.5	0.208	ppbV	70-130			25	25			
tert-Butyl Alcohol	75-65-0	0.5	0.132	ppbV	70-130			25	25			
2-Methylnaphthalene	91-57-6	1	0.259	ppbV	70-130			25	25			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
Bromofluorobenzene	*460-00-4*									*70-130*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc

ATTACHMENT A
Resumes



JAMES BELLEW

Principal

EDUCATION

M.S., Environmental Geology, Queens College
B.S., Geology, Pre-Law, Environmental Science, Binghamton University

PROFESSIONAL SOCIETIES

American Council of Engineering Companies, Member, 2017
Urban Land Institute, Member, 2016
Business Council of New York, Member, 2018

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)
30-Hour OSHA Construction Safety and Heath
8-hour OSHA Site Supervisor Certification
OSHA Confined Space Entry Training Certification
Erosion and Sediment Control, New York, No. 006925
USDOT/IATA Training on the Shipping and/or Transportation of Hazardous Materials

James has a hands-on approach to every project. He believes that being present and putting himself into his clients' shoes is the best way to understand their needs. As a Principal, James's expertise includes due diligence, environmental risk development, building surveys, remedial investigations, remedial design, and technical oversight. Mr. Bellew has completed over 50 NYCOER E-Designation Sites and NYSDEC Brownfield Cleanup Program Sites which include preparation of all reports through to the certificate of completion and a certificate of occupancy.

Clients appreciate James' strategies from the inception of a project through closure under various regulatory programs nationwide. That comprehensive approach is what James loves the most about his job. He enjoys taking on complex projects and finding rational, cost-effective, remedial solutions. His biggest reward? When he can bring a client cost relief through value engineering.

RELEVANT PROJECT EXPERIENCE

Development, NYCDDC Shirley Chisholm Recreational Center, Brooklyn, New York. Principal for the project released by the New York City Department of Design and Construction, on behalf of the NYC Parks Department, for the design and construction of a new recreational center located at 3002 Foster Avenue in Brooklyn New York. Scope of services included execution of a Phase II Environmental Site Assessment, soil characterization, remedial oversight, geotechnical percolation testing and closure with the NYC Department of Environmental Protection.

Development's, New York State Superfund Site, Former NuHart Plastics Site, New York State Superfund Site (NuHart West) and Brownfield Cleanup Program Site (NuHart East), Brooklyn, New York. Principal for the preparation of the feasibility study, offsite investigation reports, RCRA (Resource Conservation and Recovery Act) Closure Work Plan, execution of the RCRA Closure, preparation of the Brownfield Cleanup Application (NuHart East), 100% Remedial Design, preparation of all BCP related work plans (NuHart East), coordination to vest the Site for 421-a and all community outreach programs for a former plasticizer facility with on- and off-site pollutant concerns. Responsible for all remedial cost and alternative analysis with the client to bring the Site to a certificate of completion. NuHart is a high-profile Site that requires coordination with the New York State Department of Environmental Conservation (NYSDEC), the New York City Office of Environmental Remediation (NYCOER), local regulatory agencies, community stakeholders and local elected officials. The NuHart East Site has completed the remediation and received the Certificate of Completion with the NYSDEC and the NuHart West Site is close to completion with an anticipated 2024 transition from a Class 2 to a Class 4 Inactive Hazardous waste Site.

Development's, 101 Fleet Place, Brooklyn, New York. Principal responsible for the due diligence during acquisition, preparation of the Brownfield Cleanup Program Application, Change of Use Documents, BCA Amendments, remedial investigation, and remedial action design (BCP and OER) for a former bus depot Site under the New York State Brownfield Cleanup program and NYCOER E-Designation Programs (Air/Noise). The Site has a footprint of 20,000 SF with a planned development of a 21-story mixed use building with approximately 292 units which include affordable housing.

Development's, Speedway Portfolio, Multiple Boroughs, New York. Principal responsible for the expedited due diligence during acquisition of 5 former Speedway Sites of Phase I ESA's and Limited Phase II ESI's, preparation of the Brownfield Cleanup Program Applications, Remedial Investigation Work Plans, Interim Remedial Measure Work Plans and Air/Noise Remedial Action Work Plans (NYCOER). Five of the Sites were accepted into the NYSDEC Brownfield Cleanup program. Remedial Investigations for compliance with the Brownfield Cleanup Program have been completed and the remedial design on the Sites include a variety of remedial approaches which include in situ chemical treatment for groundwater, soil vapor extraction, excavation and dewatering removal and treatment.

Development, 138 Bruckner Boulevard, Bronx, New York. Principal responsible for the due diligence during acquisition, preparation of the Brownfield Cleanup Program Application, Change of Use Documents, coordination to vest the Site for 421-a, BCA Amendments, remedial investigation, and remedial action design (BCP and OER) for the former Zaro's Bakery Site under the New York State Brownfield Cleanup program and NYCOER E-Designation Programs (Air/Noise). The Site has a footprint of 50,000 SF with a planned development of a 12-story mixed use building with approximately 447 units which include affordable housing.

Development, 310 Grand Concourse, Bronx, New York. Principal responsible for environmental and construction management services required to successfully navigate this two-building redevelopment project through the NYSDEC Brownfield Cleanup Program (BCP) and NYCOER E-Designation Program (Air/Noise). Project included site investigation, design, and remediation for development of two buildings within a 30,000 square-foot lot in the Bronx, New York. Remediation included excavation of approximately 20,000 cubic yards of soil, groundwater extraction and treatment, underground storage tank (UST) removal, design, and installation an ex-situ chemical in situ soil stabilization process for elevated levels of metals.

Development, 40 Bruckner Boulevard, Bronx, New York. Principal responsible for the due diligence during acquisition, preparation of the Brownfield Cleanup Program Application, Change of Use Documents, BCA Amendments, remedial investigation, and remedial action design (BCP and OER) for the former Mill Sanitary Wiping Cloth Site under the New York State Brownfield Cleanup program and NYCOER E-Designation Programs (Air/Noise). The Site has a footprint of 45,000 SF with a planned development of a 12-story mixed use building with approximately 480 units which include affordable housing.

Development, 297 Wallabout Street, Brooklyn New York. Principal responsible for the due diligence during acquisition, preparation of the Brownfield Cleanup Program Application, Change of Use Documents, BCA Amendments, remedial investigation, and remedial action design (BCP and OER) for the 297 Wallabout Street Site under the New York State Brownfield Cleanup program and NYCOER E-Designation Programs (Air). Successfully delineated the onsite tetrachloroethene (PCE) plume in soil and groundwater. The Site is currently in the remedial implementation phase.

Developments, 89-91 Gerry & 93 Gerry Street, Brooklyn New York. Principal responsible for the due diligence during acquisition, preparation of the Brownfield Cleanup Program Application, Change of Use Documents, BCA Amendments, remedial investigation, and remedial action design (BCP and OER) for two Sites (adjacent to each other) located at 89-91 Gerry Street and 93 Gerry Street under the New York State Brownfield Cleanup program and NYCOER E-Designation Programs (Air). The Sites are currently preparing to execute the remedial action.

Development, Former Techtronics Site (8 Walworth Street), Brooklyn, New York. Principal for the remedial investigation, remedial action design and remedial action implementation for the former Techtronics Site under the New York State Brownfield Cleanup program as a Participant where trichloroethene (TCE) and tetrachloroethene (PCE)

were encountered in soil and groundwater. James successfully delineated the vertical and lateral extents of the plumes which were identified as an upgradient, on-site. For this Site we have designed source removal to 20'bgs, Zero Valent Iron (ZVI) Reactive Barrier Wall, in situ ZVI injections sitewide and a vertical vapor mitigation system. The Site is currently in the remedial implementation phase.

Development, 346 Grand Concourse, Bronx, New York. Principal for the proposed 9-story, 60 key commercial building with one-level deep cellar. Design phase environmental services consist of guiding the Site through the New York City Office of Environmental of Remediation Voluntary Cleanup and E-Designation Programs, including Hazmat, Air Quality and Noise requirements. This program included submission of a Remedial Investigation Work Plan, implementation of a Remedial Investigation, submittal of a Remedial Investigation Report, Remedial Action Work Plans (Hazmat Air and Noise) and the Final Installation Report for the Certificate of Occupancy.

Development, 3294 Atlantic Avenue, Brooklyn, New York. Principal for the proposed 12-story, 80 key commercial building with one-level deep cellar. Design phase environmental services consist of guiding the Site through the New York City Office of Environmental of Remediation Voluntary Cleanup and E-Designation Programs, including Hazmat, Air Quality and Noise requirements. This program included submission of a Remedial Investigation Work Plan, implementation of a Remedial Investigation, submittal of a Remedial Investigation Report, Remedial Action Work Plans (Hazmat Air and Noise) and the Final Installation Report for the Certificate of Occupancy.

590-594 Myrtle Avenue, Brooklyn, New York. Principal for the proposed 6-story, 12-unit residential building with one-level deep cellar. Design phase environmental services consist of guiding the Site through the New York City Office of Environmental of Remediation Voluntary Cleanup and E-Designation Programs, including Hazmat, Air Quality and Noise requirements. This program included submission of a Remedial Investigation Work Plan, implementation of a Remedial Investigation, submittal of a Remedial Investigation Report, Remedial Action Work Plans (Hazmat Air and Noise) and the Final Installation Report for the Certificate of Occupancy.

Development, 3530 Webster Avenue, Bronx, New York. Principal for the proposed 8-story, 75 key commercial building with one-level deep cellar. Design phase environmental services consist of guiding the Site through the New York City Office of Environmental of Remediation Voluntary Cleanup and E-Designation Programs, including Hazmat, Air Quality and Noise requirements. This program included submission of a Remedial Investigation Work Plan, implementation of a Remedial Investigation, submittal of a Remedial Investigation Report, Remedial Action Work Plans (Hazmat Air and Noise). The project is currently in the construction phase of the NYCOER program.

Development, Former BP Station, Elmhurst Queens, New York. Principal for the preparation of a full environmental impact statement with respect to a mixed-use development proposed in Elmhurst Queens for submission to the NYC Department of City Planning to rezone the project. The work included a full impact assessment of the proposed construction with respect to the neighborhood, evaluation of green/open spaces for the community and environmental site investigation and remediation services.

New York State Brownfield Site, Former Delta Metals Site, Brooklyn, New York. Senior Project manager for the remedial investigation and remedial action design for the former Delta Metal Products Company. Project is under the New York State Brownfield Cleanup program as a Participant where TCE and tetrachloroethene (PCE) were encountered in soil and groundwater. James successfully delineated the vertical and lateral extents of the plumes which were identified as an upgradient, on-site and downgradient plume. Investigation results triggered the NYSDEC to utilize its call-out contract to perform a plume track down for the immediate area and identify additional Potentially Responsible Parties. The design for an Air Sparge Soil Vapor Extraction system has been accepted and the project is currently under construction.

Manufacturing-Industrial, Hess Amerada, Bogota and Edgewater, New Jersey. Senior Project Manager and technical Lead for the construction management services for the demolition of two waterfront terminals on the Hackensack and Hudson rivers. Services included demolition design, submittal review, site execution and coordination of activities

related to asbestos abatement, demolition of buildings, thirty holding tanks, piping structures, containment structures and storm water structures.

Manufacturing-Industrial, PQ Corporation, Northeastern United States. Senior Project Manager responsible for the design and implementation of a three phased program for handling polychlorinated biphenyl (PCB) containing materials on approximately 100 tank structures at large, active industrial sites, which included coating removal, encapsulation, demolition, and Toxic Substances Control Act (TSCA) remediation. He was responsible for development of the overall program, specifications, drawings, bid packages, construction oversight and project administration until closure. The program also included design and oversight of a new façade and roof upgrades completed concurrently to client operations.

Development, New York State Brownfield Site, Former Cascade Laundry, Brooklyn, New York. Senior Project Manager responsible for environmental and construction management services required to successfully navigate a seven-building redevelopment project through the NYSDEC Brownfield Cleanup Program (BCP) and NYCOER E-Designation Program (Air/Noise). Project included site investigation, design, and remediation for development of seven buildings within a 2-acre site in Brooklyn, New York. Remediation included excavation of approximately 40,000 cubic yards of soil, groundwater extraction and treatment, underground storage tank (UST) removal, design, and installation of a sub slab depressurization system (SSDS) and ex situ chemical oxidation of groundwater impacted by petroleum.

Development, New York City Brownfield Site - 520-534 West 29th Street, New York, New York. James was responsible for environmental site investigation and remediation activities required to successfully navigate the project through the NYCOER's E-Designation and Voluntary Cleanup Programs. This program included submission of a Remedial Investigation Work Plan, implementation of a Remedial Investigation, submittal of a Remedial Investigation Report, Remedial Action Work Plans (Hazmat Air and Noise). The project is currently in the construction phase of the NYCOER program.

Development, New York State Brownfield Site, BJ's Wholesale, Brooklyn, New York. Senior Project Manager for the remedial execution within the NYSDEC BCP and NYCOER E-Designation programs at an 8-acre peninsula in Gravesend Bay being redeveloped by BJ's Wholesale Club (BJ's) into a "big-box" warehouse and parking garage, and a publicly accessible, waterfront open space. He implemented a comprehensive community air monitoring plan (CAMP), managed the design and installation of a passive sub slab depressurization system, and oversaw handling and off-site disposal of impacted material generated by BJ's (the Lessee for the subject site) during their foundation construction activities.

Development, New York State Brownfield Site, Coney Island, Brooklyn, New York. Senior Project Manager responsible for the environmental design during the rehabilitation and expansion of a 1970s-era mixed-use complex, which covers an area equivalent to three city blocks. He facilitated the BCP applications for two adjacent parcels within the complex impacted by historic dry-cleaning uses. Site investigations performed had documented the presence of PCE in soil gas and was delineated over three separate structural slabs in commercial and residential space utilizing a mobile laboratory. He designed and installed two sub-slab depressurization systems and prepared Remedial Investigation Work Plan which outlined work required to delineate the vertical and horizontal extent of the impacted soils, soil vapor and groundwater at both BCP sites. The system was designed with below slab suction pits, remote sensing vacuum monitoring points, and a variable frequency drive blower tied into the monitoring points for optimization and power savings.

Development, New York City Brownfield Site, Hospitals, Memorial Sloan Kettering Cancer Center (MSKCC), New York, New York. Project Manager for environmental remediation for this MSKCC development project. James was solely responsible for subsurface investigation and remediation activities, large, manufactured gas plant (MGP) gas holder removal (from former Con Edison Operations), UST removal, daily status updates to the NYCOER, implementation of the CAMP and the management, handling, characterization, and off-site disposal of MGP impacted soil and dewatering fluids.

New York State Spill Remediation, Metropolitan Transportation Agency Bridges and Tunnels, New York, New York. Project Manager responsible for execution of a remedial action scope which included UST removal, excavation of 600 cubic yards of petroleum impacted soil, design and installation of a groundwater extraction and treatment system and post remediation samples. He implemented the In Situ Chemical Oxidation program for the injection of 54,000 gallons of 8 percent solution Fenton's Reagent and the O&M (Operation & Maintenance) of the petroleum spill with respect to Fenton's performance and the plume migration.

Various Public Schools, New York City School Construction Authority, New York, New York. Project Manager responsible for environmental remediation proposed several school developments sites, including PS 312, P.S. 281, and PS 27K. Assisted in the design and implementation of the remediation programs for the sites for petroleum spills, PCB TSCA contamination and hazardous lead hot spots.

Development, i.Park Edgewater, Edgewater, New Jersey. Project Manager responsible for the design and environmental remediation on-site. Implemented the construction plan for remediation of arsenic, pitch- and PCB-impacted soil for excavation and off-site disposal of 20,000 tons. He managed the air monitoring system on-site which consisted of four permanent stations set upwind and downwind on-site for volatile organic compounds (VOCs) and particulate migration off-site. Also, James performed redesigns throughout the project to keep within the current schedule and budget.

Development, New York State Brownfield, Queens West, Long Island City, New York. Project Manager responsible for oversight of the Environmental Remediation on-site. James implemented the construction plan for remediation of 20,000 cubic yards of LNAPL on the Site; he assisted in design and oversight of the In Situ Chemical Oxidation mixing on-site. The project was eventually developed into three large towers and a new school.

Manufactured Gas Plant, National Grid, Rockaway, New York. James aided in the design and implementation of the soil characterization plan for MGP impacted sands. After delineation of the contamination plume, drafted work plans and site layout of the negative pressure tent. He performed and trained the on-site staff on the use of personal air monitoring equipment and aided with design considerations on the installation of a waterloo barrier to be advanced to minus 80 feet below grade surface. James also helped with the design and permitting for the groundwater treatment system installed on-site.

Manufactured Gas Plant, Con Edison, New York, New York. Environmental engineer for responsible party for all environmental issues associated with this job, including transportation and disposal of 8,000 tons of MGP contaminated soil from former Con Edison operations. James scheduled weekly work for all civil and environmental tasks on the job. He was responsible for the design and installation of the dewatering treatment system with a daily discharge of 25,000 gallons per day of MGP -impacted water.

New York State Superfund Project, NYSDEC, Hicksville, New York. James performed O&M and reporting on the Site's Potassium Permanganate Injection system, which was on a timed system; maintained the system, troubleshooting problems and ensuring that the proper ratios were being injected. He performed the fieldwork for analysis and drafted interim reports for the project manager.

Retail Petroleum, New York State Spills Program, Hess Amerada, Various Locations, New York. Environmental Engineer responsible for the design and installation of groundwater and soil vapor remedial systems at over 30 retail petroleum stations for Hess. Responsible for ensuring that the remedial systems were operating properly and performing repairs as necessary during operation. He performed groundwater and soil vapor monitoring and drafted O&M reports for the NYSDEC. Plume size ranged from within the retail station property with monitoring off-site impacts in local neighborhoods greater than a 3-mile radius.

Retail Petroleum, New York State Spills Program, British Petroleum (BP), Various Locations, New York. Environmental Engineer responsible for the design and installation of groundwater and soil vapor remedial systems at over 10 retail petroleum stations for BP. He was responsible for ensuring that the remedial systems were operating properly and performing repairs necessary during operation. He performed groundwater and soil vapor monitoring

and drafted O&M reports for the NYSDEC. Plume size ranged from within the retail station property with monitoring off-site impacts in local neighborhoods greater than a 2-mile radius.

Development, 524 West 19th Street, New York, NY (Metal Shutter Homes). Project Engineer responsible party for all environmental and civil issues associated with this job, including transportation and disposal of 5,000 tons of MGP contaminated soil from former Con Edison operations. James scheduled weekly work for all civil and environmental tasks on the job. He successfully redesigned the grout cutoff wall connections to the installed steel sheeting with a secant wall installed off-site. He provided technical guidance for drilling 4-foot diameter exploratory casings for subsurface anomalies. Additionally, James was responsible for the design and installation of the dewatering treatment system with a daily discharge of 25,000 gallons per day of MGP impacted water.

EPA Superfund Site, Newtown Creek Superfund, Brooklyn, New York. Environmental Engineer who aided in the design of the pump and treat system installed at Peerless Importers. He also aided in the design and installation of the harbor boom set up. Operated and Maintained groundwater/LNAPL extraction systems on-site and performed monthly site gauging as part of the O&M plan.

BRIAN A. FERGUSON

Senior Health & Safety Manager

EDUCATION

M.S., Geotechnical Engineering, Tufts University, Medford, Massachusetts
B.S., Civil Engineering, State University of New York - Environmental, Science, and Forestry, Syracuse, New York
A.S., Applied Science and Technology (Nuclear Engineering), Thomas A. Edison State College, Trenton, New Jersey

CERTIFICATIONS

BCSP Certified Safety Professional (#CSP-45145)
BCSP Associate Safety Professional (#ASP-31270)

PROFESSIONAL SOCIETIES

Associate Safety Professional – 2019
Order of the Engineer – 2000
Boston Society of Civil Engineers (BSCE)
American Society of Civil Engineers (ASCE)

SPECIAL STUDIES AND COURSES

American Concrete Institute – Certified Field Technician Certified Grade 1
Radiation Safety and Operations of Nuclear Testing Equipment – Troxler
40-Hour OSHA Hazardous Waste Operations Training (+ 8-Hour annual refresher)
10-Hour OSHA Construction training
Confined Space Entry Training
16-Hour Asbestos Operations and Maintenance
24-Hour Asbestos Inspector
Asbestos Inspector License (June 2018 and renewed annually)

ENGINEERING EXPERIENCE

Brian has over 23 years of experience serving as a project engineer on a variety of real estate development projects. His project experience has included monitoring field investigations, performing construction oversight, performing due diligence, engineering analyses, performing geotechnical analyses, developing geotechnical recommendations, and preparing geotechnical reports, and project specifications.

As a project engineer, in addition to providing engineering design support, Brian has managed and participated in many field service activities. Field work has included construction monitoring and documentation of contractors' deep and shallow foundation-related construction, including slurry walls, caissons, pile driving, pile cap installation, earthwork, backfilling and compaction, installation of soldier pile and wood lagging support systems, installation of tie backs and rock anchors, reading inclinometers, conducting in-place field unit weight tests, tie-back load testing, seismograph installation, monitoring, and evaluating, and preparation of footing bearing surfaces. Other responsibilities have included site development activities, including placement of utilities and subgrade preparation for roads; observations and testing to determine that work is completed in compliance with contract documents; on-site soil management; sampling of soil and groundwater for chemical laboratory testing and conducting in situ field screening; maintenance of job records including pile driving logs, results of field density tests, records of caisson and footing installations; preparation of daily field reports; in contact with key personnel; and resolution of field related problems.

RELEVANT PROJECT EXPERIENCE

Fenway Center. Project engineer for the construction of laboratory space constructed over the Massachusetts Turnpike, two residential towers, and the Fenway Area, consisting of 8 to 14 stories and multiple levels below grade. Construction responsibilities included coordination of construction monitoring, observing Support of Excavation (SOE) and footing installation, coordination of installation of Slurry Walls, assisting with project management, reviewing

weekly field construction reports, reviewing, and responding to geotechnical design submittals, and attending project meetings.

Massachusetts Institute of Technology, The Schwarzman College of Computing Project. Project Engineer for a new approximately eight-story above-ground and one-story below-ground building containing approximately 189,000 gross square feet (gsf) of mixed-use space for: offices, research laboratory, academic, event, collaboration, meetings, café, convening, and associated services. Responsibilities included coordination of construction monitoring, observing SOE, micropile, and Caisson Installation, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals, and attending project meetings. Brian was also the main point of contact for construction-related issues with the project owner and contractors.

Massachusetts Institute of Technology, Graduate Housing Project. Project Engineer for construction of two new five- to eight- story residential buildings with a total gross floor space of approximately 261,000 square feet (sq ft). Responsibilities included coordination of construction monitoring, observing SOE, micropile, and Caisson Installation, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals, and attending project meetings. Brian was the main point of contact for construction-related issues with the project owner and contractors and conducted Health & Safety Audits of Haley & Aldrich personnel during construction.

Edwards Vacuum Project. Project Engineer for a new single-level 101,000-sq ft building with a mezzanine located in the south portion of the proposed building. Responsibilities included developing subsurface exploration program coordination, writing the Geotech Report, and coordinating field staff to observe construction activities, including mass excavation of approximately 100,000 cubic yards of soil, installation of spread footing, and construction dewatering. Brian assisted with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals, and attending project meetings. Brian was the main point of contact for construction-related issues with the project owner and contractors and conducted Health & Safety Audits of Haley & Aldrich personnel during construction.

St. Elizabeth's Hospital – **West Campus Forensic Evaluations, Washington, D.C.** Project Engineer for forensic evaluations on the adaptive reuse of former hospital buildings. Responsibilities included coordination of a field exploration program, including test borings and test pits to obtain subsurface information for project design and construction, overseeing multiple field personnel and subcontractors, assisting with project management, reviewing subcontractors' invoices, reviewing and summarizing subsurface data, and writing data reports.



BRIAN FITZPATRICK, CHMM

Corporate Director, Health and Safety

EDUCATION

M.P.A., Environmental Policy, Syracuse University
B.S., Environmental Science, University of Massachusetts-Amherst
A.S., Chemistry, Valley Forge Military Junior College
Commissioned Officer, United States Army

CERTIFICATIONS

Certified Hazardous Materials Manager (Reg. No. 13454)
Certified Department of Transportation Shipper
Certified International Air Transport Authority Shipper

PROFESSIONAL SOCIETIES

Alliance of Hazardous Materials Professionals
Academy of Certified Hazardous Materials Managers, New England Chapter

SPECIAL STUDIES AND COURSES

Department of Transportation
International Air Transport Authority
Incident Commander
Confined Space Entry and Rescue
Radiation Safety Officer
RCRA Hazardous Waste
Massachusetts Industrial Waste Water Operator Grade 2I (expired)

AWARDS

Presidents Club Award (one million hours worked without a recordable injury), Cabot Corporation
Chancellors Award for Excellence, Syracuse University

Brian ensures the work we do for our clients is done safely – knowing this reduces costs, improves service quality and site conditions, and ultimately protects our clients' reputations. In addition to building the Haley & Aldrich Health & Safety (H&S) culture, Brian is hands-on with clients to help improve their and their partners' safety cultures.

He has extensive expertise in the Occupational Safety and Health Administration (OSHA) general industry, process safety management, and construction safety programs. He is an active member of the Alliance of Hazardous Materials Professionals and the New England chapter of the Academy of Certified Hazardous Materials Managers.

Brian knows an organization's success is predicated on empowering its people to safely work within the complex, living processes in which they operate. He is a student of human factors in the workplace, of the phenomena of human error and drift into failure, and of the safety applications of Lean techniques.

RELEVANT PROJECT EXPERIENCE

Haley & Aldrich, Inc., Burlington, Massachusetts. As Chief Health and Safety Officer, Brian has led and facilitated the development and implementation of corporate health and safety (H&S) improvement plans to enhance compliance and improve H&S performance. In Brian's time with Haley & Aldrich, Inc., the company has realized dramatic improvement on H&S goals and in Key Performance Indicators. Brian is responsible for developing a risk competence culture, where our staff are empowered to look for and engage to address risk before anyone is injured. Brian oversees the development, implementation and continuous improvement of all H&S programs for the company. Additional responsibilities include:

- Developing a safety culture through incident reporting, root cause analysis, behavior-based safety, hazard recognition and risk assessment, communication, and developing leaders;

- Monitoring proposed and existing SH&E regulations and legislation to determine their impact on operations and to ensure continued compliance;
- Overseeing the safety, industrial hygiene, and toxicology programs for over 600 staff members engaged in remediation, construction, health and safety, consulting, and general office work across 28 offices in the United States and on assignment to international project sites;
- Continuously seeks to improve H&S performance as measured by the OSHA Incident Rating (IR) and Worker's Compensation Experience Modification Rating (EMR), as well as Leading Indicators developed with the management team; and
- Participating in the corporate audit program as an auditor or lead auditor;

Energy Client, California. As Chief Health and Safety Officer, Brian led and facilitated the Alliance Partnership Safety Council in 2017, is still an active contributor to the council, and hosts routine contractor safety forums for the client. Brian is actively involved in the development and implementation of program safety, health, and environmental (SH&E) plans to ensure safe operations on project sites. Brian developed permits and Health and Safety Plans for large projects and routinely audits the site safety. Additional responsibilities include:

- Driving reporting and behavior-based safety initiatives to support our internal safety culture and developing monthly summary reports to illustrate performance to our client.
- Develop, assess, and continuously improve site safety plans and practices, including specific safety protocols for working safely over and around water.
- Worked as an extension of the client's organization to provide assurance that the remedy was completed safely and consistent with client-specific requirements.
- Support on-site safety personnel in ensuring the health and safety of the general public, our staff, and our sub-contracted employees.
- Audits and visits sites to ensure compliance with our internal policies and client-specific requirements.

Energy Client, Ohio. As Chief Health and Safety Officer, Brian supports the project team in developing and executing client and project-specific health and safety measures, such as a site-specific Health and Safety Plan, Job Hazard Analyses, Industrial Hygiene program, and site-specific training. Brian also routinely visits the site to assess current practices and conditions and to ensure continuous improvement. Additional responsibilities include:

- Develop, assess, and continuously improve site safety plans and practices, including specific safety protocols to comply with supplemental EH&S requirements such as the Duke Health and Safety Handbook, Environmental Supplemental, and EHS Keys to Life.
- Develop, assess, and continuously improve site safety plans and practices to address the risks associated with the work being performed on site, as well as the environmental conditions and simultaneous operations, including trenching and excavation, hot work, work over and near water, heavy equipment, HAZWOPER, etc.
- Worked as an extension of the client's organization to provide assurance that the remedy was completed safely and consistent with client-specific requirements.
- Support on-site safety personnel in ensuring the health and safety of the general public, our staff, and our subcontracted employees.
- Audits and visits site to ensure compliance with our internal policies and client-specific requirements.

KATHERINE R. MILLER

Project Manager

EDUCATION

B.S., Chemistry, University of Arizona

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120 and 40 CFR 265.16)
8-Hour OSHA Refresher Training (29 CFR 1910.120)
Level IV Data Validation Training

AWARDS

Pinnacle Award, 2009
Pathfinder Award, 2014

In her 10 years at Haley & Aldrich, Katherine has worked on soil and groundwater environmental investigations and the preparation of environmental reports for private, industrial, and government-based project clients. She is a qualified Data Validator capable of performing various levels of validation on laboratory water quality data according to U.S. Environmental Protection Agency (EPA) National Functional Guidelines and to U.S. Department of Energy radiochemical guidelines. She also has experience designing and maintaining databases for project-specific needs.

Project management responsibilities for a $1.5 million per year stormwater project include preparation of subcontractor bids and contracts; preparation of cost estimates, proposals, and reports; coordination of field testing programs; and interpretation of chemical testing results. She has interacted with local regulatory agencies.

RELEVANT PROJECT EXPERIENCE

Confidential Aerospace Manufacturer, Groundwater Monitoring, Western U.S. Katherine served as project manager for the comprehensive stormwater management program. Responsibilities included project finance management and data management including quality assurance/quality control (QA/QC) and interpretation of chemical testing results. Evaluated QA/QC of groundwater quality data, prepared reports and managed data for the site. Performed data validation of quarterly water quality data from over 300 locations according to EPA National Functional Guidelines and to DOE radiochemical guidelines over a six-year period. Also, responsible for updating and maintaining the integrity of over 200,000 records during that time period. Assisted with management of sampling, analysis, and reporting of constituents of concern, ensured compliance with post-closure permit monitoring and reporting requirements, Data Management Plan, QAPP, and Environmental Data Management System, and ensured and maintained 100% compliance with the QAPP and Data Management Plan. Additionally, prepared groundwater data summaries for proposed extraction wells including comparisons to site NPDES outfall limits in support of Groundwater Interim Measures planning.

Asarco Hayden Plant Site, Hayden, Arizona. Katherine assisted with field preparation, QA/QC of analytical data, and data validation as part of the Remedial Investigation/Feasibility Work Plan including soil, sediment, air, process water, surface water, and stormwater.

Former MGP Site, California. Katherine assisted with report preparation, QA/QC of soil and/or groundwater quality data, and data validation for the investigation of three large former MGP sites in an urban, residential setting; includes over 200 residential properties.

General Manufacturing, Leitchfield, Kentucky. Katherine assisted with report preparation, QA/QC of soil and/or groundwater quality data, and data validation for a soil and groundwater RCRA site. Groundwater monitoring is conducted annually at more than 50 locations for volatile organic compounds (VOCs), including 1,4-dioxane and semi-volatile organic compound (SVOCs).

Skyworks Solutions, Inc., Newbury Park, California. Katherine assisted with report preparation, QA/QC of soil and/or groundwater quality data, and data validation at groundwater remediation site. She monitored for VOCs, including 1,4-dioxane, and inorganic chemicals, including hexavalent chromium.

Teledyne Scientific Company, Thousand Oaks, California. Katherine assisted with report preparation for this groundwater assessment site. Monitored natural attenuation has been instituted as the long-term site remedy.

Port of Redwood City, Permitting and Sediment Characterization, California. Katherine assisted with report preparation, QA/QC of sampling data, and data validation.

Kiewit Infrastructure West, Sediment Quality Study, California. Katherine assisted with report preparation, QA/QC of sampling data, and data validation.

Aeolian Yacht Harbor, Permitting, Eel Grass Conservation and Sediment Characterization, California. Katherine assisted with report preparation, QA/QC of sampling data, and data validation.

Marin County, Paradise Cay Permitting and Sediment Characterization, California. Katherine assisted with report preparation, QA/QC of sampling data, and data validation.

SEBASTIAN SOTOMAYOR

Project Environmental Engineer

EDUCATION

B.S., Geological Sciences, Rutgers University

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)
8-Hour OSHA Hazardous Waste Worker Refresher Training (29 CFR 1910.120)
30-Hour OSHA
NYSDEC 4-Hour Erosion and Sediment Control Training
OSHA HAZWOPER Site Supervisor
8-Hour DOT Hazmat Employee
10-Hour OSHA Construction Safety Training
NY SST Training
RCRA Hazardous Waste Generator Training

Sebastian is an engineer with six years of experience in environmental consulting, including soil, groundwater, and soil vapor investigations, subsurface investigations, in-situ chemical oxidation remediation, preparation of technical reports, and data collection and analysis. He has extensive experience conducting Phase I Environmental Site Assessments (ESAs), Phase II ESAs, Remedial Investigations, Waste Characterizations, and Remedial/Construction Oversight. He has drafted remedial investigation reports, remedial investigation work plans, remedial action work plans, remedial progress reports, along with various other letters and memos.

He focuses his time at Haley & Aldrich leading remedial investigations, monitoring subsurface exploration activities, training junior staff, task managing complex remedial projects, completing technical reports, and assisting in the development of remedial work plans.

RELEVANT PROJECT EXPERIENCE

Environmental

NP Staten Island Industrial, LLC, Former Port Mobil – Staten Island, Staten Island, NY. Sebastian serves as task manager and is responsible for on-site field management of a 240+ acre redevelopment with a significant history as a major oil storage facility (MOSF), and vast contamination of petroleum-related light nonaqueous phase liquid (LNAPL), training junior staff in leading in-field investigations including site-wide gauging & quarterly groundwater sampling events, preparing quarterly reports for the client, and overseeing the execution and oversight of remedial efforts. Under heavy regulatory oversight, Sebastian coordinated and managed the field effort during implementation of interim remedial measures. He managed daily operations and field staff performing inspections to ensure compliance with technical plans and construction specifications. He attended and participated in weekly meetings with the client and construction team to provide technical, regulatory, and risk management status updates and guidance.

Eleven W46 Realty LLC, 616 11th Avenue & 555 45th Street, New York, NY. Sebastian served as the task manager and was responsible for daily coordination with field staff, supporting them during their daily work, and interfaced with project team daily to keep field efforts focused and on track. Along with reviewing daily reports, preparation of sampling matrices, and coordination with subcontractors, he ensured that project milestone schedules were achieved, and provided site training and skill development to junior staff.

159 Third Residence LLC, 151-169 Third Avenue, Brooklyn, NY. Sebastian served as the task manager and was responsible for daily coordination with field staff, supporting them during their daily work, and interfaced with project

team daily to keep field efforts focused and on track. Along with reviewing daily reports, preparation of sampling matrices, and coordination with subcontractors, he ensured that project milestone schedules were achieved, and provided site training and skill development to junior staff.

Bedford Beverly Acquisitions LLC, Bedford Beverly Brownfield Site, BCP Site – C224384. Sebastian was the lead field engineer conducting the waste characterization event, successfully delineating both vertical and horizontal extents of contamination on-site. He was responsible for data collection, analysis, and drafted the waste characterization report. This event included 39 waste characterization grids and involved coordination with office support and in-field adjustments to complete the work.

Ferry Landing, LLC, Tarrytown Former MGP Site, Tarrytown, New York. Sebastian serves as the task manager and was responsible for preparing periodic review reports for the New York State Department of Environmental Conservation to comply with the approved remedial action. These reports summarize remedial actions completed during each reporting period. Remedial actions overseen by him include tri-annual dense nonaqueous phase liquid (DNAPL) extraction events, groundwater sampling events, compilation of data, and coordination with multiple parties.

Madison Realty Capital, New York State Superfund Site, Former NuHart Plastics, Site, New York State Superfund Site (NuHart West) and Brownfield Cleanup Program (BCP) Site (NuHart East), Brooklyn, New York. Sebastian served the lead staff engineer for the execution and oversight of the excavation and remediation of NuHart East. During remediation, Sebastian observed and documented the excavation and proper disposal of on-site soil required for the installation of foundation elements. In addition, he oversaw the proper cleaning and removal of several 10,000-gallon underground storage tanks encountered during the site-wide excavation. He also oversaw the in-situ mixing of zero valent iron at bottom of excavation for remedial purposes. NuHart is a high-profile site that requires coordination with the New York State Department of Environmental Conservation (NYSDEC), the New York Office of Environmental Remediation (NYCOER), local regulatory agencies, community stakeholders, and local elected officials.

Waterfront Management of NY, 89-91/93 Gerry Street, Brooklyn, New York. Sebastian conducted waste characterization events for both sites and successfully delineated the vertical and horizontal extent of lead contamination on site. He was responsible for data collection, analysis, and drafted both waste characterization reports. Sebastian also served as a field engineer during the remedial oversight phase of the project, and was responsible for excavation oversight, collection of endpoint samples, implementation of community air monitoring, and proper disposal of on-site soil required for the installation of foundation elements.

Madison Realty Capital, River North, Staten Island, New York. As the lead field engineer, Sebastian was responsible for the execution of the remedial investigation, at this approximately 2-acre site. He coordinated with drillers for the installation of approximately fifty soil borings, twenty soil vapor points, including soil borings to bedrock. Sebastian was also responsible for data collection and analysis, and competition of the remedial investigation report (RIR). Sebastian also led field staff through the waste characterization event, which included the installation of 115 soil borings to bedrock.

Madison Realty Capital, 644 East 14th Street, New York, New York. Sebastian was the lead field engineer during both the remedial investigation and waste characterization event. He successfully delineated the vertical and lateral extents of lead contamination on site and was responsible for data collection and analysis.

Panoramic Hudson LLC, 541 West 37th Street, Hudson Yards, New York. Sebastian served as a staff engineer for the preparation of off-site investigative reports, which included a limited ESA and a remedial investigation work plan (RIWP). He also led waste characterization activities, which included monitoring drilling activities, recording soil recovered by the drilling rig, and collecting suitable samples of soil to be analyzed.

The Jay Group, Speedway Portfolio, Multiple Boroughs, New York. As a staff engineer, Sebastian was responsible for the preparation of remedial investigations and leading field staff through said investigations. He was also responsible for data collection and analysis, competition of the remedial investigation reports (RIR). Sebastian also led remedial

oversight efforts, observed and documented excavation activities, implemented community air monitoring, and proper disposal of on-site soil required for the installation of foundation elements.

21 Craig Road, Montvale, New Jersey. Sebastian served as the lead field engineer for this project. Responsibilities included preparing the quarterly scopes of work, preparing field team for extensive groundwater sampling event, and leading its execution. This project spanned over two townships (Park Ridge, NJ, and Montvale, NJ) and over 100 monitoring wells. Groundwater sampling and gauging events were completed quarterly. Sebastian kept project timelines on schedule and completed each event within the given timeframe. Sebastian also compiled lab data, created groundwater contours, geologic contours, and isopleths used in reports submitted to the client.

Chemtrade, WR Grace, 235 Snyder Ave Berkley Heights, New Jersey. Sebastian served as the field engineer leading storm and wastewater investigations in an active chemical manufacturing facility. Client buying property needed to map out all stormwater and wastewater lines inside the facility to outfall location. Sebastian mapped water lines from respective sources across a web of pipes, storm drains, manholes, and outlets using dye tests and downhole CCTV camera inspections. Sebastian also sampled storm and wastewater from multiple points, created figures for both the site-wide piping and implementation of a new stormwater retention basin, and presented findings during client meetings.

34 Ackerly Road, Clarks Summit, Pennsylvania. Sebastian served as a field engineer executing In-Situ chemical mixing on a former steel plating factory in Pennsylvania. This involved the mixing of emulsified vegetable oil and molasses as a means to break down cancerous chemical hexavalent chromium. Sebastian also participated in bi-annual groundwater sampling across the 12-acre site and assisted in preparation of remedial action reports for the client.

iPark Edgewater, Brownfield Redevelopment, Edgewater, New Jersey. Sebastian conducted quarterly groundwater sampling on-site, along with data collection, compilation, and completed quarterly reports for the client. Sebastian also led sediment sampling efforts on site to delineate the extents of contamination, collecting sediment samples during low tide in the Hudson River, and again analyzing the lab data to be used in reports submitted to the client.

APPENDIX D
Sampling, Analysis, and Assessment of Per- And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

NEW YORK STATE OF OPPORTUNITY.

Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

April 2023



www.dec.ny.gov

Table of Contents

Objective 1
Applicability 1
Field Sampling Procedures 1
Analysis and Reporting 2
Routine Analysis 2
Additional Analysis 2
Data Assessment and Application to Site Cleanup 3
Water Sample Results 3
Soil Sample Results 3
Testing for Imported Soil 4
Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS 5
Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids 6
Appendix C - Sampling Protocols for PFAS in Monitoring Wells 8
Appendix D - Sampling Protocols for PFAS in Surface Water 10
Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells 12
Appendix F - Sampling Protocols for PFAS in Fish 14
Appendix G - PFAS Analyte List 22
Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids 24

ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Data Assessment and Application to Site Cleanup Page 3	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	3/28/2023
Water Sample Results Page 3	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below.	NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These guidance values also include criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt).Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.	3/28/2023
Soil Sample Results Page 3	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values:	NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:	3/28/2023
Protection of Groundwater Page 3	PFOA (ppb) 1.1 PFOS (ppb) 3.7	PFOA (ppb) 0.8 PFOS (ppb) 1.0	3/28/2023

Citation and Page Number	Current Text	Corrected Text	Date
Footnote 2 Page 3	The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	3/28/2023
Testing for Imported Soil Page 4	If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.	If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.	3/28/2023
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021
Water Sample Results Page 9	"In addition, further assessment of water may be warranted if either of the following screening levels are met: a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L"	Deleted	6/15/2021

Citation and Page Number	Current Text	Corrected Text	Date
Routine Analysis, Page XX	Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP)… criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids).	Deleted	5/31/2022
Analysis and Reporting, Page XX	As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.	Deleted	5/31/2022
Routine Analysis, Page XX	LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media.	EPA Method 1633 is the procedure to use for environmental samples.	
Soil Sample Results, Page XX	Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6	
Appendix A	"Include in the text… LC-MS/MS for PFAS using methodologies based on EPA Method 537.1"	"Include in the text ….EPA Method 1633"	
Appendix A	"Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101"	Deleted	
Appendix B	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	

Citation and Page Number	Current Text	Corrected Text	Date
Appendix C	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix D	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix G		Updated to include all forty PFAS analytes in EPA Method 533	
Appendix H		Deleted	
Appendix I	Appendix I	Appendix H	
Appendix H	"These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report."	"These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER)."	
Appendix H	"The holding time is 14 days…"	"The holding time is 28 days…"	
Appendix H, Initial Calibration	"The initial calibration should contain a minimum of five standards for linear fit…"	"The initial calibration should contain a minimum of six standards for linear fit…"	
Appendix H, Initial Calibration	Linear fit calibration curves should have an R^2 value greater than 0.990.	Deleted	
Appendix H, Initial Calibration Verification	Initial Calibration Verification Section	Deleted	
Appendix H	secondary Ion Monitoring Section	Deleted	
Appendix H	Branched and Linear Isomers Section	Deleted	

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third-party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix G) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist. Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These human health criteria should also be applied to surface water that is used as a water supply. This guidance also includes criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt). Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	0.8	1.0

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These

[2] The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by EPA Method 1633
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
-
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the current SOP developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8). This SOP should be followed when collecting fish for contaminant analysis. Note, however, that the Bureau of Ecosystem Health will not be supplying bags or tags. All supplies are the responsibility of the collector

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

   1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

   2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

   3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

   1. Project and Site Name.

   2. DEC Region.

   3. All personnel (and affiliation) involved in the collection.

   4. Method of collection (gill net, hook and line, etc.)

   5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

   1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

   2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

   3. Date collected.

   4. Sample location (waterway and nearest prominent identifiable landmark).

   5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate “Age” column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish’s tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

No materials containing Teflon.
No Post-it notes.
No ice packs; only water ice or dry ice.
Any gloves worn must be powder free nitrile.
No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
Wash hands after handling any food containers or packages as these may contain PFCs.
Keep pre-wrapped food containers and wrappers isolated from fish handling.
Wear clothing washed at least six times since purchase.
Wear clothing washed without fabric softener.
Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: □Electrofishing □Gill netting □Trap netting □Trawling □Seining □Angling □Other _____

Preservation Method: □Freezing □Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20_____.

_____ _____
Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Group	Chemical Name	Abbreviation	CAS Number
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER). Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 28 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of six standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

APPENDIX E
Climate Screening Checklist

Climate Screening Checklist

BACKGROUND INFORMATION

- Project Manager: Thomas Giordano
- Site Name: Former Jamaica Truck Parts Site
- Site Number: Pending
- Site Location: 145-11 Liberty Avenue & 10208 Brisbin Street, Queens, New York
- Site Elevation (average above sea level): Approximately 45 feet above sea level (Google Earth)
- ClimAID Region (Responding Climate Change in New York State (ClimAID) - NYSERDA): Region 4 – New York City and Long Island

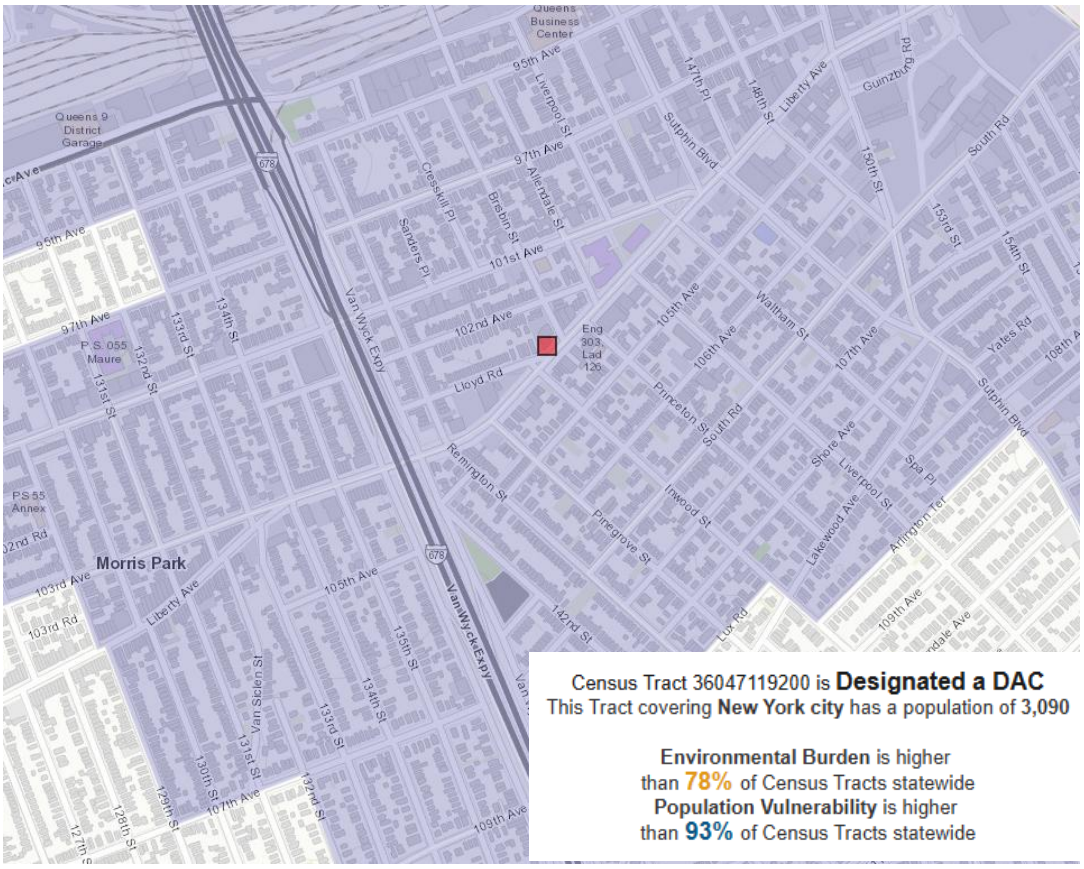


- Remedial Stage/Site Classification: Investigation.
- Contamination - Media Impacted/ Contaminants of Concern: *Primary contaminants of concern at the Site include petroleum-related volatile organic compounds (VOCs), including tetrachloroethene (PCE), semi-volatile organic compounds (SVOCs), specifically polyaromatic hydrocarbons (PAHs), and heavy metals, including lead in soil, and petroleum-related VOCs (BTEX) and chlorinated volatile organic compounds (CVOCs) in soil vapor.*
- Proposed/Current Remedy: *The remedy will be proposed upon the completion of the pending Remedial Investigation (RI), when the extent of environmental impacts at the Site is determined.*
- What is the predicted timeframe of the remedy? Will components of the remedy still be in place in 10+ years? *The predicted timeframe is unknown as the full extent of environmental impacts at the Site are undetermined.*

- Is the site in proximity to any sensitive receptors? (e.g., wetlands, waterbodies, residential properties, hospitals, schools, drinking water supplies, etc.): *Concerned Parents of Jamaica Early Learning Center, located at 143-04 101 Avenue, Jamaica, New York and Talfourd Lawn Elementary School (P.S. 050) located at 143-26 101 Avenue, Jamaica, New York.*

- Is the site in a disadvantaged community (DAC) or potential environmental justice area (PEJA) (Use DECinfolocator: DECinfo Locator (ny.gov))?

X Yes ☐ No



- If the site is in a DAC or PEJA, will climate impacts be magnified? If yes, list how and why.

☐ Yes X No

- Should thresholds of concern be lowered to account for magnification of impacts? If yes, indicate how lower thresholds will be used in the screening.

☐ Yes X No

CLIMATE SCREENING TABLE*

Potential Climate Hazards	**Relevant to the Site Location** (Y/N/NA)[1]	**Projected Change** (Resilience Analysis and Planning Tool (RAPT)/arcgis.com[3]	**Potential to Impact Remedy** (Y/N)	**Is remedy/site already resilient?** (Y/N)[4]
Precipitation	N	N/A	N/A	N/A
Temperature[2] (Extreme Heat or Cold Weather Impacts)	N	N/A	N/A	N/A
Sea Level Rise	N	N/A	N/A	N/A
Flooding	N	N/A	N/A	N/A
Storm Surge	N	N/A	N/A	N/A
Wildfire	N	N/A	N/A	N/A
Drought	N	N/A	N/A	N/A
Storm Severity	N	N/A	N/A	N/A
Landslides	N	N/A	N/A	N/A
Other Hazards:	N/A	N/A	N/A	N/A

* *Links to potential data sources can be found on the following page*

[1] If the first column is N --> The rest of the columns will be N/A, the hazard is not applicable to the site.

[2] Extreme Heat: periods of three or more days above 90°F- Extreme Cold: Individual days with minimum temperatures at or below 0 degrees F (NYSERDA ClimAID report)

[3] List the projected change in specific terms or units e.g. inches of rainfall, feet of sea level rise, etc.

[4] If final column is Y, provide reasoning, if the final column is N --> Climate Vulnerability Assessment (CVA) required.

Required Next Steps (If no further action is required, provide justification):

Conduct severe weather storm inspections during the active remedy. Inspect dewatering systems prior to anticipated storm events that could result in a power outage, and after storm events.

Potential Data Sources (not an exhaustive list)- from Superfund Climate Resilience: Vulnerability Assessment | US EPA

NYSERDA ClimAID report- Responding Climate Change in New York State (ClimAID) - NYSERDA

FEMA- National Flood Hazard Layer | FEMA.gov

NOAA- National Storm Surge Risk Maps - Version 3 (noaa.gov)

Department of Agriculture Forest Service Wildfire Risk to Communities

EPA Climate Change Indicators in the United States

EPA Climate Resilience Evaluation & Awareness Tool (CREAT) | U.S. Climate Resilience Toolkit

EPA National Stormwater Calculator

National Integrated Drought Information System U.S. Drought Portal

National Interagency Coordination Center National Interagency Fire Center

National Oceanic and Atmospheric Administration Coastal Services Digital Coast

- Resources to help communities assess coastal hazards, such as the Sea Level Rise Viewer for visualizing community-level impacts of flooding or sea level rise and downloadable LIDAR data

National Oceanic and Atmospheric Administration National Centers for Environmental Information website

National Oceanic and Atmospheric Administration Sea Level Trends

National Weather Service Climate Prediction Center

National Weather Service National Hurricane Center

National Weather Service Sea, Lake, and Overland Surges from Hurricanes (SLOSH)

National Weather Service Storm Surge Hazard Maps

U.S. Federal Government Climate Resilience Toolkit: The Climate Explorer

U.S. Army Corps of Engineers Climate Preparedness and Resilience

U.S. Geological Survey Coastal Change Hazards Portal

U.S. Geological Survey Landslide Hazards Program

U.S. Geological Survey National Ground-water Monitoring Network Data Portal

U.S. Geological Survey National Climate Change Viewer

U.S. Geological Survey National Water Dashboard

U.S. Geological Survey StreamStats

NYS Department of State- Assess | Department of State (ny.gov)

NYSERDA NY Costal Floodplain Mapper- Home Page (ny.gov)

NYSDEC Coastal Erosion Hazards- Coastal Areas Regulated By The CEHA Permit Program - NYDEC

NYSDOH Heat Index- health.ny.gov/environmental/weather/vulnerability_index/county_maps.htm

APPENDIX F
Green & Sustainable Remediation Analysis

H & A OF NEW YORK ENGINEERING
AND GEOLOGY, LLP
213 W. 35th Street
7th Floor
New York, NY 10001
646.277.5685

July 28, 2026
File No. 0215824

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
47-40 21st Street
Long Island City, New York 11101

Attention: NYSDEC Case Manager, TBD

Subject: Green Site Remediation
Proposed Former Jamaica Truck Parts Site
145-11 Liberty Avenue & 10208 Brisbin Street
Queens, New York

H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) presents the following environmental footprint analysis[1] in accordance with U.S. Environmental Protection Agency (EPA) 542-R-12-002 for the remedial investigation associated with 145-11 Liberty Avenue & 10208 Brisbin Street, Queens, New York (Site).

392 LEONARD STREET REDEVELOPMENT SITE – TOTALS

The estimated totals for all components of the remedial investigation are:

- 90.31 Metric Million British Thermal Units (MMBtus) of energy used;
- 6.72 tons of total greenhouse gas emissions (CO2e [includes consideration of carbon dioxide, methane, and nitrous oxide emissions]);
- 251.44 pounds (lbs) of nitrogen oxides (NOx) + sulfur oxides (SOx) + particulate matter (PM) emissions; and,
- 13.14 lbs of hazardous air pollutant (HAP) emissions.

Energy

- 35.45 MMBtus used for on-Site activities, such as drilling.
- 0.01 MMBtus used for grid electricity generation.
- 23.02 MMBtus used for transportation of personnel, investigation materials, and waste disposal.
- 31.84 MMBtus used for off-Site activities.

[1] *Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019.*

Greenhouse Gas Emissions (CO2e)

- 2.6 tons of CO2e will be produced from on-Site activities, such as drilling.
- 0.00 tons of CO2e will be produced from grid electricity generation.
- 1.68 tons of CO2e will be produced from the transportation of personnel, investigation materials, and waste disposal.
- 1.81 tons will be produced from off-Site activities.

The majority of the remedial investigation footprint, including both energy use and CO2e generation, is from off-Site activities, such as transportation and other off-Site activities. The on-Site activities are the smallest scope within the footprint and are primarily the result of drilling activities. Overall, the estimated footprint of the Site investigation is dominated by off-Site activities as well as transportation. Off-Site energy use is estimated to comprise 35.26 % of all energy use and off-Site greenhouse gas emissions are expected to comprise 29.734 % of all emissions for the remedial investigation.

Sincerely yours,
H & A OF NEW YORK ENGINEERING AND GEOLOGY, LLP

Matthew Levy	James Bellew
Senior Project Manager	Principal

https://haleyaldrich.sharepoint.com/sites/GFLNYCLLC/Shared Documents/0215824.145-11 Liberty Avenue/Deliverables/3. Draft RIWP/Appendices/Appendix F - GSR/2026-0729 - 1. SEFA Summary Letter_DRAFT.docx

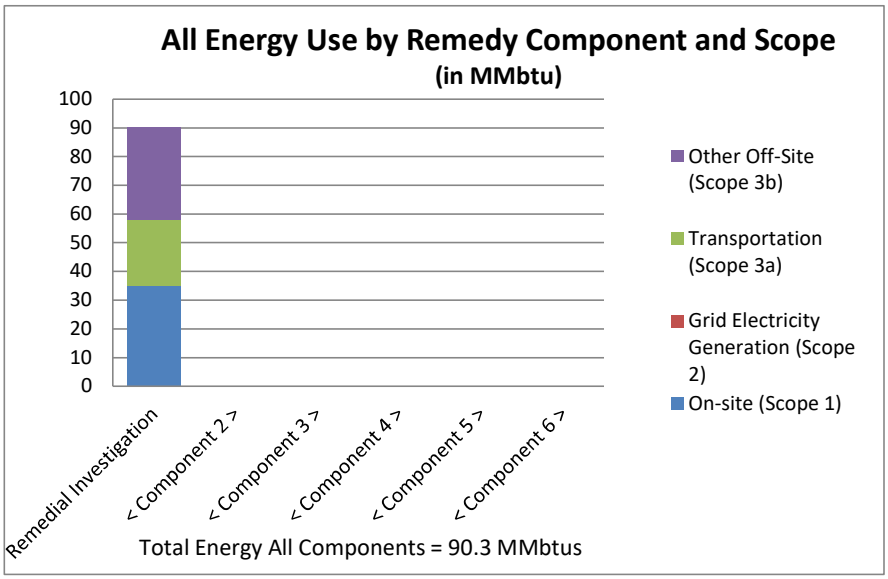
Environmental Footprint Summary

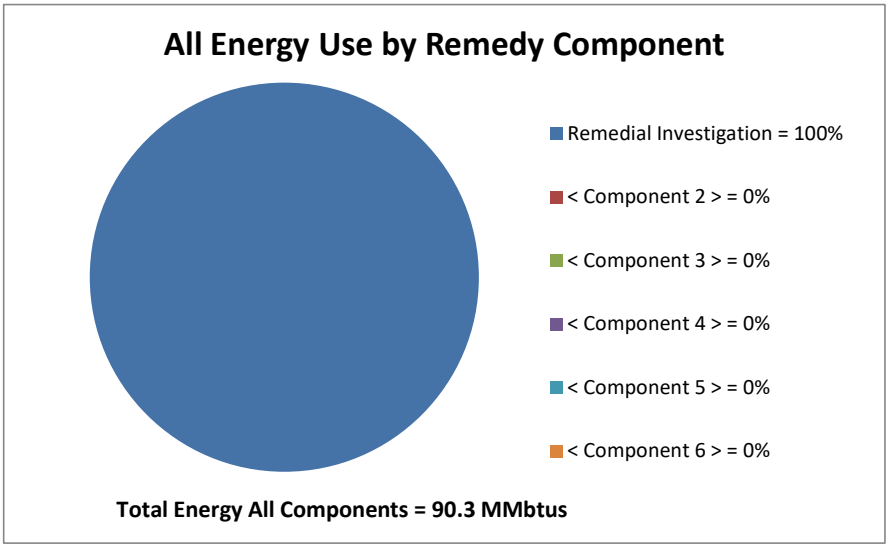
Core Element	Metric		Unit of Measure	Footprint						
				Remedial Investigation	< Component 2 >	< Component 3 >	< Component 4 >	< Component 5 >	< Component 6 >	Total
Materials & Waste	M&W-1	Refined materials used on-site	Tons	1.1	0.0	0.0	0.0	0.0	0.0	1.1
	M&W-2	% of refined materials from recycled or reused material	%	0.0%						0.0%
	M&W-3	Unrefined materials used on-site	Tons	0.000	0.000	0.000	0.000	0.000	0.000	0.0
	M&W-4	% of unrefined materials from recycled or reused material	%							
	M&W-5	On-site hazardous waste disposed of off-site	Tons	1.0	0.0	0.0	0.0	0.0	0.0	1.0
	M&W-6	On-site non-hazardous waste disposed of off-site	Tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-7	Recycled or reused waste	Tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-8	% of total potential waste recycled or reused	%	0.0%						0.0%
Water (used on-site)	W-1	Public water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-2	Groundwater use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-3	Surface water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-4	Reclaimed water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-5	Storm water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-6	User-defined water resource #1	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-7	User-defined water resource #2	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-8	Wastewater generated	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy	E-1	Total energy used (on-site and off-site)	MMBtu	90.3	0.0	0.0	0.0	0.0	0.0	90.3
	E-2	Energy voluntarily derived from renewable resources								
	E-2A	On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-2B	Voluntary purchase of renewable electricity	MWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-3	Voluntary purchase of RECs	MWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-4	On-site grid electricity use	MWh	0.001	0.000	0.000	0.000	0.000	0.000	0.0
Air	A-1	On-site NOx, SOx, and PM emissions	Pounds	45.6	0.0	0.0	0.0	0.0	0.0	45.6
	A-2	On-site HAP emissions	Pounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	A-3	Total NOx, SOx, and PM emissions	Pounds	251.4	0.0	0.0	0.0	0.0	0.0	251.4
	A-3A	Total NOx emissions	Pounds	114.9	0.0	0.0	0.0	0.0	0.0	114.9
	A-3B	Total SOx emissions	Pounds	117.1	0.0	0.0	0.0	0.0	0.0	117.1
	A-3C	Total PM emissions	Pounds	19.4	0.0	0.0	0.0	0.0	0.0	19.4
	A-4	Total HAP emissions	Pounds	13.1	0.0	0.0	0.0	0.0	0.0	13.1
	A-5	Total greenhouse gas emissions	Tons CO2e*	6.7	0.0	0.0	0.0	0.0	0.0	6.7
Land & Ecosystems	Qualitative Description									

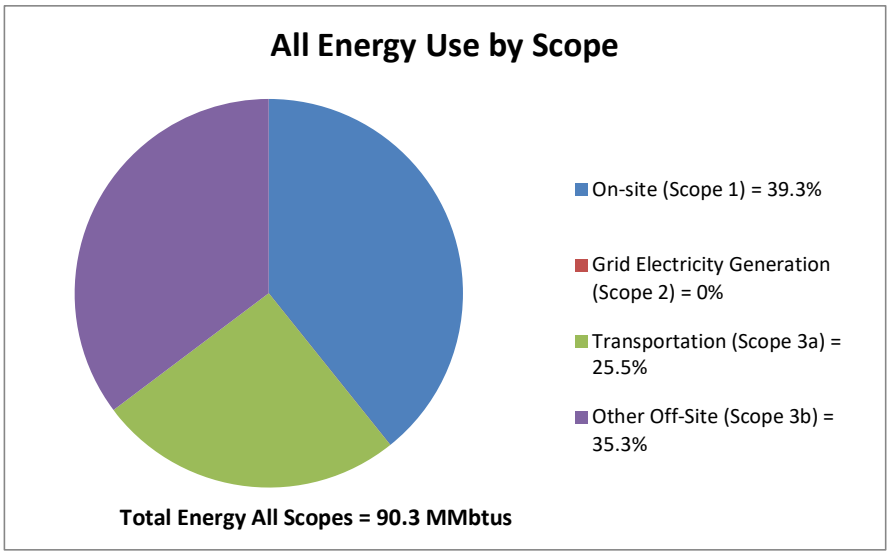
** Total greenhouse gases emissions (in CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.*
"MMBtu" = millions of Btus
"MG" = millions of gallons
"CO2e" = carbon dioxide equivalents of global warming potential
"MWh" = megawatt hours (i.e., thousands of kilowatt-hours or millions of Watt-hours)
"Tons" = short tons (2,000 pounds)

The above metrics are consistent with EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint (EPA 542-R-12-002), February 2012

Notes:


All Energy Use by Remedy Component and Scope
(in MMbtu)
100
90
80
70
60
50
40
30
20
10
0
Remedial Investigation
< Component 2 >
< Component 3 >
< Component 4 >
< Component 5 >
< Component 6 >
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
Total Energy All Components = 90.3 MMbtus


All Energy Use by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
Total Energy All Components = 90.3 MMbtus


All Energy Use by Scope
On-site (Scope 1) = 39.3%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 25.5%
Other Off-Site (Scope 3b) = 35.3%
Total Energy All Scopes = 90.3 MMbtus

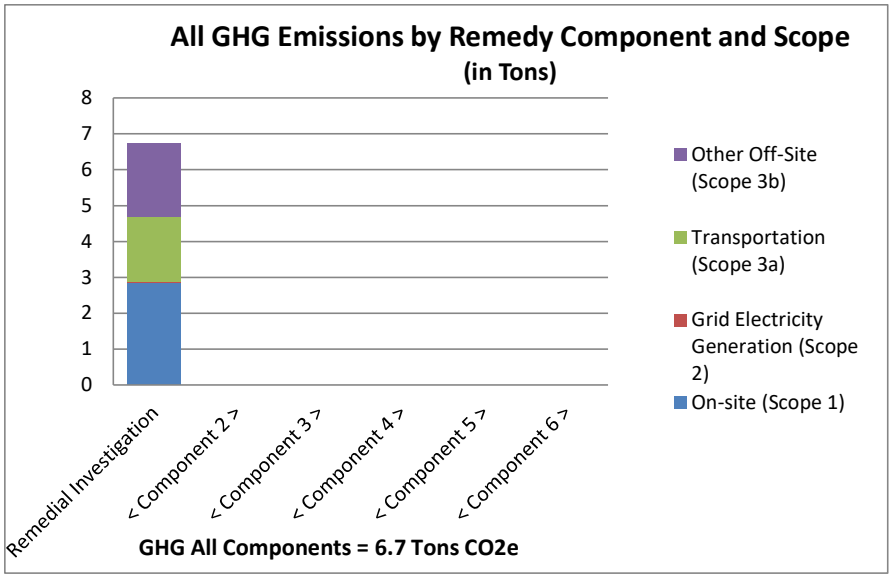
Total Energy
MMbtus

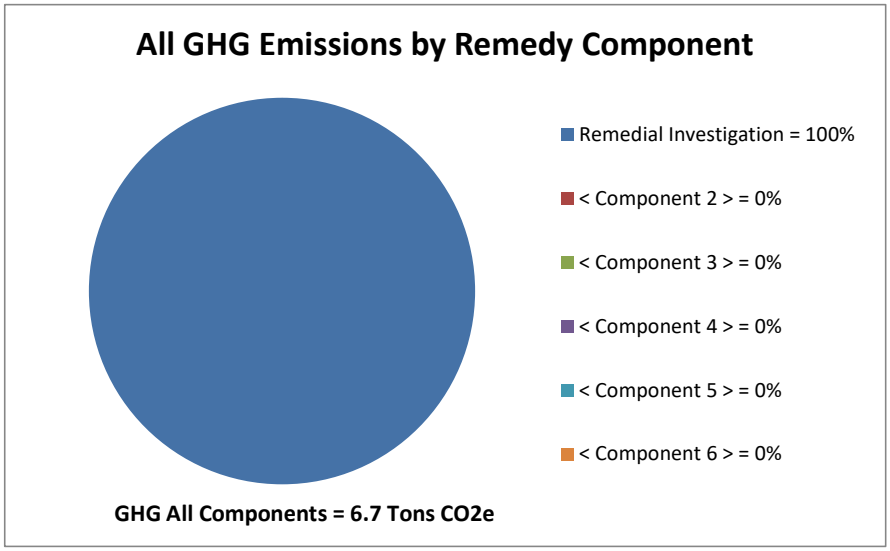
	Remedial I	< Compon	< Compon	< Compon	< Compon	< Compon	Total	
On-site (Scope 1)	35.4	0.0	0.0	0.0	0.0	0.0	35.4	
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	d Electricity
nsportation (Scope 3a)	23.0	0.0	0.0	0.0	0.0	0.0	23.0	Tran
ner Off-Site (Scope 3b)	31.8	0.0	0.0	0.0	0.0	0.0	31.8	Oth
Total	90.3	0.0	0.0	0.0	0.0	0.0	90.3	

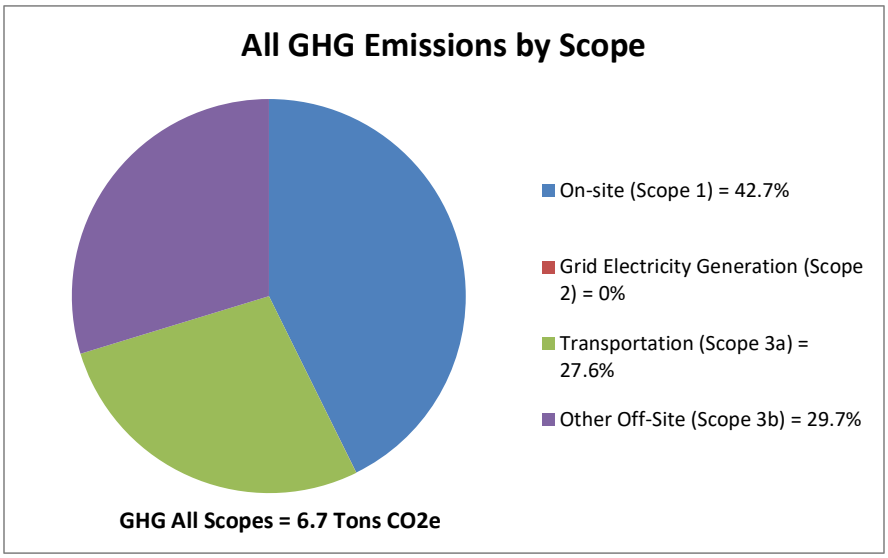
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

On-site (Scope 1) = 39.3%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 25.5%
Other Off-Site (Scope 3b) = 35.3%

Total Energy All Components = 90.3 MMbtus
Total Energy All Scopes = 90.3 MMbtus


All GHG Emissions by Remedy Component and Scope
(in Tons)
8
7
6
5
4
3
2
1
0
Remedial Investigation
< Component 2 >
< Component 3 >
< Component 4 >
< Component 5 >
< Component 6 >
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
GHG All Components = 6.7 Tons CO2e


All GHG Emissions by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
GHG All Components = 6.7 Tons CO2e

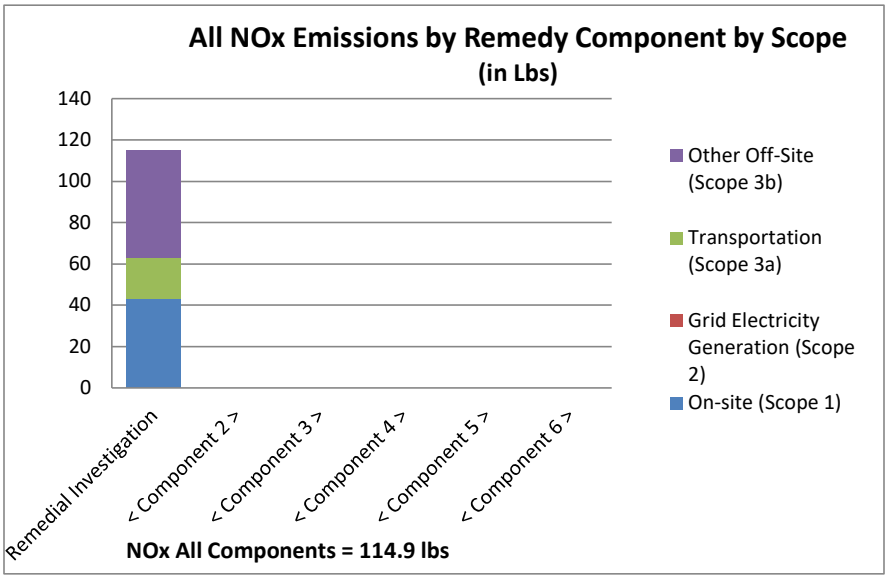

All GHG Emissions by Scope
On-site (Scope 1) = 42.7%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 27.6%
Other Off-Site (Scope 3b) = 29.7%
GHG All Scopes = 6.7 Tons CO2e

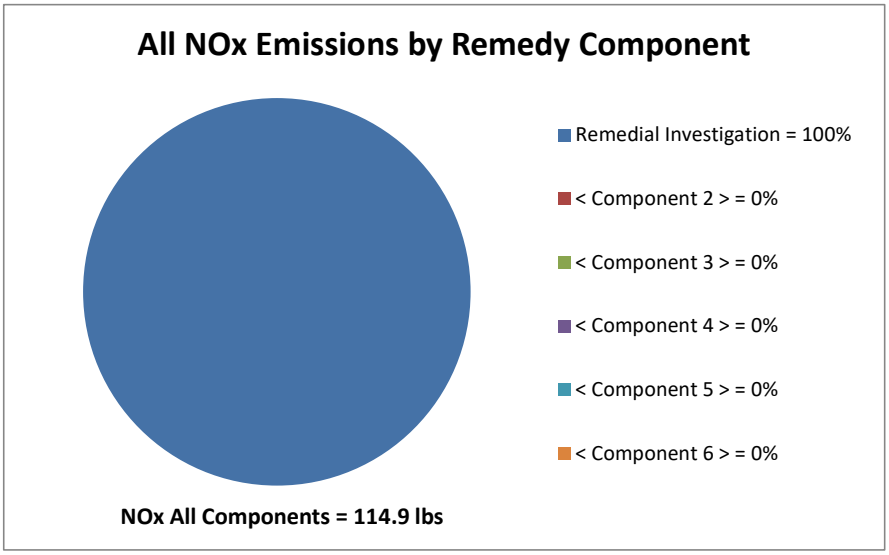
GHG Tons CO2e	Remedial I	< Compone	< Compone	< Compone	< Compone	< Compone	Total	
On-site (Scope 1)	2.9	0.0	0.0	0.0	0.0	0.0	2.9	
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	d Electricity
ısportation (Scope 3a)	1.9	0.0	0.0	0.0	0.0	0.0	1.9	Tran
ıer Off-Site (Scope 3b)	2.0	0.0	0.0	0.0	0.0	0.0	2.0	Oth
Total	6.7	0.0	0.0	0.0	0.0	0.0	6.7	

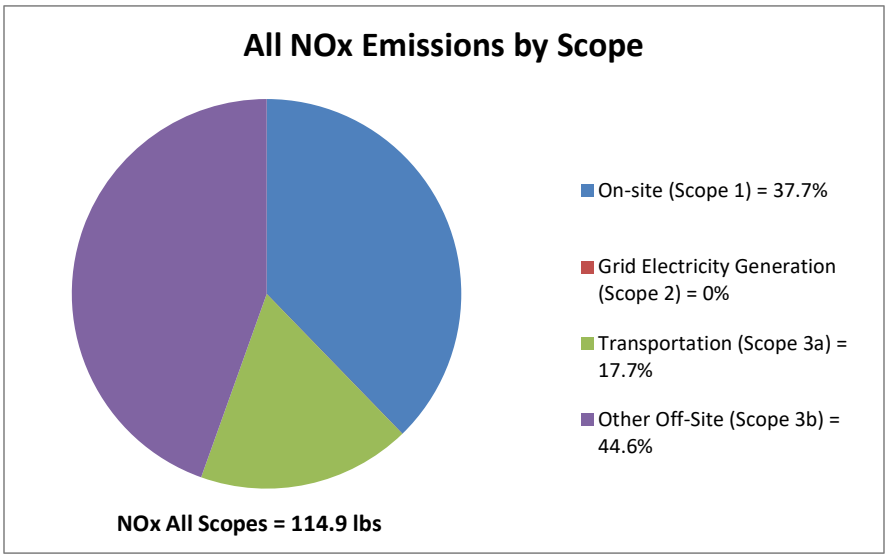
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

GHG All Components = 6.7 Tons CO2e
GHG All Scopes = 6.7 Tons CO2e

On-site (Scope 1) = 42.7%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 27.6%
Other Off-Site (Scope 3b) = 29.7%


All NOx Emissions by Remedy Component by Scope
(in Lbs)
140
120
100
80
60
40
20
0
Remedial Investigation
< Component 2 >
< Component 3 >
< Component 4 >
< Component 5 >
< Component 6 >
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
NOx All Components = 114.9 lbs


All NOx Emissions by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
NOx All Components = 114.9 lbs

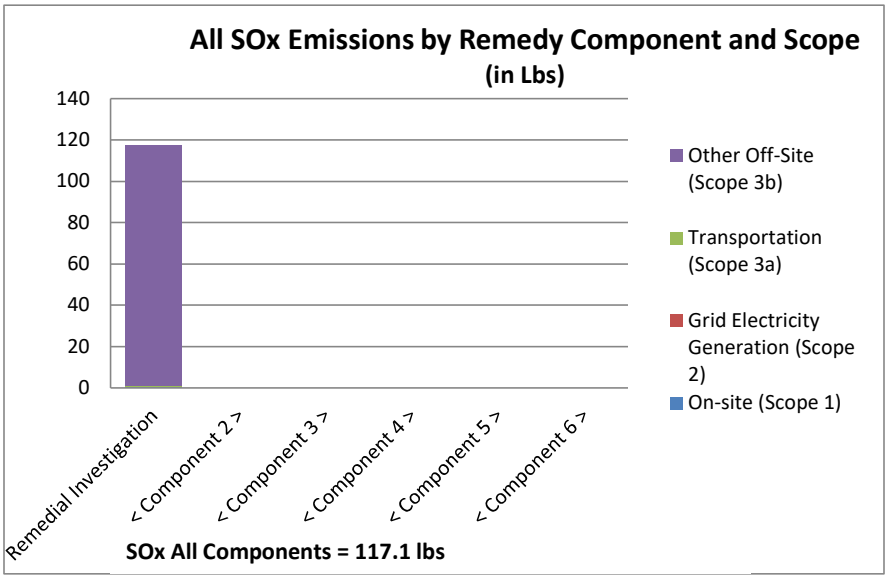

All NOx Emissions by Scope
On-site (Scope 1) = 37.7%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 17.7%
Other Off-Site (Scope 3b) = 44.6%
NOx All Scopes = 114.9 lbs

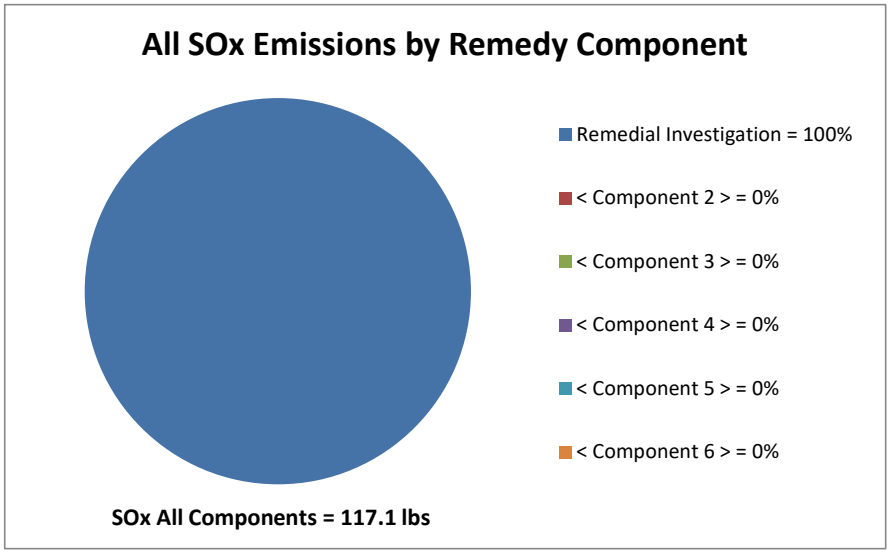
NOx lbs	Remedial I	< Compone	< Compone	< Compone	< Compone	< Compone	Total	
On-site (Scope 1)	43.4	0.0	0.0	0.0	0.0	0.0	43.4	
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	d Electricity
ısportation (Scope 3a)	20.3	0.0	0.0	0.0	0.0	0.0	20.3	Tran
ıer Off-Site (Scope 3b)	51.2	0.0	0.0	0.0	0.0	0.0	51.2	Oth
Total	114.9	0.0	0.0	0.0	0.0	0.0	114.9	

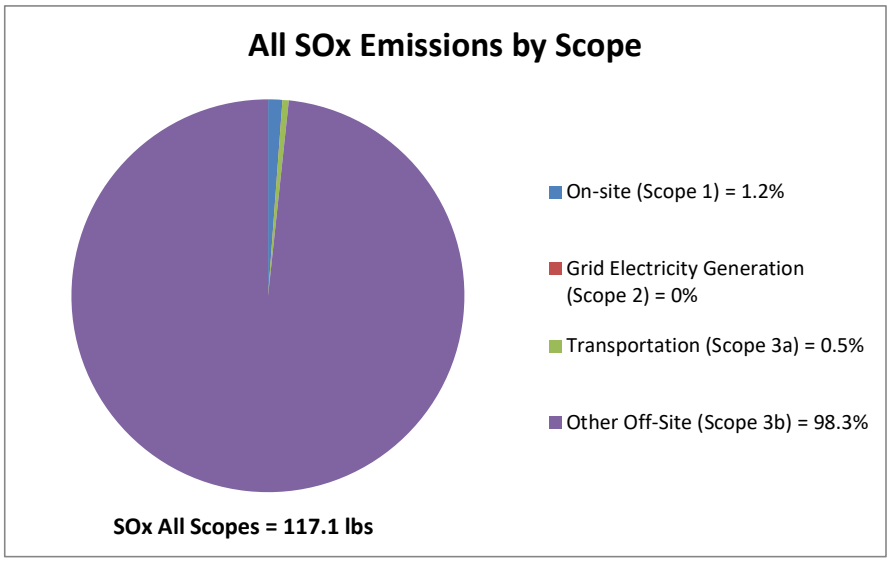
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

NOx All Components = 114.9 lbs
NOx All Scopes = 114.9 lbs

On-site (Scope 1) = 37.7%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 17.7%
Other Off-Site (Scope 3b) = 44.6%


All SOx Emissions by Remedy Component and Scope
(in Lbs)
140
120
100
80
60
40
20
0
Remedial Investigation
< Component 2 >
< Component 3 >
< Component 4 >
< Component 5 >
< Component 6 >
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
SOx All Components = 117.1 lbs


All SOx Emissions by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
SOx All Components = 117.1 lbs

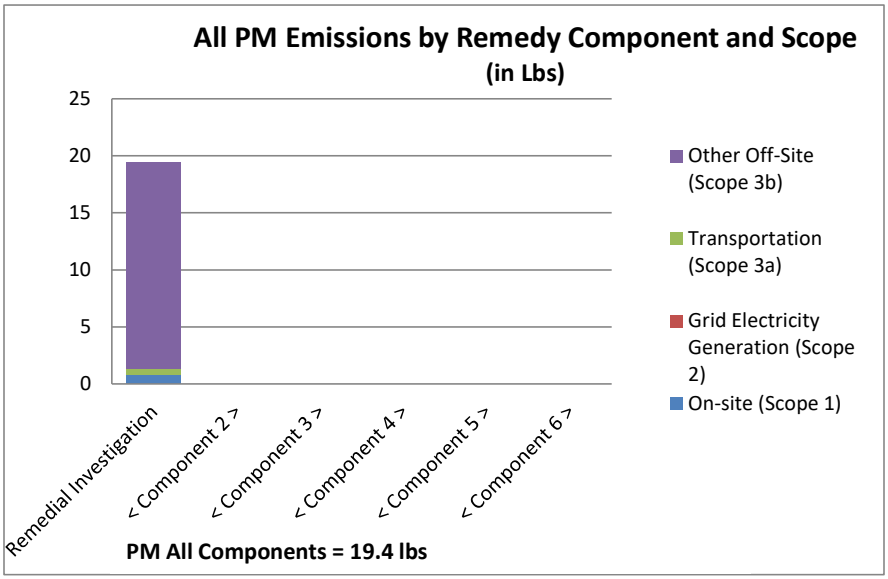

All SOx Emissions by Scope
On-site (Scope 1) = 1.2%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0.5%
Other Off-Site (Scope 3b) = 98.3%
SOx All Scopes = 117.1 lbs

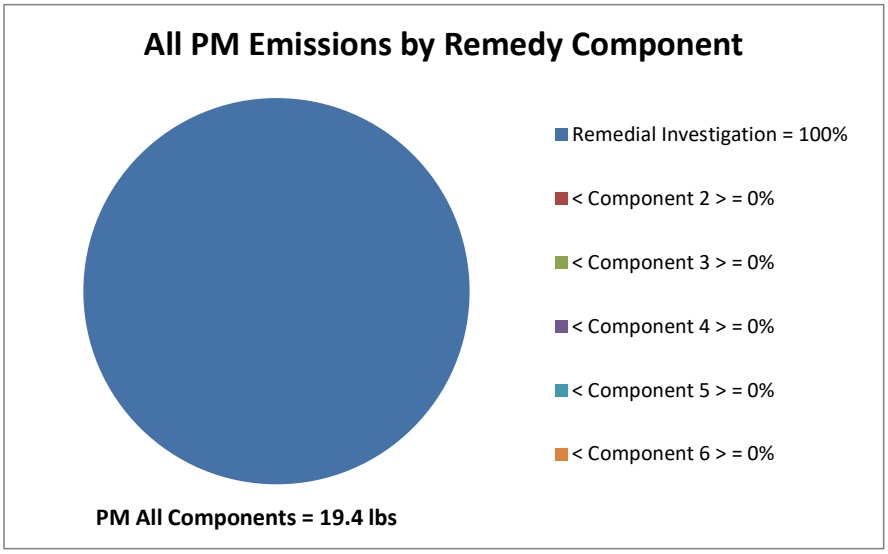
SOx lbs	Remedial I	< Compone	< Compone	< Compone	< Compone	< Compone	Total	
On-site (Scope 1)	1.4	0.0	0.0	0.0	0.0	0.0	1.4	
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	d Electricity
ısportation (Scope 3a)	0.6	0.0	0.0	0.0	0.0	0.0	0.6	Tran
ıer Off-Site (Scope 3b)	115.1	0.0	0.0	0.0	0.0	0.0	115.1	Oth
Total	117.1	0.0	0.0	0.0	0.0	0.0	117.1	

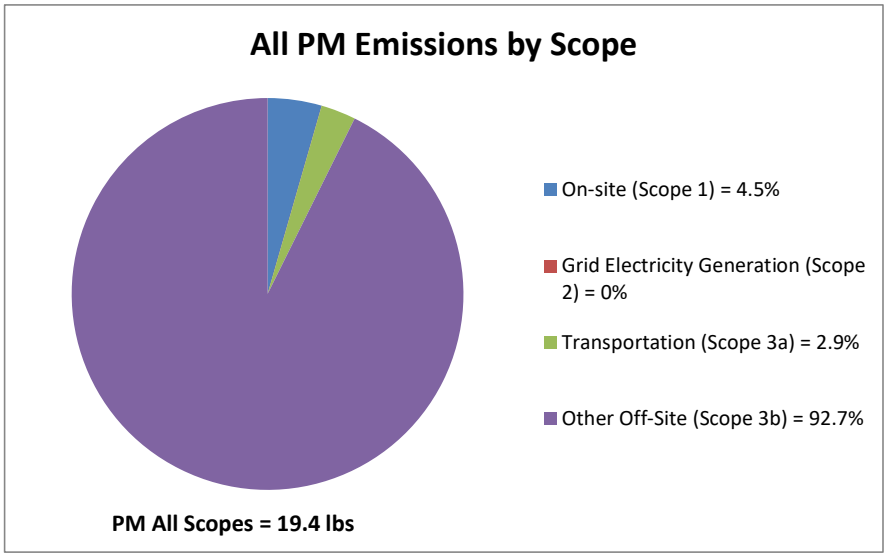
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

SOx All Components = 117.1 lbs
SOx All Scopes = 117.1 lbs

On-site (Scope 1) = 1.2%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0.5%
Other Off-Site (Scope 3b) = 98.3%


All PM Emissions by Remedy Component and Scope
(in Lbs)
25
20
15
10
5
0
Remedial Investigation
Component 2
Component 3
Component 4
Component 5
Component 6
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
PM All Components = 19.4 lbs


All PM Emissions by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
PM All Components = 19.4 lbs

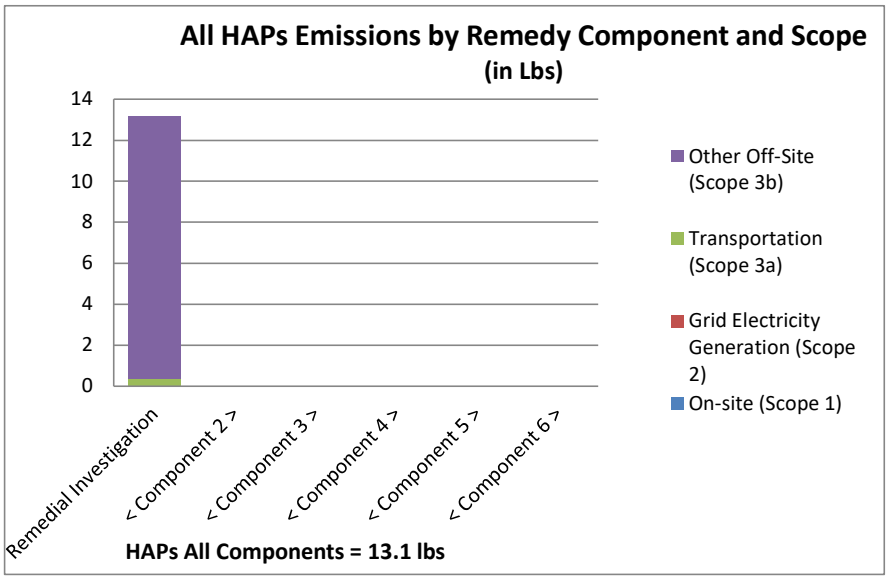

All PM Emissions by Scope
On-site (Scope 1) = 4.5%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 2.9%
Other Off-Site (Scope 3b) = 92.7%
PM All Scopes = 19.4 lbs

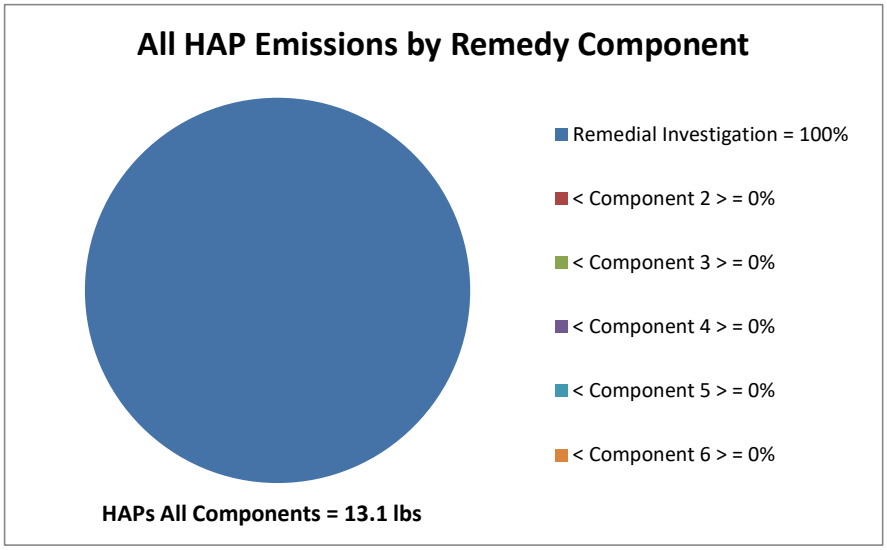
PM lbs	Remedial I	< Compone	< Compone	< Compone	< Compone	< Compone	Total	
On-site (Scope 1)	0.9	0.0	0.0	0.0	0.0	0.0	0.9	
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	d Electricity
ısportation (Scope 3a)	0.6	0.0	0.0	0.0	0.0	0.0	0.6	Tran
ıer Off-Site (Scope 3b)	18.0	0.0	0.0	0.0	0.0	0.0	18.0	Oth
Total	19.4	0.0	0.0	0.0	0.0	0.0	19.4	

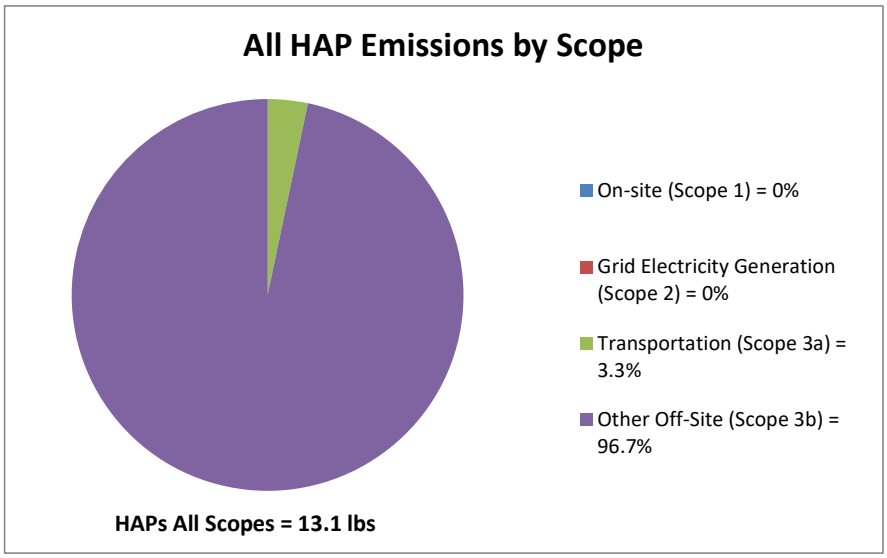
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

PM All Components = 19.4 lbs
PM All Scopes = 19.4 lbs

On-site (Scope 1) = 4.5%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 2.9%
Other Off-Site (Scope 3b) = 92.7%


All HAPs Emissions by Remedy Component and Scope
(in Lbs)
14
12
10
8
6
4
2
0
Remedial Investigation
< Component 2 >
< Component 3 >
< Component 4 >
< Component 5 >
< Component 6 >
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
HAPs All Components = 13.1 lbs


All HAP Emissions by Remedy Component
Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%
HAPs All Components = 13.1 lbs


All HAP Emissions by Scope
On-site (Scope 1) = 0%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 3.3%
Other Off-Site (Scope 3b) = 96.7%
HAPs All Scopes = 13.1 lbs

HAPs lbs	Remedial I	< Compone	< Compone	< Compone	< Compone	< Compone	Total
On-site (Scope 1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ısportation (Scope 3a)	0.4	0.0	0.0	0.0	0.0	0.0	0.4
ıer Off-Site (Scope 3b)	12.7	0.0	0.0	0.0	0.0	0.0	12.7
Total	13.1	0.0	0.0	0.0	0.0	0.0	13.1

Remedial Investigation = 100%
< Component 2 > = 0%
< Component 3 > = 0%
< Component 4 > = 0%
< Component 5 > = 0%
< Component 6 > = 0%

HAPs All Components = 13.1 lbs
HAPs All Scopes = 13.1 lbs

On-site (Scope 1) = 0%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 3.3%
Other Off-Site (Scope 3b) = 96.7%

Remedial Investigation - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**35**	**5,738**	**43**	**1**	**1**	**46**	**0**
Grid Electricity Generation (Scope 2)	**0.008**	**1**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**23**	**3,707**	**20**	**1**	**1**	**22**	**0**
Other Off-Site (Scope 3b)	**32**	**3,997**	**51**	**115**	**18**	**184**	**13**
Remedy Totals	**90**	**13,442**	**115**	**117**	**19**	**251**	**13**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file: SEFA_calculations_(121718).xlsx

APPENDIX G
Health & Safety Plan

Company HASP

Revision Number	Revision Date	Summary of Changes	Approved By
0	8/1/2025	Initial	Brian Fitzpatrick
1	11/3/2025	Revise WorkCare to Acuity	Maggie Cahoon

TABLE OF CONTENTS

		Page
1.	**PURPOSE**	**1**
2.	**EXPECTATIONS**	**1**
2.1	FOUNDATIONAL SAFETY BEHAVIORS	1
2.2	STOP WORK AUTHORITY	1
2.3	HEALTH AND SAFETY REPORTING	2
3.	**ISSUANCE AND COMPLIANCE**	**2**
4.	**ROLES AND RESPONSIBILITIES**	**3**
4.1	PROJECT STAFF ROLES AND RESPONSIBILITIES	3
4.1.1	Haley & Aldrich Project Manager (PM)	4
4.1.2	Haley & Aldrich Site Safety Officer (SSO)	4
4.1.3	Haley & Aldrich Regional Safety Manager (RSM)	4
4.1.4	Haley & Aldrich Health & Safety Team	4
4.1.5	Haley & Aldrich Subcontractors	4
5.	**SCOPE OF WORK (SOW)**	**5**
5.1	GENERAL AND PROJECT TASKS	5
6.	**SITE OVERVIEW**	**5**
6.1	SITE CHARACTERIZATION AND ANALYSIS	5
6.1.1	Preliminary Evaluation	5
6.2	SITE DESCRIPTION AND WORK AREAS	6
6.3	REQUIRED INFORMATION	6
7.	**HAZARD ASSESSMENT**	**6**
7.1	HAZARD ASSESSMENT	6
7.2	CHEMICAL HAZARDS	7
7.3	PHYSICAL HAZARDS	7
7.4	WEATHER HAZARDS	7
7.5	BIOLOGICAL HAZARDS	7
8.	**PROTECTIVE MEASURES**	**8**
8.1	IMPLEMENTING CONTROLS	8
8.2	FIT FOR DUTY	8
8.3	PERSONAL PROTECTIVE EQUIPMENT (PPE)	8
8.4	LEVELS OF PERSONAL PROTECTIVE EQUIPMENT	9
8.4.1	Level D Protection	9
8.4.2	Level C Protection	10
8.4.3	Level B Protection	10
8.4.4	Level A Protection	11
8.5	INSPECTION, CLEANING, MAINTENANCE, AND STORAGE	12
8.6	TRAINING AND PROPER FITTING	12

TABLE OF CONTENTS

		Page
8.7	DONNING AND DOFFING	12
8.8	EVALUATION OF EFFECTIVENESS	12
8.9	LIMITATIONS	13
8.10	RESPIRATORY PROTECTION	13
8.11	HEARING CONSERVATION	13
9.	**TRAINING REQUIREMENTS**	**13**
9.1	HEALTH AND SAFETY TRAINING REQUIREMENTS	13
9.2	40-HOUR HAZWOPER	14
9.3	8-HOUR ANNUAL REFRESHER	14
9.4	8-HOUR SUPERVISOR	14
9.5	ADDITIONAL TRAINING FOR SPECIFIC PROJECTS	14
10.	**MEDICAL SURVEILLANCE**	**14**
10.1	MEDICAL SURVEILLANCE	14
11.	**AIR MONITORING PLANS AND EQUIPMENT**	**15**
11.1	INITIAL ENTRY AND BACKGROUND MONITORING	15
11.2	PERIODIC MONITORING	16
11.3	AIR MONITORING EQUIPMENT	16
11.3.1	Calibration, Functionality Tests, and Use of Air Monitoring Equipment	16
12.	**SITE CONTROL**	**17**
12.1	GENERAL SITE CONTROL INFORMATION	17
12.2	SITE MAP WITH DESIGNATED WORK ZONES	17
12.3	SITE COMMUNICATIONS	18
12.4	LOCATION OF MEDICAL ASSISTANCE	18
13.	**EMERGENCY RESPONSE PLAN**	**18**
13.1	EMERGENCY RESPONSE PLANS	18
13.2	HALEY & ALDRICH AS THE CONTROLLING EMPLOYER	18
13.2.1	Pre-Emergency Planning	18
13.2.2	Personnel, Roles, Lines of Authority, and Communication	19
13.2.3	Safe Distances and Places of Refuge	19
13.2.4	Site Security and Control	19
13.2.5	Evacuation Routes and Procedures	19
13.2.6	Emergency Medical Treatment and First Aid	20
13.2.7	Emergency Alerting and Response Procedures	20
13.2.8	PPE and Emergency Equipment	20
13.2.9	Critiques of Response and Follow-Up	20
13.3	MULTI-EMPLOYER PROJECT SITES	20
13.3.1	Procedures for Reporting a Fire or Other Emergency	21
13.3.2	Procedures for Emergency Evacuation	21
13.3.3	Procedures to Account for All Staff After an Evacuation	21

TABLE OF CONTENTS

Page

13.3.4 Procedures for Staff Performing Rescue or Medical Duties 21
13.3.5 Name or Title of Who is Responsible for the Plan 21

14. DECONTAMINATION AND DISPOSAL METHODS 21

14.1 GENERAL DECONTAMINATION AND DISPOSAL INFORMATION 21
14.1.1 Required Information for Projects 22
14.1.2 Personal Protective Equipment and Clothing 23
14.2 STANDARD PERSONAL DECONTAMINATION PROCEDURES 23
14.3 SMALL EQUIPMENT DECONTAMINATION 24
14.4 MONITORING THE EFFECTIVENESS OF DECONTAMINATION PROCEDURES 24

15. PERMIT-REQUIRED CONFINED SPACE ENTRY 24

15.1 GENERAL CONFINED SPACE INFORMATION 24
15.2 PERMIT-REQUIRED CONFINED SPACE INFORMATION 25
15.2.1 Hazardous Atmosphere Permit-Required Confined Spaces 25
15.2.2 Permit-Required Confined Space Hazards Additional to Atmosphere 26
15.3 WHEN HALEY & ALDRICH IS NOT THE CONTROLLING EMPLOYER ON SITE 26
15.4 CONFINED SPACE TRAINING 26

16. SPILL CONTAINMENT PROGRAM 26

16.1 POTENTIAL SOURCES 26
16.1.1 Handling Drums 26
16.1.2 Opening Drums and Containers 27
16.1.3 Radioactive Wastes 28
16.1.4 Shock-Sensitive Wastes 28
16.1.5 Laboratory Waste Packs 28
16.1.6 Sampling of Drum and Container Contents 28
16.1.7 Shipping and Contents 28
16.1.8 Tank and Vault Procedures 29
16.2 SITE EVALUATION 29
16.3 POTENTIAL SPILLS AND AVAILABLE CONTROLS 29
16.4 INITIAL SPILL NOTIFICATION AND RESPONSE 30
16.5 SPILL EVALUATION AND RESPONSE 30
16.6 POST SPILL EVALUATION 31

APPENDIX A – CHEMICAL HAZARDS

APPENDIX B – PHYSICAL HAZARDS

APPENDIX C – WEATHER-RELATED HAZARDS

APPENDIX D – BIOLOGICAL HAZARDS

APPENDIX E – EMERGENCY RECOGNITION AND PREVENTION

1. PURPOSE

The purpose of this Company Health and Safety Plan (HASP) is to address site-specific hazards for work activities that Haley & Aldrich undertakes on Hazardous Waste Operations and Emergency Response (HAZWOPER) sites. This document identifies appropriate mitigations and control measures to help eliminate or reduce identified risks or directs staff to complete project Job Hazard Analysis (JHA) to further document the risks and mitigations specific to that site. Project JHAs and task-specific JHAs are used to augment this document to provide more detailed information on risk and mitigations. Project JHAs provide directions on site-specific risks such as, but not limited to, simultaneous operations, security, and emergency response. JHAs task pages are used to identify the tasks associated with the project work, and the risks and mitigations specific to that task.

Included in this document are references to Haley & Aldrich Operating Procedures (OPs) and policies related to the work performed at project sites.

2. EXPECTATIONS

2.1 FOUNDATIONAL SAFETY BEHAVIORS

The Foundational Safety Behaviors are designed to advance and streamline safety across the organization. These behaviors were developed through extensive feedback, collaboration, and engagement across the company.



These behaviors are not just guidelines, but must be integrated into daily operations of all staff members to ensure consistency across the organization. By taking ownership of these behaviors, every staff member contributes to a safer work environment, ultimately advancing the overall safety culture at Haley & Aldrich.

2.2 STOP WORK AUTHORITY

In accordance with Haley & Aldrich OP1035 - Stop Work Authority, any individual has the right to refuse to perform work that they believe to be unsafe without fear of retaliation. They also have the authority, obligation, and responsibility to stop others from working in an unsafe manner. Stop Work does not always mean to stop all

work on a project, but it can also mean that you are stopping a task or activity to ensure that everyone is working safely.

- **Stop** working immediately when perceiving a dangerous situation.
- **Notify** coworkers, supervisors, and any other relevant individuals of the stop-work action.
- **Investigate** the situation and come to an agreement on whether work should resume or be suspended until the risk is mitigated.
- **Necessary corrections** shall be made and inspected by qualified experts to verify that the issue has been resolved and that work can proceed safely.
- **Resume work** once the relevant authority has approved of the situation and issued a notice that corrective actions have been implemented.
- **Follow up** from management in the form of investigations, improvements, or relevant reports.

STOP Work Authority is the stop work policy for all personnel and subcontractors on the site. When work has been stopped due to an unsafe condition, Haley & Aldrich site management (e.g., Project Manager [PM], Site Safety Officer [SSO], Regional Safety Manager [RSM], etc.) will be notified immediately.

Reasons for issuing a Stop Work order include, but are not limited to:

- The belief/perception that injury to personnel or accident-causing significant damage to property or equipment is imminent.
- A Haley & Aldrich subcontractor is in breach of site safety requirements and/or their own site HASP.
- Identifying a substandard condition (e.g., severe weather) or activity that creates an unacceptable safety risk as determined by a qualified person.

Work will not resume until the unsafe act has been stopped OR sufficient safety precautions have been taken to remove or mitigate the risk to a degree of which work can resume safely. Any instances of stopping work will be documented through Health & Safety's digital reporting tool. Once work has been stopped, only the Haley & Aldrich PM or SSO can give the order to resume work. Haley & Aldrich senior management is committed to support anyone who exercises their "Stop Work" authority.

2.3 HEALTH AND SAFETY REPORTING

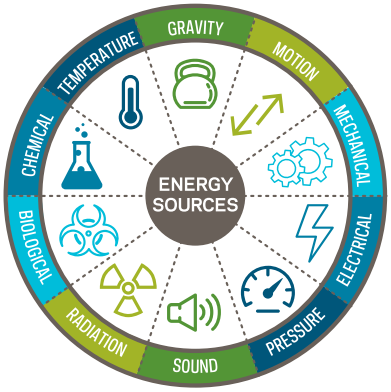
All staff members are required to use Health & Safety's digital reporting tool to document any safety events occurring at work, or related to work. Forms are available for various purposes, including events, injuries, and sensitive information. Staff must report safety events promptly, and the Health & Safety team is responsible for collaborating with both onsite and supporting staff to address safety concerns and feedback in a timely manner.

3. ISSUANCE AND COMPLIANCE

The Company HASP was developed in accordance with Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120 and 1926.65. This document outlines general requirements and information related to our project work. Project-specific documents, such as the JHAs, are developed by those most familiar with the

work and are reviewed and approved prior to starting work by the Haley & Aldrich RSM and PM. These documents must be reviewed and modified regularly as site conditions change.

- All Haley & Aldrich JHAs must be signed by Haley & Aldrich personnel involved in the implementation of the Scope of Work (SOW).
- Haley & Aldrich's subcontractors must have their own project health and safety documents which address hazards specific to their trade. All subcontractor JHAs must be signed by subcontractor personnel involved in the implementation of their respective SOW.
- The Company HASP, electronic or printed, must be accessible at all times when Haley & Aldrich staff are present.
- If changes are necessary based on the presence of high energy hazards, the RSM and PM must approve updates to the JHA. Any revision to the JHA requires staff members and subcontractors to be informed of the changes so that they understand the requirements of the change. Staff members and subcontractors must sign the applicable JHAs associated with their work following any revisions.



- Deviations from the JHA are permitted with approval from the Haley & Aldrich RSM and PM. Unauthorized deviations may constitute a violation of Haley & Aldrich company procedures/policies and may result in disciplinary action.
- Project JHAs will be relied upon by Haley & Aldrich staff, subcontractors, and visitors to the site. This document will also be available for review but is not intended to be the sole source of project safety. This HASP and all project-specific JHAs will be made available for review to Haley & Aldrich's subcontractors and other interested parties (e.g. facility personnel and regulatory agencies) prior to commencing work, to ensure that Haley & Aldrich has properly informed our subcontractors and others of the potential hazards associated with the implementation of the SOW to the extent that Haley & Aldrich is aware.

This Company HASP provides required information in alignment with OSHA regulations. General safety and health compliance programs in support of this HASP and project documents (e.g., injury reporting, medical surveillance, personal protective equipment [PPE] selection, etc.) are described in the Haley & Aldrich Corporate Health and Safety Program Manual and within Haley & Aldrich's Operating Procedures (OPs). Copies of project documents must be readily available on site and reviewed daily. Both the manual and SOPs can be located on the Haley & Aldrich's Company Intranet. Users of this HASP and other project documents should always refer to these resources and incorporate to the extent possible. The manual and SOPs are available to clients and regulators upon request.

4. ROLES AND RESPONSIBILITIES

4.1 PROJECT STAFF ROLES AND RESPONSIBILITIES

Project teams consist of multiple staff members working together to provide support to those executing work in the field. Below are general responsibilities of team members that contribute to project support.

4.1.1 Haley & Aldrich Project Manager (PM)

The Haley & Aldrich PM has the overall responsibility for the health and safety of Haley & Aldrich project personnel. The PM is responsible for ensuring the following to properly implement this HASP:

- Sufficient resources and materials are available.
- Day-to-day field investigation activities are planned and executed in a manner consistent with project-specific JHAs.
- Only staff who are properly trained and experienced are placed on a project site.
- Sufficient resources and materials are allocated to implement this HASP and are properly used.
- Site staff understand how to access a copy of the project-specific JHA through printed resources and project files, and this HASP electronically.
- All relevant company policies, procedures, and expectations are followed.

4.1.2 Haley & Aldrich Site Safety Officer (SSO)

The Haley & Aldrich SSO, or their designee, will be present during the execution of work. The SSO may perform additional roles on-site but will be responsible for Haley & Aldrich's health and safety and that of contracted subcontractors. The SSO will be responsible for administration of the site safety program and will ensure the elements of this HASP are properly implemented and understood by site personnel. The senior person for Haley & Aldrich on-site is the SSO, unless otherwise designated. The SSO will be named in the project-specific JHA.

4.1.3 Haley & Aldrich Regional Safety Manager (RSM)

The RSM, or their designee, is the safety lead for all Company projects within their designated region. The RSM is a full-time Haley & Aldrich staff member, trained as a safety and health professional. They will review and approve the site-specific safety documents and any required amendments, and lead the project teams in their safety efforts. The RSM is active in identifying and mitigating any potential safety and health issues. RSMs are available for site visits and play an active role as a resource for field staff members with any questions or concerns regarding site safety.

4.1.4 Haley & Aldrich Health & Safety Team

When the "Health & Safety Team" is referenced in this document it means, the Chief H&S Officer, Corporate H&S staff, RSMs, and/or their designees.

4.1.5 Haley & Aldrich Subcontractors

When Haley & Aldrich is the controlling employer, we expect each subcontractor will provide a qualified representative who will act as their Safety Lead, unless otherwise denoted in the contract. This person will be responsible for the planning, coordination, and safe execution of subcontractor tasks. This includes the preparation of a site-specific HASP, JHAs, performing daily safety planning, and coordinating directly with the Haley & Aldrich SSO for other site safety activities. This person will play a lead role in safety planning for subcontractor tasks, and in ensuring all their staff members and lower-tier subcontractors are in adherence with

applicable local, state, and/or federal regulations, and/or industry- and project-specific safety standards or best management practices.

The subcontractors' safety documentation will be at least as stringent as the health and safety requirements of the Haley & Aldrich HASP and JHAs. This will be verified by Haley & Aldrich prior to the start of work.

If any field staff working for the subcontractors do not speak English, their supervisor/foreman must be bilingual and be present in all safety meetings for translations. Appropriate multi-language signs must also be utilized in accordance with each worker's native language.

5. SCOPE OF WORK (SOW)

5.1 GENERAL AND PROJECT TASKS

The SOW for each project can be found on the project's JHA cover page. Attached task-specific JHA pages will detail tasks that are to be performed by all Haley & Aldrich staff members and will allow supporting Health & Safety team members to guide the project team through the process of planning for and mitigating possible hazards. These files are in safety folders under each project's Teams page.

When Haley & Aldrich is the controlling employer, we expect that project-specific tasks performed by subcontractors will be identified and evaluated by Haley & Aldrich through the review of their JHAs, unless otherwise denoted in the contract. General hazards associated with work performed on site can be identified through Section 7 Hazard Assessment.

6. SITE OVERVIEW

6.1 SITE CHARACTERIZATION AND ANALYSIS

An evaluation of work activities is performed for each project including a hazard assessment for each task or activity to identify associated hazardous conditions, appropriate staff member protection methods, and PPE. The evaluation of potential site conditions and hazards is ongoing and continues throughout the duration of the project. Site characterization information can be found in the project-specific JHA with additional information regarding the SOW. All hazard assessment and mitigations are selected and documented through project-specific JHAs.

6.1.1 Preliminary Evaluation

A preliminary evaluation of a site's characteristics shall be approved by a qualified person familiar with site conditions to aid in the selection of appropriate protection methods prior to site entry. The qualified person is an individual who possesses extensive knowledge, training, and experience in relation to the possible characteristics and hazards of the site, and has demonstrated their ability to resolve problems related to the subject matter, work, or project.

A more detailed evaluation of the site's specific characteristics shall be performed by the RSM and PM to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and PPE for the tasks to be performed.

6.2 SITE DESCRIPTION AND WORK AREAS

A site description and identified work areas will be outlined in the scope of associated JHAs. Project teams are to provide this information on project documents to assist the RSM reviewing the documents with identifying hazards and appropriate mitigations.

6.3 REQUIRED INFORMATION

The information listed below, to the extent of which is available, shall be obtained by Haley & Aldrich project teams prior to completing the JHA and allowing any staff members to enter the site:

- Location and approximate size of the site.
- Description of the activities or job tasks being performed.
- Duration of planned staff member activity.
- Site topography and accessibility by air and roads.
- Safey and health hazards expected at the site.
- Pathways for hazardous substance dispersion.
- Present status and capabilities of emergency response teams that would aid hazardous waste clean-up site at the time of an emergency.
- Hazardous substances and health hazards involved or expected at the site, and their chemical and physical properties.

7. HAZARD ASSESSMENT

7.1 HAZARD ASSESSMENT

Hazard assessments are performed as part of project preparation for all projects that Haley & Aldrich performs. A hazard assessment is intended to identify and describe safety and health hazards associated with site work. All project teams are expected to identify hazards associated with the site, the tasks, and simultaneous operations. Assessments are performed through a JHA. All JHAs are to be included in project safety folders, provided to all on-site personnel for their applicable tasks, and reviewed by field staff prior to mobilization. Modifications to JHAs are to be communicated with the entire project team as soon as they occur, and JHAs are to be reviewed daily during the execution of the work associated with the JHA. With this information, risks are then eliminated or effectively controlled.

All project-specific and task-specific JHAs are to be modified when:

- The SOW is changed by adding, eliminating, or modifying tasks.
- New methods of performing site tasks are selected.

- Observation of the performance of site tasks results in a revised characterization of the hazards.
- New hazards are identified.
- Exposure data indicate changes in the concentration and/or likelihood of exposure.
- Change in personnel or subcontractors.
- When a near miss or incident occurs.

7.2 CHEMICAL HAZARDS

Haley & Aldrich staff members have the potential to interact with a variety of chemical hazards while working in the field. Chemical hazards must be identified and addressed on a project-by-project basis. Project-specific personal air monitoring plans shall be developed and described in the project-specific JHA. Additionally, other routes of exposure to chemical hazards (e.g., absorption, injection, ingestion) and associated controls will be addressed in either project-specific or task-specific JHAs. Personal air monitoring plans and JHAs must be reviewed and approved by a RSM. All project-specific or task-specific JHAs are to be modified when new chemical hazards are identified.

For more information on chemical hazards and exposure limits, see Appendix A – Chemical Hazards or appropriate Safety Data Sheets.

7.3 PHYSICAL HAZARDS

Haley & Aldrich staff members have the potential to interact with a variety of physical hazards while working in the field. Physical hazards will be identified and addressed in either project-specific or task-specific JHAs. JHAs must be reviewed and approved by a RSM and PM. All project-specific or task-specific JHAs are to be modified when new physical hazards are identified.

For more information on physical hazards, see Appendix B – Physical Hazards.

7.4 WEATHER HAZARDS

Haley & Aldrich staff members have the potential to interact with a variety of weather-related hazards while working in the field. Weather-related hazards will be identified and addressed in either project-specific or task-specific JHAs. JHAs must be reviewed and approved by a RSM and PM. All project-specific or task-specific JHAs are to be modified when new weather-related hazards are identified.

For more information on weather-related hazards, see Appendix C – Weather-Related Hazards.

7.5 BIOLOGICAL HAZARDS

Haley & Aldrich staff members have the potential to interact with a variety of biological hazards while working in the field. Biological hazards will be identified and addressed in either project-specific or task-specific JHAs. JHAs must be reviewed and approved by a RSM and PM. All project-specific or task-specific JHAs are to be modified when new biological hazards are identified.

For more information on biological hazards, see Appendix D – Biological Hazards.

8. PROTECTIVE MEASURES

8.1 IMPLEMENTING CONTROLS

The hierarchy of controls should always be used to evaluate how hazards can be mitigated. When possible, staff members should look to eliminate and substitute hazards or design engineering controls before implementing administrative controls and PPE. To effectively assess hazards and best select mitigations, field staff must be engaged in discussion, as they have the best understanding of the hazardous conditions and insights into how they can be controlled.

Staff members are to review these controls and use the JHAs to document hazards and their associated controls.

8.2 FIT FOR DUTY

It is important for those planning the work to support staff members to be fit for duty and complete their work in a safe manner. See OP1063 – Fit for Duty for more information. Below are guidelines to maintain a safe environment and encourage staff to be fit for duty:

- Scheduling enough staff on sites so they are able to rotate work.
- Allowing staff who have worked multiple shifts in a row to take time off.
- Giving staff members the weekend, when possible, to rest and prepare for the following work week.
- Ensuring staff members are physically capable of completing work tasks assigned to them.
- Being mindful of total worker health, ensuring that stress, emotional state, and conditions outside of work are considered.

Staff members are responsible to show up to work:

- Not under the influence of drugs or alcohol, including prescription medicines that may interfere with their ability to perform work safely.
- Symptom free for 24 hours from any contagious illnesses.
- Adhering to work restrictions prescribed by a medical professional.
- Fit for duty to perform job tasks assigned.

When there is a risk of fatigue, it is the responsibility of the PM and RSM to develop controls for staff to be fit for duty, and to build those mitigations into the project-specific JHA.

8.3 PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is used to provide adequate personnel protection only after feasible engineering and administrative control options have been exhausted. See OP1024 – Personal Protective Equipment for more information. All PPE is provided by Haley & Aldrich to users and is selected to ensure that it is constructed and designed to protect staff members against known or anticipated hazards. Selected PPE should properly and appropriately fit the staff member. These provisions follow the requirements of all applicable regulations (29 CFR 1910.120(c)(5), 29 CFR 1910.132 to 1910.140, and 29 CFR 1926.28). It is the responsibility of the user to ensure that PPE is used and maintained in a sanitary and reliable condition.

All staff members at Haley & Aldrich are required to wear standard PPE listed below, unless a hazard assessment has determined the hazard related to some of the items listed below is not present. This includes but is not limited to:

- Hard hat;
- High visibility vest;
- Safety glasses;
- Cut-resistant gloves (A2);
- Hearing protection;
- Safety-toed boots; and
- Work clothing consisting of, at a minimum, long pants and a short-sleeve shirt.

The selection of additional PPE and other controls is based on an evaluation of the hazards present and job activities being performed. This selection is outlined in the PPE Hazard Assessment as part of the project-specific JHAs. PPE may vary from task to task, and all personnel engaged in the project work activities must use the appropriate level of protection as required by the activity to be performed. If an office does not have the necessary PPE for the work being conducted, contact the Local Health & Safety Coordinator.

If during the planned activities unique conditions are observed, an updated hazard assessment will be performed and reviewed by the PM and RSM. No changes in PPE will be conducted without a hazard assessment, review and approval by RSM and PM, and documentation of the proper training, if applicable.

8.4 LEVELS OF PERSONAL PROTECTIVE EQUIPMENT

8.4.1 Level D Protection

Level D protection should be used when:

- The atmosphere contains no known hazard; and
- Work functions preclude splashes, immersion, or the potential for unexpected inhalation of, or contact with, hazardous levels of any chemicals.

The following constitute Level D equipment which may be used when appropriate and selected by a RSM or PM:

- Coveralls.
- Gloves.
- Boots/shoes that meet ASTM International (ASTM) F2413.
- Boots, outer, chemical-resistant (disposable).
- Safety glasses or chemical splash goggles.
- Hard hat.
- Face shield.

8.4.2 Level C Protection

Level C protection should be used when:

- The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;
- The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator (APR) is available that can remove the contaminants; and
- All criteria for the use of an APR are met.

APRs can be used only when the contaminant(s) is known, cartridges/canisters exist, and concentrations are within the substance-specific standard guidelines or within the maximum use concentration (MUC) for the APR used. An appropriate cartridge/canister selection process and change schedule are outlined in our Respiratory Protection Program, according to the respiratory protection regulation (29 CFR 1910.134(d)(3)(iii)(B)(2)). See Respiratory Protection below for more information.

If warning properties (chemical odors, tastes, or physical irritation) are detected, staff members must immediately leave the work area and notify their PM and RSM.

The following constitute Level C equipment and may be used when appropriate and selected by a RSM:

- Full-face or half-mask, air purifying respirators (National Institute for Occupational Safety and Health [NIOSH] approved).
- Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).
- Coveralls.
- Gloves, outer, chemical-resistant.
- Gloves, inner, chemical-resistant.
- Boots/shoes that meet ASTM F2413.
- Boot-covers, outer, chemical-resistant (disposable).
- Hard hat.
- Escape mask.
- Face shield.

8.4.3 Level B Protection

This level of protection is appropriate when the highest level of respiratory protection is necessary, but a lesser level of skin protection is needed. Level B protection should be used when:

- The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection;
- The atmosphere contains less than 19.5 percent oxygen; or

- The presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

The following constitute Level B equipment and may be used when appropriate and selected by a RSM:

- Positive pressure, full-facepiece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).
- Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one- or two-piece chemical splash suit; disposable chemical-resistant overalls).
- Coveralls.
- Gloves, outer, chemical-resistant.
- Gloves, inner, chemical-resistant.
- Boots/shoes that meet ASTM F2413.
- Boot-covers, outer, chemical-resistant (disposable).
- Hard hat.
- Face shield.

8.4.4 Level A Protection

This level of protection should be selected when the greatest level of skin, respiratory, and eye protection is required. Level A protection should be used when:

- The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the skin;
- Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or
- Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not yet been determined.

The following constitute Level A equipment and may be used when appropriate and selected by an RSM:

- Positive pressure, full face-piece SCBA, or positive pressure supplied air respirator with escape SCBA, approved by NIOSH.
- Totally encapsulating chemical-protective suit.
- Coveralls.
- Long underwear.
- Gloves, outer, chemical-resistant.
- Gloves, inner, chemical-resistant.

- Boots/shoes that meet ASTM F2413.
- Hard hat (under suit).
- Disposable protective suit, gloves, and boots (depending on suit construction, may be worn over totally encapsulating suit).

8.5 INSPECTION, CLEANING, MAINTENANCE, AND STORAGE

PPE must be inspected prior to use and must be cleaned and maintained at regular intervals, as regulatory required, and as required by the manufacturer so that the PPE provides the requisite protection. PPE should be cleaned as needed, after each use, and before storage. PPE must be stored in a manner to avoid conditions that could result in damage, such as exposure to heat, light, moisture, or contamination (e.g., dirt, dust, or impacted media). PPE that is either defective or damaged must not be used and must be discarded or removed from service until repaired by a qualified person or the manufacturer. It is also important to ensure that contaminated PPE that cannot be decontaminated is not reused and is disposed of in a manner that protects staff members from exposure to hazards. For more information on decontamination, see Section 14 Decontamination.

PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles.

8.6 TRAINING AND PROPER FITTING

Staff members are trained on when PPE is necessary, what PPE is necessary for certain work, how to properly don, doff, adjust, and wear PPE, the limitations of the PPE, what to do if the PPE fails, the proper care, maintenance, useful life, and disposal of the PPE, and at the end of any training, should be able to demonstrate how to use PPE properly. Training is included as part of the Annual 8-Hour HAZWOPER Refresher for those that maintain a certificate. Refresher training must be performed annually for all staff members who use PPE, and more frequently, as necessary, in the event of any of the following:

- Changes in the workplace or types of PPE used which would make the previous training obsolete;
- Inadequacies in the staff's knowledge or use of PPE indicate that the staff has not retained the requisite understanding or skill; and
- Any other situation that arises in which retraining appears necessary to ensure safe use of PPE.

Staff members have the responsibility to communicate any issues with the fit or use of PPE to a member of the Health & Safety Team to ensure proper PPE is provided for hazards that are present.

8.7 DONNING AND DOFFING

Proper donning and doffing procedures are dependent on the type of PPE being worn by the staff member. Donning and doffing procedures are shown in Annual 8-Hour HAZWOPER Refresher courses and are to be demonstrated by local health and safety leads when PPE is given to a staff member for the first time.

8.8 EVALUATION OF EFFECTIVENESS

Staff members and RSMs are responsible for communicating the effectiveness of PPE with the Health & Safety Team. RSMs or their designees routinely visit projects sites to evaluate hazards present, and compare them to project documents developed, to ensure that the best mitigations are in place to protect staff members.

8.9 LIMITATIONS

Some PPE may create limitations when working in extreme environments, including extreme heat. Staff members are to review OP1015 – Heat Stress* as part of the hazard assessment with their project team ahead of work starting to identify appropriate PPE when there is concern for working conditions.

- *Note - OP1015 Heat Stress is currently in review to align with Federal OSHA's proposed heat stress ruling, while still meetings requirements of State OSHA heat safety plans. Staff must use the Heat Injury and Illness Prevention Plan (linked as OP1015 - Heat Stress) above to reduce risk when working in the heat.

8.10 RESPIRATORY PROTECTION

Before beginning any work that generates airborne contaminants, chemical, or dust, respiratory protection must be assessed. For more information on medical evaluation and clearance, fit testing, respirator maintenance and repair, storage, cartridge selection, and training, see OP1023 – Respiratory Protection.

Staff members that wish to wear respirators for voluntary use must complete a Voluntary Use Respirator Form. Contact the Health & Safety Team for more information.

8.11 HEARING CONSERVATION

Staff members exposed to, or with the potential to be exposed to, an 8-hour time-weighted average (TWA) sound level equal to or greater than 85 dBA must participate in a hearing conservation program. See OP1031 – Hearing Conservation for more information. All exposed personnel receive awareness training about the hazards of noise, the procedures to properly use and maintain hearing protection, and the importance of annual testing.

Hearing protection is made available when noise exposures equal or exceed an 8-hour TWA sound level of 85 dBA. Hearing protection is required when the 8-hour TWA sound level is greater than 90 dBA. Where noise exposure meets or exceeds this level, noise is listed as a physical hazard in the JHA for the tasks or operation, and hearing protection is included as one of the control measures.

Hearing protection is also required for any staff members who have not yet had a baseline audiogram or who have experienced a standard threshold shift and are exposed to an 8-hour TWA sound level greater than 85 dBA.

9. TRAINING REQUIREMENTS

9.1 HEALTH AND SAFETY TRAINING REQUIREMENTS

All Haley & Aldrich Staff members must be trained to a level required by their job function and responsibility prior to working on non-HAZWOPER and HAZWOPER sites. Haley & Aldrich staff members, contractors, subcontractors, and consultants who have the potential to be exposed to contaminated materials or physical hazards must complete the training described in the following sections.

Corporate Health & Safety maintains documentation of training records. PMs must review staff member training records to ensure they are trained and compliant with OSHA requirements for the tasks being performed. PMs may also access training records at the request of clients and/or OSHA through Corporate Health & Safety.

9.2 40-HOUR HAZWOPER

The 40-Hour HAZWOPER course provides instruction on the nature of hazardous waste work, protective measures, proper use of PPE, recognition of signs and symptoms which might indicate exposure to hazardous substances, and decontamination procedures. All staff members who are required to participate in work on hazardous waste sites- including equipment operators, general laborers, and supervisors- will be required to complete an initial 40 hours of training as specified by 29 CFR 1910.120 (e)(3).

9.3 8-HOUR ANNUAL REFRESHER

Personnel who complete the 40-hour health and safety training and are required to maintain its validity beyond one calendar year are required to attend an annual 8-hour refresher training course as per 29 CFR 1910.120 (e)(8). Haley & Aldrich maintains records of all staff members 40-hour HAZWOPER training status, and when required can provide proof of this status with a certificate of completion.

9.4 8-HOUR SUPERVISOR

The Haley & Aldrich SSO directly responsible for hazardous waste operations, or who supervise staff members engaged in these operations, must have eight additional hours of Supervisor training in accordance with 29 CFR 1910.120 (e)(4) Supervisor Training. This includes, but is not limited to, accident reporting/investigation, regulatory compliance, work practice observations, emergency response procedures, and maintenance of an internal Safety & Health program.

9.5 ADDITIONAL TRAINING FOR SPECIFIC PROJECTS

Haley & Aldrich PMs must ensure field staff are trained in any additional OSHA requirements for tasks they are required to perform, including information on specific instruments, equipment, and construction hazards, and can demonstrate competence. Specialized training will be provided at the awareness level, and competent person level where necessary, to staff members before engaging in the specific work activities. Examples of trainings offered include but are not limited to, Hearing Conservation, Respiratory Protection, Trenching & Excavations, Confined Space Entry (entrant, supervisor, attendant), Heavy Equipment (aerial lifts, forklifts, etc.), First Aid/CPR, Fall Protection, Nuclear Density Gauges, and Hazardous Substances specified in 1926 Subpart Z.

10. MEDICAL SURVEILLANCE

10.1 MEDICAL SURVEILLANCE

A medical surveillance program is present when staff members have the potential to be exposed to contaminants or hazards that cause adverse health effects. This program ensures that staff are protected from exposure to hazardous materials or health hazards that have been identified and when a potential exposure has occurred. This section follows the requirements as presented by OSHA in 29 CFR 1910.120(f), with additional guidelines for

substance-specific requirements in 29 CFR 1910 1001-1052 if they are identified as present on-site. Additional information can be referenced in OP1009 – Workplace Medical, as listed below:

- Staff members covered
- Exam Frequency
- Exam Content
- Subpart Z Hazards and Additional Testing
- Physical Exam, Review, Written Opinion
- Recordkeeping Requirements
- Hearing Conservation
- Bloodborne Pathogens

11. AIR MONITORING PLANS AND EQUIPMENT

To determine the types and quantities of airborne contaminants that staff members may be exposed to on site, a project-specific evaluation of chemical hazards should be performed. Chemical hazards will be evaluated to develop a personal air monitoring plan with controls in accordance with applicable OSHA regulations. Personal air monitoring plans must be developed per project to incorporate project-specific details such as scope, chemical hazards, expected concentrations, site conditions, and available monitoring equipment, and must be documented in project-specific JHAs. All personal air monitoring plans must be reviewed and approved by the RSM and PM prior to starting work. Additional information about air monitoring equipment can be found in operating procedures:

- OP1004 – Operation and Calibration of PID
- OP1005 – Operation and Calibration of FID
- OP1006 – Operation of Draeger Gas Detector Pump
- OP1007 – Operation and Calibration of Combustible Gas Indicators

For information on chemical hazards and exposure limits from commonly encountered chemicals on site, see Appendix A – Chemical Hazards or appropriate Safety Data Sheets.

11.1 INITIAL ENTRY AND BACKGROUND MONITORING

Initial exposure monitoring and/or background monitoring should be conducted to measure staff member exposure to hazardous chemicals or atmospheres where the potential for the following conditions may exist:

- Possible Immediately Dangerous to Life or Health (IDLH) conditions;
- Potential for exposure near or over permissible exposure limits and/or action levels;
- Potential for exposure to any radioactive source;
- Oxygen rich or deficient environments;

- Flammable atmospheres;
- Or any other dangerous conditions on site.

Initial exposure monitoring should be conducted in accordance with applicable OSHA regulations for monitoring frequency, methodology, and notification procedures. Generally, an initial determination may include a representative sample of the staff member's exposure who is exposed to the greatest concentrations of the chemical hazard of concern. Contact your regional H&S representative to perform this process.

When conducting initial or background monitoring, staff must be protected from potential exposure by using appropriate engineering controls or PPE.

11.2 PERIODIC MONITORING

Periodic monitoring shall be established in accordance with applicable OSHA standards for each chemical hazard. The frequency of monitoring shall be further established by the results of initial exposure determinations, changes to work processes, controls, personnel changes which may result in new or additional exposure, or when there is any other reason to suspect a change in exposure.

The following examples are changes to site conditions that may impact and increase potential exposure to air contaminants or health Hazards:

- Work in a new area of a site.
- Work with new materials that may present a health hazard.
- The start of new tasks or work operations (i.e., soil vapor intrusion sampling vs. confined space entry).
- When staff are handling leaking drums or containers in working areas with liquid contamination.

11.3 AIR MONITORING EQUIPMENT

The air monitoring equipment below may be used in personal air monitoring plans for the associated contaminant or health hazard. See JHA for site-specific equipment and usage.

Equipment	Detectable Contaminants / Hazard
PID 10.2eV or 11.7eV	Volatile Organic Compounds (VOCs)
OV Monitor	Volatile Organic Compounds (VOCs)
Gas Chromatograph	Volatile Organic Compounds (VOCs)
Colorimetric Tubes	Volatile Organic Compounds (VOCs)
Combustible Gas Indicator	LEL
Multiple Gas Detector	LEL / O_2 / H_2S / CO
RAM (Real-time Air Monitor)	Particulates
Air Sampling Pump	Chemical specific

11.3.1 Calibration, Functionality Tests, and Use of Air Monitoring Equipment

The calibration of all monitoring equipment is required in accordance with manufacturers requirements and Haley & Aldrich Operating Procedures listed above in Section 10 and site-specific requirements (e.g., at the

beginning and end of each workday). Calibration must be done by a qualified laboratory- at least annually- unless manufacturer recommendations differ, or you encounter problems. Rental companies will perform calibration services.

Daily functionality tests, also known as bump tests, of equipment shall be documented in the field notes or Daily Field Report. Documentation should include:

- Date/time,
- Equipment ID number,
- Zero reading, if applicable, and
- Reading obtained with calibration gas or gases.

The required equipment listed above must be in good working condition and be available on-site at all times during applicable work activities, as outlined in the JHA. Work shall not commence unless the equipment is present, calibrated, and operable.

12. SITE CONTROL

The goal of a site control plan is to establish procedures that minimize potential worker exposure to hazardous substances, protect the public from the site's hazards, and provide site security. Understanding the site control program is crucial in the event of an emergency. The degree of site control necessary depends on site characteristics, site size, and the surrounding community. Haley & Aldrich incorporates the elements required for a site control plan in the JHA. This includes information to access a site map that identifies work zones, site communications, applicable Haley & Aldrich SOPs, and the location of the nearest medical facility. Please reference the project-specific JHA for site control information.

All operating procedures, such as OP1025 - Signs, Signals, and Barricades, OP1043 - Site Traffic Control, and OP1046 - Site Control, are available to staff members at any time through our internal site. Operating procedures can be provided to any external party at any time upon request.

12.1 GENERAL SITE CONTROL INFORMATION

One of the main goals of a site control plan is to establish procedures that minimize potential exposure to hazardous substances that workers may encounter before the initiation of a project as described by 29 CFR 1910.120 (d)(1). Understanding the site control program is crucial in the event of an emergency. The degree of site control required depends on site characteristics, site size, and the surrounding community. The information provided below identifies all elements used to control the activities and movements of people and equipment at the project site.

12.2 SITE MAP WITH DESIGNATED WORK ZONES

See project-specific JHAs for site map with identified work zones and exit locations. Language to support JHA development related to site control can be found in Appendix B – Physical Hazards.

12.3 SITE COMMUNICATIONS

Haley & Aldrich encourages all staff members to communicate face to face with one another. If face-to-face communication is not feasible, conversation over cellular phones is acceptable. Haley & Aldrich does provide other forms of communication to staff members, such as satellite phones, radios, or walkie-talkies, when this is necessary. If staff are entering areas where hearing is of concern due to noise, PPE, or other reasons, staff will develop agreed upon hand signals to communicate.

12.4 LOCATION OF MEDICAL ASSISTANCE

See project-specific JHA for information about, and route to, the nearest medical facility. Additional emergency contact information can also be accessed on the same JHA.

13. EMERGENCY RESPONSE PLAN

13.1 EMERGENCY RESPONSE PLANS

Emergency Response Plans are developed prior to the beginning of work for all uncontrolled hazardous waste sites. Emergency response plans help facilitate anticipated emergencies on hazardous waste sites by providing clear direction for a course of action when each anticipated emergency occurs. Additionally, emergency response plans inform staff members of safe practices surrounding other hazards on the project, such as safe distances from machinery, and site security.

The major categories of emergencies that could occur during project work are:

- Fire(s)/Combustion
- Hazardous Materials Event
- Medical Emergency
- Natural Disaster

A detailed list of emergency types and response actions are summarized in Appendix E – Emergency Recognition And Prevention. Emergency response plans are included in the project-specific JHA.

13.2 HALEY & ALDRICH AS THE CONTROLLING EMPLOYER

Haley & Aldrich has developed the following Emergency Response plan to adhere to the requirements specified in 20 CFR 1910.120(l). This plan is applicable to all project sites where Haley & Aldrich is designated as the controlling employer of a project.

13.2.1 Pre-Emergency Planning

Before the start of field activities, the PM must prepare for emergencies to include the following:

- Meet with the controlling employer, subcontractor, or client to discuss emergency procedures in the event a person is injured.

- Develop, review, and communicate actions for specific scenarios, which will be incorporated into the project-specific JHA.
- The SSO will establish evacuation routes and assembly areas for the sites.
- All personnel entering the site, including subcontractors and visitors, will be informed of evacuation routes and assembly areas. Emergency response documents will be available for all to access on site. Additional copies can be provided upon request.
- Haley & Aldrich staff members should perform an emergency drill during the initial stages of the project. This can either be a physical drill performed by the field staff members while on the project site, or a step-by-step walkthrough of where to go and what to do with the entire project team on a call prior to beginning the work.

13.2.2 Personnel, Roles, Lines of Authority, and Communication

Site personnel must be trained on the use of the site emergency communication plan during site orientation. Emergency telephone numbers are accessible in the project-specific JHA. The SSO is responsible for establishing the communication network and discussing it with all staff prior to the start of work. This includes signals agreed upon to identify emergency situations which will be documented in the project-specific JHA. It is the responsibility of the SSO to regularly remind staff of the lines of communication, and ensure subcontractors are aware and understand the meaning of each form of communication.

In the event of an emergency, work must be stopped, and site personnel must be notified of the situation immediately. The scene should be surveyed to determine next steps. The Haley & Aldrich SSO will follow the procedure listed below:

- Evaluate the incident and assess the need for assistance and/or evacuation.
- Take appropriate measures to stabilize the incident scene.
- Assign roles and responsibilities for emergency response, as needed.
- Contact applicable Emergency Services if necessary.
- Notify other members of the project team (PM, RSM, Field Service Manager).

13.2.3 Safe Distances and Places of Refuge

Safe distances and places of refuge will be identified in the project-specific JHA.

13.2.4 Site Security and Control

Site security and control will be identified in the project-specific JHA.

13.2.5 Evacuation Routes and Procedures

Evacuation routes will be highlighted on the site map included in the project-specific JHA and discussed regularly during work kickoff meetings. Emergency procedures will be developed as part of the project documents.

13.2.6 Emergency Medical Treatment and First Aid

Haley & Aldrich field staff are trained in First Aid/CPR/AED use. Emergency services will be contacted immediately if an injury greater than first aid is required. Minor injuries to Haley & Aldrich staff that only require first aid should be addressed on site, reported to the SSO and other members of the project team, and then managed by Acuity. Minor injuries to contractors should be reported to the SSO, addressed on site, and then be managed by the contractor themselves.

13.2.7 Emergency Alerting and Response Procedures

In the event of an emergency, Haley & Aldrich will communicate with everyone on site. Emergency Response procedures will regularly be reviewed during morning tailgate meetings, and other scheduled & unscheduled project communication. In instances where emergency services are required, they will be contacted immediately and supported from the time they arrive on site until the emergency has been addressed.

13.2.8 PPE and Emergency Equipment

Haley & Aldrich provides all staff members with OSHA-approved first aid kits. Additional emergency response PPE and equipment is identified in project-specific or task-specific JHAs.

13.2.9 Critiques of Response and Follow-Up

Haley & Aldrich will exercise the use of reporting, incident investigation, and root cause analysis to identify learning opportunities related to emergency response. Any findings from the incident investigation or root cause analysis process will be used to improve emergency response plans for the project where the incident occurred, if still active, and for future emergency response plans on all other projects.

13.3 MULTI-EMPLOYER PROJECT SITES

Haley & Aldrich is often not the controlling employer on project sites. When a project requires a staff member to enter or work on a site where there are multiple employers, the project team must review the controlling employer's emergency response plan and incorporate the required information into our own emergency response plan.

The following information should be identified in the controlling employer's emergency response plan, and be incorporated into our own plan and procedures:

- Evacuation Alarm;
- Evacuation Routes;
- Evacuation Response Drills;
- Contractors written emergency and contingency plans;
- Discuss exit routes and fire extinguisher locations; and
- Confirm presence and access to emergency response supplies.

13.3.1 Procedures for Reporting a Fire or Other Emergency

- Haley & Aldrich requires staff members to discuss reporting procedures on the JHA Cover Page.
- In the event of a fire or other emergency, staff must immediately evacuate or remove themselves from the dangerous situation.
- Once in a safe location, staff should contact 911 if a life-threatening situation is present. If not:
- The staff member should immediately contact the safety coordinator of the controlling employer and follow their direction.

13.3.2 Procedures for Emergency Evacuation

Haley & Aldrich requires staff members to incorporate a site map into the project-specific JHA documents that designates work zones, and highlights emergency exit routes.

13.3.3 Procedures to Account for All Staff After an Evacuation

Staff members are responsible for knowing what other Haley & Aldrich staff are on the same project site at a time. The staff should first contact the other staff on site, and then contact the PM to confirm all staff are accounted for.

13.3.4 Procedures for Staff Performing Rescue or Medical Duties

If extensive rescue or medical duties are needed, staff are to call Acuity for non-emergency situations (1-888-397-8099), or 911 for emergency situations. Haley & Aldrich staff members are not to perform extensive rescue or medical duties.

13.3.5 Name or Title of Who is Responsible for the Plan

The PM is the responsible party for all aspects of the project. If a staff member does not think the project documents are sufficient, they can reach out to the PM or Health & Safety.

14. DECONTAMINATION AND DISPOSAL METHODS

14.1 GENERAL DECONTAMINATION AND DISPOSAL INFORMATION

All possible and necessary steps shall be taken to reduce or minimize contact with chemicals and contaminated/ impacted materials while performing field activities. Decontamination procedures are designed to achieve an orderly, controlled removal or neutralization of contaminants that may accumulate on personnel or equipment. These procedures minimize worker contact with contaminants, and protect against the transfer of contaminants outside designated work zones. Any procedures developed will be communicated to staff members and implemented before any staff members or equipment may enter areas on site where potential for exposure to hazardous substances exists.

All staff members leaving a contaminated area shall be appropriately decontaminated, and all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.

Decontamination areas and procedures will change from site to site, and it is the responsibility of the field staff, the PM, and Health & Safety to communicate with the Controlling Employer to understand appropriate procedures for each site. If procedures are changed as a result of inspection and monitoring, all affected staff are to be notified of these changes.

14.1.1 Required Information for Projects

Decontamination will be specific to each project. PMs and their teams are expected to incorporate the following information into the project-specific JHA.

- Location of decontamination areas
  - Geographical areas designated for decontamination that will minimize exposure of uncontaminated staff members and equipment.
- Equipment and solvents to be used for decontamination, such as, but not limited to:
  - Acetone
  - Alconox soap
  - Brushes
  - Disposal bags
  - 5-gallon buckets
  - Distilled water
  - Drums
  - Hexane
  - Methanol
  - Paper towels
  - Polyethylene sheeting
  - Pressure/steam cleaner
  - Tap water
  - Wash tubs
- Showers and change rooms
  - If temperature conditions prevent the effective use of water, then other effective means for cleansing shall be provided and used.
  - Establishing showers and changing rooms are the responsibility of the Controlling Employer.
- Disposal methods
  - Procedures for disposal of contaminated materials, decontamination waste, and single use PPE shall meet applicable client, local, state, and federal requirements.
  - PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles.
  - PPE that is grossly contaminated must be bagged and sealed, and field personnel should communicate with the PM to determine proper disposal.

14.1.1.1 Personal Hygiene Safeguards

PMs must also make staff members aware of the following minimum personal hygiene safeguards that shall be adhered to:

- No smoking or tobacco products in any project work areas.
- No eating or drinking in the exclusion zone.
- It is required that personnel present on site wash hands before eating, smoking, taking medication, chewing gum/tobacco, using the restroom, applying cosmetics, and before leaving the site for the day.

It is recommended that personnel present on site shower or bathe at home at the end of each day of working on the site.

14.1.1.2 Unauthorized Staff Members

PMs must make staff members aware of who is performing work that requires the staff member to follow decontamination processes. All other staff members are considered unauthorized staff and shall not perform HAZWOPER work. Unauthorized staff are not to remove protective clothing or equipment from change rooms or enter any decontamination areas.

14.1.2 Personal Protective Equipment and Clothing

Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain their effectiveness. Staff members whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone. See Section 14.1.1 Equipment and solvents to be used for decontamination, and Standard Personal Decontamination Procedures below for more information on general decontamination processes. All information must be communicated to staff members before the start of the project, and as any changes are made to the decontamination process.

Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures to hazardous substances.

14.2 STANDARD PERSONAL DECONTAMINATION PROCEDURES

Outer gloves and boots should be decontaminated periodically as necessary and at the end of the day. Brush off solids with a hard brush and clean with soap and water or another appropriate cleaner whenever possible. Remove inner gloves carefully by turning them inside out during removal. Wash hands and forearms frequently. It is good practice to wear work-designated clothing while on-site which can be removed as soon as possible. Non-disposable overalls and outer work clothing should be bagged onsite prior to laundering. If gross contamination is encountered on-site, contact the PM and RSM to discuss proper decontamination procedures.

The steps required for decontamination will depend upon the degree and type of contamination but will generally follow the sequence below.

1. Rinse boots and gloves of gross contamination.
2. Scrub boots and gloves clean.
3. Rinse boots and gloves.

4. Remove outer boots (if applicable).
5. Remove outer gloves (if applicable).
6. Remove and wipe clean hard hat.
7. Remove Tyvek coverall (if applicable).
8. Remove respirator, wipe clean and store (if applicable).
9. Remove inner gloves (if outer gloves were used).

PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles.

14.3 SMALL EQUIPMENT DECONTAMINATION

Pretreatment of heavily contaminated equipment may be conducted as necessary:

1. Remove gross contamination using a brush or wiping with a paper towel.
2. Soak in a solution of Alconox and water (if possible).
3. Wipe off excess contamination with a paper towel.

Standard decontamination procedure:

1. Wash using a solution of Alconox and water.
2. Rinse with potable water.
3. Rinse with methanol (or equivalent).
4. Rinse with distilled/deionized water.

Inspect the equipment for any remaining contamination and repeat as necessary.

14.4 MONITORING THE EFFECTIVENESS OF DECONTAMINATION PROCEDURES

Project teams and Health & Safety are responsible for routinely auditing the effectiveness of decontamination procedures through regular site visits and project audits. Visual examination is used to ensure that procedures are implemented as described, and that they appear to control the spread of contaminants under changing conditions.

Air samples can be taken in the clean zone to ensure that airborne contaminants have not spread to clean areas of the facility. Surface samples can be taken from the inside surfaces of PPE, from decontaminated equipment, and from surfaces within clean areas of the facility to ensure that decontamination and control procedures are performing as anticipated.

Results of the inspections of decontamination procedures and documentation of any action taken to correct deficiencies are recorded and stored in Health & Safety's reporting tool.

15. PERMIT-REQUIRED CONFINED SPACE ENTRY

15.1 GENERAL CONFINED SPACE INFORMATION

OSHA defines a confined space as a space that is large enough for an staff member to enter, limited means of entry and exit, and not designed for continuous staff member occupancy. Examples of these spaces include manholes, stacks, pipes, storage tanks, pits, sumps, hoppers, and bins. Before any staff are allowed to enter or

even break the plane of a confined space, OSHA requires that a competent person is responsible for determining whether the confined space is a Permit-Required Confined Space (PRCS), using the OSHA decision flow chart found in 29 CFR 1910.46 Appendix A. An RSM must be contacted if you will be breaking the plane (putting any body part inside the entrance of a confined space) or entering a confined space.

15.2 PERMIT-REQUIRED CONFINED SPACE INFORMATION

PRCS are confined spaces where potential hazards like hazardous atmospheres, engulfment, or oxygen deficiency are present, requiring a formal permit to be issued before anyone can enter, ensuring proper safety procedures are followed and monitored by designated personnel. Haley & Aldrich maintains a PRCS program to identify and inform the involved staff members of the specific hazards of the PRCS. Before Haley & Aldrich staff are allowed to break the plane of a PRCS, the RSM must be engaged to oversee the permitting process. For more information on confined space entry, see OP1060 – Confined Space Entry.

15.2.1 Hazardous Atmosphere Permit-Required Confined Spaces

Haley & Aldrich develops and implements a monitoring and inspection plan for every confined space where Hazardous Atmosphere is a concern. If the confined space has an actual or potential hazardous atmosphere, including oxygen deficiency, it is a PRCS and staff must implement a monitoring and inspection plan, along with other requirements specified in OP1060 – Confined Space Entry. This includes the following steps.

- All conditions that make it unsafe to remove the entrance cover to the confined space will be eliminated before the cover is removed.
- After removal of the cover, the entrance to the confined space will be marked and guarded to prevent accidental fall through of individuals or other foreign objects.
- Before a staff member enters the space, the atmosphere will be tested for oxygen content, flammable gases and vapors, and potential toxic air contaminants, in that order.
- Any entrants will observe this testing process.
- Staff will not enter spaces that contain a hazardous atmosphere, nor remain in the space if a hazardous atmosphere is subsequently detected.
- Continuous forced air ventilation will be utilized according to the requirements specified in 29 CFR 1910.146 (c)(5)(ii)(E).
- The confined space will be tested for hazardous atmosphere continuously to ensure the forced air ventilation is functioning properly.
- Staff members will leave the confined space immediately if hazardous atmosphere is detected.
- An attendant must always be present when staff are in a confined space.

In the event of a change to the PRCS, whether it be reason for entry or presence of hazards, Haley & Aldrich staff members will immediately contact the RSM, who may reclassify the confined space, or stop work until it is safe to continue.

15.2.2 Permit-Required Confined Space Hazards Additional to Atmosphere

All PRCS entries with hazards other than or additional to hazardous atmosphere will also require the development of a PRCS entry permit. Other hazards include, but are not limited to engulfment, entrapment, drowning, and electrical hazards. Each PRCS entry is project-specific and is governed by a permit that must be complete prior to entry. All PRCS programs will adhere to the OSHA requirements provided in 29 CFR 1910.146 (d).

15.3 WHEN HALEY & ALDRICH IS NOT THE CONTROLLING EMPLOYER ON SITE

When Haley & Aldrich is not the controlling employer, and staff members are required to enter a confined space, the following protocol will be followed as detailed in 29 CFR 1910.146 (c)(8).

- Haley & Aldrich staff will be sure to complete the necessary permits required by the controlling employer and adhere to the requirements specified on the permit.
- Ensure that all of the hazards present in the confined space are clearly communicated with the Haley & Aldrich Staff Member.
- Communicate an entry, work, and exit plan with the contractor for the planned work inside the confined space.
- Debrief with the controlling employer following exit from the confined space.

15.4 CONFINED SPACE TRAINING

All Haley & Aldrich staff members will receive the proper training prior to being assigned the work that is specified in 29 CFR 1910.146 (g). All staff member training certificates can be provided upon request.

16. SPILL CONTAINMENT PROGRAM

16.1 POTENTIAL SOURCES

This section describes the potential for hazardous substance spills at this site, and procedures for controlling and containing such spills. Haley & Aldrich will ensure that spill containment planning is conducted, and appropriate control measures are established, consistent with regulatory requirements.

16.1.1 Handling Drums

Only employees who have completed U.S. Department of Transportation (DOT) certification training can handle drums. If you do not maintain the appropriate training, or you training has expired, please complete a training request ticket to H&S to be enrolled in a new DOT training course.

Hazardous substances and contaminated soils, liquids, and other residues shall be handled, transported, labeled, and disposed of in accordance with the following procedures:

- Drums and containers used during the clean-up shall meet the appropriate DOT, OSHA, and EPA regulations for the wastes that they contain.

- When practical, drums and containers shall be inspected, and their integrity shall be assured prior to being moved. Drums or containers that cannot be inspected before being moved because of storage conditions (i.e., buried beneath the earth, stacked behind other drums, stacked several tiers high in a pile, etc.) shall be moved to an accessible location and inspected prior to further handling.
- Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.
- Site operations shall be organized to minimize the number of drums or containers moved.
- Prior to movement of drums or containers, all staff members exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drums or containers.
- U.S. Department of Transportation specified salvage drums or containers, and suitable quantities of proper absorbent shall be kept available and used in areas where spills, leaks, or ruptures may occur.
- Where major spills may occur, a spill containment program shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.
- Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using a device classified for the material being transferred.
- A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of buried drums or containers.
- Soil or covering material shall be removed with caution to prevent drum or container rupture.
- Fire extinguishing equipment shall be on hand and ready for use to control incipient fires.

16.1.2 Opening Drums and Containers

The following procedures shall be followed in areas where drums or containers are being opened:

- Where an airline respirator system is used, connections to the source of air supply shall be protected from contamination and the entire system shall be protected from physical damage.
- Staff members not actually involved in opening drums or containers shall be kept a safe distance from the drums or containers being opened.
- If staff members must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the staff member and the drums or containers being opened to protect the staff member in case of accidental explosion.
- Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind the explosion-resistant barrier.
- When there is a reasonable possibility of flammable atmospheres being present, material handling equipment and hand tools shall be of the type to prevent sources of ignition.
- Drums and containers shall be opened in such a manner that excess interior pressure will be safely relieved. If pressure cannot be relieved from a remote location, appropriate shielding shall be placed between the staff member and the drums or containers to reduce the risk of staff member injury.
- Staff members shall not stand upon or work from drums or containers.

16.1.2.1 Material Handling Equipment

Material handling equipment used to transfer drums and containers shall be selected, positioned, and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers. Any material handling equipment necessary must be selected and identified in project documents, communicated with staff members performing the work, and readily available for work.

16.1.3 Radioactive Wastes

- Drums and containers containing radioactive wastes shall not be handled until their hazard to staff members is properly assessed.
- If handling radioactive wastes is necessary, staff members must coordinate with Health & Safety to ensure that proper controls are in place to mitigate as much exposure as possible.

16.1.4 Shock-Sensitive Wastes

- Drums and containers containing shock sensitive wastes shall not be handled until their hazard to staff members is properly assessed.
- If handling shock sensitive wastes is necessary, staff members must coordinate with Health & Safety to ensure that proper controls are in place to mitigate as much exposure as possible.

16.1.5 Laboratory Waste Packs

The following precautions shall be taken, as a minimum, when handling laboratory waste packs (lab packs):

- Lab packs shall be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within the pack according to the hazards of the wastes.
- If crystalline material is noted on any container, the contents shall be handled as a shock-sensitive waste until the contents are identified.

16.1.6 Sampling of Drum and Container Contents

Sampling of containers and drums shall be done in accordance with a sampling procedure which is part of the project-specific JHA.

16.1.7 Shipping and Contents

Drums and containers shall be identified and classified prior to packaging for shipment. Identifying, classifying, and signing manifests for drums and containers requires training and an agency agreement to be in place. Before assigning staff members to perform this work, PMs must ensure staff have the proper training. Drum or container staging areas shall be kept to the minimum number necessary to identify and classify materials safely and prepare them for transport. Staging areas shall be provided with adequate access and egress routes. Bulking of hazardous wastes shall be permitted only after a thorough characterization of the materials has been completed.

16.1.8 Tank and Vault Procedures

Appropriate tank or vault entry procedures shall be identified and followed as outlined in project-specific JHAs, and must be developed in compliance with confined space entry requirements outlined in Section 15 Confined Space Entry.

16.2 SITE EVALUATION

All spills on the site are considered hazardous before they are evaluated. If an evaluation of the site and hazards present has been conducted, and the project team has determined that there is little if any potential for a hazardous substance spill of a sufficient quantity to require containment planning, equipment, and procedures, then no spill containment procedures will be required at the site. Spill containment kits should still be made available on site in the event an unforeseen incident occurs or there is a release from a piece of operation equipment. Staff members must always be trained on how to respond if there has been a potential spill, including any Controlling Employer requirements.

If following an evaluation it is determined there is the potential for a hazardous spill on site, then the spill containment procedures must be followed. The general outline below is to be followed and used to develop site-specific spill containment through JHAs. JHAs for spill containment should include but will not be limited to:

- Potential hazardous substances, their locations, and available controls
- Available spill containment equipment
- Initial notification and response
- Spill evaluation and response
- Post spill evaluation.

16.3 POTENTIAL SPILLS AND AVAILABLE CONTROLS

If there is potential for a hazardous spill on site, all site personnel are trained in the contents of their project-specific spill containment program and their roles and responsibilities during spill response operations. This information is to be outlined in the project-specific JHA and communicated with all staff at initial assignment and whenever there are changes in the process, hazards, or responsibilities. Project teams must identify the location and type of potential hazardous substance spills at this site. The project-specific JHA must also describe the activities or situations in which an accidental spill could occur and whether an emergency response is likely to be needed.

Where spills, leaks, or ruptures can occur, this site must have suitable quantities of proper absorbent and DOT-specified salvage drums and containers. In addition, all areas subject to potential spills are diked or a means to adequately dike these areas in the event of a spill is available so that the entire volume of the spilled hazardous substance can be contained and isolated. The type and location of spill containment equipment must also be outlined in the project-specific JHA.

16.4 INITIAL SPILL NOTIFICATION AND RESPONSE

Any staff member who discovers a hazardous substance spill must immediately notify the designated site contact, their PM, and RSM. The staff member, to their ability, shall report the following information:

- Hazardous substance involved.
- Location of the spill.
- Estimated quantity of substance spilled, the direction/flow of the spill material, related fire/explosion incidents, and any associated injuries.

16.5 SPILL EVALUATION AND RESPONSE

A member of the Health & Safety Team is responsible for working with project teams to evaluate hazardous substance spills and determine the appropriate response. When the hazardous substance spill evaluation is being made, the spill area is isolated to the greatest extent possible.

When an incidental release occurs, cleanup personnel receive instructions in a pre-cleanup meeting as to spill conditions, PPE, response activities, decontamination, and waste handling. The procedures of the Emergency Response section of this HASP are immediately implemented when the spill is determined to require emergency precautions and action. If necessary to protect those outside the cleanup area, notification of the appropriate authorities is made.

The following are general measures that must be considered for response/cleanup personnel to take when responding to a spill:

- To minimize the potential for a hazardous spill, hazardous substances, control/absorbent media, drums and containers, and other contaminated materials must be properly stored and labeled.
- When a spill occurs, only those persons involved in overseeing or performing spill containment operations will be allowed within the designated hazard areas. If necessary, the area will be roped or otherwise blocked off. Unauthorized personnel are kept clear of the spill area.
- Appropriate PPE is donned before entering the spill area.
- Appropriate spill control measures are applied during spill response.
- Whenever possible without endangerment to personnel, the spill is stopped at the source or as close to the source as possible.
- Ignition points are removed if fire or explosion hazards exist.
- Surrounding reactive materials are removed.
- Drains or drainage in the spill area is blocked or surrounded by berms to exclude the spilled waste and any materials applied to it.
- Provisions are made to contain and recover a neutralizing solution, if used.
- Small spills or leaks from a drum, tank, or pipe will result in the establishment of an evacuation zone to allow cleanup and to prevent staff member exposure. For small spills, sorbent materials are placed directly on the spill to prevent further spreading and aid in recovery.

- The spill area is sprayed with appropriate foam where the possibility of volatile emissions exists.
- If the spill results in the formation of a toxic vapor cloud from vaporization, reaction with surrounding materials, or the outbreak of fire, further evacuation may be required.
- To dispose of spill waste, all contaminated sorbents, liquid waste, or other spill cleanup will be placed in small quantities in approved drums for proper storage or disposal as hazardous waste.
- For more information on specific spill containment plans, please refer to project documents.

16.6 POST SPILL EVALUATION

At the conclusion of cleanup operations, documentation of spill response report must be prepared through our appropriate forms on our Forms, Audits, and Checklists page on the Health & Safety Intranet. The report includes, at a minimum, the following information:

- Date of spill incident.
- The hazardous substance(s) released.
- The quantity released.
- The location of the release.
- The effect of the release.
- Cause of incident.
- Spill response actions.
- Who responded.
- Spill equipment used.
- How the spill material was discarded or contained.
- Any outside agencies involved, including their incident reports.
- Lessons learned or suggested improvements.

The spill area is inspected for residual contaminants to determine whether safety and environmental requirements are met. The use of surface and air sampling is utilized in this determination as necessary. The root cause of the spill is examined, and corrective steps must be taken to ensure the engineering and control measures in place have performed as required. If alternative precautions or measures are needed, they are made available and implemented.

All durable equipment placed into use during cleanup activities must be decontaminated, as specified in this section, for future utilization. All spill response equipment and supplies are restocked as required.

APPENDIX A – CHEMICAL HAZARDS

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Metals			
Antimony	50 mg/m^3	0.5 mg/m^3 0.5 mg/m^3 0.5 mg/m^3	***Skin:*** Irritation ***Eye:*** Irritation ***Respiratory Tract:*** Nose and throat irritation, cough, loss of smell ***Gastrointestinal:*** Nausea, vomiting, diarrhea, stomach cramps
Arsenic	5 mg/m^3	0.01 mg/m^3 0.01 mg/m^3 0.002 mg/m^3 Known human carcinogen.	***Skin:*** Irritation, burning, itching and rash. Contact dermatitis is possible. ***Eye:*** Red, watery eyes and irritation. Conjunctivitis may occur in some people. ***Lung:*** Nose and throat irritation, and possible nasal perforation. ***CNS:*** Can cause nausea, poor appetite, vomiting, and muscle cramps, cognitive impairments and peripheral neuropathy.
Barium (and soluble compounds, as Ba, except barium sulfate)	50 mg/m^3 (as Ba)	0.5 mg/m^3 (as Ba) 0.5 mg/m^3 (as Ba) 0.5 mg/m^3 (as Ba).	***Skin:*** Irritation. Skin burns may be possible. ***Eye:*** Irritation, itching, and burning on contact ***Lung:*** Upper respiratory irritation. **Other:** Gastroenteritis; muscle spasms; slow pulse; extrasystoles; hypokalemia.
Beryllium	4.0 mg/m^3 (as Be)	0.002 mg/m^3 (as Be) 0.002 mg/m^3 (as Be) 0.0002mg/m^3 proposed TLV 0.0005 mg/m^3 (as Be, ceiling) Probable human carcinogen.	***Skin:*** Severe irritation. Skin ulcers may be possible. ***Eye:*** Severe irritation, itching, and burning on contact. Sometimes an allergic eye problem develops, breaking out again with future exposures. ***Lung:*** Over-exposure can severely irritate the airways and lungs, causing nasal discharge, tightness in the chest, cough, shortness of breath, and/or fever. Future exposures can cause further attacks. Death can occur in severe cases. High level acute exposures can lead to pneumonitis.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Cadmium	9.0 mg/m^3	0.005 mg/m^3 (Cd dust) 0.01 mg/m^3 (Cd dust) Reduce to lowest possible level. Known human carcinogen.	***Skin:*** Possible irritation may occur. ***Eye:*** Irritation and possible damage on contact. ***Lung:*** High exposures can cause rapid and severe lung damage, with shortness of breath, chest pain, cough, and a possible buildup of fluids in the lungs (pulmonary edema), which is a medical emergency. In serious cases, death or permanent lung damage can occur. Illness can be delayed for 48 hours, allowing over-exposures to occur without warning signs. ***Other:*** High exposure to cadmium may cause nausea, cramps, salivation, vomiting and diarrhea.
Chromium	250 mg/m^3 (as Cr)	1.0 mg/m^3 (as Cr) 0.5 mg/m^3 (as CrIII) 0.5 mg/m^3 (as CrIII) Hexavalent chromium is a known human carcinogen via inhalation.	***Skin:*** Irritation, rash and possible dermatitis. ***Eye:*** Chromium particles can irritate the eyes. ***Lung:*** Inhalation of chromium may cause a condition known as “metal fume fever” (flu-like symptoms).
Cobalt	20 mg/m^3 (as Co)	0.10 mg/m^3 0.02 mg/m^3 0.05 mg/m^3	***Skin***: Dermatitis. ***Lung***: Cough, shortness of breath, wheezing, respiratory hypersensitivity, asthma
Copper (dusts and mists, as Cu, except copper fumes)	100 mg/m^3 (as Cu)	1.0 mg/m^3 (as Cu) 1.0 mg/m^3 (as Cu) 1.0 mg/m^3 (as Cu)	***Skin:*** Irritation, rash and possible dermatitis. ***Eye:*** Red, watery eyes and irritation ***Lung:*** Irritation of nose, pharynx; possible perforation of the nasal septum
Lead	100 mg/m^3 (as Pb)	0.05 mg/m^3 (as Pb) 0.05 mg/m^3 (as Pb) 0.05 mg/m^3 (as Pb)	***Skin:*** Irritation/scratching on contact with particles. ***Eye:*** Irritation/scratching on contact with particles. ***Lung:*** Possible irritation of the nose, throat, and lungs following exposure to fibers and dusts.
Manganese	500 mg/m^3	5 mg/m^3 0.2 mg/m^3 1 mg/m^3	***Lung:*** Cough, dry throat, breathing difficulty, chest tightness, flu-like fever. ***Gastrointestinal (ingestion route):*** Abdominal pain, nausea, vomiting.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Mercury	10 mg/m^3 (as Hg)	0.1 mg/m^3 (skin) 0.025 mg/m^3 (skin) 0.1 mg/m^3 (skin)	***Skin:*** Irritation, rash, dermatitis, and possible redness and the appearance of small blisters. Dermal absorption will cause toxic systemic effects. ***Eye:*** Irritation, inflammation, watering, swelling, conjunctivitis. ***Lung:*** Inhalation of mercury vapors may cause irritation of the mucous membranes in the respiratory tract causing cough, phlegm, and lung tissue irritation leading to bronchitis, pneumonitis, and even delayed pulmonary edema.
Nickel	10 mg/ m^3	1.0 mg/m^3 1.5 mg/m^3 0.015 mg/m^3	***Skin:*** Irritation/scratching on contact with dusts. May cause "nickel itch" or nickel dermatitis. ***Eye:*** Irritation and scratching with possible progression to conjunctivitis. ***Lung:*** Irritation of the nose, throat and lungs on exposure to powders and dusts.
Selenium	1 mg/m^3	0.2 mg/m^3 0.2 mg/m^3 0.2 mg/m^3	***Skin:*** Irritation, burns, dermatitis ***Eye:*** Irritation and burns ***Respiratory Tract:*** Nose and throat irritation, shortness of breath, bronchitis ***Other:*** Metallic taste, garlic breath, GI disturbance
Silica	25-50 mg/m^3 (suspected human carcinogen)	10 mg/m^3 % SiO_2 +2 (respirable dust) 0.05 mg/m^3 (respirable dust) 0.05 mg/m^3	***Eye:*** Irritation. ***Lung:*** Cough, dyspnea (breathing difficulty), wheezing.
Silicon	ND	15 mg/m^3 (total dust) 10 mg/m^3 (total dust) 10 mg/m^3 (total dust)	***Skin:*** Irritation and possible rash upon contact with skin (contact dermatitis). ***Eye:*** Severe irritation and possible inflammation. ***Lung:*** Irritation of the nose, throat, and lungs following exposure. Can cause coughing, dyspnea, nausea and headache.
Silver	10 mg/m^3 (as Ag)	0.01 mg/m^3 0.01 mg/m^3 0.01 mg/m^3	***Skin:*** Irritation and ulceration. ***Eye:*** Whites of eyes turn blue/gray eyes. ***Respiratory:*** Nose and throat irritation.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Thallium (soluble compounds as Tl)	15 mg/m^3 (as Tl)	0.01 mg/m^3 (as Tl) 0.01 mg/m^3 (as Tl) 0.01 mg/m^3 (as Tl)	***Eye:*** Irritation ***GI Tract***: Nausea, diarrhea, vomiting, metallic taste in mouth ***Respiratory***: Pulmonary edema ***CNS****:* Perineuritis, tremor, convulsions, psychosis. ***Other***: Ptosis, strabismus, chest tightness, chest pain, chorea, potential liver and kidney damage; alopecia
Zinc (as zinc oxide dust)	500 mg/m^3 (as ZnO dust)	15 mg/m^3 (total dust) 5 mg/m^3 (respirable dust) 5 mg/m^3 (TWA) 15 mg/m^3 (Ceiling) 2 mg/m^3 (TWA) 10 mg/m^3 (STEL)	***Respiratory***: Dry throat, cough, chest tightness, decreased pulmonary function. ***GI Tract*****:** Nausea, metallic taste in mouth, vomiting ***CNS****:* Blurred vision, malaise. ***Other***: Fever, chills, muscle aches, headaches, lower back pain, difficulty breathing,
BTEX			
Benzene	500 ppm	1.0 ppm 0.5 ppm ppm Known human carcinogen.	***Skin:*** Irritation with potential for redness, blistering and burning. ***Eye:*** Severe irritation; pain and permanent damage possible. ***Lung:*** Nose, throat and respiratory tract irritation causing difficulty in breathing, possible pulmonary edema (fluid in lungs) on high exposure that can be fatal. ***CNS:*** Confusion, dizziness, tightening of the leg muscles, cranial pressure (headaches), possible coma.
Chlorobenzene	1,000 ppm	75 ppm 10 ppm none	***Skin:*** Irritation with potential for redness and burning. ***Eye:*** Irritation and redness. ***Lung:*** Nose, throat and respiratory tract irritation ***CNS:*** CNS depressant, drowsiness

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Ethylbenzene	800 ppm	100 ppm 100 ppm 100 ppm	***Skin:*** Irritation with potential for redness, blistering, and serious burning. Chemical will pass through intact skin to cause toxic systemic effects, including narcosis. ***Eye:*** Severe irritation, burning, pain, and permanent damage possible. ***Lung:*** Nose, throat and respiratory tract irritation causing difficulty in breathing, possible pulmonary edema (fluid in lungs) on high exposure. ***CNS:*** Narcosis, headaches, light-headedness, dizziness, vertigo, coma, and death due to respiratory paralysis.
Toluene	500 ppm	200 ppm 50 ppm (skin) 100 ppm	***Skin:*** Severe irritation and possible burns. Will pass through unbroken skin to cause toxic systemic effects (weakness, nausea, collapse, and death). ***Eye:*** Severe irritation with damage and possible loss of vision likely. ***Lung:*** Severe irritation to the respiratory tract and associated mucosa. Can cause weakness, nausea, confusion, collapse, coma, and death (respiratory failure). ***CNS:*** A CNS depressant. Weakness, confusion, mood changes and other personality changes, nausea, collapse. ***Other:*** Ingestion will cause irritation to the gastrointestinal system with nausea, vomiting, convulsions, dyspnea, jaundice, tremor, confusion, and nervousness. Toluene is toxic to the liver and kidneys.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Xylene (mixed monomers)	900 ppm	100 ppm 100 ppm 100 ppm	***Skin:*** Irritation with potential for redness, blistering and serious burning. Chemical will pass through intact skin to cause systemic effects, including narcosis. ***Eye:*** Severe irritation, burning, pain, and permanent damage possible. ***Lung:*** Nose, throat, and respiratory tract irritation causing difficulty in breathing, possible pulmonary edema (fluid in lungs) on high exposure. ***CNS:*** Narcosis, headaches, light-headedness, dizziness, vertigo, drowsiness, loss of consciousness, coma, and death due to respiratory paralysis.
Diesel Fuel	ND	-- 100 mg/m^3 --	***Skin:*** Irritation, dermatitis ***Eye:*** Irritation ***Lung:*** Cough, difficulty breathing, nausea, chest tightness ***CNS:*** Lightheadedness, loss of consciousness. ***Other:*** Danger of cutaneous absorption, absorption through the skin may be significant contribution to overall exposure.
Gasoline	--	-- 300 ppm Reduce to lowest level	***Skin:*** Irritation with potential for redness, blistering, burning, and absorption. ***Eye:*** Severe irritation, conjunctivitis, redness, possible pain, and visual disturbance. ***Lung:*** Nose, throat, and respiratory tract irritation causing difficulty in breathing, possible pulmonary edema on high exposure (a medical emergency) that can be fatal. ***CNS:*** Inebriation, dizziness, stupor, hallucinations, slurred speech, mental confusion, loss of consciousness and possible convulsions. ***Other:*** Acute exposure can also lead to acute hemorrhage of the pancreas, fatty degeneration of the liver and kidneys, and congestion of the spleen.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Kerosene	ND	Not determined 200 mg/m^3 100 mg/m^3	***Skin:*** Irritation, dermatitis ***Eye:*** Irritation ***Lung:*** Burning sensation in chest, irritation of nose and throat ***CNS:*** Headache, nausea, lassitude, restlessness, incoherence, confusion, drowsiness.
Volatiles			
1,1-Dichloroethane	3,000 ppm	100 ppm 100 ppm 100 ppm	***Skin:*** Irritation. ***CNS:*** Depression. **Other**: Liver, kidney and lung damage.
1,2-Dichloroethane (Ethylene dichloride)	50 ppm (Ca)	50 ppm 10 ppm 1 ppm	***Skin:*** Irritation with potential for redness, pain, burns, and tissue damage. ***Eye:*** Irritation and smarting of the conjunctiva. Can cause clouding of the cornea (corneal opacity). ***Lung:*** Irritation of the mucous membranes of the nose, throat, and respiratory tract causing possible ulceration, coughing, chest pains, difficulty breathing, and pulmonary edema. ***CNS:*** Depression with headaches, light-headedness, dizziness, nausea, vomiting, diarrhea, narcotic and anesthetic effects.
1,1-Dichloroethene (vinylidene chloride)	ND	-- 5 ppm Not determined	***Skin:*** Irritation ***Eye:*** Irritation ***Respiratory system:*** Irritated throat ***CNS:*** Depressant, with dizziness, headache, nausea.
1,2-Dichloroethene	1,000 ppm	200 ppm 200 ppm 200 ppm	***Eye:*** Irritation ***Lung:*** Irritation ***CNS:*** Depressant
1,4 Dioxane	500 ppm (Ca)	100 ppm 20 ppm 1 ppm	***Skin:*** Irritation ***Eyes:*** Irritation ***Lung:*** Nose and throat irritation ***GI:*** Nausea, vomiting, liver failure ***CNS:*** Drowsiness, headache
2-butanone (MEK)	3,000 ppm	200 ppm 200 ppm 200 ppm	***Skin:*** Irritation, dermatitis ***Eye:*** Irritation ***Resp. System:*** Irritation of upper respiratory tract ***CNS:*** Headache, dizziness, vomiting

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Acetone	2,500 ppm	1,000 ppm 500 ppm 250 ppm	***Skin:*** Dermatitis ***Eye:*** Irritation ***Respiratory tract:*** Upper respiratory tract irritation ***CNS:*** Headache, dizziness CNS depression
Carbon Disulfide	500 ppm	20 ppm 1 ppm (skin) 1 ppm (skin)	***Skin*****:** Skin burns, dermatitis ***Eye*****:** Ocular changes, burns ***CNS*****:** Dizziness, headache, lassitude, anxiety, Parkinson-like syndrome ***Other*****:** Gastritis ***Target Organs:*** central nervous system, peripheral nervous system, cardiovascular system, kidneys, liver
Carbon Tetrachloride	200 ppm	10 ppm 5 ppm 2 ppm (60 minute STEL)	***Skin:*** Irritation with potential for redness, drying and cracking. ***Eye:*** Irritation with tearing and burning. ***Lung:*** Irritation of the mucous membranes of the nose, throat, and respiratory tract. ***CNS:*** Depression of the CNS with headache, dizziness, confusion. ***GI***: Gastric distress, nausea, vomiting, loss of appetite.
Chloroethane (ethyl chloride)	3,800 ppm	1,000 ppm 100 ppm Handle with caution	***CNS:*** Loss of coordination, inebriation, **GI:** Abdominal cramps **Other:** Cardiac arrhythmia, cardiac arrest, liver and kidney damage
Chloroform	500 ppm	50 ppm 10 ppm Reduce to lowest level	**Skin:** Irritation ***Eyes:*** Irritation ***Central Nervous System:*** Dizziness, nausea, confusion, headache, weakness, exhaustion and anesthetic effects.
Chloromethane (methyl chloride)	2,000 ppm	100 ppm (C: 200 ppm) 50 ppm As low as possible –Ca	***Skin:*** Frostbite ***CNS:*** Dizziness, stagger, slurred speech, convulsions, coma **GI:** Nausea, vomiting
Cyclohexane	2,000 ppm	300 ppm 100 ppm 300 ppm	***Skin:*** Redness, dryness, irritation, dermatitis ***Eye:*** Redness, irritation ***Lung:*** Nose and throat irritation, cough, ***CNS:*** Headache, dizziness, weakness, drowsiness, narcosis, coma ***Gastrointestinal:*** Abdominal pain, nausea, vomiting

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Methyl Isobutyl Ketone (MIBK or Hexone)	500 ppm	100 ppm 50 ppm 50 ppm	***Skin:*** Irritation and dermatitis with possible localized rash and redness. Absorption is likely. ***Eye:*** Irritation with pain and inflammation that can lead to corneal damage and possible visual disturbances. ***Lung:*** Irritation causing coughing and/or shortness of breath. Higher exposures can cause dizziness, headache and, possibly, coma and death. ***CNS:*** A mild to moderate narcotic compound producing neurotoxicity as it is partially metabolized to methanol.
Methyl Tertiary Butyl Ether (MTBE)	ND	TLV- 50 ppm	***Lung:*** Nose and throat irritation. ***CNS:*** Headache, nausea, dizziness, mental confusion.
Methylcyclohexane	1,200 ppm	500 ppm 400 ppm 400 ppm	***Skin:*** Irritation, drying and cracking of exposed areas upon prolonged contact ***Eye:*** Irritation ***Lung:*** Upper respiratory tract irritation ***CNS:*** Dizziness, lightheadedness, drowsiness
Methylene chloride (Dichloromethane)	2,300 ppm	25 ppm 50 ppm Reduce to lowest level	***Skin:*** Irritation with potential for redness, pain, burns and tissue damage. ***Eye:*** Irritation and smarting of the conjunctiva. Can cause tearing, redness and pain. ***Lung:*** Irritation of the mucous membranes of the nose, throat, and respiratory tract causing possible ulceration, coughing, chest pains, difficulty breathing and pulmonary edema. ***CNS:*** Depression with headaches, light-headedness, dizziness, nausea, vomiting, diarrhea, narcotic and anesthetic effects.
Pentachlorophenol	2.5 mg/m^3	0.5 mg/m^3(skin) 0.5 mg/m^3 0.5 mg/m^3	***Skin:*** Dermatitis ***Eye:*** Irritation ***Respiratory Tract:*** Irritation of nose and throat, coughing, sneezing ***CNS:*** Headache, dizziness, lassitude ***GI:*** Nausea, vomiting ***Cardiac:*** chest pain

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Stoddard Solvent (Mineral Spirits)	20,000 mg/m^3	500 mg/m^3 100 ppm 350 mg/m^3	***Skin:*** Irritation, dermatitis ***Eye*:** Irritation ***Lung:*** Nose and throat irritation. May cause chemical pneumonia if liquid is aspirated. ***CNS:*** Depressive effects. Dizziness. ***Other:*** Kidney damage
Tert-Butyl Alcohol (TBA, 2-Methyl-2-propanol)	1,600 ppm	100 ppm --- 100 ppm	***Skin:*** Irritation ***Eye:*** Irritation ***Respiratory:*** Nose and throat irritation ***CNS:*** Drowsiness, narcosis
Tetrachloroethylene (Perchloroethylene)	150 ppm	100 ppm 25 ppm Lowest possible level	***Skin:*** Moderate irritation with redness and possibly painful inflammation. It will pass through unbroken skin easily to cause toxic systemic effects. ***Eye:*** Severe irritation and burning but rarely causes permanent damage. ***Lung:*** Nose and throat irritation. Produces intoxicating effects and may cause lung effects as well. ***CNS:*** Unconfirmed effects by all routes of exposure. There may be numbness around the lips and mouth, dizziness, loss of coordination, headache, somnolence, slurred speech, flushed face, irregular heartbeat, and other unspecified effects on nervous system functions.
1,1,2,2-Tetrachloroethane	100 ppm	5 ppm 1 ppm 1 ppm	***Skin:*** Moderate irritation with redness and possibly painful inflammation. It will pass through unbroken skin easily to cause toxic systemic effects. Dermatitis is also possible. ***Eye:*** Severe irritation and burning, but rarely causes permanent damage. ***Lung:*** Nose and throat irritation. Produces intoxicating effects and may cause lung effects as well. ***CNS:*** Adverse effects (depression) by all routes of exposure. There may be numbness around the lips and mouth, dizziness, loss of coordination, headache, somnolence, slurred speech, flushed face, irregular heartbeat, and other unspecified effects on nervous system functions.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
1,1,1-Trichloroethane (Methyl chloroform)	700 ppm	350 ppm 350 ppm 350 ppm	***Skin:*** Irritation with potential for redness, pain, dryness, scaling, cracking, and infection. Dermatitis may occur in some individuals. ***Eye:*** Severe irritation, burning, pain and smarting of the conjunctiva. Permanent damage to visual acuity is possible. ***Lung:*** Nose, throat, and respiratory tract irritation. High concentrations can cause severe irritation. ***CNS:*** Headaches, light-headedness, dizziness, hallucinations, loss of coordination, aggressive behavior, motor changes. Death can occur due to cardiac arrhythmia and possible cardiac arrest.
1,1,2-Trichloroethane	100 ppm	10 ppm 10 ppm 10 ppm	***Skin:*** Irritation ***Eye:*** Irritation ***Respiratory:*** Nose irritation ***CNS:*** Depressant
Trichloroethylene	1,000 ppm	100 ppm 10 ppm 25 ppm	***Skin:*** Moderate irritation with redness and possibly painful inflammation with blisters and burns. It will pass through unbroken skin easily to cause toxic systemic effects. ***Eye:*** Severe irritation and burning with a possibility for injury to the corneal epithelium. ***Lung:*** Nose and throat irritation. Produces intoxicating effects and may cause lung effects such as pulmonary edema (may be fatal). ***CNS:*** Depressive effects by all routes of exposure. There may be numbness around the lips and mouth, dizziness, loss of coordination, headache, somnolence, slurred speech, blurred vision, flushed face, irregular heartbeat, and other effects on nervous system functions. Death can result from cardiac arrest.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Vinyl Chloride	--	1 ppm 1 ppm Reduce to lowest level Known human carcinogen.	***Skin:*** Irritation with potential for redness, pain, inflammation and tissue damage (frostbite). ***Eye:*** Severe irritation, burning, pain, and permanent damage possible. ***Lung:*** Nose, throat, and respiratory tract irritation. Symptoms can include dyspnea, asthma, and pneumoconiosis. ***CNS:*** Narcosis, headaches, light-headedness, dizziness, drowsiness, nausea, vomiting, confusion, decreased mental status, possible loss of consciousness, and death (respiratory arrest).
Pesticides			
2,4 Dichlorophenoxy-cetic acid	100 mg/m^3	10 mg/m^3 10 mg/m^3 10 mg/m^3	***Skin***: Dermatitis ***Inhalation***: Irritation of nose and throat; irritation of lungs causing coughing and/or shortness of breath; fluid buildup in lungs; headache; fatigue; muscle weakness and twitching; poor coordination in arms and legs. ***Ingestion***: Nausea, vomiting, sweating, fever, diarrhea, stomach pain, and loss of appetite and weight.
Carbaryl (Sevin)	100 mg/m^3	5 mg/m^3 5 mg/m^3 5 mg/m^3	***Skin***: May cause severe irritation, rash or a burning feeling. Will pass through unbroken skin and enter the bloodstream. ***Eyes***: May cause severe irritation. ***Inhalation***: Can cause blurred vision, sweating, nausea, vomiting and abdominal pain. Higher exposures can cause pulmonary edema and death. ***Ingestion***: Symptoms include nausea, vomiting, diarrhea, abdominal cramps, miosis, lachrymation, and excessive salivation.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Chlordane	100 mg/m^3	0.5 mg/m^3 (skin) 0.5 mg/m^3 (skin) 0.5 mg/m^3 (skin)	***Skin:*** Liquid can pass through unbroken skin. Contact may cause irritation and rash. Symptoms of exposure include headache, nausea, abdominal pain, and vomiting. ***Eye:*** Severe irritation and possible damage on contact. ***Lung:*** Irritation of the nose and throat. Breathing vapors can cause cough, convulsions, unconsciousness, and death. ***CNS:*** A central nervous system stimulant. Symptoms include ataxia, excitement, tremors, convulsions, blurred vision, confusion, delirium, and irritability.
Copper sulfate	100 mg/m^3 as Cu	Dust/mist – 1 mg (Cu)/m^3 1 mg (Cu)/m^3 1 mg (Cu)/m^3	**Skin**: Contact may cause smarting and first degree burns, second degree burns on prolonged contact. Can pass through skin and cause toxic systemic effects. **Inhalation**: Irritation of the upper respiratory system, nose and throat. May cause nosebleeds and “metal fume fever” (flu-like illness with chills, aches and cough.) **Ingestion**: Will cause intense pain and local corrosion with hemorrhages, prostration, anuria, hematuria, anemia, coma, and death.
DDT (Dichlorodiphenyl-trichloroethane)	500 mg/m^3	1.0 mg/m^3 (skin) 1.0 mg/m^3 0.5 mg/m^3 (skin)	***Skin:*** Dermatitis associated with DDT is unusual. Most effects from skin contact are internal due to adsorption of liquid solutions containing DDT. Symptoms include vomiting, nausea, malaise, and muscular twitching at high doses (above the PEL). ***Eye:*** Possible irritation. ***Lung:*** Irritation causing coughing and/or shortness of breath. Higher exposures can lead to respiratory problems. ***CNS:*** Dizziness, headaches, nausea, vomiting, muscle jerks, severe seizures, and death.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Dieldrin	50 mg/m^3	0.25 mg/m^3 (skin) 0.25 mg/m^3 (skin) 0.25 mg/m^3 (skin)	***Skin:*** Liquid can pass through unbroken skin. Contact may cause irritation and rash. Symptoms of exposure include headache, nausea, abdominal pain, vomiting and CNS stimulation. ***Eye:*** Mild to severe irritation. Absorption through direct eye contact is possible. ***Lung:*** Irritation of the nose and throat. Breathing vapors can cause cough, convulsions, and adverse effects on the liver. ***CNS:*** A central nervous system stimulant. Symptoms include: irritability, blurred vision, tremors, convulsions, and metal confusion.
Endrin	2 mg/m^3	0.1 mg/m^3 (skin) 0.1 mg/m^3 (skin) 0.1 mg/m^3 (skin)	***Skin:*** Liquid can pass through unbroken skin. Contact may cause irritation and rash. Symptoms of exposure include headache, nausea, abdominal pain, vomiting, and CNS stimulation. ***Eye:*** Severe irritation. ***Lung:*** Irritation of the nose and throat. Breathing vapors can cause cough, convulsions, and adverse effects on the liver. ***CNS:*** A powerful central nervous system stimulant. Symptoms of exposure may include agitation, aggressiveness, excitement, tremors, convulsions, blurred vision, mental confusion, delirium, and irritability.
Heptachlor	35 mg/m^3	0.5 mg/m^3 (skin) 0.05 mg/m^3 (skin) 0.5 mg/m^3 (skin)	***Skin:*** Liquid can pass through unbroken skin. Contact may cause irritation and rash. Symptoms of exposure of exposure include headache, nausea, abdominal pain, and vomiting. ***Eye:*** Severe irritation and possible damage on contact. ***Lung:*** Irritation of the nose and throat. Breathing vapors can cause cough, convulsions, unconsciousness, and death. ***CNS:*** A central nervous system stimulant. Symptoms include ataxia, excitement, tremors, convulsions, confusion, delirium and irritability.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Lindane	50 mg/m^3	0.5 mg/m^3 (skin) 0.5 mg/m^3 (skin) 0.5 mg/m^3 (skin)	***Skin:*** Liquid can pass through unbroken skin. Contact may cause irritation and rash. Symptoms of exposure include headache, nausea, abdominal pain, vomiting and CNS stimulation. ***Eye:*** Mild to severe irritation. Absorption through direct eye contact is possible. ***Lung:*** Irritation of the nose and throat. Breathing dusts or solution vapors can cause cough, convulsions, and adverse effects on the liver. ***CNS:*** A central nervous system stimulant. Symptoms include irritability, blurred vision, tremors, convulsions, and mental confusion.
Semivolatiles			
1,2-Dichlorobenzene	200 ppm	50 (Ceiling) 25 ppm 50 (Ceiling)	***Eye:*** Irritation ***Respiratory:*** URT irritation ***Target organs:*** Liver, kidneys
1,4-Dichlorobenzene	150 ppm Carcinogen	75 ppm 10 ppm Carcinogen	***Eye***: Irritation, periorbital swelling ***Inhalation/Ingestion:*** Rhinitis, headache, anorexia, nausea ***Target organs***: Kidneys, liver, respiratory system
3,3'-Dichlorobenzidine	Ca (ND) *OSHA Regulated Carcinogen	NE* ALAP** NE ** As low as possible	**Skin:** Skin sensitization, dermatitis, burns ***Eye:*** Irritation Inhalation/Ingestion: Headache, dizziness, frequent urination, blood in urine, GI upset, upper respiratory infection **Target organs:** Bladder, liver, lung, skin, GI Tract
1,2,4-Trichlorobenzene	ND	none 5 ppm (ceiling) 5 ppm (ceiling)	***Skin:*** Irritation with burning, itching, redness. ***Eye:*** Irritation with burning, itching and watering. ***Respiratory:*** Irritation of mucosa of respiratory tract. ***Other:*** Potential Teratogen

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Aniline	100 ppm (Ca)	5 ppm (skin) 2 ppm (skin) Lowest possible level	***Aniline is rapidly absorbed through all routes and induces methemoglobinemia. Symptoms include:*** *Cyanosis, headache, dizziness, weakness, lethargy, loss of coordination, shortness of breath.* ***Skin:*** Aniline causes skin irritation and mild skin sensitization. The skin is a major route of exposure. **Eye**: Severe irritation ***CNS****:* Severe headache, tremor, confusion. CNS depression may be a result of methemoglobinemia. ***Systemic****:* Chronic exposure may cause injury to kidney, bladder, liver and spleen.
Bis(2-ethylhexyl) phthalate	5000 mg/m^3	PEL: 5 mg/m^3 TLV: 5 mg/m^3	***Skin***: Irritation ***Eye****:* Irritation ***Other****:* Nausea, diarrhea ***Suspected human carcinogen***
Hexachlorobenzene	NE	NE 0.002 mg/m^3 NE	***Skin:*** UV sensitivity and skin damage, hyperpigmentation ***Inhalation/ingestion:*** CNS impairment, skin effects noted above
Naphthalene	250 ppm	10 ppm 10 ppm (skin) 10 ppm	***Skin:*** Irritation with burning, itching, and edema (buildup of fluid) redness and swelling. ***Eye:*** Severe irritation of the conjunctiva with burning, itching, and watering. Direct contact with heated fumes can irritate the eyes. ***Lung:*** Irritation of the bronchial tubes and other members of the respiratory tract. May cause headache, loss of appetite, nausea, vomiting, slowed reactions, and a loss of strength. ***CNS:*** Depression of the nervous system causing excitement, convulsions, and possibly coma.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
No. 6 Fuel Oil	100 ppm (H_2S)	20 pm (H_2S) 1 ppm (H_2S) 10 ppm (H_2S-ceiling)	***Skin:*** Skin irritation with prolonged contact ***Eye:*** Mild to moderate irritation ***Lung:*** Minimal inhalation hazard at ambient temperature, upon heating, vapors may result in respiratory tract irritation and CNS effects-see below ***CNS:*** Headache, dizziness, loss of balance and coordination, unconsciousness ***Other:*** Irritating and toxic hydrogen sulfide gas may be found in confined spaces. H_2S causes olfactory fatigue, so the characteristic rotten egg odor may not be detected, especially at higher concentrations. Thus, the odor is not a reliable warning indicator for exposure.
Phenol	250 ppm	5 ppm (skin) 5 ppm (skin) 5 ppm (skin)	***Skin:*** Severe irritation and possible burns. Will pass through unbroken skin to cause toxic systemic effects, including weakness, nausea, collapse, and death. ***Eye:*** Severe irritation with damage and possible loss of vision likely. ***Lung:*** Severe irritation to the respiratory tract and associated mucosa. Can cause weakness, nausea, confusion, collapse, coma and death (respiratory failure). ***CNS:*** A central nervous system depressant. Weakness, confusion, mood changes and other personality changes, nausea, collapse and death.
Polyaromatic hydrocarbons (PAHs) (coal tar pitch volatiles)	80 mg/m^3	0.2 mg/m^3 0.2 mg/m^3 0.1 mg/m^3	***Skin:*** Irritation with burning, itching, edema, redness and swelling. ***Eye:*** Severe irritation of the conjunctiva with burning, itching and watering. ***Lung:*** Irritation of respiratory tract, especially bronchial tubes. ***CNS:*** Slowed reactions, headache and loss of strength. ***Other:*** Loss of appetite, nausea, vomiting.

Contaminant	IDLH Level	PEL/TLV/REL	Acute Toxicological Symptoms
Polychlorinated Biphenyls (PCBs)	5 mg/m^3-	PEL:1 mg/m^3-1242 PEL:0.5 mg/m^3-1254 TLV:1 mg/m^3-1242 TLV:0.5 mg/m^3-1254 REL: 0.001 mg/m^3 – 1242 and 1254	***PCBs have low acute toxicity, but because they accumulate in the environment and in animal and human tissues, the potential for chronic toxicity is significant.*** ***Skin:*** Burning sensation and edema of the face and hands, skin thickening, hyper pigmentation, chloracne. ***Eye:*** Eye discharge, swelling of the eyelids. ***Ingestion:*** Severe abdominal pain, nausea, vomiting, diarrhea have been reported following acute and chronic exposures. ***Central and peripheral Nervous System:*** Headache, dizziness, depression and nervousness, weakness and numbness of the extremities.
Trimethyl benzene (mixed isomers)	ND	No PEL 25 ppm 25 ppm	***Skin***: Irritation ***Eye***: Irritation ***Lung***: Irritation of the throat, respiratory system, bronchitis ***CNS***: Headache, lassitude, drowsiness, dizziness, ***Gastrointestinal***: Nausea, vomiting
Other			
Methane	NA	NA	***-Simple asphyxiant-displaces oxygen in air and may cause rapid suffocation.*** ***-Odorless and does not provide adequate warning.*** ***-Highly flammable gas that may form explosive mixtures with air.***

Notes*:*
IDLH – Immediately Dangerous to Life or Health
mg/m3 – milligrams per cubic meter
NA – not applicable (no specific IDLH value has been determined)
ND – not determined (no IDLH value has been formally derived)
NE – not established
ppm – parts per million
STEL – Short-Term Exposure Limit

APPENDIX B – PHYSICAL HAZARDS

Asbestos Removal

- For asbestos removal, a Regulated Area will be constructed in accordance with Occupational Safety and Health Administration (OSHA)1926.1101.
- A digital vacuum pressure gauge must be maintained on-site during the removal activities, and the containment area must maintain a -0.020 inches of water column pressure.
- Warning signs and danger signs will be posted outside the containment area and all personnel performing the asbestos removal must wear safety toed shoes, hard hat, Tyvek (with booties and hoodie), nitrile gloves with polyvinyl chloride (PVC) over gloves, and full-face air purifying respirator.
- During the removal of asbestos containing materials, all asbestos materials must be sprayed with amended water and must be kept adequately wet during the removal process. Perform required personal air monitoring and provide results to staff members. Avoid over watering to control potential runoff. Capture any runoff on poly film and use towels or rags to soak up excessive water.
- Ensure best management practices are in place prior to work, and drains are protected.
- Ground-fault circuit interrupters must be utilized on all powered equipment.
- No cutting tools to be used for non-friable asbestos removal.
- Do not overload, throw, drop, or puncture bags.
- Good housekeeping must be maintained, and work area should be kept free of debris.
- If caulking needs to be cut, ensure to use cut resistant gloves and a self-retracting safety knife.
- A personal decontamination area must be on-site.
- All waste will be double bagged and must be properly marked with required U.S. Department of Transportation (DOT) hazard label, and all waste must be maintained on-site until the required manifest(s) are available and signed for transport and disposal.
- Personal air sampling is required for workers performing asbestos removal work.

Batteries

- Battery inspection: Determine the functionality and potential damage of each battery cell.
- Voltage checks: Implement procedures to check battery voltage before and after charging.
- Discharge prevention: Shut down the battery's ability to discharge below 20 volts.
- Alarm fixes: Improve the specificity of "battery abnormality" alarms and raise the threshold for maximum charge alarms.
- Standard work: Develop a Standard Operating Procedure (SOP), Job Hazard Analysis (JHA), or other standard work guidance for infrequent activities.
- Workplace exams: Conduct regular workplace examinations and eliminate hazardous conditions.
- Proper training: Train staff in the correct use and care of lithium battery-powered equipment, including appropriate personal protective equipment (PPE) usage.

- Follow instructions: Adhere to the manufacturer's guidelines for the storage, use, charging, and maintenance of lithium batteries.
- Fire safety: Keep fire extinguishing equipment readily available and ensure a smoke or heat alarm is installed in areas where devices are charged or stored.

Caught-In Or Between

Below are best practices to mitigate caught in between hazards:

- Ensure operating paths are clear of personnel or objects subject to hazard.
- Operate equipment safely and according to manufacturer's instructions.
- While heavy equipment is operating, all personnel on ground will wear reflective, high-visibility vests and hard hats.
- No one will approach equipment in operation unless the operator gives them positive indication that it is acceptable to do so.
- Put up barriers to avoid unnecessary contact with hazards.
- Ensure egress paths are clear and unobstructed.

Combustible Dusts

For a combustible dust explosion to occur, the following must be present:

- Combustible dust (fuel);
- Ignition source (heat);
- Oxygen in air (oxidizer);
- Dispersion of dust particles in sufficient quantity and concentration; and
- Confinement of the dust cloud.

Dust control:

- Minimize the escape of dust from process equipment or ventilation systems;
- Use dust collection systems and filters;
- Utilize surfaces that minimize dust accumulation and facilitate cleaning;
- Provide access to all hidden areas to permit inspection;
- Inspect for dust residues in open and hidden areas, at regular intervals;
- Clean dust residues at regular intervals;
- Use cleaning methods that do not generate dust clouds, if ignition sources are present;
- Only use vacuum cleaners approved for dust collection;
- Locate relief valves away from dust hazard areas; and
- Develop and implement a hazardous dust inspection, testing, housekeeping, and control program (preferably in writing with established frequency and methods).

Ignition control:

- Use appropriate electrical equipment and wiring methods;
- Control static electricity, including bonding of equipment to ground;
- Control smoking, open flames, and sparks;
- Control mechanical sparks and friction;
- Use separator devices to remove foreign materials capable of igniting combustibles from process materials;
- Separate heated surfaces from dusts;
- Separate heating systems from dusts;
- Proper use and type of industrial trucks;
- Proper use of cartridge activated tools; and
- Adequately maintain all the above equipment.

Damage control:

- Separation of the hazard (isolate with distance);
- Segregation of the hazard (isolate with a barrier);
- Deflagration venting of a building, room, or area;
- Pressure relief venting for equipment;
- Provision of spark/ember detection and extinguishing systems;
- Explosion protection systems;
- Sprinkler systems; and
- The use of other specialized suppression systems.

Compressed Air

Hazards of compressed air use include:

- Flying objects cutting or bruising the body.
- Foreign bodies getting lodged under skin.
- Air or foreign particles causing eye injury that can cause loss of sight.
- Injection of an air bubble into the blood stream that can lead to a fatal embolism.
- Air blown into the mouth that can rupture the esophagus or the lungs (can happen even at a low pressure of 5 psi).
- Noise from an air hose that can lead to hearing loss (sounds can reach 120-130 dB).

Safely working with and around compressed air involves the following:

- Stand clear of areas where compressed air is being used, whenever possible.
- Do not use compressed air to clean clothing or hair.
- Do not point a compressed air hose at yourself or another person.
- Check condition of hoses and lines before use.
- Wear PPE-safety glasses with side shields, full face shields, and hearing protection.
- Do not use compressed air for cleaning workspaces.
- Safety chains or other locking devices should be used at couplings of high-pressure hose lines where a connection failure would create a hazard.

Compressed Gases

- Compressed gases pose both physical and chemical hazards, depending on the type of gas. These gases can range from inert and non-reactive to highly toxic, flammable, or explosive. Due to the high pressure inside cylinders, any physical damage or exposure to high temperatures can result in serious incidents.
- All compressed gas cylinders must be:
  - Clearly labeled with the name of their contents in accordance with OSHA and other applicable regulations.
  - Accompanied by a Safety Data Sheet (SDS), which must be obtained and maintained for each type of gas.
- Always store, transport, and use cylinders upright with the valve facing up. Secure them using appropriate supports such as racks, straps, chains, or stands to prevent tipping or falling.
- Protect cylinder valves with standard caps when not in use—this applies to both full and empty cylinders.
- Never force a cap or regulator; caps should be hand-tightened only.
- Avoid exposing cylinders to excessive moisture, corrosive chemicals, or fumes.
- Do not store cylinders near combustible materials or in areas subject to extreme temperatures.
- Never transfer gases from one cylinder to another (except for dry ice or cryogenic materials). Do not attempt to refill compressed gas cylinders.
- Before use, slowly “crack” the valve to clear dust or debris—ensure the opening is pointed away from people. Take extra precautions with toxic or flammable gases.
- Do not stand in front of the regulator gauge when opening the valve.
- Always use the correct pressure regulator for specific gas. Never operate a cylinder without a regulator.
- Before opening the cylinder, ensure the regulator’s adjusting screw is released. Never allow gas to enter the regulator suddenly.
- If a leak occurs between the cylinder and regulator, close the valve before attempting to tighten the union nut.
- Never strike an electric arc on a cylinder.

Confined Space

A confined space is an area that has limited or restricted means for entry or exit, and it is not designed for continuous staff member occupancy. Confined spaces include, but are not limited to, underground vaults, tanks, storage bins, manholes, pits, silos, process vessels, and pipelines. OSHA uses the term "permit-required confined space" (permit space) to describe a confined space that has one or more of the following characteristics:

- contains or has the potential to contain a hazardous atmosphere;
- contains a material that has the potential to engulf an entrant;
- has walls that converge inward or floors that slope downward and taper into a smaller area which could trap or asphyxiate an entrant; or
- contains any other recognized safety or health hazard, such as unguarded machinery, exposed live wires, or heat stress.

Haley & Aldrich staff members should avoid entering confined spaces whenever possible. Confined spaces can only be investigated by opening the entryway, allowing adequate venting time, and viewing the interior using a flashlight without entering the space or breaking the plane of the opening of the space.

Work in confined spaces requires additional planning, training, permits, control of energy through lockout/tagout, and safety documentation. Confined space work cannot be performed without approval from Regional Safety Managers (RSMs). Contact an RSM for more information on safely completing confined space work.

Congested Areas

- Project sites may present congested working areas with other subcontractors and moving equipment.
- Be mindful of the work happening around you, pay attention to the hazards beyond those of just the task you are performing.
- Stay clear of vehicle pathways.
- Remain visible to operators and receive confirmation before moving across the pathway of any heavy equipment.

Construction Materials

- To prevent fires and hazards, separate incompatible materials during storage. Keep solvent waste, flammable liquids, and oily rags in fire-resistant containers until they are removed from the site.
- All materials stored in tiers must be securely stacked, racked, blocked, or interlocked. Cylindrical materials like steel, poles, and pipes need proper stacking and blocking to prevent shifting and potential injuries.
- Be aware of the maximum safe load limits for floors used as storage areas and never exceed these limits.
- Keep walkways and passageways clear and well-maintained to allow the safe movement of staff members and vehicles.
- When working on different levels, provide ramps or graded surfaces to prevent vehicle accidents and material spillage.

Control of Hazardous Energy

- A system for effective de-energization will be implemented, communicated to personnel, and verified prior to conducting operations in an area affected by energized equipment.
- Personnel will remain alert for energized equipment and will notify their supervisor immediately should they suspect anything around them is still energized or unsafe to approach.
- The steps of lockout/tagout are a primary method of isolating energy and include the following,
  - Lockout/tagout events to be discussed in tailgate safety meetings prior to implementation.
  - Notify all staff members within the immediate affected area that a lockout or tagout is going to be utilized and the reason why.
  - If the equipment is operating, shut it down in an orderly fashion using the normal stopping procedure.
  - Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s).
  - Lockout and/or tagout the energy isolating devices with assigned individual lock(s) or tag(s).
  - Lockout devices and tagout devices are to indicate the identity of the employee applying the device(s).
  - Use the TAG Template available on the Haley & Aldrich Intranet Forms/Health & Safety/ Hazardous Energy Control page to generate staff member and equipment-specific tags.
  - Following the application of lockout or tagout devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, or otherwise rendered safe. For example:
    - Prior to work on hydraulic or pneumatic systems, the energy source shall be turned off and existing pressure drained.
    - Release the tension on springs or block the movement of spring-driven parts.
    - Block parts that could move form loss of hydraulic and pneumatic pressure.
    - Drain process piping systems and close valves to prevent the flow of hazardous materials.
    - Verify a zero-energy state with applicable test equipment, gauges, etc.
    - Verify that timing devices and delayed starts have been isolated.
    - Attempt to energize the equipment.
    - Return the controls to its energy isolation position (i.e. “OFF”).
  - At this point the equipment is considered to be locked or tagged out.
  - If lockout is the energy control method utilized, the authorized staff member is to keep the key in their possession for the duration of the lockout period.

Dehydration

There may be instances where staff members become dehydrated while performing work. To reduce potential for dehydration, staff members should:

- Drink plenty of fluids, including drinks with electrolytes, at regular intervals. OSHA recommends at least one quart of water per hour on days that exceed 80 degrees F;
- Eat foods that are high in water, such as fruits and vegetables;

- Drink additional water in hot or humid weather to help lower your body temperature and to replace what you lose through sweating;
- Drink extra water in cold weather to combat moisture loss from dry air, particularly at higher altitudes; and,
- Ensure that project teams prepare for staff members to have access to adequate hydration.

If at any point staff members are experiencing extreme symptoms of dehydration, contact emergency medical services.

Drilling Hazards

There are several hazards associated with drilling. The primary hazards are the exposed moving parts where the soil borings are advanced. The size of the drill rig may present blind spots for the operator as well as workers moving around the drill rig. Noise is also a significant hazard, particularly when using air rotary equipment.

Use of a drill rig will require all personnel in the vicinity of the operating rig to wear steel-toed boots, hard hats, reflective safety vests, hearing protection, and safety eyewear. Personnel should not remain in the vicinity of operating equipment unless it is required for their work responsibilities.

Oversight personnel should follow these safety procedures:

- Do not stand near cables under tension, such as those lifting drill pipe
- Do not stand directly underneath a load suspended by a cable
- Stand clear as drill pipe is lowered into pipe rack by cable
- Keep away from drill rig unless required by task
- Do not approach equipment without first establishing eye contact with the operator
- Ensure that all machinery have operating back-up alarms
- Keep hands away from moving parts

Additionally, the following safety requirements must be followed:

- All drill rigs and other machinery with exposed moving parts must be equipped with an operational emergency stop device. Drillers and geologists must be aware of this device. This device must be tested before the job starts and periodically thereafter. The driller and helper shall not simultaneously handle augers unless there is a standby person to activate the emergency stop when necessary.
- The driller must never leave the controls of the rig while the tools are rotating unless all workers are kept clear of rotating equipment.
- A long-handled shovel must be used to clear drill cuttings away from the hole and from rotating tools. Hands and/or feet are not to be used for this purpose.
- A remote sampling device must be used to sample drill cuttings if the tools are rotating or if the tools are readily capable of rotating. Samplers must not reach into or near the rotating equipment. If personnel must work near any tools that could rotate, the driller must shut down the rig prior to initiating work.
- Drillers, helpers, and geologists must secure all loose clothing when in the vicinity of drilling operations.

- Only equipment that has been approved by the manufacturer may be used in conjunction with drilling equipment and specifically to attach sections of drilling tools together. Pins that protrude excessively from augers shall not be permitted.
- No person may climb the drill mast while tools are rotating.
- No person may climb the drill mast without the use of American National Standards Institute (ANSI)-approved fall protection or portable ladder that meets the requirements of OSHA standards.
- The drill rig must not be moved with the mast in a raised position.
- Elevated parts of the drill rig shall remain at least 20 feet from overhead power lines or follow the procedures outlined in Overhead Utilities below.

Drum Handling

- Use proper lifting and moving techniques to prevent back injuries.
- Make sure the vehicle selected has sufficient rated load capacity to handle the anticipated loads, and make sure the vehicle can operate smoothly on the available road surface.
- Have overpacks ready before any attempt is made to move drums.
- Before moving anything, determine the most appropriate sequence in which the various drums and other containers should be moved.
- Exercise extreme caution in handling drums that are not intact and tightly sealed.
- Ensure that operators have a clear view of the roadway when carrying drums.
- Pressurized drums are extremely hazardous. Wherever possible, do not move drums that may be under internal pressure, as evidenced by bulging or swelling.
- Make sure that all waste drums are managed according to state, federal, and PG&E regulations and requirements.

Economically Depressed Areas

- Economically depressed areas may have high crime rates.
- Staff could be subjected to crime that includes but may not be limited to thievery, vandalism, and violence.
- Prior to the start of work, staff need to understand the work locations and the potential for exposure to low level crime.
- Staff members should never work alone in these areas.
- A buddy system is required.
- Conduct work during daylight hours.
- Secure equipment and vehicles.
- If warranted, contact the local police department for a security detail.
- Leave the work area immediately and contact the local authorities if staff members feel threatened, or are threatened.

Electrical Hazards

- Electrical work of 120 volts or less can be completed by a qualified person, who has received training and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved.
- Electrical work of over 120 volts but under 600 volts can be completed by a qualified electrical worker as defined as a person with who by reason of a minimum of 2 years of training and experience with high-voltage circuits and equipment and who has demonstrated by performance familiarity with the work to be performed and the hazards involved.

Energized Equipment and Electrical Shock

- Document process to de-energize or isolate energy sources.
- Ensure staff are appropriately trained to conduct work requiring lockout/tagout.
- Affix lock and/or tag to equipment to ensure improper start-up or release of energy.
- Execute an Energy Isolation Permit.
- Electrical equipment and power tools must be operated and maintained in accordance with manufacturers' requirements.
- Electrical equipment, tools, switches, and outlets must be protected from environmental elements.
- Check manufacturers' requirements.

Equipment and Moving Vehicle Safety

The following procedures can be used to minimize the risk of traffic-related hazards and working near heavy equipment:

- Always wear seat belts when operating vehicles or heavy equipment, unless the equipment is designed for stand-up operation or lacks a rollover protective structure.
- Check vehicles and equipment before each shift to ensure all parts and accessories are in safe working condition.
- Obey all traffic laws and any additional on-site vehicle rules.
- Do not use cell phones or other distractions while driving.
- Allow adequate travel time to avoid speeding.
- Only drive on roadways or grades that are safely constructed and maintained.
- Do not exceed a vehicle's rated load or lift capacity.
- Do not carry passengers unless the vehicle is equipped with a designated and safe seating area.
- Operators must meet all requirements (e.g., licenses, certifications, training) for the specific equipment they are using.
- Do not drive in reverse with an obstructed rear view unless the vehicle has an audible reverse alarm, or a spotter signals it is safe.
- Use a dedicated spotter when operating or maneuvering heavy equipment.

- Set parking brakes when vehicles are parked, and chock wheels if on an incline.
- Lower or block buckets and place all controls in neutral when equipment is not in use.
- Ensure all vehicles have adequate braking systems and safety devices.
- Use traffic signs, barricades, or flaggers when working near public roadways.
- Clearly define work zones using reflective tape, traffic cones, or similar markers.
- Use orange flashing lights to alert drivers to hazards or changes in traffic patterns.
- Workers must wear high-visibility clothing.

Excavation and Trenching Safety

- Contact the proper utilities to obtain clearance. Prior to work, review the utilities in the area and be sure they have been staked properly. Before work begins, staff obtain multiple lines of evidence, using guidance found in OP1020 Working Near Utilities.
- Be aware that trenches and excavations deeper than 4 feet are considered confined spaces and require additional safety precautions, such as shoring. If an excavation exceeds 4 feet in depth, contact the Client or Site Safety Officer (SSO) to review the original Safe Work Permit and ensure that it is adequate. A 4-gas meter monitoring will be required in addition to the existing air monitoring plan.
- The walls and faces of all excavations and trenches more than 5 feet deep, in which a staff member is exposed to danger from moving ground, will be guarded by a shoring system, sloping of the ground, or some other equivalent means. The design of shoring systems in excavation greater than 20 feet must be done by a registered Professional Engineer as per 29 Code of Federal Regulations 1926 Part P.
- Excavated or other material will be effectively stored and retained at least 2 feet or more from the edge of any excavation or trench.
- Make daily inspections of excavations. If evidence of possible cave-ins or slides is apparent, all work in the excavation will cease until the necessary precautions have been taken to safeguard staff members.
- Trenches more than 4 feet deep will have ladders or steps available so no more than 25 feet of lateral travel is required.
- Determine soil composition (through soil sampling and/or soil maps) and other relevant site conditions, with special emphasis on conditions conducive to cave-ins.
- Monitor the atmosphere in and around excavation on a regular basis to check for explosive, toxic, or otherwise dangerous gases and vapors. Be sure sources of nuisance and harmful gas are not near the trenches; for example, do not park vehicles or equipment next to the excavation where the fumes can enter it.
- Water will not be allowed to accumulate in any excavation. Utilize ditches, dikes, pumps, or other means to keep surface water out of trenches.
- All open excavations must be well marked and barricaded.

- Staff members involved in the excavation activity have appropriate training in safe excavation practices, with emphasis on factors such as:
  - Utility line identification.
  - Cave-in prevention measures.
  - Recognition of conditions which may cause cave-ins.
  - Means of egress from trench.
- Excavations greater than 5 feet in depth are not to be entered unless properly sloped, shored, or benched.
- No project staff member is to enter the excavation unless they have determined that there is no potential for injury such as cave-ins and/or atmospheric hazards.
- It is the CM and project staff's responsibility to safeguard all affected workers from falling into any excavation by the use of barriers and warning signs.
- No excavation is to be left open or unattended when there is a possibility for anyone to fall into the excavation. Barricades will be placed around excavation where there is a fall hazard by workers and/or equipment; and if needed will be lighted at night. This is the responsibility of the subcontractor.
- Keep all equipment at a minimum of 10 feet away from energized electrical lines

Extended Shift

- Extended work hours may disrupt the body's regular schedule, leading to increased fatigue, stress, and lack of concentration.
- The degree to which an individual is exposed to fatigue risk factors depends upon the work schedule. As both the duration of the workday and the number of days worked increase, so do the fatigue risk factors.
- Staff Managers need to be aware of the fatigue risk factors and ensure projects are structured to mitigate these factors.
- Staff Members also have a responsibility to manage the personal fatigue risk factors that they can control outside of work (e.g., duration and quality of sleep, diet, drugs, and alcohol).
- Fatigue symptoms, both mental and physical, vary and depend on the person and degree of overexertion. Examples include:
  - Weariness
  - Sleepiness
  - Irritability
  - Reduced alertness
  - Lack of memory
  - Concentration and motivation
  - Increased susceptibility to illness
  - Depression
  - Headaches

  - Loss of appetite
  - Digestive problems

- When possible, managers should limit use of extended shifts and increase the number of days worked.
- Additional breaks and meals should be provided when working extended shift periods.
- Tasks requiring heavy physical labor or intense concentration should be performed at the beginning of the shift, if possible.
- Make efforts, when feasible, to ensure that unavoidable extended work shifts and shift changes allow affected staff members time for adequate rest and recovery.
- PMs need to plan to have an adequate number of personnel available to enable workers to take breaks, eat meals, relax, and sleep.
- Plan for regular and frequent breaks throughout the work shift.
- If at remote sites, ensure if possible, that there is a quiet, secluded area designated for rest and recuperation.
- Encourage use of micro breaks to change positions, move about, and shift concentration.
- Personnel should look to obtain an adequate quantity and quality of sleep.

Fuel Operations

Below are best practices to prevent spills or releases during fueling activities:

- Conduct fueling operations from a leak-proof nozzle or safety fuel can with a fitted gooseneck nozzle or funnel.
- Use screens to prevent debris and particles (from debris or ice in cold weather) from entering fuel tanks.
- Secondary containment shall be placed under the equipment during fueling to prevent any loss of containment to the ground surface.
- Store sorbent pads near fueling areas during all fueling operations to prevent fuel leaks or spills from travelling.
- Use flashlights in low light areas or in other than daylight hours to prevent over filling fuel tanks.
- Fuels will be stored in approved containers that are placed in a secondary containment capable of storing 100 percent of the spilled material.
- Equipment must be shut down before fueling, and drips will be wiped clean, and the fuel cap must be securely fastened before restarting the equipment.
- Store the fuel away from combustible materials and oxidizers.
- Fuel storage areas will be located away from common walkways and work areas.

Geoprobe® or Other Direct Push Rig Use

Use of a Geoprobe® or other direct push rig will require all personnel in the vicinity of the operating rig to wear steel-toed boots, hard hats, hearing protection and safety eyewear. Personnel should not remain in the vicinity of operating equipment unless it is required for their work responsibilities.

The following general guidelines apply to the operation and transport of any direct push rig.

Hazards

- Pinch points - Geoprobe® rod ends, auger joints, stacked rods, or augers
- Rotating augers - loose clothing
- Low head clearance when working directly over hole beneath mast
- Overhead and underground utilities
- Back strain - auger or Geoprobe® rod handling
- Use of cutting tools to open acetate core sleeves
- Accidentally engaging operating controls
- Noise

General Operating Procedures

- All drill rigs and other machinery with exposed moving parts must be equipped with an operational emergency stop device. Drillers and geologists must be aware of this device. This device must be tested before the job starts and periodically thereafter. The driller and helper shall not simultaneously handle augers unless there is a standby person to activate the emergency stop when necessary.
- Only equipment that has been approved by the manufacturer may be used in conjunction with drilling equipment and specifically to attach sections of drilling tools together. Pins that protrude excessively from augers shall not be permitted.
- Elevated parts of the drill rig shall remain at least 20 feet from overhead power lines or follow the procedures outlined in “Overhead Utilities” below.
- One person will be assigned the responsibility of lead operator. The lead operator will be responsible for operating the rig and performing the daily checklist. One additional personnel will assist with handling Geoprobe® rods. When augering, an additional person is recommended for assisting with auger flights. In either case, a separate person will be required for collection of soil samples or logging cores.
- A safe zone will be established using banner guard or physical barriers to prevent unnecessary personnel from entering the work area.
- Operations and crew will be familiar with the operator’s manual and will review the practical training on rig use.
- The driller must never leave the controls of the rig while it is running.
- Keep hands away from moving parts.
- Drillers, helpers, and geologists must secure all loose clothing when in the vicinity of drilling operations.
- Wear heavy gloves when handling Geoprobe® rods or augers.
- Hearing protection must be worn.
- Lifting tasks should be accomplished by using the legs to lift instead of the back (bending at the knees instead of at the waist). A second person should help lift the item if it is too large or heavy for one person.

- For protection of staff members from cut injuries during sampling activities or other activities where knives may be used, first evaluate whether hand knives are the correct tool for the task. Where possible, use a safer cutting tool such as scissors or snips. Cut resistant gloves such as Kevlar must be worn. If using a knife/ box cutter, it should have a self-retracting blade. When using a knife, cut away from oneself and end the knife stroke away from the body. Hold the item firmly and do not cut downwards and towards the body. Personal knives (e.g., pocket knives) are not to be considered as a tool for any type of work-related cutting.
- The rig and inspection logs will be maintained.
- During auger flight connection, pinch potential will be controlled by keeping hands away from the joint (heavy gloves must be worn). Constant communication between lead operator and helper must be maintained.

Oversight Personnel Should Follow these Safety Procedures:

- Do not stand near cables under tension such as those lifting drill pipe
- Do not stand directly underneath a load suspended by a cable
- Stand clear as drill pipe is lowered into pipe rack by cable
- Keep away from drill rig unless required by task
- Do not approach equipment without first establishing eye contact with the operator
- Ensure that all machinery have operating back-up alarms
- Keep hands away from moving parts

Daily Maintenance Checklist (for subcontractors):

- Check all fluids.
- Test kill switch.
- Ensure that back-up alarm is operating.
- Confirm mandatory underground utility clearances, double check for indications of utilities not reported by appropriate state clearing centers.
- Before raising mast, look up for overhead obstructions.
- Review location of kill switch and fire extinguisher with entire crew.
- Maintain safe distance from all electrical power lines.
- Decontaminate entire rig prior to leaving site.
- Check that fire extinguisher is charged.

Maintenance of Rig (for subcontractors):

- Regular inspection and maintenance will be performed by qualified personnel. A full check-out will be performed on a monthly basis and immediately following extensive use.
- The daily inspection will be completed by the rig operator.

Hand Tools

- Use tools that are in good condition.
- Ensure handles are not split, mushroomed, or otherwise damaged.
- Defective tools shall be removed from service.
- Use the proper tool for the job.
- Wear eye protection and hand protection depending on the potential hazard
- Maintain secure footing when using any hand tool
- Do not use fixed blade open knives, unless approval is obtained by Health & Safety. Examples include pocketknives, multi-tools, hunting knives, machetes, standard utility knives, and box cutters.
  - There are safer alternatives, such as self-retracting utility knives and guarded utility knives, that can effectively accomplish tasks while providing additional protection to staff members.
- For any tasks that involve cutting, staff must:
  - Wear cut score A2 cut resistant gloves.
  - Cut away from oneself and end the knife stroke away from the body. Hold the item firmly and do not cut downwards and towards the body. Cut into the air or onto something hard.

Heavy Equipment and Traffic – Working Around

- Before approaching a piece of heavy equipment or heavy equipment work zone, establish eye contact with the equipment operator. The equipment operator must put the equipment in a neutral energy state (e.g., coring equipment stopped from pushing or rotating) and then remove their hands from the controls.
- Once this is done, it is acceptable to approach the piece of equipment or heavy equipment work zone.
- The equipment operator must keep their hands off the equipment controls for the duration of time someone is in the work zone.
- Maintain visual contact with operators at all times and keep out of the strike zone whenever possible.
- Always approach heavy equipment with an awareness of the swing radius and traffic routes of each piece of equipment and never go beneath a hoisted load.
- Never position yourself between fixed objects and running equipment and/or between two running pieces of equipment.
- When possible, use a spotter or backer while equipment is being moved.
- Workers must be highly visible in all levels of light. Warning clothing, such as red or orange vests, are required while working near vehicles or any heavy mobile equipment. If worn for night work, clothing must be of reflective material.
- Be aware of traffic patterns and make sure to stay well away from these areas as a pedestrian.
- Be aware that debris may be kicked up or fly out of passing vehicles.
- Be especially careful and alert when working near heavy equipment since equipment failure or breakage can lead to accidents and worker injury.
- Avoid breathing fumes created by heavy equipment exhaust.

Heavy Equipment and Traffic – Operating

- Create a traffic control plan.
- Check vehicles before each shift to assure that all parts and accessories are in safe operating condition.
- Obey all traffic rules as well as an additional vehicle rules on-site.
- Do not speed. Make sure to leave adequate time to arrive at your destination on time.
- Do not drive a vehicle in reverse gear with an obstructed rear view, unless it has an audible reverse alarm, or another worker signals that it is safe.
- Drive vehicles or equipment only on roadways or grades that are safely constructed and maintained.
- Make sure that you and all other personnel are in the clear before using dumping or lifting devices.
- Lower or block buckets and leave all controls in neutral position when not in use (e.g., end-loader buckets, dump bodies).
- Set parking brakes when vehicles and equipment are parked and chock the wheels if they are on an incline.
- All vehicles must have adequate braking systems and other safety devices.
- Do not exceed a vehicle's rated load or lift capacity.
- Do not carry personnel unless there is a designed and safe place to ride.
- Use a dedicated spotter while heavy equipment is in operation.
- Use traffic signs, barricades, or flaggers when construction takes place near public roadways.
- Ensure work zones are defined (e.g., reflective tape, traffic cones).
- Use orange flashing lights to make drivers better aware of potential hazards and traffic pattern changes.
- If operating heavy equipment, personnel must meet all the requirements to operate that specific heavy equipment (e.g., licenses, certifications, training).

Hot Surfaces

- Cover hot surfaces with materials that can withstand high temperatures and prevent direct contact.
- Implement measures like ventilation, reflective shields, and air conditioning to reduce heat exposure.
- Provide appropriate gloves, heat-resistant clothing, and other gear to protect workers from burns.
- Identify potential hazards associated with hot surfaces and assess the risk of burns.
- Educate workers on the risks of hot surfaces, how to identify hazards, and how to use PPE effectively.
- Conduct routine inspections to ensure controls are effective and PPE is in good condition.
- Use clear warning signs, labels, and physical barriers to alert workers to hot surfaces.

Hot Work

Hot work activities include burning, welding, grinding, braising, soldering, and using fire or spark-producing tools. The main hazards associated with hot work are getting burned directly by the hot work activity or by fires or explosions that result from an accumulation of combustible materials.

Performing hot work in classified and non-classified areas may be considered a hazardous activity, and a Permit to Work may be required. In general, the Hot Work Permit has five purposes:

- To serve as written permission to do the work.
- To provide a minimum checklist prior to the commencement of hot work.
- To outline the steps necessary for making the work site safe for conducting hot work.
- To alert operating personnel to the hot work in progress.
- To provide a record of safe work practices performed during the permitted activity.

All work shall be conducted in accordance with OP1034 - Hot Work.

Combustible and flammable materials must be kept at least 35 feet from ignition sources. A trained person must act as a fire watch during hot work and 30 minutes after hot work is completed. A properly inspected and tagged fire extinguisher must be readily available to the fire watch.

Housekeeping

Haley & Aldrich strives to provide a clean, hazard-free and safe environment for staff members. Each staff member is expected to take an active role in maintaining a safe environment. Workplaces must be kept neat, clean and organized. Staff members are expected to observe good housekeeping practices at offices and project sites. Such practices must:

- Keep work areas clean and free of debris that might cause safety hazards.
- Maintain order on project sites to avoid tripping hazards. Equipment, tools, extension cords, coolers and supplies must be kept away from areas with foot traffic. These items must be put away and stored in a safe manner at the end of the workday.
- Prevent slip and fall hazards by keeping project sites clean and free from oil, grease, mud, and other slippery materials. Clear away snow and ice.
- Unsafe conditions at offices (e.g., ice on the sidewalk) shall be reported to the office manager to resolve with the property owner.
- Ensure that aisles, walkways, entrances, exits, and access to first aid and spill materials are kept free of obstructions.
- Collect and properly dispose of waste.
- All spills should be reported or cleaned up promptly.
- Avoid placing materials where they may become contaminated.
- Do not place tools or materials on elevated surfaces where they may fall and strike another worker.

- Remove sharp objects and debris including scrap metal, broken glass, nails, etc. from the work area.
- Ensure subcontractors keep the work area and the rest of the site in a neat and orderly fashion.

Periodic inspections of office areas and project sites are conducted by the Corporate Health & Safety Team. To protect against slips, trips, and falls, Haley & Aldrich requires its staff members to wear appropriate footwear (skid resistant soles) and watch for hazards such as uneven terrain, holes, ditches, wires, ropes, hoses, or any other materials or equipment in the path of travel. Tripping caused by wearing disposable footwear can be reduced by selecting properly sized disposable boots. Workers will also change work speed in muddy, snowy, or icy conditions.

Hunting Season

The PM will be responsible for identifying and informing the field crew of the potential for hunting activities in the general area of field activities.

- The field crew will be required to wear appropriate safety clothing such as, but not limited to, orange vests and/or hats when conducting field work during the hunting season in areas where it is likely to occur.

Inadequate Lighting

Some work may need to occur in areas that are not well lit. To reduce hazards of working in low light:

- temporary lighting can be used to brighten the site, such as flashlights or headlamps, if possible.
- Clear safety glasses should be worn under these conditions.
- If conditions are dark and visibility is poor, staff members should pause work and work with project teams to implement mitigations or postpone work until lighting is better.

Ladders

- Always maintain three points of contact when using a ladder.
- Only use ladders on a smooth and level surface.
- Do not exceed the maximum load rating of the ladder.
- Ladders shall always be maintained and kept in good condition.
- Lubricate metal bearings frequently (e.g., locks, wheels, pulleys).
- Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.
- Ladders shall be inspected prior to use, and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."
- Ladder rungs should be kept free of grease and oil.
- Fixed ladders that equal or exceed 24 feet must be equipped with ladder safety devices. If using multiple ladder sections, each ladder section is not to exceed 50 feet in length and must use a cage or well. Alternatively, self-retracting lifelines and rest platforms at intervals of 150 feet or less can be used.

- Side rails of through or side-step fixed ladders must extend 42 inches above the top level or landing platform served by the ladder.
- All on-site personnel shall review and be familiar with the requirements of OP1027 - Ladder Safety.

Lasers

- Restrict access and designate laser-controlled areas to restrict access to only authorized personnel who have completed laser safety training.
- Post appropriate warning signs at the entrance(s) of laser-controlled areas to warn about potential hazards.
- Ensure the area is set up and restricted to prevent laser beam transmission outside the controlled area.
- Never enter a laser-controlled area unless authorized and equipped with proper PPE.

Line of Fire - Lifting Equipment and Overhead Hazards

- Install barriers, shields, or screens around unsafe areas.
- Identify and maintain safe walking areas.
- Address overhead work concerns and avoid unsafe zones.
- Keep a safe distance between you and any suspended loads, heavy equipment, or other line of fire hazards.
- Never stand under a suspended load.
- Avoid areas where there is potential for dropped objects.
- Remain aware of stored energy, and where equipment or objects may fall when energy is released.

Line of fire - Lines Under Pressure

Injection hoses operating under pressure may release stored energy if connections fail or hoses otherwise become dislodged. Oversight personnel may be sprayed with injection chemicals and/or be injured by violent hose movements. Staff members shall maintain a safe distance from connection points during injection activities and wear safety glasses. Should the need arise to stand closer to connection points, a face shield should be worn over safety glasses. Contractors should be using whip checks to secure hoses that may become loose or dislodged.

Manual Lifting

Wherever possible, material handling will be done mechanically. Where manual handling is absolutely necessary, personnel will be instructed in safe handling techniques and will be instructed to use the appropriate protective gear to prevent abrasions, cuts, and struck-by accidents. Personnel will also be encouraged to request assistance from other site personnel when lifting large, heavy, or awkward objects (greater than 50 pounds).

The following steps describe the proper method for lifting:

- Get a good footing.
- Place your feet about shoulder-width apart.
- Bend your knees to pick up the load. Never bend from the waist.
- Keep your back straight.

- Get a firm hold. Grasp opposite corners of the load, if possible.
- Keep your back as upright as possible.
- Lift gradually by straightening your legs. Do not jerk the load.
- Keep the weight as close to your body as possible.
- When changing directions, turn your entire body, including your feet.
- Do not twist your body or make awkward moves forcing you to be off balance.

Mechanical Equipment

- Use physical guarding and barriers whenever possible to reduce potential for injury around mechanical equipment.
- Personnel should exercise caution when working with mechanical equipment to prevent entanglement with clothing, placing body parts near pinch points on equipment or using equipment on slopes or unstable surfaces.
- Site personnel and visitors who are not performing necessary work shall remain a distance of at least 15 feet away from moving parts on such equipment.

Material and Equipment Handling

The movement and handling of equipment and materials on site pose a risk to workers in the form of muscle strains and minor injuries. These injuries can be avoided by using safe handling practices; proper lifting techniques and use of safety equipment including steel-toed boots, hard hats and work gloves; and testing the weight of an object before attempting to lift or carry it. Where necessary, mechanical devices will be used to assist in moving equipment and materials.

Proper Lifting Procedure:

- Get a good footing.
- Place feet shoulder width apart.
- Bend knees to pick up load. Do not bend from waist.
- Keep back straight.
- Get a firm hold on load. Grasp opposite corners of the load if possible.
- Keep the back as upright as possible.
- Lift gradually by straightening the load-do not jerk the load.
- Keep the weight as close to the body as possible.
- When changing direction, turn the entire body, including the feet.
- Do not twist the body.

General Requirements for Powered Industrial Trucks are:

- They must be inspected daily before being placed into service, to detect safety problems.
- High-lift rider trucks must be fitted with an overhead guard to protect the operator from falling objects.

- If the load being carried obstructs forward view, the load must travel with the load trailing.
- When a unit is left unattended, the load must be fully lowered, the control Level positioned in neutral, the power shut off, and the brakes set.
- Trucks, trailers or railroad cars being unloaded or loaded with lift trucks must be secured by setting their brakes and placing wheel chocks under the rear wheels.
- Any driver-operated equipment (truck, tractor) used on a site with uneven terrain must have some form of rollover protection.

Naturally Occurring Radioactive Materials (NORM)

- Practice As Low As Reasonably Achievable (ALARA) principles by minimizing the time spent near, increasing your distance from, and using appropriate shielding materials, such as lead or concrete, to block radiation.
- Be aware that NORM can be present in various materials, like rocks, soil, and building materials, as well as in specific industrial equipment.
- Do not eat, drink, or smoke in areas where NORM may be present.
- Contamination Control:
  - Avoid activities that generate dust, such as cutting or grinding, which can contain NORM/ Technologically Enhanced Naturally Occurring Radioactive Material (TENORM).
  - Protect any wounds or cuts to prevent potential contamination.
  - Practice good hygiene, including hand washing after working with or around NORM/TENORM.
- Monitoring and Decontamination:
  - Use appropriate radiation monitoring equipment, like alarming dosimeters, to track exposure.
  - Ensure workers are checked for contamination before leaving a NORM/TENORM work area.
  - Decontaminate equipment and work areas appropriately.
- PPE: Utilize PPE like respirators, coveralls, boots, and gloves, as needed.

Needles

- If you find a discarded needle, stop and do not approach or attempt to pick up the needle.
- Notify the client, controlling employer, or other designated safety personnel immediately.
- Clearly describe the location of the needle to ensure it can be safely addressed.
- Treat all needles, blood, and other potentially infectious materials as if they are infectious.
- When discarded, needles must be placed in SHARPS containers and not in traditional trash.

Night Work

- Minimize or redesign routine administrative tasks to ensure staff members can focus on core duties during their night work.
- Limit consecutive night shifts worked.
- A project requiring staff to work beyond four nights requires a fatigue management plan.

- Ensure that rosters allow for at least two full night's sleep after the last night shift before returning to day shift.
- Regular and frequent breaks are needed.
- Comprehensive training on fatigue risk factors for the staff members assigned to the project.
- Identify optimal sleeping conditions during the day (e.g., dark/quiet rooms, minimize distractions, light meal prior to sleep).

Noise Exposure (e.g., loud equipment, impact noise, noise from tools)

- Wear appropriate hearing protection such as earplugs or earmuffs in high-noise areas.
- Check the Noise Reduction Rating (NRR) of your hearing protection to ensure it provides adequate protection for the noise levels you're exposed to.
- Maintain distance from loud equipment whenever possible to reduce noise exposure.
- Take regular breaks in quiet areas to give your ears time to recover from prolonged noise exposure.
- Use tools like the NIOSH Sound Level Meter app to monitor and understand noise levels on-site and assess the need for hearing protection.
- Be aware of the potential for sudden loud noises. While it's best to wear hearing protection at all times in noisy environments, always follow posted signage indicating when hearing protection is required.

Operations On, Over, or Near Water

Staff are not permitted to perform work on, over, or near water without first informing their RSM and developing additional safety plans. Coast Guard approved flotation devices will be worn to protect staff members from the risk of drowning.

General hazards of walking around water bodies:

- Enhanced potential for slips, trips, and falls.
- Engulfment/entrapment.
- Rising water conditions.
- Enhanced physical exertion from wearing waders, hauling equipment to areas inaccessible to vehicles; this will increase the likelihood of fatigue leading to muscle strains, heat stress, or cold stress.
- Increased chance of encounters with biological hazards.

Protective measures for working around water:

- Ensure team has proper PPE, such as Coast Guard approved floatation devices, lifeline, life buoy, or audible alarms.
- Use the buddy system.
- Conduct daily inspections of work areas, equipment, and safety devices.
- Install guardrails or other barriers to reduce potential for falling into water.
- Ensure team is aware of emergency procedures and prepared to respond in the event of an emergency.

- Be vigilant about weather changes.
- Dress appropriately for weather and other conditions of the site.
- Remain hydrated and maintain electrolyte balance.
- Make sure all walking areas and work surfaces are clean, dry, clear of debris, etc.
- Keep all gear secure when not in use.
- Keep stairs, ladders, doorways, ramps, walkways, and gangways clear.
- Safely secure ramps or gangways when loading and offloading.
- Check for items such as loose boards or nails that stick out on docks and repair as necessary.
- Wear footwear with slip-resistant soles.
- Use a non-skid deck compound where possible.
- Do not allow any part of your body to be between the dock and the boat.

Overhead Utilities

Before beginning equipment operations, the contractor will identify the work zone and determine if any part of the equipment, load line, or load could get closer than 20 vertical or horizontal feet to a power line. If so, the contractor will:

- Determine the line's voltage and maintain clearance distances both vertical and horizontal in accordance with the table below, or
- Arrange with the utility to de-energize and ground the power line, or
- Modify the work to maintain a 20 foot clearance distance by implementing the measures specified in 29 CFR 1926.1408(b) including conducting a planning meeting, erecting, and maintaining an elevated warning line, barricade, or line of signs in view of the operator equipped with high visibility markings at the minimum clearance distance, using a proximity alarm, dedicated spotter, or range limiting device.

Table B. Equipment Travel Clearance Distances for Uninsulated Power Lines	
Voltage (nominal, kV, alternating current)	**Minimum clearance distance (feet)**
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1000	As established by the utility owner operator or registered PE who is a qualified person with respect to electrical power transmission and distribution

Pinch Points

A pinch point is a place where a body part can get caught between moving parts of a machine, between moving and stationary machine parts and between moving parts and other materials. Other situations where pinch point injuries can occur include:

- Catching fingers, hands, toes, or feet under or between heavy crates or equipment or drums while moving them
- Slamming fingers or hands in a door
- Nipping fingers or hands with hand tools
- Nipping fingers or hands with equipment that has sliding parts or hinges
- Nipping fingers or hands while closing a container
- Getting clothing, hair, or jewelry tangled in a pinch point

Pinch point injuries can be prevented by:

- Using machine guards
- Never reaching around, under, or through a guard
- Reporting guards that are missing, damaged, or not working properly
- Lockout/tagout of equipment before repairing or servicing
- Looking for pinch points before starting any task
- Lifting the edge of a heavy item slightly before picking it up to assess its weight and if you are able to lift the weight unassisted-an awkward or heavy load can slip and pinch or crush hands or feet. Get help or use material handling aids to move heavy or awkward items.
- When placing a heavy item on a shelf, pallet, floor etc. or closing a heavy door, make sure there is enough room so the item will not land on your feet
- Sliding the item into place while moving feet and hands out of the way
- Concentrating on the task at all times

Power Tools

Potential Hazards:

- Electrical
- Eye injuries
- Hand injuries
- Musculoskeletal Injuries
- Dust inhalation

Safe Work Practices and Control Measures:

- Personnel will be trained in the use operation and proper handling of portable power tools before they use them.
- Ensure the right tool is used to perform the job.
- Before use, the tool must be inspected for loose power cord connections and frays, and damage to the casing, cord, and plug. The grounding prong must be in good condition, if present.
- Electric tools must be grounded (i.e., have three pronged plugs) and be plugged into a properly grounded outlet or be double insulated. Always hold the tool by the insulated gripping surface instead of the cord.
- Extension cords with three-pronged grounding plugs must be plugged into a three-pronged outlet when using grounded tools.
- When using power tools, grounded surfaces such as pipes or radiators shall not be touched, as there is a greater risk of electric shock if your body is grounded.
- When working with electric tools in damp or wet locations, ground fault circuit interrupter (GFCI) protection must be used.
- Do not abuse the cord, carry the tool by its cord, or pull the cord to unplug it. Keep cord from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately.
- Unplug the tool immediately after use, before removing or changing bits, and before performing any service or maintenance on the tool.
- During inspection, ensure that the trigger turns the tool when “on” and stops the tool in the “off” position. Make sure the chuck is tightly secured to the spindle.
- Loose clothes, gloves, jewelry, or hair can be caught in moving parts, so they must not be worn or be controlled (tie back hair).
- Always wear safety glasses or goggles and, if needed, a face shield.
- Wear hearing protection and a particulate respirator, if dust is generated.
- Hold or brace the tool securely. Brace against stationary things for maximum control.
- Avoid bending the wrists and other awkward body postures, such as twisting the torso.
- Take frequent breaks from tool use to avoid musculoskeletal injuries from repetitive motion.
- Use proper lifting techniques for handling tools. Do not lift more than 55 pounds alone, and use proper body mechanics - lift with your legs, not your back. Do not twist the body when picking up a load.

Projectiles

- Be aware that many tasks, such as cutting, grinding, or prying, can create flying debris or projectiles.
- Implement controls to prevent tools and materials from falling, such as securing tools, using toe boards, guardrails, debris nets, or canopies.
- Secure materials that could become airborne or projectiles.
- Use tool tethers to prevent tools from falling from heights and becoming projectiles.

- Barricade areas where work creating projectiles is taking place and prevent unauthorized personnel.
- Wear proper PPE, including hard hats, eye protection, and safety-toed boots.

Public Right Of Way

- Haley & Aldrich staff and their subcontractors conducting work on public roads and/or rights of way can be exposed to vehicular traffic and expose the public to the hazards of the job site.
- Where a hazard exists to site workers because of traffic or haulage conditions at work sites that encroach public streets or highways, a system of traffic controls in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), or state program, is required.
- A Temporary Traffic Control Plan (TCP) describes traffic controls to be used for facilitating vehicle and pedestrian traffic through a temporary traffic control zone. TCPs are required to provide for worker protection and safe passage of traffic through and around job sites with as little inconvenience and delay as possible.
- The plan may range in scope from being very detailed, to merely referencing typical drawings contained in the MUTCD.
- The degree of detail in the TCP depends entirely on the complexity of the situation, and TCP's should be prepared by persons knowledgeable about the fundamental principles of temporary traffic control and the work activities to be performed.
- Haley & Aldrich PMs or their subcontractors need to establish appropriate control measures and obtain any permits when project work is on or encroaches public roadways.
- You may need flaggers or police details.
- Cease work and notify the field supervisor immediately if any conditions are such that safety is jeopardized.
- Utilize protective vehicles whenever appropriate, or position equipment so it is in between the work and oncoming traffic.

Railroad Right Of Way

- Typically, the presence of anyone, equipment, and/or material is "in the railroad area" (closer than 15 feet of the nearest railroad rail, centenary, electrical wire, signal wire, or other signal facility) must have permission of the railroad company prior to initiating work. All work must avoid causing damage to trains, tracks, or other facilities of the railroad company, and not to interfere with movement of trains or railroad track ballast.
- Railroad companies may require a flagger when construction operations encroach "the railroad area."
  - The flagger is assigned to a construction project to ensure safe passage of trains or on-track equipment by communicating with trains regarding the movement of construction equipment on/near active tracks.
  - Notify the flagger whenever necessary to be "in the railroad area" and proceed only after the flagger has indicated it is safe to do so.
  - The tracks must be cleared promptly anytime the flagger indicates to do so.
- Trains may need 1.5 miles to come to a complete stop.

- New trains are quiet and can cover a mile in less than 30 seconds producing enormous amounts of wind turbulence.
- The slipstream is powerful enough to drag you under the wheels of the train if standing next to the track.
- Communication protocols need to be established prior to being "in the railroad area."
- Tracks are clearly defined and known by all parties involved.
- If a flagger is required, they must inform all workers how they will be warned of approaching trains.
- Complete safety and security awareness training through e-railsafe or designated vendor.

Remote Work Area

- Establish frequent check-ins and meetings to maintain clear communication among team members.
  - Project team members must regularly touch base with staff members performing remote work to ensure they are safe.
  - When working in remote areas, cell phone reception may be limited.
  - Ensure you have designed communication systems that are adequate for the working environment.
- Encourage the use of instant messaging and email for quick updates.
- Establish adequate emergency response processes, including who to call, how to call, and directions to your location.

Repetitive Motion

- Trade-off job duties to minimize repetitive stress of joints or muscles.
- Encourage job rotation for repetitive or monotonous work in the field.
- Take breaks at the intervals defined during the task risk assessment to prevent fatigue and repetitive motion injuries.
- Use proper lifting and hand positioning to avoid sprains and repetitive motion injury.
- Prior to work, stretch legs, arms, and back.

Rotating Equipment

- Personnel should exercise caution when working near rotating equipment to prevent entanglement with clothing, placing body parts near pinch points on equipment, or using equipment on slopes or unstable surfaces.
- Site personnel and visitors who are not performing necessary work shall remain a distance of at least 15 feet away from moving parts on such equipment.

Rough Terrain

- Wear proper footwear with tread patterns designed for rough terrain.
- Before stepping, lightly tap the ground with your foot to assess its stability.
- Reduce your walking speed to allow for better balance and reaction time.
- Keep your feet slightly apart to increase your base of support.

- Actively scan the path ahead for obstacles, loose rocks, or uneven surfaces.
- Carry lightly: Avoid carrying heavy loads that could affect your balance.
- Take extra caution in wet, icy, or snowy conditions.

Sharp Objects

- Staff members are required to wear ANSI cut score A2 gloves whenever there is potential for cutting hazards on site.

Silica Dust

- Use of wet methods must be utilized to minimize dust production.
- Ensure that enough water is supplied.
- A water-integrated delivery system that supplies water to cutting surface will be a requirement for stationary mason saws, hand-held power saws, walk behind saws, drivable saws, rig mounted core saw/drills, jackhammers, and hand-held grinders.
- All water must be collected for sampling and disposal off-site.
- All drain inlets will need to be identified and secured with plastic sheeting and absorbent snakes or sandbags, and will need to be identified by the use of a cone or delineator.
- Personnel must ensure drain valves are safely secured, and washed soils will be shoveled from the unit and will be transported into appropriate labeled drums.
- Evaluation must be completed to determine whether a dusk mask/respirator is required to prevent inhalation of particles (based on equipment used – see below).
- The slurry from utilizing the wet methods must be removed before it dries to prevent the dried material from generating dust that can spread to other areas of the site.

Simultaneous Operations (SIMOPS)

- SIMOPS are described as the potential class of activities which could bring about an undesired event or set of circumstances (e.g., safety, environment, damage to assets, schedule, commercial, financial, etc.).
- SIMOPS are defined as performing two or more operations concurrently.
- SIMOPS should be identified at an early stage before operations commence to understand issues such as schedule and physical clashes, maintenance activities, failure impacts, interferences between vessels, contracts and third part interfaces and environmental impacts.
- Coordinate project with site activities.
- Identify and understand the hazards associated with the host and client's activities.
- Integrate site emergency response protocols, where appropriate, and communicate to all project staff.
- Integrate site communication protocols and communicate to all project staff.

Site Control

- Work Zones
  - To prevent both exposure of unprotected personnel and migration of contaminated materials due to tracking by personnel or equipment, work areas along with PPE requirements will be clearly identified.
  - Haley & Aldrich designates work areas or zones in accordance with the "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" (NIOSH/OSHA/USCG/EPA).
  - They recommend the areas surrounding each of the work areas to be divided into three zones:
    - Exclusion zone
    - Contamination Reduction Zone (CRZ)
    - Support Zone
- Exclusion Zone
  - The areas of site activities discussed in the mobilization section of this HASP which contain or are suspected to contain hazardous material will be considered the exclusion zone.
  - The exclusion zone for soil excavation will be a radius of 20 feet around each area to be excavated whenever possible and where applicable.
  - The exclusion zone for drilling activities will be at least a radius equal to the height of the drill rig mast.
  - This radius may be increased if air monitoring reveals that Level C respiratory protection is required during these activities.
  - Personnel in the exclusion zone must have the required OSHA training, medical authorization, and have the appropriate PPE.
  - The locations of the exclusion zones will be determined in the field by the SSO and will be marked using caution tape, snow fence, and/or signs, where appropriate.
- Contamination Reduction Zone (CRZ)
  - The CRZ will be established upwind of the exclusion zone and will provide for personnel and equipment decontamination where necessary. The decontamination area will be determined in the field by the SSO.
- Support Zone
  - The support zone is located in an area that is not contaminated.
  - This area is established to provide areas for breaks, administration of first aid, personnel monitoring, administrative functions, and equipment storage.

Slips, Trips, and Falls

- Keep site and walking pathways clear of obstacles and debris.
- Keep work surfaces dry where possible.
- Wear appropriate footwear for the conditions. Add traction devices (ice cleats, 'Yaktrax', etc.) to footwear as needed.

- Take your time, stay alert, and be aware of the conditions.
- In mixed vegetation, rubble or debris, or walking over snow/ice use a walking stick/staff to 'investigate the ground' of your path.

Steep Slopes

- All machines have limits for the slopes on which they can safely operate.
- Machines must not be operated on slopes outside of the manufacturer's recommendations.
- If excavations are on a steep slope, evaluate operations to ensure compliance with excavation/ trenching regulations.
- Work should be evaluated for fall protection, and any heavy equipment should be evaluated to see if appropriate for the work.
- When planning how the work should be done on a specific site, consider:
  - Soil/ground conditions,
  - Ground roughness,
  - Underlying material,
  - Machine design/limits,
  - Terrain-slope measurements,
  - Visibility,
  - Weather conditions,
  - Water on site/sinking/floods.
- When working on a steep slope, additional care should be taken to prevent slips, trips, or falls.

Struck-By

- Ensure operating paths are clear of personnel or objects subject to hazard.
- Operate equipment safely and according to manufacturer's instructions.
- No one will approach equipment in operation unless the operator gives them positive indication that it is acceptable to do so.
- Put up barriers to avoid unnecessary contact with hazards.
- Ensure egress paths are clear and unobstructed.
- Vessel operator will clearly notify anyone boarding the vessel of any pinch point hazards associated with the operation of the vessel and sample equipment.

Underground Utilities

Pre-planning is required for understanding the limitations of the site and identifying whether subsurface intrusive work can be completed safely. The following items, which are provided in OP1020 - Underground Utilities may

need to be completed or reviewed prior to intrusive work based on the type of work as well as local, state, federal, and client requirements:

- Dig-In Prevention Policy;
- A health and safety plan and related health and safety documents/considerations;
- OP1020 Attachment C - Subsurface Clearance Field Checklist;
- Utilities marked with ANSI Z 535.1 Color Matrix;
- Confirm utilities with a private utility locator;
- Establish Tolerance Zones;
- A site walkthrough with staff members, subcontractors, and others who know utility locations, as applicable;
- State One Call – 811, three days prior to starting ground disturbance activities; and/or
- State One Call Ticket/Permit kept at site or readily accessible.

Welding

- Stay at least 35 feet away from the welding area, when possible, especially if not involved in the welding operation.
- If you must be in the vicinity, ensure you are shielded from the direct line of the welding arc, do not look at the welding arc, or wear appropriate eye protection.
- Flammable materials should be removed from the area or protected with fire-resistant shields or blankets.
- Unauthorized people should not enter the welding area.
- If staff will be performing welding activities, they must complete a task-specific JHA, hot work permit, and contact H&S.

Working at Heights

- Any project teams performing work that requires fall protection must work with their RSM for proper planning and training.
- Fall protection such as guardrail systems, safety net systems, or personal fall arrest systems can be used to protect staff while working at height.
- Staff required to wear fall arrest systems shall have received appropriate training and will inspect their gear prior to use to ensure it is in good working order.

Working in Phragmites Marshes

Special precautions should be taken when working in and around Phragmites marshes. These precautions include:

- Phragmites marshes pose significant slip, trip, and fall hazards. These marshes have soft and wet soil which can cause slip hazards. Terrain may be uneven, and changes in terrain may be hidden by ground cover. Additionally, features including muskrat burrows and ditches may create hazardous walking conditions. Use caution when walking through these areas.

- Dense Phragmites growth limits visibility, making slip, trip, and fall hazards such as ditches or waterway banks difficult to negotiate.
- The limited visibility can affect orientation. Site personnel entering areas of dense Phragmites growth should travel in pairs and maintain constant awareness of the way to exit the area.
- Phragmites leaves are sharp edged and cut skin. Additionally, Phragmites pose significant threat to eyes. Site personnel should wear work gloves and eye protection (spoggles) if the activity involves walking through Phragmites.
- When working in marshes and other limited visibility areas, field staff should ensure that they make another team member aware of their location. Radios or cell phones should be used to maintain communication. Have readily available telephone numbers for emergency services such as fire and police departments.
- Dry Phragmites stalks and leaves can catch fire. See section on Brush Fires in Appendix C for more information.

Workplace Harassment

- Staff members that encounter any sort of harassment during work should first try to deescalate the situation, if possible, and remove themselves from any threat as soon as possible;
- Do not attempt to engage or antagonize a person threatening violence;
- Report any threats, physical or verbal, and/or any disruptive behavior of any individual to HP and H&S as soon as possible either through phone call, email, or the use of the Sensitive Information Reporting Form; and
- Following an incident, staff may be asked to participate in any subsequent investigation of the workplace harassment incident.

APPENDIX C – WEATHER-RELATED HAZARDS

Brush Fires

Fires are a concern due to the large amount of vegetative material. Dry weather and strong winds contribute to the threat of fires. The following precautions should be taken during these periods:

- Prior to field activity, personnel should review all available weather information for warnings of increased fire potential.
- For extended work activities in the wetlands, a minimum of two evacuation routes should be established and cleared. The evacuation routes must be identified to field personnel working in the wetlands.
- A fire extinguisher will be carried into the wetlands.
- One field team member must return to the entry point to check the surroundings for signs of brushfire (smoke, etc.) and changing wind conditions on intervals not exceeding twenty minutes.
- Navigation tools, such as a map and compass, and two separate means of communication (cell phones, two-way radios, etc.) will be required safety equipment and must be immediately accessible to all members of each field team during all activities.
- Work involving the use of a potential ignition source (e.g. generators, halogen lighting) will not be performed.
- No smoking is allowed in wetland areas.
- In the event that warning signs of a brush fire are noticed by any field team member (fire sighting, smoke smell or sight, warning from elsewhere on site), all work will be suspended, and field teams will evacuate the site immediately. After evacuation, the priority will be achieving confirmation of evacuation from all field personnel. Emergency services will be contacted as per the HASP.
- All activities will be suspended until positive confirmation can be obtained that the fire has been completely controlled and extinguished.

Cold Stress

- Make sure workers are aware of cold stress symptoms, consequences, and prevention methods.
- Dress appropriately for wet/cold weather.
- Dress in layers and wear waterproof clothing as needed and proper cold weather PPE.
- Stay inside, as practicable, and use a buddy system to monitor cold stress effects.
- Have a warm area or vehicle available for breaks from the cold.
- Schedule work at warmer times of day or during milder weather times, if possible.
- If staff members feel the effect of weather stress, seek a warm location and drink warm non-caffeinated beverages.

Earthquakes

- Remember to Drop, Cover, and Hold on.
  - Drop: Wherever you are, drop down to your hands and knees and hold onto something sturdy. If you're using a wheelchair or walker with a seat, make sure your wheels are locked and remain seated until the shaking stops.
  - Cover: Cover your head and neck with your arms. If a sturdy table or desk is nearby, crawl underneath it for shelter. If no shelter is nearby, crawl next to an interior wall (away from windows). Crawl only if you can reach better cover without going through an area with more debris. Stay on your knees or bent over to protect vital organs.
  - Hold on: If you are under a table or desk, hold on with one hand and be ready to move with it if it moves. If seated and unable to drop to the floor, bend forward, cover your head with your arms, and hold on to your neck with both hands.
- If an earthquake happens, protect yourself right away:
  - If you are in a car, pull over and stop. Set your parking brake.
  - If you are in bed, turn face down and cover your head and neck with a pillow.
  - If you are outdoors, stay outdoors away from buildings.
  - If you are inside, stay and do not run outside and avoid doorways.
- There can be serious hazards after an earthquake, such as damage to the building, leaking gas and water lines, or downed power lines.
  - Expect aftershocks to follow the main shock of an earthquake. Be ready to Drop, Cover, and Hold On if you feel an aftershock.
  - If you are in a damaged building, go outside and quickly move away from the building. Do not enter damaged buildings.
  - **If you are trapped, send a text or bang on a pipe or wall.** Cover your mouth with your shirt for protection and instead of shouting, use a whistle.
  - If you are in an area that may experience tsunamis, go inland or to higher ground immediately after the shaking stops. Avoid contact with floodwaters as they can contain chemicals, sewage, and debris.

Fires

- Small
  - Use fire extinguisher if safe and qualified to do so.
  - Notify PM, Site Safety Officer, contact 911.
- Large
  - Evacuate immediately.
  - Notify PM, Site Safety Officer, contact 911.

Flooding

- Move to higher ground.
- Avoid floodwater, don't walk, drive, or swim in flooded areas.

- Don't touch any electrical equipment.
- If heavy rains are expected and there is potential for flooding, consider rescheduling work to avoid unsafe areas.
- Evacuate when instructed to do so.

Heat Stress

- Make sure workers are aware of heat stress symptoms, consequences, and prevention methods.
- Drink plenty of hydrating fluids (i.e., water), provide enough water for each staff member to drink one quart per hour for days when heat exceeds 80 degrees F using the Heat Index.
- Use cooling devices, as needed.
- Acclimatize workers before performing work in extreme heat.
- Have a shaded area or vehicle available for breaks from the heat.
- Use a buddy system to monitor heat stress effects.
- Schedule work at cooler times of day or during milder weather times, if possible.
- Monitor the Heat Index using the OSHA NIOSH Heat Safety Tool mobile app, complete the Heat Injury and Illness Prevention Plan when heat exceeds 80 degrees F using the Heat Index, and consult Health and Safety.

High Winds

- The table below summarizes the stop work action levels for general site work and various high-risk project activities with respect to wind speed.

Work Activity	Wind Speed Stop Work Action Levels	
	Sustained[1]	Instantaneous
General Site Work	25 mph	40 mph or greater
High Risk Activities		
Working at Heights	15 mph	25 mph or greater
Critical Lifting Operations	15 mph	25 mph or greater
Lifting Operations	25 mph	35 mph or greater
Over Water Work	25 mph	35 mph or greater
Heavy Equipment with Elevated Masts	25 mph	35 mph or greater

- It should be noted that when using specific heavy equipment, that the manufacturer's recommended wind speed for cease of operations (if defined) supersedes the wind speed action levels stated above, if the manufacturer's guidelines are more restrictive.
- Task specific JHAs must reflect manufacturer's specific guidelines, or if exact make and model of equipment is not known during initial JHA development, they will be updated in the field to reflect requirements.

Hurricanes

- Pay attention to emergency information and alerts.
- If you live in a mandatory evacuation zone and local officials tell you to evacuate, do so immediately.

- Determine how best to protect yourself from high winds and flooding.
- Take refuge in a designated storm shelter or an interior room for high winds.
- Go to the highest level of the building if you are trapped by flooding. Do not climb into a closed attic. You may become trapped by rising flood water.
- Do not walk, swim, or drive through flood waters. Turn Around. Don't Drown! Just 6 inches of fast-moving water can knock you down, and 1 foot of moving water can sweep your vehicle away.

Lightning Storms

- If lightning is observed to be within 6 miles of the project, suspend operations, depending on the speed of storm approach.
- You can use "Spark" by WeatherBug, or another recognized lightning warning app to track lightning.
- National Severe Storms Laboratory (NSSL) recommends the "Flash to Bang" method. Simply count the seconds from the time the lightning is sighted to when the clap of thunder is heard.
- Divide the number by five to obtain how far away in miles the lightning is occurring.
  - For example, if the lightning flash is seen and then 15 seconds later the bang of thunder is heard, the lightning is 3 miles away. It is important site personnel monitor not only how far away the lightning is, but also how fast it is approaching.
- The NSSL recommends by the time the Flash to Bang count reaches 30 seconds, all individuals should have left the site and reached a safe structure, such as a building or job trailer.
- If caught in the open by an electrical storm, immediately seek shelter in a vehicle on land.
- If a vehicle is inaccessible: move to a topographically low area away from tall objects and conductors (e.g., trees, transformers, fences, pipelines, power lines, metal sheds) and wait for the storm to leave the area.
- If you feel your hair stand on end (an indicator lightning is about to strike), drop to your knees and bend forward, putting your hands on your knees. Do not lie flat on the ground (be wary of seeking shelter in washes, ravines, or gullies during heavy downpours because of the risk of flash floods).
- In the event of extreme weather conditions which may pose a health and/or safety risk to workers, field activities will cease until the SSO determines conditions are safe to resume operations.
- Wait at least 30 minutes after the last lightning strike within 6 miles before resuming work.

Snowstorms

- Assess the weather before traveling and ensure emergency supplies are packed in the vehicle.
- Provide sufficient time for travel delays due to snow/ice covered roads or accidents.
- Inform someone of your travel plans and expected time of arrival.
- Wear layered clothing, including jackets, hats, and mittens, or keep these items in the vehicle.
- If you get stuck inside your vehicle:
  - Stay inside the vehicle.
  - Run the heater periodically but be cautious of carbon monoxide poisoning.

Sun Exposure

- Exposure to ultraviolet light from working outdoors can cause sunburn and can lead to skin cancer. Staff members are encouraged to liberally apply sunscreen, with a minimum sun protection factor of SPF 30 when working outdoors. Sunscreen selected should protect against both UVA and UVB rays. Staff members should work in the shade whenever practical.
- Prevention of over-exposure and sunburn will be completed by wearing appropriate clothing and using sunscreen. Long-sleeve breathable shirts are recommended to avoid sun exposure to the arms. All staff members are required to wear long pants and boots as part of their PPE and will eliminate sun exposure to legs and feet.
- Additionally, staff wear safety glasses offering protection from ultraviolet A/ultraviolet B rays.

Tornadoes

- Watch areas where tornadoes could become present.
- Review and discuss your emergency plans, communication/sirens in case of emergency and review shelter locations.
- If site is prone to tornadoes, monitor weather reports during work shifts.
- Act quickly if a warning is issued or you suspect a tornado is approaching.
- If a tornado has been sighted or indicated by weather radar, imminent danger to life and property exists.
- Go to shelter locations listed in Safety Plan. Go immediately under ground to a basement, storm cellar or an interior room (closet, hallway, or bathroom).
- If caught outdoors when a tornado is threatening, seek shelter in a basement or a sturdy building. If one is not within walking distance, try to drive to the nearest shelter.
- If flying debris is encountered while in a vehicle, there are two options:
  - Stay in the vehicle with the seat belt on, keep your head below the windows, and cover it with your hands or a blanket, or
  - If there is an area that is noticeably lower than the roadway, lie in that area and cover your head with your hands.

Tsunami

- If you are under a tsunami warning:
  - Know evacuation routes (often are marked by a wave with an arrow in the direction of higher ground) and follow them to higher ground.
  - Contact your project manager when it is safe to do so to inform them that you have evacuated.
  - Leave immediately if you are told to do so. Evacuation routes often are marked by a wave with an arrow in the direction of higher ground.
  - If you are in the water, grab onto something that floats, such as a raft or tree trunk.
  - If you are in a boat, face the direction of the waves and head out to sea. If you are in a harbor, go inland.

Wildfires and Air Quality Concerns

- Monitor and assess the air quality index (AQI) for particulate matter at 2.5 microns (PM 2.5) utilizing AirNow.
- Utilize engineering or administrative controls to limit staff member exposure to an AQI level of 150 or lower if possible.
- Review our Wildfire Smoke and Air Quality program materials.
- Ensure all staff members have completed Air Quality Training.

AQI for PM 2.5	Response Action
0 to 50	Normal working conditions. Monitor PM 2.5 conditions and forecasts.
51 to 100	Normal working conditions. Sensitive groups should begin to monitor physical condition. Notify staff of air quality conditions. Ensure only trained staff members are working in the field.
101 to 150	NIOSH approved N95 respirators will be available in all offices for staff members that have completed the voluntary use form. Engineering controls and administrative controls will be implemented. Sensitive groups should continue to monitor conditions.
151 to 200	NIOSH approved N95 respirators will remain available in all offices for staff members that have completed the voluntary use form. Monitor physical conditions throughout the day and remain aware of immediate health impacts of smoke inhalation. PMs should begin discussions about rescheduling work. Recommended that outdoor staff take frequent breaks in areas where filtered AQI is less than 101.
201 to 250	Respirators will remain available for all staff if voluntary use form is completed. All outdoor staff are required to take frequent breaks in areas where filtered AQI is less than 101. Sensitive persons are not to work outdoors in these conditions.
251+	All outdoor projects will be stopped in the impacted areas until the AQI has dropped below 251. Outdoor project work will be rescheduled.

APPENDIX D – BIOLOGICAL HAZARDS

Bacteria

- Wear appropriate personal protective equipment (PPE), such as gloves, eye protection (goggles or face shields), and disposable clothing, when working with potentially contaminated materials or in areas where bacterial exposure is possible.
- Wash your hands and any exposed skin with soap and water immediately, or as soon as feasible, after contact with potentially infectious materials or contaminated surfaces.
- Disinfect potentially contaminated surfaces to reduce potential for bacteria to spread.

Bees, Wasps, and Hornets

- Bees generally fly in straight lines between flower and hive, hence collision with unsuspecting individuals occurs.
- If a single bee approaches, STAY STILL, do not try to swat the insect as this may cause it to react.
- If it lands, gently try to blow it off the skin.
- If a swarm of bees approach, run for shelter. Bees release a chemical when they sting, which may attract other bees to sting.
- If stung, try to look for the stinger and carefully remove it by flicking it or scratching it out of the skin from the stinger sack.
- Stings to the head and neck are more dangerous.
- Life threatening reactions are more likely to occur in people who are already known to be very allergic to bee venom, older people with pre-existing heart and chest complaints, or with multiple stings.
- When stung immediately apply ice or cold compresses to the sting site.
- Wasps and bees are drawn to flower fragrances and clothing with bright colors (white is safest), perfumes, fruit juices and eating fruit outdoors, hair tonics, suntan lotions, and floral odors.
- Hornets are drawn to food and sources of moisture.
- Carefully shake out any clothing left on the ground.
- Cover open containers and any food outdoors.
- Individuals who are prone to severe reactions to bee stings should notify the SSO and carry their prescribed medication(s) with them for self-administration.
- Emergency medical treatment should be sought immediately for individuals who are allergic to bee stings or other individuals who exhibit severe reactions described above.

Bird and/or Bat Droppings

- Avoid situations where bird or bat droppings may exist.
- Use dust suppression methods to reduce airborne particulate levels.
- Wear respiratory protection and PPE to curtail particulate adhesion to clothing.

Bloodborne Pathogens (BBPs)

- While Haley & Aldrich staff members should not anticipate occupational exposure to bloodborne pathogens in their normal daily activities, there is always potential for an incident that could lead to exposure.
- Bloodborne pathogens are bacteria, viruses, and other pathogenic microorganisms that can only be detected by medical tests.
- Any time you come in contact with another individual's blood or other potentially infectious material (OPIM), you are at risk of becoming infected.
- Therefore, staff members must treat all blood and OPIM as if they could get infected.
- Offices are equipped with BBP response kits, and field staff members have the option to collect the same BBP kits to have on hand as a resource.
- Proper PPE, disposal, and handwashing are critical to limit exposure to BBP.
- For more information, see OP1058 - Bloodborne Pathogens.

Contaminated water

- Don PPE to reduce exposure, such as gloves, safety glasses, and protective clothing.
- Implement work practices to limit contact with contaminated water, such as avoiding walking through contaminated areas and using remote handling techniques, where feasible.
- Use signage that clearly indicates the presence of contaminated water and warns against contact or use.
- Identify handwashing facilities or areas where staff members can thoroughly wash hands following any potential exposure.

Disease

- The primary routes of infectious disease transmission are contact, droplet, and airborne.
- General practices, such as the following, can help reduce the risk of disease:
  - Regular handwashing
  - Covering coughs and sneezes
  - Proper cleaning and disinfection of surfaces
  - Staying home when sick
  - Wearing face coverings
  - Wearing gloves

Mammals - Large

- Avoid contact with animals whenever possible.
- If an animal displays aggressive behavior and charges, do not run or turn your back.
- When confronted by a large mammal, it is important not to run or exhibit any behavior that may be construed as a challenge (e.g., looking the animal in the eyes, showing your teeth, etc.).

- Stand still and place your work bag between you and the animal and then begin to move slowly away from the animal, while not turning your back.

Mammals - Small

- Avoid contact with rodents, if possible.
- Avoid contact with rodent excrement.
- Do not eat food or water that may have encountered rodent excrement.
- If exposed, wash hands and avoid touching your face with your hands.

Mosquitoes

- Take appropriate precautions to minimize the potential transmission of viruses carried by mosquitoes.
- Use of PPE techniques is essential to prevent mosquito bites, especially when working at sites where mosquitoes may be active and biting.
- Use repellents containing DEET, picaridin, IR3535, and some oil of lemon eucalyptus and para-menthane-diol products provide longer-lasting protection. To optimize safety and effectiveness, repellents should be used according to the label instructions.
- Cover as much of your skin as possible by wearing shirts with long sleeves, long pants, and socks whenever possible.
- Avoid use of perfumes and colognes when working outdoors during peak times when mosquitoes may be active; mosquitoes may be more attracted to individuals wearing perfumes and colognes.
- Treat bites by cleaning the affected area with warm soapy water.
- Place an ice pack on the affected area to reduce swelling.
- Take or apply an antihistamine to reduce itchiness.
- Avoid scratching the bite to reduce risk of infection.

Marine Animals

- Maintain a minimum 50-yard distance from marine mammals.
- Marine mammals can be aggressive if bothered, and many have environmental protections.
- Do not approach marine mammals and should maintain their distance.
- If marine mammals are in the work area and impede work, the team should contact the harbormaster and project management.

Poisonous Plants

Poisonous plants that can cause skin irritation include poison ivy, poison oak, and poison sumac. Poisonous plants are found throughout the United States (except Alaska and Hawaii).

<u>Poison Ivy</u>

Eastern poison ivy is typically a hairy, ropelike vine with three shiny green leaves budding from one small stem. The leaves may be red in the fall.

Western poison ivy is typically a low shrub with three leaves that does not form a climbing vine. It may have yellow or green flowers and white to green-yellow or amber berries.



Poison Oak

Poison oak is typically a shrub with three leaves, like poison ivy. Pacific poison oak may be vine-like. It may have yellow or green flowers and clusters of green-yellow or white berries.



Poison Sumac

Poison sumac is a woody shrub that has stems with 7 to 13 leaves arranged in pairs. It may have glossy, pale yellow, or cream-colored berries



Types of Exposure

Poison ivy, poison oak, and poison sumac release an oil (urushiol) when part of the plant is damaged or burned. When the oil gets on the skin, most exposed people have an allergic reaction (contact dermatitis). Workers can become exposed to urushiol through:

- Direct contact with the plant.
- Indirect contact, such as touching tools, livestock, or clothing that have urushiol on them.
- Inhaling particles containing urushiol from burning plants.

Prevention

- Wear long sleeves, long pants, boots, and gloves. Wash exposed clothing separately in hot water with detergent.
- Use barrier skin creams, such as Ivy X pre contact towelettes.
- Clean tools with rubbing alcohol (isopropanol or isopropyl alcohol) or soap and lots of water. Urushiol can remain active on the surface of objects for up to five years. Wear disposable gloves while cleaning.

Symptoms of contact with poisonous plants include:

- Red rash within a few days of skin contact
- Bumps, red patches or streaking, or weeping blisters
- Note: fluids in blisters will not cause blisters to spread on you or others
- Swelling
- Itching

First Aid

- Rinse skin immediately.
- Use rubbing alcohol, poison plant washes (Ivy X Contact wipes), or dishwashing soap, and lots of water.
- Rinse often to prevent wash solutions from drying on the skin and further spreading the urushiol.
- Apply cold compresses, follow directions on treatment wipes, do not apply to broken skin
- Emergency medical treatment should be sought immediately for individuals who are allergic to poisonous plants or other individuals who exhibit severe reactions described above.

Snakes

The degree of toxicity resulting from snakebites depends on the potency of the venom, the amount of venom injected, and the size of the person bitten. Poisoning may occur from injection or absorption of venom through cuts or scratches.

The most effective way to prevent snakebites is to avoid snakes in the first place. Personnel should avoid walking at night or in high grass and underbrush. Visual inspection of work areas should be performed prior to activities taking place.

The use of leather boots and long pants will be required, since more than half of all bites are on the lower part of the leg. No attempts at killing snakes should be made; many people are bitten in such an attempt.

If someone is bitten by a potentially poisonous snake, the following treatment should be initiated:

- Keep patient calm.
- Notify emergency medical services.
- Wash the wound and keep the affected body part still.
- Apply direct pressure to site of bite if bleeding is extreme.
- Keep the affected area lower than the heart.
- Carry a victim who must be transported or have them walk slowly.
- Transport to the closest medical facility.

Ticks

- Wear light-colored clothing so ticks stand out, and long-sleeved shirts and long pants to reduce skin exposure.
- Tuck your shirt into your pants and tuck your pants into your socks to close gaps.
- Use repellent containing 20-30% DEET (N, N-diethyl-m-toluamide) on exposed skin and clothing.
- Avoid hands, eyes, and mouth and wash off repellent when back indoors.
- Treat clothing with or purchase clothing with products containing 0.5% permethrin.
- Conduct frequent tick checks on clothing and skin. Have others check your back, scalp, and behind your ears and check gear for "hitchhikers."
- As soon as you return indoors, take a bath or shower. and do a full-body inspection using a mirror.
- Wash field clothes and tumble dry on high to kill any ticks that may be hidden.
- If working in an area of significant tick habitat, PPE may need to be upgraded to a Tyvek suit.
- Implementation of controls is crucial to minimize or eliminate the possibility of a tick bite.
- If a staff member has been bitten contact Corporate H&S and Work Care at 888-449-7787 to initiate the Tick Management Protocol. Once bitten, it takes approximately 48 hours to transmit Lyme Disease,
- For removal, a fine-tipped tweezer is recommended as a tick removal tool and should be in the first-aid kit. Follow these steps:
  - Pull upward with steady, even pressure.
  - Do not twist or jerk the tick; this can cause mouth parts to break off and remain in the skin.
  - If this happens, remove the parts with tweezers.
  - If unable to remove easily with tweezers, leave them alone and let the skin heal.
  - After removing the tick, thoroughly clean the bite area and hands with rubbing alcohol, iodine scrub, or soap & water.
  - Dispose of live ticks by submersal in alcohol, placing it in a sealed bag/container, wrap it tightly in tape, or flush it down the toilet.

- Never crush ticks with your fingers.
- Do not attempt to use nail polish remover, petroleum jelly, lotion, or heat to try to get the tick to exit skin.
- Swift removal is key.

Venomous Spiders

- Inspect or shake out any clothing, shoes, towels, or equipment before use.
- Wear protective clothing, such as a long-sleeved shirt and long pants, hat, gloves, and boots when handling stacked or undisturbed piles of materials.
- Minimize the empty spaces between stacked materials.
- Remove and reduce debris and rubble from around the outdoor work areas.
- Trim or eliminate tall grasses from outdoor work areas.
- Store apparel and outdoor equipment in tightly closed bags.
- Keep tetanus boosters up to date (every 10 years).
- Spider bites can become infected with tetanus spores.
- Additional information in the case of bites can be obtained from the Poison Center (1-800-222-1222).

Wildlife Droppings

- Do not touch droppings with unprotected hands.
- Avoid disturbing the droppings and generating dust.
- Staff member work practices and dust control measures that eliminate or reduce dust generation during removal of manure from a building will also reduce risks of infection and development of disease.
- Use an industrial vacuum cleaner with a high-efficiency (HEPA) filter to bag contaminated material.

APPENDIX E – EMERGENCY RECOGNITION AND PREVENTION

Emergency Type	Notification	Response Action
Chemical Exposure	Report event to PM immediately	Refer to Safety Data Sheet for required actions
Fire- Small	Contact 911 and notify PM when safe to do so	Use fire extinguisher if safe and qualified to do so
Fire - Large/Explosion	Contact 911 and notify PM when safe to do so	Evacuate Immediately
Medical - Bloodborne Pathogen	Report using H&A's reporting tool	If qualified and trained dispose in container or call client/responsible party for further instruction
Medical - First Aid	Call Acuity (1-888-397-8099) and notify PM when safe to do so	If qualified, perform first aid duties. Contact Acuity for future management.
Medical - Trauma	Call 911 immediately, and notify PM when safe to do so	Wait at site entrance for ambulance.
Security Threat	Notify PM, who will call 911 as warranted	Hide all valuables and delineate all work zones. Double check and secure access points to site.
Weather - Earthquake/ Tsunami's	Stop Work, evacuate the site if necessary, and notify PM	Turn off all equipment and evacuate as soon as it is safe to do so.
Weather - Lightning Storm	Stop Work and seek shelter, and notify PM	Work may resume 30 minutes after the last observed lightning.
Weather - Tornadoes/ Hurricanes	Monitor weather conditions, Stop Work, seek appropriate shelter, and notify PM when safe to do so	Evacuate to shelter location or shelter in place immediately.
Weather - Fog	Monitor Weather conditions	Pause work until fog dissipates and site lines can be re-established.
Weather - Wind	Notify PM and all equipment operators	Monitor conditions and be prepared to Stop Work.
Weather - Floods	Notify PM and monitor weather conditions	Immediately Stop Work and evacuate.
Hazardous Materials Spill - Small	Contain and clean the spill if it is safe to do so, and notify the PM	Properly trained staff can clean up the spill.
Hazardous Material Spill - Large	Stop Work, secure the area, and notify the PM when safe to do so	Spill will be reported to the correct agency, and cleanup will be at their discretion

APPENDIX H
New York State Department of Health Generic Community Air Monitoring Plan

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

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

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work With Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.