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REMEDIAL INVESTIGATION WORK PLAN

For

Proposed Mixed-Use Development
466 Main Street
Block 215, Lot 32
New Rochelle, Westchester County, NY

Prepared for:

BRP 466 Main Street LLC

June 2025

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LIST OF ACRONYMS

Acronym	Definition
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BER	Business Environmental Risks
CAMP	Community Air Monitoring Plan
cis-1,2-DCE	cis-1,2-Dichloroethene
COC	Contaminant of Concern
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Accreditation Program
ESA	Environmental Site Assessment
ft bgs	feet below ground surface
FWIA	Fish and Wildlife Impact Analysis
GRS	Green Remediation Strategies
HASP	Health and Safety Plan
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyls
PFAS	Per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PGSCO	Protection of Groundwater Soil Cleanup Objectives
PHC	Petroleum Hydrocarbon
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
REC	Recognized Environmental Conditions
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RRSCO	Restricted Residential Soil Cleanup Objectives
RSCO	Residential Soil Cleanup Objectives
SESI	SESI Consulting Engineers, Inc.
SCG	Standards Criteria and Guidance
SVOC	Semi-volatile Organic Compound
TIC	Tentatively Identified Compound
TCE	Trichloroethene
TCL	Target Compound List
VOC	Volatile Organic Compound
USEPA	United States Environmental Protection Agency

Acronym	Definition
USCO	Unrestricted Use Soil Cleanup Objectives

1.0 INTRODUCTION

BRP 466 Main Street, LLC has submitted an application as the Volunteer for the property located at 466 Main Street, Block 215, Lot 32 ("Site") and has submitted this Remedial Investigation Work Plan with the BCP application. A Site Location Map is presented as **Figure 1.1.**

This document comprises a draft Remedial Investigation Work Plan (RIWP) to be conducted at the Site after NYSDEC approval, as part of the Site's planned remedial investigation. It includes a description of the Site, summary of the Site history and previous environmental investigations, a description of the Site's physical, geologic, hydrogeologic setting and subsurface features and a plan of action for further investigation of the areas of concern identified previously.

This RIWP has been prepared to establish a plan to achieve the following objectives:

- To complete the horizontal and vertical delineation of the nature and extent of contamination on the Site,
- To identify any potential source areas of contamination,
- To determine the remedial action needed to protect human health and the environment, and
- To collect sufficient data to advance the remediation of the Site.

This RIWP is developed in general accordance with the Department's Remediation Technical Guidance for Site Investigation and Remediation (DER-10).

2.0 PROJECT BACKGROUND

2.1 SITE DESCRIPTION

The Site consists of an approximately 0.708-acre area parcel and is located at 466 Main Street, Westchester County, New York (Site). The Site is identified as Block 215, Lot 32 as approved by the City of New Rochelle and discussed in the BCP application. This recently assigned Lot number will not appear on the City of New Rochelle or the Westchester County tax map for some time but has been approved. The Site is improved with a commercial space, a historic theater building, asphalt parking lot and vegetated areas. The Site building operations include several commercial spaces. The Site has been developed since at least 1951 and historically has been residences and commercial uses including most notably a plumber shop (circa 1903), the New Rochelle Theatre (circa 1903-1911), a repair shop (circa 1911) and a hardware and paints shop (circa 1911). **Figure 2.1** presents a Site Plan.

The Site is located in a residential and commercial area and is bounded by Main Street (US Highway 1) to the north, a parking lot to the south, Locust Avenue and apartment buildings to the east, and North Avenue to the west. **Figure 2.1** presents a Site Plan.

Adjacent properties are summarized on **Table 2.1** below:

Table 2.1: Summary of Surrounding Properties

Direction	Adjacent Property
North	Main Street and Commercial Development beyond
South	Parking
East	Locust Avenue and Apartment Buildings
West	North Avenue and Commercial and Retail beyond

The proposed Site redevelopment is anticipated to consist of a mixed-use commercial and residential building. The historic theater building, which was converted to a bank, will be repurposed as part of the Project. Formal Site Plans are anticipated to be developed during the design phase of the project.

2.2 SITE HISTORY

The Site has historically been occupied by residences and commercial uses including most notably a plumber shop (circa 1903), the New Rochelle Theatre (circa 1903-1911), a repair shop (circa 1911) and a hardware and paints shop (circa 1911). The Site has also contained asphalted parking areas.

2.3 PREVIOUS ENVIRONMENTAL INVESTIGATION

The following environmental reports are attached in **Appendix A** and summarized below:

- "Phase I Environmental Site Assessment, 466 Main Street, New Rochelle, NY," prepared by SESI Consulting Engineers. (SESI), dated July 2024 (which covers additional parcels some of which are not part of this application).
- "Phase I Environmental Site Assessment, 466 Main Street, New Rochelle, NY," prepared by SESI Consulting Engineers. (SESI), dated April 2025.
- "Phase II Environmental Site Assessment, 466 Main Street, New Rochelle, NY," prepared by SESI Consulting Engineers. (SESI), dated April 2025.

2.3.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA, APRIL 2025)

The Phase I ESAs prepared by SESI identified the following Recognized Environmental Conditions (RECs) and Business Environmental Risks (BERs) for the subject property:

- **REC 1 – Former Subject Property Operations:** The Sanborn fire insurance maps indicated a plumber shop (circa 1903), repair shop (circa 1911) and a hardware and paints shop (circa 1911) at the northeast; and the New Rochelle Theatre (circa 1903-1911) at the northwest on the subject property. **These historic operations may have adversely impacted the subject property due to the potential use of petroleum products and chlorinated solvents. These operations may be the source of the recently identified contamination in soil, groundwater and soil vapor on the subject property during SESI's Phase II investigation. Remediation or mitigation of the identified contamination may be required as part of the planned redevelopment of the subject property.**
- **BER 1 – Off-Site Contamination:** A review of the EDR Databases for Engineering Controls/Institutional Controls, Brownfields, PFAS Contaminated Site Location Listing and/or Hist Cleaner Sites identified three (3) BCP facilities (Nos. C360176, C360199 and

C360078) within approximately 500 feet from the subject property. **However, investigations and remediations have been completed at these facilities. Therefore, no further investigation is warranted.**

- **BER 2 – Chemical Storage Containers:** Chemicals were identified in the basement utility room and on the roof. Specifically, the chemicals included 5-gallon containers of Teflon grease, floor stripper concentrate, Terra Glaze Acrylic Polymer and tar roof coating. There were no visible cracks or stains on the surfaces below these containers. **Therefore, no additional investigation is warranted, and these chemicals should be properly disposed of prior to demolition or redevelopment.**
- **BER 3 – Drain, Basin, Pits and Sump:** Two (2) interior drainage pits, one (1) sump and one (1) wash basin were observed in the basement utility room during the walkthrough. **No evidence of staining or a sheen was observed. Therefore, no further investigation is warranted.**
- **BER 4 – Monitoring Well:** One (1) monitoring well was identified in the parking lot to the south of the Site building on this site. The origin of this well is unknown. The seller of the site to the volunteer claimed to have no knowledge of the origin of this well which apparently predated their ownership. **This well should be resampled as part of this RI and if appropriate, properly decommissioned prior to redevelopment**.
- **BER 5 – Hazardous Materials:** An asbestos containing material, lead-based paint, polychlorinated biphenyls (PCB) caulk and universal waste survey was not conducted as part of this Phase I Environmental Site Assessment. Based on the age of the structures located on the Subject Property, the presence of these materials cannot be ruled out. **Therefore, a comprehensive hazardous material survey is recommended prior to demolition or redevelopment.**

The above RECs are presented on **Figure 2.2**.

2.3.2 PHASE II ENVIRONMENTAL SITE ASSESSMENT (APRIL 2025)

Between August 2022 and February 2025, SESI performed sampling of soil, groundwater and soil vapor at the subject property. The investigation activities completed by SESI confirmed the presence of polycyclic aromatic hydrocarbons (PAHs) above the Restricted Residential Soil Cleanup Objectives (RRSCOS), Residential Soil Cleanup Objectives (RSCOs) and/or Protection of Groundwater Soil Cleanup Objectives (PGSCOs) and perfluorooctanesulfonic acid (PFOS,) pesticides and metals exceeding the Unrestricted Soil Cleanup Objectives (USCOs) in soil/historic

fill. Furthermore, volatile organic compound (VOC), per- and polyfluoroalkyl substances (PFAS), phenol, PAHs and metals exceeded the Ambient Water Quality Standards (AWQS) in groundwater at the subject property. Additionally, elevated VOC concentrations in soil vapor may require mitigation following redevelopment. The results are detailed further below:

Soil

The complete soil analytical results are presented as **Table 2.2**. A summary table of the analytical results exceedances compared to NYSDEC USCOs, RSCOs, RRSCOs and PGSCOs is presented in **Table 2.3** below.

Table 2.3 Summary of Soil Exceedances

SAMPLE ID:					SB-9 (8-8.5)		SB-10 (4-4.5)		SB-11 (7-7.5)		SB-12 (0.5-1.0)		SB-13 (1-1.5)	
LAB ID:					L2242456-08		L2242456-09		L2242456-10		L2242456-11		L2242456-12	
COLLECTION DATE:					8/6/2022		8/6/2022		8/6/2022		8/6/2022		8/6/2022	
SAMPLE DEPTH (FT):					8.0-8.5		4.0-4.5		7.0-7.5		0.5-1.0		1.0-1.5	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PFAS (mg/kg)														
PFOS	0.00088	0.0088	0.044		-		-		ND		-		-	
SVOCs (mg/kg)														
Benzo(a)anthracene	1	1	1	1	ND		ND		ND		-		ND	
Benzo(a)pyrene	1	1	1	22	ND		ND		ND		-		ND	
Benzo(b)fluoranthene	1	1	1	1.7	ND		ND		ND		-		ND	
Benzo(k)fluoranthene	0.8	1	3.9	1.7	ND		ND		ND		-		ND	
Chrysene	1	1	3.9	1	ND		ND		ND		-		ND	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	ND		ND		ND		-		ND	
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	ND		ND		ND		-		ND	
Pesticides (mg/kg)														
4,4'-DDE	0.0033	1.8	8.9	17	ND		ND		ND		-		ND	
4,4'-DDT	0.0033	1.7	7.9	136	ND		ND		ND		-		ND	
Metals (mg/kg)														
Copper, Total	50	270	270	1720	9.9		21		11.4		-		13.4	
Lead, Total	63	400	400	450	2.11	J	4.71		2.62	J	-		2.72	J
Mercury, Total	0.18	0.81	0.81	0.73	ND		ND		ND		-		ND	
Nickel, Total	30	140	310	130	11		14.1		11.1		-		14.2	
Zinc, Total	109	2200	10000	2480	15.7		24.4		14		-		21.7	

SAMPLE ID:					SB-210 (2.5-3)		SB-211 (3.5-4)		SB-212 (3-3.5)		SB-213 (3-3.5)		SB-214 (4-4.5)	
LAB ID:					L2305142-10		L2305142-11		L2305142-12		L2305142-13		L2305142-14	
COLLECTION DATE:					1/28/2023		1/28/2023		1/28/2023		1/28/2023		1/28/2023	
SAMPLE DEPTH (FT):					2.5-3.0		3.5-4.0		3.0-3.5		3.0-3.5		4.0-4.5	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PFAS (mg/kg)														
PFOS	0.00088	0.0088	0.044		0.000126	J	-		-		-		-	
SVOCs (mg/kg)														
Benzo(a)anthracene	1	1	1	1	2.7		0.16		1.3		0.047	J	0.027	J
Benzo(a)pyrene	1	1	1	22	3		0.28		1.2		0.05	J	ND	
Benzo(b)fluoranthene	1	1	1	1.7	3.5		0.36		1.4		0.059	J	0.033	J
Benzo(k)fluoranthene	0.8	1	3.9	1.7	1.2		0.13		0.48		ND		ND	
Chrysene	1	1	3.9	1	2.5		0.22		1.2		0.046	J	0.027	J
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	0.46		0.049	J	0.14		ND		ND	
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	2.2		0.25		0.83		0.035	J	ND	
Pesticides (mg/kg)														
4,4'-DDE	0.0033	1.8	8.9	17	ND		ND		ND		ND		ND	
4,4'-DDT	0.0033	1.7	7.9	136	ND		ND		ND		ND		ND	
Metals (mg/kg)														
Copper, Total	50	270	270	1720	41.9		24.3		15.9		12.7		21.6	
Lead, Total	63	400	400	450	62.7		20.3		24		83.4		36.7	
Mercury, Total	0.18	0.81	0.81	0.73	0.126		ND		ND		0.233		0.202	
Nickel, Total	30	140	310	130	22.1		17		14.4		13.5		15.6	
Zinc, Total	109	2200	10000	2480	67.7		42.7		49.7		47.4		40.5	

SAMPLE ID:					SB-215 (1-1.5)		SB-301 (2-2.5)		SB-302 (1-1.5)		SB-303 (3-3.5)		SB-304 (2.5-3)	
LAB ID:					L2305142-15		L2359919-01		L2359919-02		L2360344-01		L2360711-01	
COLLECTION DATE:					1/28/2023		10/10/2023		10/10/2023		10/11/2023		10/12/2023	
SAMPLE DEPTH (FT):					1.0-1.5		2.0-2.5		1.0-1.5		3.0-3.5		2.5-3.0	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PFAS (mg/kg)														
PFOS	0.00088	0.0088	0.044		-		-		0.00105		-		0.00092	
SVOCs (mg/kg)														
Benzo(a)anthracene	1	1	1	1	0.057	J	0.096	J	0.12		0.29		0.31	
Benzo(a)pyrene	1	1	1	22	0.065	J	0.086	J	0.11	J	0.29		0.32	
Benzo(b)fluoranthene	1	1	1	1.7	0.079	J	0.11	J	0.13		0.32		0.39	
Benzo(k)fluoranthene	0.8	1	3.9	1.7	0.03	J	0.035	J	0.048	J	0.11	J	0.15	
Chrysene	1	1	3.9	1	0.062	J	0.1	J	0.14		0.27		0.28	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	ND		ND		ND		0.042	J	0.044	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	0.049	J	0.063	J	0.073	J	0.22		0.2	
Pesticides (mg/kg)														
4,4'-DDE	0.0033	1.8	8.9	17	ND		0.00397		0.00518		0.00144	J	0.00164	J
4,4'-DDT	0.0033	1.7	7.9	136	ND		0.00714		0.0119		0.00232		0.0042	
Metals (mg/kg)														
Copper, Total	50	270	270	1720	15.6		25.8		42.9		24.2		28.8	
Lead, Total	63	400	400	450	171		362		335		112		102	
Mercury, Total	0.18	0.81	0.81	0.73	0.195		0.159		0.388		0.064	J	0.086	
Nickel, Total	30	140	310	130	13		13.4		15.4		26.4		30.2	
Zinc, Total	109	2200	10000	2480	51		129		386		74.9		93.5	

SAMPLE ID:					SB-305 (2-2.5)		SB-309 (3-3.5)		SB-401 (0.5-1.0		SB-402 (0.5-1.0		SB-403 (1.0-1.5	
LAB ID:					L2361112-01		L2362230-01		L2511313-01		L2511313-02		L2511014-01	
COLLECTION DATE:					10/13/2023		10/19/2023		2/28/2025		2/28/2025		2/27/2025	
SAMPLE DEPTH (FT):					2.0-2.5		3.0-3.5		0.5-1.0		0.5-1.0		1.0-1.5	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PFAS (mg/kg)														
PFOS	0.00088	0.0088	0.044		0.00056		-	-					-	-
SVOCs (mg/kg)														
Benzo(a)anthracene	1	1	1	1	2.3		ND		ND		0.054	J	ND	
Benzo(a)pyrene	1	1	1	22	2.2		ND		ND		ND		ND	
Benzo(b)fluoranthene	1	1	1	1.7	2.8		ND		ND		0.069	J	ND	
Benzo(k)fluoranthene	0.8	1	3.9	1.7	0.92		ND		ND		ND		ND	
Chrysene	1	1	3.9	1	2		ND		0.039	J	0.074	J	ND	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	0.29		ND		ND		ND		ND	
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	1.3		ND		ND		0.032	J	ND	
Pesticides (mg/kg)														
4,4'-DDE	0.0033	1.8	8.9	17	ND		ND						-	-
4,4'-DDT	0.0033	1.7	7.9	136	ND		ND						-	-
Metals (mg/kg)														
Copper, Total	50	270	270	1720	25.2		24.3		6.07		19.4		18.4	
Lead, Total	63	400	400	450	88.8		15.7		9.43		35.7		5.79	
Mercury, Total	0.18	0.81	0.81	0.73	0.168		ND		ND		ND		ND	
Nickel, Total	30	140	310	130	13.3		19.6		2.82	J	11.9		23.2	
Zinc, Total	109	2200	10000	2480	101		41.8		22.4		33.4		33.9	

SAMPLE ID:					B-404 (3.25-3.7		SB-405 (4.0-4.5		SB-406 (0.5-1.0		SB-407 (1.0-1.5		SB-408 (1.5-2.0	
LAB ID:					L2511313-03		L2511014-02		L2511014-03		L2511313-04		L2511313-05	
COLLECTION DATE:					2/28/2025		2/27/2025		2/27/2025		2/28/2025		2/28/2025	
SAMPLE DEPTH (FT):					3.25-3.75		4.0-4.5		0.5-1.0		1.0-1.5		1.5-2.0	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PFAS (mg/kg)														
PFOS	0.00088	0.0088	0.044				-	-	-	-				
SVOCs (mg/kg)														
Benzo(a)anthracene	1	1	1	1	0.038	J	0.034	J	ND		0.31		ND	
Benzo(a)pyrene	1	1	1	22	ND		ND		ND		0.32		ND	
Benzo(b)fluoranthene	1	1	1	1.7	0.046	J	0.032	J	ND		0.37		ND	
Benzo(k)fluoranthene	0.8	1	3.9	1.7	ND		ND		ND		0.14		ND	
Chrysene	1	1	3.9	1	0.036	J	0.03	J	ND		0.32		ND	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	ND		ND		ND		0.055	J	ND	
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	ND		ND		ND		0.2		ND	
Pesticides (mg/kg)														
4,4'-DDE	0.0033	1.8	8.9	17			-	-	-	-				
4,4'-DDT	0.0033	1.7	7.9	136			-	-	-	-				
Metals (mg/kg)														
Copper, Total	50	270	270	1720	14.9		13		16.4		24.2		98.4	
Lead, Total	63	400	400	450	3.07	J	5.53		8.73		150		1.28	J
Mercury, Total	0.18	0.81	0.81	0.73	ND		ND		ND		0.246		ND	
Nickel, Total	30	140	310	130	16.2		14		27.2		13		119	
Zinc, Total	109	2200	10000	2480	30.8		23		25.5		88.5		61.2	

SAMPLE ID:					SB-409 (1.5-2.0		SB-410 (2.0)-2.5	
LAB ID:					L2511014-04		L2511014-05	
COLLECTION DATE:					2/27/2025		2/27/2025	
SAMPLE DEPTH (FT):					1.5-2.0		2.0-2.5	
ANALYTE	USCO	RSCO	RRSCO	PGSCO	Conc	Q	Conc	Q
PFAS (mg/kg)								
PFOS	0.00088	0.0088	0.044		-	-	-	-
SVOCs (mg/kg)								
Benzo(a)anthracene	1	1	1	1	1		0.2	
Benzo(a)pyrene	1	1	1	22	1.1		0.22	
Benzo(b)fluoranthene	1	1	1	1.7	1.5		0.26	
Benzo(k)fluoranthene	0.8	1	3.9	1.7	0.48		0.094	J
Chrysene	1	1	3.9	1	1.1		0.19	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000	0.19		0.032	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2	0.78		0.14	J
Pesticides (mg/kg)								
4,4'-DDE	0.0033	1.8	8.9	17	-	-	-	-
4,4'-DDT	0.0033	1.7	7.9	136	-	-	-	-
Metals (mg/kg)								
Copper, Total	50	270	270	1720	31		21.6	
Lead, Total	63	400	400	450	385		166	
Mercury, Total	0.18	0.81	0.81	0.73	0.515		0.15	
Nickel, Total	30	140	310	130	22.5		16	
Zinc, Total	109	2200	10000	2480	228		89.2	

Notes
PFOS = Perfluorooctanesulfonic Acid
USCO: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
RSCO: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
RRSCO: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
PGSCO: New York NYCRR Part 375 Protection of Groundwater Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
Exceedance of USCO
Exceedance of RSCO
Exceedance of RRSCO
Exceedance of PGSCO
J = Estimated
ND = Not Detected
- = Not Tested

Groundwater

The complete groundwater analytical results are presented as **Table 2.4.** A summary table of the analytical results exceedances compared to NYSDEC AWQS is presented in **Table 2.5** below.

Table 2.5 Summary of Groundwater Exceedances

SAMPLE ID:		TW-2		MW-1		TW-202		TW-303		TW-401	
LAB ID:		L2242491-02		L2242491-03		L2305142-17		L2362532-01		L2511313-06	
COLLECTION DATE:		8/6/2022		8/6/2022		1/28/2023		10/20/2023		2/28/2025	
ANALYTE	NY-AWQS	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
VOCs (ug/l)											
Benzene	1	ND		ND		ND		1.3		ND	
Chloroform	7	ND		ND		ND		21		ND	
PFAS (ug/l)											
PFOS	0.0027	0.0105		0.014		0.0372		ND		0.057	
PFOA	0.0067	0.0128		0.0112		0.0161		ND		0.0161	
SVOCs (ug/l)											
Phenol	1	ND		ND		ND		1.7	J	ND	
SVOCs - SIM (ug/l)											
Benzo(a)anthracene	0.002	ND		0.11		0.03	J	0.02	J	0.04	J
Benzo(a)pyrene	0	ND		0.13		ND		0.03	J	0.03	J
Benzo(b)fluoranthene	0.002	ND		0.27		ND		0.04	J	0.05	J
Benzo(k)fluoranthene	0.002	ND		0.08	J	ND		0.02	J	ND	
Chrysene	0.002	ND		0.13		ND		0.02	J	0.04	J
Indeno(1,2,3-cd)pyrene	0.002	ND		0.2		ND		0.02	J	0.04	J
Metals (ug/l)											
Arsenic, Total	25	0.7		0.79		41.51		9.92		27.96	
Barium, Total	1000	197		163		11710		4302		4480	
Beryllium, Total	3	0.29	J	ND		14		3.98		12.04	
Cadmium, Total	5	ND		ND		6.58		4.53		5.91	
Chromium, Total	50	25.09		13.09		396.7		1083		213.5	
Copper, Total	200	24.94		8.07		597.5		876.8		876.6	
Iron, Total	300	18800		4960		165000		368000		129000	
Lead, Total	25	4.25		2.76		286.5		481.3		2508	
Magnesium, Total	35000	30700		46300		117000		77400		91100	
Manganese, Total	300	853.6		1127		88680		48620		22610	
Mercury, Total	0.7	ND		ND		0.49		3.04		4.36	
Nickel, Total	100	26.17		11.02		733.2		1334		226.8	
Selenium, Total	10	9.39		5.15		169		44.5		26.9	
Silver, Total	50	ND		ND		0.53		23.67		3.19	
Sodium, Total	20000	124000		124000		109000		60200		42300	
Thallium, Total	0.5	0.25	J	ND		2.47		1.63		3	

Notes
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards & Guidance Values Criteria per Standards & Guidance Values including all addenda through February 2023.
Exceedance of NY-AWQS
J = Estimated
ND = Not Detected
- = Not Tested
PFOS = Perfluorooctanesulfonic Acid
PFOA = Perfluorooctanoic Acid

Soil Vapor

A summary table of the analytical results is presented in **Table 2.6.** A summary table of the analytical results detections compared to the New York State Department of Health (NYSDOH) Decision Matrices is presented as **Table 2.7** below.

Table 2.7 Summary of Soil Vapor Detections

SAMPLE ID:													SV-2		AA-1		SV-202		SV-303		SV-302		AA-1	
LAB ID:													L2242461-02		L2242461-03		L2304933-02		L2514233-01		L2514233-02		L2514233-03	
COLLECTION DATE:													8/6/2022		8/6/2022		1/28/2023		3/12/2025		3/12/2025		3/12/2025	
SAMPLE MATRIX:													SOIL_VAPOR		AIR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		AIR	
ANALYTE	IAC-A	SSC-A	IAC-B	SSC-B	IAC-C	SSC-C	IAC-D	SSC-D	IAC-E	SSC-E	IAC-F	SSC-F	Conc	RL	Conc	RL	Conc	RL	Conc	RL	Conc	RL	Conc	RL
VOCs (ug/m3)																								
1,1-Dichloroethane													ND	0.81	ND	0.81	ND	1.93	0.9	0.81	ND	0.81	ND	0.81
1,2,4-Trimethylbenzene							2	60					7.82	0.98	ND	0.98	2.82	2.34	4.67	0.98	6.74	0.98	**2.4**	0.98
1,2-Dichloroethane													ND	0.81	ND	0.81	ND	1.93	ND	0.81	0.83	0.81	ND	0.81
1,3,5-Trimethylbenzene							2	60					8.6	0.98	ND	0.98	ND	2.34	1.17	0.98	2.31	0.98	ND	0.98
1,3-Butadiene													15.9	0.44	ND	0.44	ND	1.05	ND	0.44	ND	0.44	ND	0.44
1,4-Dioxane													ND	0.72	ND	0.72	ND	1.72	ND	0.72	3.6	0.72	ND	0.72
2,2,4-Trimethylpentane							2	60					ND	0.93	ND	0.93	ND	2.22	ND	0.93	1.97	0.93	ND	0.93
2-Butanone													101	1.47	ND	1.47	56.9	3.51	1.71	1.47	1.5	1.47	4.31	1.47
2-Hexanone													35	0.82	ND	0.82	ND	1.95	ND	0.82	ND	0.82	ND	0.82
4-Ethyltoluene													3.52	0.98	ND	0.98	ND	2.34	ND	0.98	1.35	0.98	ND	0.98
4-Methyl-2-pentanone													24.9	2.05	ND	2.05	ND	4.88	ND	2.05	ND	2.05	ND	2.05
Acetone													432	2.38	13.5	2.38	52	5.65	16.4	2.38	15.8	2.38	86.7	2.38
Benzene							2	60					23.7	0.64	ND	0.64	ND	1.52	1.09	0.64	5.18	0.64	1.09	0.64
Bromodichloromethane													ND	1.34	ND	1.34	ND	3.19	ND	1.34	1.47	1.34	ND	1.34
Carbon disulfide													51.4	0.62	ND	0.62	ND	1.48	1	0.62	13.8	0.62	ND	0.62
Carbon tetrachloride	0.2	6											ND	1.26	ND	1.26	ND	2.99	**29.5**	1.26	**7.67**	1.26	**0.52**	0.13
Chloroethane													3.64	0.53	ND	0.53	ND	1.26	ND	0.53	ND	0.53	ND	0.53
Chloroform													ND	0.98	ND	0.98	ND	2.32	24.8	0.98	31.6	0.98	ND	0.98
Chloromethane													8.78	0.41	1.44	0.41	ND	0.98	ND	0.41	0.78	0.41	1.27	0.41
cis-1,2-Dichloroethene	0.2	6											ND	0.79	ND	0.79	ND	1.89	**304**	0.79	ND	0.79	ND	0.08
Cyclohexane							2	60					13.7	0.69	ND	0.69	1.65	1.64	ND	0.69	1.64	0.69	ND	0.69
Dichlorodifluoromethane													2.76	0.99	2.46	0.99	ND	2.35	4.21	0.99	3.33	0.99	2.47	0.99
Ethanol													35	9.42	17.8	9.42	92.7	22.4	288	9.42	187	9.42	24.5	9.42
Ethyl Acetate													4.97	1.8	ND	1.8	17.8	4.29	2.81	1.8	2.16	1.8	ND	1.8
Ethylbenzene							2	60					7.12	0.87	ND	0.87	**405**	2.07	1.87	0.87	6.25	0.87	1.06	0.87
Heptane									6	200			14.8	0.82	ND	0.82	8.97	1.95	0.85	0.82	1.9	0.82	ND	0.82
Isopropanol													15.4	1.23	8.11	1.23	8.53	2.93	143	2.46	49.7	2.46	54.6	2.46
n-Hexane									6	200			20.2	0.71	ND	0.71	7.12	1.68	0.97	0.71	2.19	0.71	0.74	0.71
o-Xylene							2	60					9.43	0.87	ND	0.87	**337**	2.07	2.89	0.87	7.43	0.87	1.67	0.87
p/m-Xylene									6	200			22.4	1.74	ND	1.74	**1240**	4.14	6.12	1.74	20.9	1.74	3.64	1.74
Styrene													0.99	0.85	ND	0.85	ND	2.03	ND	0.85	ND	0.85	ND	0.85
Tertiary butyl Alcohol													63.4	1.52	ND	1.52	ND	3.61	ND	1.52	1.64	1.52	ND	1.52
Tetrachloroethene			3	100									7.26	1.36	ND	1.36	8.07	3.23	**411**	1.36	60.4	1.36	ND	0.14
Tetrahydrofuran													5.93	1.47	ND	1.47	ND	3.51	ND	1.47	ND	1.47	5.01	1.47
Toluene											10	300	21.2	0.75	3.92	0.75	65.6	1.79	8.71	0.75	31.4	0.75	2.56	0.75
trans-1,2-Dichloroethene													ND	0.79	ND	0.79	ND	1.89	61.1	0.79	ND	0.79	ND	0.79
Trichloroethene	0.2	6											ND	1.07	ND	1.07	ND	2.56	**404**	1.07	**16.9**	1.07	ND	0.11
Trichlorofluoromethane													2.47	1.12	1.36	1.12	ND	2.67	2.12	1.12	1.29	1.12	1.15	1.12
Vinyl chloride					0.2	6							0.66	0.51	ND	0.51	ND	1.22	ND	0.51	ND	0.51	ND	0.05

Notes

ug/m^3: Micrograms per cubic meter
Bold: Elevated Concentration
Action Required by NYSDOH Decision Matrix
NY-IAC-A: New York DOH Matrix A Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-B: New York DOH Matrix B Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-C: New York DOH Matrix C Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-D: New York DOH Matrix D Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-E: New York DOH Matrix E Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-F: New York DOH Matrix F Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-A: New York DOH Matrix A Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-B: New York DOH Matrix B Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-C: New York DOH Matrix C Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-D: New York DOH Matrix D Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-E: New York DOH Matrix E Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-F: New York DOH Matrix F Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.

Based on the results and due to the future residential use on the subject property, further investigation is required to try to further delineate the volume of soil, groundwater, and soil vapor that will require remediation to address the exceedances in soil, groundwater and soil vapor and to specific identify the source of the VOC soil vapor contamination.

2.4 GEOLOGIC SETTING

Regional surface topography slopes southeast. Based on the U.S. Geological Survey – 2019 Mount Vernon, New York, 7.5-minute Quadrangle map, the Property is approximately 90 feet above the North American Datum. Based on the Phase II investigation conducted by SESI, the stratigraphy of the Site, from the surface down, consists of historic fill. The historic fill materials were encountered to a maximum of 10 feet below ground surface (ft bgs). During the investigation, groundwater was encountered at depths ranging from 8 to 15 feet below grade.

2.5 HYDROGEOLOGIC SETTING

As per the USDA National Cooperative Soil Survey map for the area, the soils at the Subject Property are characterized as UoA (Urban Land outwash substratum) urban land which is surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material, till substratum, 0 to 3 percent slopes. During the investigation, groundwater was encountered at depths ranging from 8 to 15 feet below grade. Groundwater flow direction is expected to be in the southeast direction toward the Long Island Sound based on regional topography. Historic fill generally consisted of brown coarse to fine sand, and varying amounts of silt and gravel were observed. Debris within the historic fill layer included concrete and brick.

2.6 SUBSURFACE FEATURES

There are no known underground storage tanks or drywells at the Site.

2.7 SUMMARY OF ENVIRONMENTAL ASSESSMENT

Based on the investigations conducted to date, the primary contaminants of concern (COCs) are anticipated to be (PAHs, Metals, Phenol, pesticides and PFAS). COCs will be refined based on the RIR results.

Soil: (maximum concentrations).

- **PAHs:** benzo(a)anthrance (2.7 mg/kg), benzo(a)pyrene (3 mg/kg), benzo(b)fluoranthene (3.5 mg/kg), benzo(k)fluoranthene (1.2 mg/kg), chrysene (2.5 mg/kg), dibenzo(a,h)anthracene (0.46 mg/kg), and indeno(1,2,3-cd)pyrene (2.2 mg/kg)
- **Pesticides:** 4,4'-DDE (0.005 mg/kg) and 4,4'-DDT (0.012 mg/kg)
- **Metals:** Copper (98.4 mg/kg), lead (385 mg/kg), mercury (0.515 mg/kg), nickel (119 mg/kg) and zinc (386 mg/kg)

- **PFAS:** Perfluorooctanesulfonic acid (PFOS, 0.00105 mg/kg)

Groundwater: (maximum concentrations)

- **VOCs:** benzene (1.3 ug/L) and chloroform (21 ug/L)
- **PAHs:** benzo(a)anthracene (0.11 ug/L), benzo(a)pyrene (0.13 ug/L), benzo(b)fluoranthene (0.27 ug/L), benzo(k)fluoranthene (0.08 ug/), chrysene (0.13 ug/L), and indeno(1,2,3-cd)pyrene (0.2 ug/L)
- **Semi-volatile Organic Compounds (SVOCs):** phenol (1.7 ug/L)
- **PFAS:** PFOS (0.057 ug/L) and Perfluorooctanoic acid (PFOA, 0.0161 ug/L)
- **Metals:** arsenic (41.51 ug/L), barium (11,710 ug/L), beryllium (14 ug/L), cadmium (6.58 ug/L), chromium (1,083 ug/L), copper (876.8 ug/L), iron (368,000 ug/L), lead (2,508 ug/L), magnesium (117,000 ug/L), manganese (88,680 ug/L), mercury (4.36 ug/L), nickel (1,334 ug/L), selenium (169 ug/L), sodium (124,000 ug/L) and thallium (3 ug/L)

Soil Vapor:

- cis-1,2-Dichloroethene (cis-1,2-DCE) and Trichloroethene (TCE) were compounds detected above the lower limits of the soil vapor NYSDOH Matrices concentrations in one soil vapor sample. Additionally, a number of chlorinated solvent and petroleum hydrocarbon (PHC) compounds were detected in soil vapor across the Site.

3.0 FIELD REMEDIAL INVESTIGATION

Soil borings, soil vapor borings, and groundwater monitoring wells are proposed below based on the following rationale to complete the nature and extent delineation of contaminated soil, groundwater and soil vapor on the Site. The applicable standards criteria and guidance (SCGs) for the Site soil are the unrestricted use soil cleanup objectives (SCOs). The applicable criteria for sub-slab vapor are the NYSDOH Decision Matrices (May 2017). The applicable SCGs for the Site groundwater are the Groundwater Effluent Limitations Class GA standards (cf. Section 703.6) and the screening levels for PFOA and PFOS (NYSDEC Guidelines for Sampling and Analysis of PFAS, April 2023).

3.1 SOIL REMEDIAL INVESTIGATION

Surface soil samples are not being collected because the proposed redevelopment is anticipated to cover the entire site. If the anticipated future conditions change and existing soil is to remain exposed at the site, surface soil samples may need to be collected and analyzed.

In order to further evaluate the soils, 12 soil borings will be performed on the Site in an approximate (50)-foot grid pattern to evaluate and delineate soil contamination from historical operations, and other potential sources. In addition, waste characterization samples will be collected from the borings for disposal approval. The proposed soil boring locations are shown on **Figure 3.1.**

The borings will be advanced using direct-push or other drilling methods as needed. The borings will extend to a depth of 20 ft-bgs or until native material or bedrock is encountered. Soil samples will be at a minimum of one sample per 5-foot depth interval biased based on field screening that includes visual observations, PID readings and olfactory observations. Boring logs documenting soil classifications, PID readings, and visual observations will be provided in the final report.

Upon retrieval of the sampling barrel, the collected sample shall be placed in glass jars and labeled, stored on site (on ice in a cooler if necessary), and transmitted to the NYSDOH ELAP-certified testing laboratory. Chain-of-custody procedures will be practiced following Section 15, EPA-600/4-82-029, Handbook for Sampling and Sample Preservation of Water and Waste Waters. Soil samples for VOC analysis will be collected in Encore ® vials.

The drilling contractor will be responsible for obtaining accurate and representative samples, informing the geologist of changes in drilling pressure, keeping a separate general log of soils encountered and installing monitoring wells to levels directed by the supervising geologist following specifications further outlined in this protocol.

As many as 48 soil samples will be collected from the 12 boring locations and will be analyzed by a NYSDOH ELAP certified laboratory for TCL+30/TAL including VOCs by EPA Method 8260C, SVOCs by EPA Method 8270D, pesticides by EPA Method 8081B, PCBs by EPA Method 8082A, TAL metals by EPA Methods 6010C, 7471B, and 9012, the 41 PFASs compounds by EPA Method 1633, and 1-4,dioxane by EPA Method 8270. Category B deliverables will be requested on each sample chain of custody.

The proposed soil sample locations and the rationale for their locations are presented in **Table 3.1** below.

Table 3.1 – Proposed Soil Sample Locations

Soil Boring Name	Proposed Sample Depths	Boring Location Rationale	Analysis
RI-SB-01	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-02	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-03	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-04	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-05	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS

Soil Boring Name	Proposed Sample Depths	Boring Location Rationale	Analysis
RI-SB-06	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-07	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-08	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-09	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-10	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-11	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-SB-12	1 sample every 5 feet to a total depth of 20 ft bgs or until bedrock refusal	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS

[1] Notes: ft bgs - feet below ground surface

A geologist or engineer will be on site during the drilling operations to fully describe each soil sample, following the New York State Soil Description Procedure, and to retain representative portions of each sample.

A summary of the parameters to be tested, the analytical methods and the holding times for the samples is shown on **Table 3.2**.

Table 3.2 – Soil Analyses Summary

Parameter and Analytical Method	Holding Time
Volatile Organic Compounds (VOCs) – USEPA 8260C	14 days
SVOCs (BNAs) and 1,4-Dioxane – USEPA 8270D or E	14 days (until extraction, 40 days extracted)
Pesticides – USEPA 8081B	14 days (until extraction) 40 days (extracted)
PCBs – USEPA 8082A	None
Metals - Method 6010D, 7470A for mercury, and 9012B for cyanide	180 days Cyanide: 14 days
PFAS – USEPA 1633	28 days

Quality assurance/quality control (QA/QC) samples will be collected and analyzed as specified in the QAPP. The number of duplicate, spiked and blank samples analyzed will be collected at a frequency of one (1) duplicate for every 20 samples. The inclusion and frequency of analysis of field blanks will be on the order of one (1) per every 20 soil samples but not more than one (1) per day. Samples to be analyzed for volatile organic compounds will be accompanied by a field blank for all matrix types and trip blank for water matrices. SESI's field sampling procedures are described in the quality assurance project plan (QAPP) presented in **Appendix B.** The Sampling Plan for Emerging Contaminants is included as **Appendix C.**

3.2 GROUNDWATER REMEDIAL INVESTIGATION

To investigate the Site groundwater, a total of four (4) permanent groundwater monitoring wells will be installed as shown on **Figure 3.2**. The wells will be installed to a depth of approximately 15-20 feet bgs with a 10 foot screen, such that the groundwater table intersects the well screen. The groundwater table is anticipated to be between 8 and 15 feet below ground surface based on previous investigations. If bedrock is encountered before 15-20 ft bgs, the well depth will be determined based on the depth to bedrock and the observed groundwater table. Wells are anticipated to be installed only in the overburden. Well depths and screen placement will be evaluated based on observed groundwater table.

Each monitoring well will be constructed with two (2)-inch diameter well screens. The well screening will intersect the water table and extend to the bottom of the well boring. The annular space of each well will be filled with well sand to at least two (2) feet above the screening and will be sealed with hydrated bentonite or cement grout. Finally, each monitoring well will be completed with a flush-mount road-box or stickup as necessary. A typical boring and well construction log is provided in **Appendix D**.

The Groundwater RI will be conducted to achieve the following:

- delineate the nature and extent of AOC-specific contaminants in the Site groundwater;
- identify actual or potential impacts to sensitive receptors, e.g. surface water;
- determine whether a contaminant plume exists;
- gather sufficient data to determine groundwater flow direction and contour map and evaluate groundwater Remedial alternatives, including, as appropriate, monitored natural attenuation (MNA), and
- provide information on the background quality of the groundwater flowing into the Site.

All the wells will be surveyed for location and elevation. The survey data will be provided pursuant to the DER-10 requirements in an acceptable format (e.g., North America Datum 83 [NAD83]). The wells will be gauged for groundwater depth to determine the groundwater elevation. The Site-specific groundwater flow direction and gradient will be determined based on the latest elevation data and summarized in the Remedial Investigation Report (RIR). The proposed well locations are shown on **Figure 3.2**.

Two (2) rounds of sampling will be conducted from the newly installed wells, with the second round of sampling completed within one (1) month of the start of remedial work. The data will be analyzed to determine whether groundwater contamination exists, the magnitude and the extent of the potential contaminant plume. In addition to the analytical data, field measurements and chemical analyses will be conducted to characterize the impacted groundwater.

All the wells will be sampled for TCL+30/TAL metals, PFAS, and 1-4 dioxane. The VOCs will be analyzed by EPA Method 8260C, SVOCs by EPA Method 8270D, pesticides by EPA Method 8081B, PCBs by EPA Method 8082A, TAL metals by EPA Methods 6010C, 7471B, and 9012, PFAS compounds by EPA Method 1633, and 1-4 dioxane by EPA Method 8270 SIM. The QAPP, which describes all field sampling procedures, is included as **Appendix B**, and the Sampling

Plan for Emerging Contaminants is included as **Appendix C**. The proposed groundwater monitoring wells and the rationale for their locations are presented in **Table 3.2** below.

Table 3.2 – Proposed Groundwater Monitoring Wells

Well Name	Proposed Sample Depths	Well Location Rationale	Analysis
RI-MW-01	Center of Water Column feet below groundwater table	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-MW-02	10 feet below groundwater table	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-MW-03	10 feet below groundwater table	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS
RI-MW-04	10 feet below groundwater table	Horizontal / Vertical Delineation	TCL+30/TAL, 1,4-Dioxane, PFAS

All groundwater samples will be analyzed by a NYSDOH ELAP certified laboratory and Category B deliverables will be requested on each sample chain of custody. In addition, QA/QC samples will be collected and analyzed as specified in the QAPP. Specifically, the number of duplicate, spiked and blank samples analyzed will be a minimum of one (1) duplicate for every 20 samples. For the aqueous matrix field blanks will be collected at a frequency of one (1) per day. Samples to be analyzed for volatile organic compounds will be accompanied by a trip blank for each shipment and field blanks water matrix.

The wells will be sampled using the low flow technique, when possible. A flow rate of 100 ml to 250 ml per minute is used to purge the wells. Drawdown will not exceed 0.3 feet. At the initiation of low flow purging a water level is recorded as well as field parameters. Field parameters are then monitored every five minutes during low flow purging using a flow through cell. When three (3) consecutive measurements of pH differ by 0.1 units or less, with ORP within 10 mv or less, turbidity varies 10 percent or less, conductivity differs by 3 percent or less and dissolved oxygen by 10 percent or less, sampling may begin. Flow through cells are used so continuous real time readings are made. When the parameters stabilize the flow through cell is disconnected and sample bottles are filled directly from the tubing. If the parameters of a well do not stabilize in a timely manner, the groundwater sample will be collected after emptying three (3) well volumes from the well being sampled.

In addition to water samples collected from the monitoring wells, two types of "blanks" will be collected and submitted to the chemical laboratory for analyses. The blanks will consist of 40 ml VOA vials, as follows:

- A trip blank will be prepared before the sample bottles are sent by the laboratory. It consists of a sample of distilled, deionized water which accompanies the other sample bottles into the field and back to the laboratory. A trip blank will be included with each shipment of samples where sampling and analysis for TCL volatiles is planned (water matrix only). The trip blank will be analyzed for TCL VOCs as a measure of potential contamination from background sources and their effect on the results.
- In order to check for contaminant carryover when non-dedicated sampling equipment is used, a rinsate blank will be submitted to the laboratory. This blank will also be analyzed for TCL VOCs.

3.3 SOIL VAPOR INVESTIGATION

SESI will collect four (4) soil vapor samples from soil vapor points in the footprint of the proposed building. The proposed soil vapor point locations are shown on **Figure 3.3**. The purpose of the soil vapor points is to assess the potential for vapor intrusion into future buildings. All soil vapor points will be installed within two (2) feet below the proposed foundation elevation.

The soil gas samples will be collected in accordance with the procedures of the NYS Department of Health October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York as amended in May 2017 and February 2024. Specifically, the soil vapor probes will be advanced using direct push sampling equipment and samples will be collected by installing vapor implants. The soil vapor depth will be based on the final construction and development plan. A sacrificial vapor point connected to flexible tubing will be inserted into the borehole. The annular space of the borehole will be filled with sand and the surface will be sealed with bentonite to seal the surface. Prior to sampling the tubing system will be purged of ambient air with a low-flow pump.

The soil vapor samples will be collected into laboratory supplied one (1)-liter, stainless-steel, summa canisters. The summa canisters will be equipped with a manometer to verify the canister is under vacuum, and a flow controller set to a flow rate of <200 ml/min. 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 chain of custody protocols. The vapor samples will be sent to a certified laboratory for analysis of VOCs in accordance with EPA Method TO-15. In addition to the soil vapor, two (2) collocated indoor air samples will be placed in any existing building should demolition not proceed prior to this investigation and one (1) ambient air sample will be collected with a 1-liter summa canister set to a flow rate of <200 ml/min outside the building. The field sampling procedures are described in the QAPP, which is included as **Appendix B**.

As part of the vapor sampling, a tracer gas will be used to serve as a QA/QC device to verify the integrity of the soil vapor probe seal. Helium will be used as the tracer gas and a box will serve to keep it in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer 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 will be performed a second time to confirm the integrity of the probe seals.

Table 3.3 Proposed Soil Vapor Sample Locations

Soil Vapor/Indoor Air/Ambient Air Point Name	Sample Type	Proposed Sample Depths	Analysis
RI-SV-01	Soil Vapor	2 feet below grade	VOCs (TO-15)
RI-IA-01	Indoor Air	3 feet above grade	VOCs (TO-15)
RI-SV-02	Soil Vapor	2 feet below grade	VOCs (TO-15)
RI-IA-02	Indoor Air	3 feet above grade	VOCs (TO-15)
RI-SV-03	Soil Vapor	2 feet below grade	VOCs (TO-15)

Soil Vapor/Indoor Air/Ambient Air Point Name	Sample Type	Proposed Sample Depths	Analysis
RI-SV-04	Soil Vapor	2 feet below grade	VOCs (TO-15)
RI-AA-01	Ambient Air	3 feet above grade	VOCs (TO-15)

4.0 DECONTAMINATION AND IDW

Reusable equipment utilized for ground intrusive activities (i.e. borings and wells) will be decontaminated between each boring. Equipment utilized for sample collection (i.e. spoons, trowels) will be decontaminated between each sample unless disposable equipment is utilized. Appropriate decontamination areas will be established to support work being conducted in each area of the Site. PFAS free certified deionized water, supplied from the laboratory, will be used for the decontamination of the sampling tools if needed. Locally supplied water, if available, or water supplied by the driller in a tank will be used to decontaminate the equipment.

All investigative derived waste (IDW) of soil cuttings and purged groundwater will be containerized, sampled, and properly disposed of pursuant to DER-10 requirements. Disposable sampling equipment, including macro core liners, spoons, gloves, bags, paper towels, and PPE that contacts environmental media, will be double bagged and disposed of as municipal trash in a facility trash dumpster as non-hazardous refuse.

5.0 WASTE CHARACTERIZATION

Waste characterization will be completed in conjunction with the remedial investigation to obtain data for facility approvals. It is anticipated that twenty waste characterization samples will be collected, each from a five point composite, and analyzed for TCL+30/TAL, however, the exact quantity and parameters will be determined based on disposal facility requirements.

6.0 SURVEY

After the RI sampling scope is completed, a survey will be completed, which includes the locations and elevations of all the monitoring wells, soil borings, and soil vapor points.

7.0 HUMAN HEALTH EXPOSURE ASSESSMENT

A qualitative human health exposure assessment will be performed for the Site in accordance with the New York State Department of Health's Qualitative Human Health Exposure Assessment guidance document. Sampling data will be reviewed along with the physical conditions of the contaminant sources or physical hazards near the Site. Potential on-Site and off-Site exposures will be evaluated. The Exposure Assessment will describe the nature and size of the population exposed, or potentially exposed, to the contaminants that are present at, or migrating from the Site, and will characterize the exposure setting, identify exposure pathways and evaluate contaminant fate and transport.

Several objectives will be met by the exposure assessment. First, applicable Site information and characterization data for environmental media of concern will be evaluated. Applicable SCGs including Part 375 SCOs and CP-51 SCOs for soil, and AWQS for groundwater and surface water will be applied.

An assessment of current and future Site activities and Site use will be conducted in relation to potential human exposure. Next, potential exposure pathways will be identified, and each aspect of the potential exposure pathway will be evaluated. Soil and groundwater contamination will be addressed and the impact of remediation on future exposure scenarios will be analyzed.

8.0 FISH AND WILDLIFE IMPACT ANALYSIS

A Fish and Wildlife Impact Analysis (FWIA) Decision Key will be completed prior to the excavation work to determine if a FWIA is needed. Contaminant migration pathways and any fish and wildlife exposure pathways will be identified. As stated in the FWIA, "if no resources are associated with the site or if there is no potential for contaminant migration to the resources, then only the necessary information to support that conclusion should be provided."

If resources are identified, or migration pathways exist, a FWIA will be completed and submitted as part of the RI Report. The FWIA would include qualitative estimates of the following: 1) the routes, intensity, frequency, and duration of actual or potential exposures to chemicals; 2) the nature and size of the population exposed to the contaminants that are present at or migrating from the Site; 3) the exposure setting and possible exposure pathways; and 4) contaminant fate and transport.

9.0 GREEN REMEDIATION STRATEGIES (GRS)

Remedial Investigation: While there are only a limited number of GRS principles that can be incorporated during the investigation phase of the project, the engineering firm of record will be required to incorporate as many carbon reduction measures as possible by using mass transit where available to travel to and from the site or electrical vehicles if available and causing any vehicles on the site to be turned off and avoid idling. Waste reduction measures such as use of less disposal gloves and equipment will also be considered.

10.0 CLIMATE CHANGE SCREENING OR VULNERABILITY ASSESSMENT

The Site is entering the program at the investigation stage; therefore, a Climate Change Screening or Vulnerability Assessment is not required at this time. Further, this Site is not in a floodplain and is not located in the vicinity of a wetland; therefore, the requirements for a vulnerability assessment is not anticipated.

11.0 DUSR

Following the completion of the laboratory analysis program, a Data Usability Summary Report (DUSR) will be completed for the lab data and included as part of the RI Report. The DUSR will include available datasets from previous investigations, as well as data from this phase of Site characterization. The DUSR is carried out as specified in DER-10 to evaluate the quality control measures that were implemented during the field and laboratory analytical programs, with the objective of determining whether the reported analytical data are representative and usable for decision making. The DUSR will evaluate whether the data are technically defensible (i.e. were all analytical data requirements met and documented?). Data usability analysis reviews the Site data to determine whether they are adequate to draw conclusions regarding the nature and extent of contamination.

The items that will be reviewed as part of the DUSR will include the following:

- Completeness (number of samples collected and analyzed compared to plans)
- Chains of custody are complete and accurate
- Holding times
- Instrument calibration
- Relative percent difference between field duplicates
- Reasonableness of data (e.g. relationships between total and soluble analytes)
- Blank contamination

The DUSR will be conducted in accordance with guidelines provided under Appendix 2B of DER-10. The site-specific Quality Assurance Project Plan (QAPP) is included in **Appendix B**.

12.0 REMEDIAL INVESTIGATION REPORT (RIR)

Following the completion of the RI activities and the receipt of sample results, an RIR will be prepared. The RIR report will summarize the activities completed during the RIR including analytical results, well construction and sampling logs, waste characterization information for disposal purposes, conclusions from the FWIA if necessary, a Data Usability Summary Report (DUSR) and laboratory data packages. Scaled figures showing the sample locations and areas of contamination exceeding applicable standards will be prepared for soil, soil vapor, and groundwater. Sampling results will be summarized and discussed and the need for additional investigation and remediation will be evaluated. In addition, analytical summary tables will be prepared for soil, soil vapor, and groundwater compared to applicable standards.

The RIR will also include: 1) a summary of the site history and previous investigations, 2) a description of current site conditions, 3) the identification of exposure pathways via a Qualitative Human Health Exposure Assessment; an analysis of the results, 4) a description of the nature and extent of the contamination; and 5) a detailed conclusion with recommendations.

Analytical data collected during the Remedial Investigation and previous data used for the selection of the remedy will be submitted in the NYSDEC approved Electronic Data Deliverable (EDD) format. EDDs will be prepared using the DEC's Environmental Information Management System (EIMS) database software application EQuIS™ for submission.

13.0 QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance and Quality Control (QA/QC) is addressed in the Quality Assurance Project Plan (QAPP) included as **Appendix B**. The QAPP outlines procedures to be followed for sampling and analysis to ensure quality of the results. A DUSR will be prepared with the final reports to document the reliability of the sample results.

14.0 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) has been prepared and is included as **Appendix E**. All on-site personnel and visitors involved in the RI will be required to read and sign the HASP prior to entry of the Site.

15.0 COMMUNITY AIR MONITORING

A Community Air Monitoring Plan (CAMP) is provided as **Appendix F**, in accordance with DER-10 requirements for remedial investigation. The CAMP sets forth air monitoring procedures that will be utilized to measure airborne emissions during the RI, in order to minimize the release of contaminants to off-Site areas.

16.0 CITIZEN PARTICIPATION

Citizen participation activities will be performed throughout the RI process to involve and inform the public. The specific citizen participation activities to be performed will be outlined in the Citizen Participation Plan (CPP), included as **Appendix G**.

17.0 REMEDIAL INVESTIGATION SCHEDULE

The proposed remedial investigation schedule is presented on **Table 17.1** below.

Table 17.1: Proposed Remedial Investigation Schedule

Activity	Duration
Remedial Investigation with first round of RI groundwater samples	2 weeks
Prepare and Submit Draft RIR	2 months
Second Round of RI Groundwater Samples	2 weeks (2 months after first round)

Tables

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
VOLATILE ORGANICS BY EPA 5035																					
1,1,1,2-Tetrachloroethane	630-20-6				ND		0.00052	0.00014	ND		0.00054	0.00014	ND		0.00044	0.00012	ND		0.00056	0.00015	ND
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND		0.00052	0.00017	ND		0.00054	0.00018	ND		0.00044	0.00015	ND		0.00056	0.00019	ND
1,1,2,2-Tetrachloroethane	79-34-5				ND		0.00052	0.00017	ND		0.00054	0.00018	ND		0.00044	0.00015	ND		0.00056	0.00018	ND
1,1,2-Trichloroethane	79-00-5				ND		0.001	0.00028	ND		0.0011	0.00029	ND		0.00088	0.00024	ND		0.0011	0.0003	ND
1,1-Dichloroethane	75-34-3	19	26	0.27	ND		0.001	0.00015	ND		0.0011	0.00016	ND		0.00088	0.00013	ND		0.0011	0.00016	ND
1,1-Dichloroethene	75-35-4	100	100	0.33	ND		0.001	0.00024	ND		0.0011	0.00026	ND		0.00088	0.00021	ND		0.0011	0.00026	ND
1,1-Dichloropropene	563-58-6				ND		0.00052	0.00016	ND		0.00054	0.00017	ND		0.00044	0.00014	ND		0.00056	0.00018	ND
1,2,3-Trichlorobenzene	87-61-6				ND		0.0021	0.00033	ND		0.0022	0.00035	ND		0.0018	0.00028	ND		0.0022	0.00036	ND
1,2,3-Trichloropropane	96-18-4				ND		0.0021	0.00013	ND		0.0022	0.00014	ND		0.0018	0.00011	ND		0.0022	0.00014	ND
1,2,4,5-Tetramethylbenzene	95-93-2				ND		0.0021	0.0002	ND		0.0022	0.00021	ND		0.0018	0.00017	ND		0.0022	0.00021	ND
1,2,4-Trichlorobenzene	120-82-1				ND		0.0021	0.00028	ND		0.0022	0.00029	ND		0.0018	0.00024	ND		0.0022	0.0003	ND
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND		0.0021	0.00034	ND		0.0022	0.00036	ND		0.0018	0.00029	ND		0.0022	0.00037	ND
1,2-Dibromo-3-chloropropane	96-12-8				ND		0.0031	0.001	ND		0.0032	0.0011	ND		0.0026	0.00088	ND		0.0033	0.0011	ND
1,2-Dibromoethane	106-93-4				ND		0.001	0.00029	ND		0.0011	0.0003	ND		0.00088	0.00024	ND		0.0011	0.00031	ND
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND		0.0021	0.00015	ND		0.0022	0.00016	ND		0.0018	0.00013	ND		0.0022	0.00016	ND
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND		0.001	0.00026	ND		0.0011	0.00028	ND		0.00088	0.00023	ND		0.0011	0.00029	ND
1,2-Dichloroethene, Total	540-59-0				ND		0.001	0.00014	ND		0.0011	0.00015	ND		0.00088	0.00012	ND		0.0011	0.00015	ND
1,2-Dichloropropane	78-87-5				ND		0.001	0.00013	ND		0.0011	0.00014	ND		0.00088	0.00011	ND		0.0011	0.00014	ND
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND		0.0021	0.0002	ND		0.0022	0.00021	ND		0.0018	0.00017	ND		0.0022	0.00022	ND
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND		0.0021	0.00015	ND		0.0022	0.00016	ND		0.0018	0.00013	ND		0.0022	0.00016	ND
1,3-Dichloropropane	142-28-9				ND		0.0021	0.00017	ND		0.0022	0.00018	ND		0.0018	0.00015	ND		0.0022	0.00019	ND
1,3-Dichloropropene, Total	542-75-6				ND		0.00052	0.00016	ND		0.00054	0.00017	ND		0.00044	0.00014	ND		0.00056	0.00018	ND
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND		0.0021	0.00018	ND		0.0022	0.00018	ND		0.0018	0.00015	ND		0.0022	0.00019	ND
1,4-Dioxane	123-91-1	9.8	13	0.1	ND		0.082	0.036	ND		0.086	0.038	ND		0.07	0.031	ND		0.089	0.039	ND
2,2-Dichloropropane	594-20-7				ND		0.0021	0.00021	ND		0.0022	0.00022	ND		0.0018	0.00018	ND		0.0022	0.00022	ND
2-Butanone	78-93-3	100	100	0.12	ND		0.01	0.0023	ND		0.011	0.0024	ND		0.0088	0.002	ND		0.011	0.0025	ND
2-Hexanone	591-78-6				ND		0.01	0.0012	ND		0.011	0.0013	ND		0.0088	0.001	ND		0.011	0.0013	ND
4-Methyl-2-pentanone	108-10-1				ND		0.01	0.0013	ND		0.011	0.0014	ND		0.0088	0.0011	ND		0.011	0.0014	ND
Acetone	67-64-1	100	100	0.05	0.01		0.01	0.005	0.0069	J	0.011	0.0052	0.0094		0.0088	0.0042	0.007	J	0.011	0.0054	0.0065
Acrylonitrile	107-13-1				ND		0.0041	0.0012	ND		0.0043	0.0012	ND		0.0035	0.001	ND		0.0045	0.0013	ND
Benzene	71-43-2	2.9	4.8	0.06	ND		0.00052	0.00017	ND		0.00054	0.00018	ND		0.00044	0.00015	ND		0.00056	0.00018	ND
Bromobenzene	108-86-1				ND		0.0021	0.00015	ND		0.0022	0.00016	ND		0.0018	0.00013	ND		0.0022	0.00016	ND
Bromochloromethane	74-97-5				ND		0.0021	0.00021	ND		0.0022	0.00022	ND		0.0018	0.00018	ND		0.0022	0.00023	ND
Bromodichloromethane	75-27-4				ND		0.00052	0.00011	ND		0.00054	0.00012	ND		0.00044	0.0001	ND		0.00056	0.00012	ND
Bromoform	75-25-2				ND		0.0041	0.00025	ND		0.0043	0.00027	ND		0.0035	0.00022	ND		0.0045	0.00027	ND
Bromomethane	74-83-9				ND		0.0021	0.0006	ND		0.0022	0.00063	ND		0.0018	0.00051	ND		0.0022	0.00065	ND
Carbon disulfide	75-15-0				ND		0.01	0.0047	ND		0.011	0.0049	ND		0.0088	0.004	ND		0.011	0.0051	ND
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND		0.001	0.00024	ND		0.0011	0.00025	ND		0.00088	0.0002	ND		0.0011	0.00026	ND
Chlorobenzene	108-90-7	100	100	1.1	ND		0.00052	0.00013	ND		0.00054	0.00014	ND		0.00044	0.00011	ND		0.00056	0.00014	ND
Chloroethane	75-00-3				ND		0.0021	0.00046	ND		0.0022	0.00049	ND		0.0018	0.0004	ND		0.0022	0.0005	ND
Chloroform	67-66-3	10	49	0.37	ND		0.0015	0.00014	ND		0.0016	0.00015	ND		0.0013	0.00012	ND		0.0017	0.00016	ND
Chloromethane	74-87-3				ND		0.0041	0.00096	ND		0.0043	0.001	ND		0.0035	0.00082	ND		0.0045	0.001	ND
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND		0.001	0.00018	ND		0.0011	0.00019	ND		0.00088	0.00015	ND		0.0011	0.0002	ND
cis-1,3-Dichloropropene	10061-01-5				ND		0.00052	0.00016	ND		0.00054	0.00017	ND		0.00044	0.00014	ND		0.00056	0.00018	ND
Dibromochloromethane	124-48-1				ND		0.001	0.00014	ND		0.0011	0.00015	ND		0.00088	0.00012	ND		0.0011	0.00016	ND
Dibromomethane	74-95-3				ND		0.0021	0.00024	ND		0.0022	0.00026	ND		0.0018	0.00021	ND		0.0022	0.00026	ND
Dichlorodifluoromethane	75-71-8				ND		0.01	0.00094	ND		0.011	0.00099	ND		0.0088	0.00081	ND		0.011	0.001	ND
Ethyl ether	60-29-7				ND		0.0021	0.00035	ND		0.0022	0.00037	ND		0.0018	0.0003	ND		0.0022	0.00038	ND
Ethylbenzene	100-41-4	30	41	1	ND		0.001	0.00014	ND		0.0011	0.00015	ND		0.00088	0.00012	ND		0.0011	0.00016	ND

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Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
Hexachlorobutadiene	87-68-3				ND		0.0041	0.00017	ND		0.0043	0.00018	ND		0.0035	0.00015	ND		0.0045	0.00019	ND
Isopropylbenzene	98-82-8				ND		0.001	0.00011	ND		0.0011	0.00012	ND		0.00088	0.0001	ND		0.0011	0.00012	ND
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND		0.0021	0.00021	ND		0.0022	0.00022	ND		0.0018	0.00018	ND		0.0022	0.00022	ND
Methylene chloride	75-09-2	51	100	0.05	ND		0.0052	0.0024	ND		0.0054	0.0025	ND		0.0044	0.002	ND		0.0056	0.0026	ND
n-Butylbenzene	104-51-8	100	100	12	ND		0.001	0.00017	ND		0.0011	0.00018	ND		0.00088	0.00015	ND		0.0011	0.00019	ND
n-Propylbenzene	103-65-1	100	100	3.9	ND		0.001	0.00018	ND		0.0011	0.00018	ND		0.00088	0.00015	ND		0.0011	0.00019	ND
Naphthalene	91-20-3	100	100	12	ND		0.0041	0.00067	ND		0.0043	0.0007	ND		0.0035	0.00057	ND		0.0045	0.00072	ND
o-Chlorotoluene	95-49-8				ND		0.0021	0.0002	ND		0.0022	0.00021	ND		0.0018	0.00017	ND		0.0022	0.00021	ND
o-Xylene	95-47-6				ND		0.001	0.0003	ND		0.0011	0.00031	ND		0.00088	0.00026	ND		0.0011	0.00032	ND
p-Chlorotoluene	106-43-4				ND		0.0021	0.00011	ND		0.0022	0.00012	ND		0.0018	0.0001	ND		0.0022	0.00012	ND
p-Diethylbenzene	105-05-5				ND		0.0021	0.00018	ND		0.0022	0.00019	ND		0.0018	0.00016	ND		0.0022	0.0002	ND
p-Ethyltoluene	622-96-8				ND		0.0021	0.0004	ND		0.0022	0.00042	ND		0.0018	0.00034	ND		0.0022	0.00043	ND
p-Isopropyltoluene	99-87-6				ND		0.001	0.00011	ND		0.0011	0.00012	ND		0.00088	0.0001	ND		0.0011	0.00012	ND
p/m-Xylene	179601-23-1				ND		0.0021	0.00058	ND		0.0022	0.00061	ND		0.0018	0.00049	ND		0.0022	0.00062	ND
sec-Butylbenzene	135-98-8	100	100	11	ND		0.001	0.00015	ND		0.0011	0.00016	ND		0.00088	0.00013	ND		0.0011	0.00016	ND
Styrene	100-42-5				0.00064	J	0.001	0.0002	0.00069	J	0.0011	0.00021	0.00054	J	0.00088	0.00017	0.00069	J	0.0011	0.00022	0.0006
tert-Butylbenzene	98-06-6	100	100	5.9	ND		0.0021	0.00012	ND		0.0022	0.00013	ND		0.0018	0.0001	ND		0.0022	0.00013	ND
Tetrachloroethene	127-18-4	5.5	19	1.3	ND		0.00052	0.0002	ND		0.00054	0.00021	ND		0.00044	0.00017	ND		0.00056	0.00022	ND
Toluene	108-88-3	100	100	0.7	ND		0.001	0.00056	ND		0.0011	0.00059	ND		0.00088	0.00048	ND		0.0011	0.00061	ND
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND		0.0015	0.00014	ND		0.0016	0.00015	ND		0.0013	0.00012	ND		0.0017	0.00015	ND
trans-1,3-Dichloropropene	10061-02-6				ND		0.001	0.00028	ND		0.0011	0.0003	ND		0.00088	0.00024	ND		0.0011	0.0003	ND
trans-1,4-Dichloro-2-butene	110-57-6				ND		0.0052	0.0015	ND		0.0054	0.0015	ND		0.0044	0.0012	ND		0.0056	0.0016	ND
Trichloroethene	79-01-6	10	21	0.47	ND		0.00052	0.00014	ND		0.00054	0.00015	ND		0.00044	0.00012	ND		0.00056	0.00015	ND
Trichlorofluoromethane	75-69-4				ND		0.0041	0.00072	ND		0.0043	0.00075	ND		0.0035	0.00061	ND		0.0045	0.00078	ND
Vinyl acetate	108-05-4				ND		0.01	0.0022	ND		0.011	0.0023	ND		0.0088	0.0019	ND		0.011	0.0024	ND
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND		0.001	0.00034	ND		0.0011	0.00036	ND		0.00088	0.0003	ND		0.0011	0.00037	ND
Xylenes, Total	1330-20-7	100	100	0.26	ND		0.001	0.0003	ND		0.0011	0.00031	ND		0.00088	0.00026	ND		0.0011	0.00032	ND
Total VOCs					0.01064	-	-	-	0.00759	-	-	-	0.00994	-	-	-	0.00769	-	-	-	0.0071
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-		-	-	-		-	-	-		-	-	-		-	-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	NJ	0	0	0.00627	NJ	0	0	0.00533	NJ	0	0	0.00552	NJ	0	0	0.00524
No Tentatively Identified Compounds					-		-	-	-		-	-	-		-	-	-		-	-	-
Pentane	000109-66-0				-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					0.00305	J	0	0	0.00281	J	0	0	0.00223	J	0	0	0.0025	J	0	0	0.00224
Unknown Cycloalkane					-		-	-	-		-	-	-		-	-	-		-	-	-
Total TIC Compounds					0.00951	J	0	0	0.00908	J	0	0	0.00756	J	0	0	0.00802	J	0	0	0.00748
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-		-	-	-		-	-	-		-	-	-		-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-		-	-	-		-	-	-		-	-	-		-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-		-	-	-		-	-	-		-	-	-		-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-		-	-	-		-	-	-		-	-	-		-	-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
Perfluorohexanoic Acid (PFHxA)	307-24-4				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-		-	-	-		-	-	-		-	-	-		-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-		-	-	-		-	-	-		-	-	-		-	-	-
PFOA/PFOS, Total					-		-	-	-		-	-	-		-	-	-		-	-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND		0.000507	0.000291	-		-	-	-		-	-	-		-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND		0.000507	0.000182	-		-	-	-		-	-	-		-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND		0.000507	0.000086	-		-	-	-		-	-	-		-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND		0.000507	0.000204	-		-	-	-		-	-	-		-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND		0.000253	0.00004	-		-	-	-		-	-	-		-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND		0.000507	0.000023	-		-	-	-		-	-	-		-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND		0.000507	0.000155	-		-	-	-		-	-	-		-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND		0.000253	0.000068	-		-	-	-		-	-	-		-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND		0.000507	0.000071	-		-	-	-		-	-	-		-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND		0.000507	0.000138	-		-	-	-		-	-	-		-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND		0.000253	0.000046	-		-	-	-		-	-	-		-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND		0.000253	0.000061	-		-	-	-		-	-	-		-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND		0.000507	0.000053	-		-	-	-		-	-	-		-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND		0.000253	0.000076	-		-	-	-		-	-	-		-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND		0.000507	0.000099	-		-	-	-		-	-	-		-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND		0.000253	0.000132	-		-	-	-		-	-	-		-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND		0.000253	0.000043	-		-	-	-		-	-	-		-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND		0.000507	0.000047	-		-	-	-		-	-	-		-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND		0.000507	0.000055	-		-	-	-		-	-	-		-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND		0.000507	0.000207	-		-	-	-		-	-	-		-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND		0.000507	0.000047	-		-	-	-		-	-	-		-	-	-
PFOA/PFOS, Total					ND		0.000253	0.000043	-		-	-	-		-	-	-		-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND		0.18	0.018	ND		0.2	0.02	ND		0.18	0.018	ND		0.19	0.02	ND
1,2,4-Trichlorobenzene	120-82-1				ND		0.18	0.02	ND		0.2	0.022	ND		0.18	0.02	ND		0.19	0.022	ND
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND		0.18	0.032	ND		0.2	0.035	ND		0.18	0.032	ND		0.19	0.034	ND
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND		0.18	0.03	ND		0.2	0.034	ND		0.18	0.03	ND		0.19	0.032	ND
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND		0.18	0.031	ND		0.2	0.034	ND		0.18	0.031	ND		0.19	0.033	ND
1,4-Dioxane	123-91-1	9.8	13	0.1	ND		0.026	0.0082	ND		0.029	0.009	ND		0.026	0.0081	ND		0.028	0.0086	ND
2,4,5-Trichlorophenol	95-95-4				ND		0.18	0.034	ND		0.2	0.038	ND		0.18	0.034	ND		0.19	0.036	ND
2,4,6-Trichlorophenol	88-06-2				ND		0.11	0.034	ND		0.12	0.037	ND		0.1	0.033	ND		0.11	0.036	ND
2,4-Dichlorophenol	120-83-2				ND		0.16	0.028	ND		0.18	0.032	ND		0.16	0.028	ND		0.17	0.03	ND
2,4-Dimethylphenol	105-67-9				ND		0.18	0.058	ND		0.2	0.065	ND		0.18	0.058	ND		0.19	0.062	ND
2,4-Dinitrophenol	51-28-5				ND		0.85	0.082	ND		0.94	0.091	ND		0.85	0.082	ND		0.9	0.088	ND
2,4-Dinitrotoluene	121-14-2				ND		0.18	0.035	ND		0.2	0.039	ND		0.18	0.035	ND		0.19	0.038	ND
2,6-Dinitrotoluene	606-20-2				ND		0.18	0.03	ND		0.2	0.034	ND		0.18	0.03	ND		0.19	0.032	ND
2-Chloronaphthalene	91-58-7				ND		0.18	0.018	ND		0.2	0.019	ND		0.18	0.017	ND		0.19	0.019	ND
2-Chlorophenol	95-57-8				ND		0.18	0.021	ND		0.2	0.023	ND		0.18	0.021	ND		0.19	0.022	ND
2-Methylnaphthalene	91-57-6				ND		0.21	0.021	ND		0.24	0.024	ND		0.21	0.021	ND		0.22	0.023	ND
2-Methylphenol	95-48-7	100	100	0.33	ND		0.18	0.027	ND		0.2	0.03	ND		0.18	0.027	ND		0.19	0.029	ND

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
2-Nitroaniline	88-74-4				ND		0.18	0.034	ND		0.2	0.038	ND		0.18	0.034	ND		0.19	0.036	ND
2-Nitrophenol	88-75-5				ND		0.38	0.067	ND		0.42	0.074	ND		0.38	0.066	ND		0.41	0.071	ND
3,3'-Dichlorobenzidine	91-94-1				ND		0.18	0.047	ND		0.2	0.052	ND		0.18	0.047	ND		0.19	0.05	ND
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND		0.26	0.028	ND		0.28	0.031	ND		0.25	0.028	ND		0.27	0.029	ND
3-Nitroaniline	99-09-2				ND		0.18	0.033	ND		0.2	0.037	ND		0.18	0.033	ND		0.19	0.035	ND
4,6-Dinitro-o-cresol	534-52-1				ND		0.46	0.085	ND		0.51	0.094	ND		0.46	0.085	ND		0.49	0.09	ND
4-Bromophenyl phenyl ether	101-55-3				ND		0.18	0.027	ND		0.2	0.03	ND		0.18	0.027	ND		0.19	0.029	ND
4-Chloroaniline	106-47-8				ND		0.18	0.032	ND		0.2	0.036	ND		0.18	0.032	ND		0.19	0.034	ND
4-Chlorophenyl phenyl ether	7005-72-3				ND		0.18	0.019	ND		0.2	0.021	ND		0.18	0.019	ND		0.19	0.02	ND
4-Nitroaniline	100-01-6				ND		0.18	0.073	ND		0.2	0.081	ND		0.18	0.073	ND		0.19	0.078	ND
4-Nitrophenol	100-02-7				ND		0.25	0.072	ND		0.27	0.08	ND		0.25	0.072	ND		0.26	0.077	ND
Acenaphthene	83-32-9	100	100	20	ND		0.14	0.018	ND		0.16	0.02	ND		0.14	0.018	ND		0.15	0.019	ND
Acenaphthylene	208-96-8	100	100	100	ND		0.14	0.027	ND		0.16	0.03	ND		0.14	0.027	ND		0.15	0.029	ND
Acetophenone	98-86-2				ND		0.18	0.022	ND		0.2	0.024	ND		0.18	0.022	ND		0.19	0.023	ND
Anthracene	120-12-7	100	100	100	ND		0.11	0.034	ND		0.12	0.038	ND		0.1	0.034	ND		0.11	0.037	ND
Benzo(a)anthracene	56-55-3	1	1	1	ND		0.11	0.02	ND		0.12	0.022	ND		0.1	0.02	ND		0.11	0.021	ND
Benzo(a)pyrene	50-32-8	1	1	1	ND		0.14	0.043	ND		0.16	0.048	ND		0.14	0.043	ND		0.15	0.046	ND
Benzo(b)fluoranthene	205-99-2	1	1	1	ND		0.11	0.03	ND		0.12	0.033	ND		0.1	0.03	ND		0.11	0.032	ND
Benzo(ghi)perylene	191-24-2	100	100	100	ND		0.14	0.021	ND		0.16	0.023	ND		0.14	0.021	ND		0.15	0.022	ND
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND		0.11	0.028	ND		0.12	0.031	ND		0.1	0.028	ND		0.11	0.03	ND
Benzoic Acid	65-85-0				ND		0.57	0.18	ND		0.64	0.2	ND		0.57	0.18	ND		0.61	0.19	ND
Benzyl Alcohol	100-51-6				ND		0.18	0.054	ND		0.2	0.06	ND		0.18	0.054	ND		0.19	0.058	ND
Biphenyl	92-52-4				ND		0.4	0.023	ND		0.45	0.025	ND		0.4	0.023	ND		0.43	0.024	ND
Bis(2-chloroethoxy)methane	111-91-1				ND		0.19	0.018	ND		0.21	0.02	ND		0.19	0.018	ND		0.2	0.019	ND
Bis(2-chloroethyl)ether	111-44-4				ND		0.16	0.024	ND		0.18	0.026	ND		0.16	0.024	ND		0.17	0.025	ND
Bis(2-chloroisopropyl)ether	108-60-1				ND		0.21	0.03	ND		0.24	0.033	ND		0.21	0.03	ND		0.22	0.032	ND
Bis(2-ethylhexyl)phthalate	117-81-7				ND		0.18	0.061	ND		0.2	0.068	ND		0.18	0.061	ND		0.19	0.065	ND
Butyl benzyl phthalate	85-68-7				ND		0.18	0.045	ND		0.2	0.049	ND		0.18	0.044	ND		0.19	0.047	ND
Carbazole	86-74-8				ND		0.18	0.017	ND		0.2	0.019	ND		0.18	0.017	ND		0.19	0.018	ND
Chrysene	218-01-9	1	3.9	1	ND		0.11	0.018	ND		0.12	0.02	ND		0.1	0.018	ND		0.11	0.02	ND
Di-n-butylphthalate	84-74-2				ND		0.18	0.034	ND		0.2	0.037	ND		0.18	0.033	ND		0.19	0.036	ND
Di-n-octylphthalate	117-84-0				ND		0.18	0.06	ND		0.2	0.067	ND		0.18	0.06	ND		0.19	0.064	ND
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND		0.11	0.02	ND		0.12	0.023	ND		0.1	0.02	ND		0.11	0.022	ND
Dibenzofuran	132-64-9	14	59	7	ND		0.18	0.017	ND		0.2	0.018	ND		0.18	0.017	ND		0.19	0.018	ND
Diethyl phthalate	84-66-2				ND		0.18	0.016	ND		0.2	0.018	ND		0.18	0.016	ND		0.19	0.017	ND
Dimethyl phthalate	131-11-3				ND		0.18	0.037	ND		0.2	0.041	ND		0.18	0.037	ND		0.19	0.039	ND
Fluoranthene	206-44-0	100	100	100	ND		0.11	0.02	ND		0.12	0.022	ND		0.1	0.02	ND		0.11	0.022	ND
Fluorene	86-73-7	100	100	30	ND		0.18	0.017	ND		0.2	0.019	ND		0.18	0.017	ND		0.19	0.018	ND
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND		0.11	0.02	ND		0.12	0.022	ND		0.1	0.02	ND		0.11	0.021	ND
Hexachlorobutadiene	87-68-3				ND		0.18	0.026	ND		0.2	0.029	ND		0.18	0.026	ND		0.19	0.028	ND
Hexachlorocyclopentadiene	77-47-4				ND		0.51	0.16	ND		0.56	0.18	ND		0.5	0.16	ND		0.54	0.17	ND
Hexachloroethane	67-72-1				ND		0.14	0.029	ND		0.16	0.032	ND		0.14	0.028	ND		0.15	0.03	ND
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND		0.14	0.025	ND		0.16	0.027	ND		0.14	0.024	ND		0.15	0.026	ND
Isophorone	78-59-1				ND		0.16	0.023	ND		0.18	0.025	ND		0.16	0.023	ND		0.17	0.024	ND
n-Nitrosodi-n-propylamine	621-64-7				ND		0.18	0.027	ND		0.2	0.03	ND		0.18	0.027	ND		0.19	0.029	ND
Naphthalene	91-20-3	100	100	12	ND		0.18	0.022	ND		0.2	0.024	ND		0.18	0.021	ND		0.19	0.023	ND
NDPA/DPA	86-30-6				ND		0.14	0.02	ND		0.16	0.022	ND		0.14	0.02	ND		0.15	0.021	ND
Nitrobenzene	98-95-3				ND		0.16	0.026	ND		0.18	0.029	ND		0.16	0.026	ND		0.17	0.028	ND
p-Chloro-m-cresol	59-50-7				ND		0.18	0.026	ND		0.2	0.029	ND		0.18	0.026	ND		0.19	0.028	ND
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND		0.14	0.039	ND		0.16	0.043	ND		0.14	0.039	ND		0.15	0.041	ND
Phenanthrene	85-01-8	100	100	100	ND		0.11	0.022	ND		0.12	0.024	ND		0.1	0.021	ND		0.11	0.023	ND

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
Phenol	108-95-2	100	100	0.33	ND		0.18	0.027	ND		0.2	0.03	ND		0.18	0.027	ND		0.19	0.028	ND
Pyrene	129-00-0	100	100	100	ND		0.11	0.018	ND		0.12	0.019	ND		0.1	0.018	ND		0.11	0.019	ND
Total SVOCs					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND		0	0	ND		0	0	ND		0	0	ND		0	0	ND
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown Alcohol					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown PAH					-		-	-	-		-	-	-		-	-	-		-	-	-
Unknown Thiophene					-		-	-	-		-	-	-		-	-	-		-	-	-
Total TIC Compounds					-		-	-	-		-	-	-		-	-	-		-	-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND		0.0017	0.000605	ND		0.00188	0.000669	ND		0.00166	0.00059	ND		0.00176	0.000628	ND
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND		0.0017	0.000392	ND		0.00188	0.000434	ND		0.00166	0.000383	ND		0.00176	0.000408	ND
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND		0.0017	0.00136	ND		0.00188	0.00151	ND		0.00166	0.00133	ND		0.00176	0.00142	ND
Aldrin	309-00-2	0.019	0.097	0.005	ND		0.0017	0.000597	ND		0.00188	0.00066	ND		0.00166	0.000583	ND		0.00176	0.00062	ND
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND		0.000706	0.000201	ND		0.000781	0.000222	ND		0.00069	0.000196	ND		0.000734	0.000208	ND
Beta-BHC	319-85-7	0.072	0.36	0.036	ND		0.0017	0.000643	ND		0.00188	0.000711	ND		0.00166	0.000628	ND		0.00176	0.000668	ND
Chlordane	57-74-9				ND		0.0141	0.00562	ND		0.0156	0.00621	ND		0.0138	0.00548	ND		0.0147	0.00584	ND
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND		0.00212	0.00059	ND		0.00234	0.000653	ND		0.00207	0.000577	ND		0.0022	0.000614	ND
Delta-BHC	319-86-8	100	100	0.04	ND		0.0017	0.000332	ND		0.00188	0.000367	ND		0.00166	0.000324	ND		0.00176	0.000345	ND
Dieldrin	60-57-1	0.039	0.2	0.005	ND		0.00106	0.00053	ND		0.00117	0.000586	ND		0.00103	0.000517	ND		0.0011	0.000551	ND
Endosulfan I	959-98-8	4.8	24	2.4	ND		0.0017	0.0004	ND		0.00188	0.000443	ND		0.00166	0.000391	ND		0.00176	0.000416	ND
Endosulfan II	33213-65-9	4.8	24	2.4	ND		0.0017	0.000566	ND		0.00188	0.000626	ND		0.00166	0.000553	ND		0.00176	0.000589	ND
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND		0.000706	0.000336	ND		0.000781	0.000372	ND		0.00069	0.000328	ND		0.000734	0.00035	ND
Endrin	72-20-8	2.2	11	0.014	ND		0.000706	0.00029	ND		0.000781	0.00032	ND		0.00069	0.000283	ND		0.000734	0.000301	ND
Endrin aldehyde	7421-93-4				ND		0.00212	0.000742	ND		0.00234	0.00082	ND		0.00207	0.000724	ND		0.0022	0.000771	ND
Endrin ketone	53494-70-5				ND		0.0017	0.000436	ND		0.00188	0.000483	ND		0.00166	0.000426	ND		0.00176	0.000454	ND
Heptachlor	76-44-8	0.42	2.1	0.042	ND		0.000848	0.00038	ND		0.000938	0.00042	ND		0.000828	0.000371	ND		0.000881	0.000395	ND
Heptachlor epoxide	1024-57-3				ND		0.00318	0.000954	ND		0.00352	0.00105	ND		0.0031	0.000931	ND		0.0033	0.000991	ND
Lindane	58-89-9	0.28	1.3	0.1	ND		0.000706	0.000316	ND		0.000781	0.000349	ND		0.00069	0.000308	ND		0.000734	0.000328	ND
Methoxychlor	72-43-5				ND		0.00318	0.000989	ND		0.00352	0.00109	ND		0.0031	0.000966	ND		0.0033	0.00103	ND
Toxaphene	8001-35-2				ND		0.0318	0.0089	ND		0.0352	0.00984	ND		0.031	0.00869	ND		0.033	0.00925	ND
trans-Chlordane	5103-74-2				ND		0.00212	0.000559	ND		0.00234	0.000619	ND		0.00207	0.000546	ND		0.0022	0.000582	ND
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-1 (7.5-8.0)				SB-2 (5.5-6)				SB-3 (7.5-8)				SB-4 (6.5-7)				
				LAB ID:	L2242456-01				L2242456-02				L2242456-03				L2242456-04				
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022				8/6/2022				
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL				SOIL				SOIL				SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc
Aroclor 1016	12674-11-2	1	1	0.1	ND		0.0339	0.00301	ND		0.0375	0.00333	ND		0.0336	0.00298	ND		0.0367	0.00326	ND
Aroclor 1221	11104-28-2	1	1	0.1	ND		0.0339	0.0034	ND		0.0375	0.00376	ND		0.0336	0.00336	ND		0.0367	0.00368	ND
Aroclor 1232	11141-16-5	1	1	0.1	ND		0.0339	0.00718	ND		0.0375	0.00795	ND		0.0336	0.00711	ND		0.0367	0.00778	ND
Aroclor 1242	53469-21-9	1	1	0.1	ND		0.0339	0.00457	ND		0.0375	0.00506	ND		0.0336	0.00452	ND		0.0367	0.00494	ND
Aroclor 1248	12672-29-6	1	1	0.1	ND		0.0339	0.00508	ND		0.0375	0.00562	ND		0.0336	0.00503	ND		0.0367	0.0055	ND
Aroclor 1254	11097-69-1	1	1	0.1	ND		0.0339	0.00371	ND		0.0375	0.0041	ND		0.0336	0.00367	ND		0.0367	0.00401	ND
Aroclor 1260	11096-82-5	1	1	0.1	ND		0.0339	0.00626	ND		0.0375	0.00693	ND		0.0336	0.0062	ND		0.0367	0.00678	ND
Aroclor 1262	37324-23-5	1	1	0.1	ND		0.0339	0.0043	ND		0.0375	0.00476	ND		0.0336	0.00426	ND		0.0367	0.00466	ND
Aroclor 1268	11100-14-4	1	1	0.1	ND		0.0339	0.00351	ND		0.0375	0.00388	ND		0.0336	0.00348	ND		0.0367	0.0038	ND
PCBs, Total	1336-36-3	1	1	0.1	ND		0.0339	0.00301	ND		0.0375	0.00333	ND		0.0336	0.00298	ND		0.0367	0.00326	ND
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950		8.47	2.29	7700		9.36	2.53	7600		8.1	2.19	7910		8.99	2.43	9020
Antimony, Total	7440-36-0				ND		4.24	0.322	ND		4.68	0.356	ND		4.05	0.308	ND		4.5	0.342	ND
Arsenic, Total	7440-38-2	16	16	13	0.421	J	0.847	0.176	2.32		0.936	0.195	ND		0.81	0.168	2.05		0.899	0.187	0.559
Barium, Total	7440-39-3	350	400	350	49		0.847	0.147	45.6		0.936	0.163	63.9		0.81	0.141	45		0.899	0.156	58.7
Beryllium, Total	7440-41-7	14	72	7.2	0.258	J	0.424	0.028	0.345	J	0.468	0.031	0.272	J	0.405	0.027	0.378	J	0.45	0.03	0.331
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	J	0.847	0.083	0.107	J	0.936	0.092	0.124	J	0.81	0.079	0.097	J	0.899	0.088	0.101
Calcium, Total	7440-70-2				611		8.47	2.97	1180		9.36	3.28	390		8.1	2.83	1060		8.99	3.15	1170
Chromium, Total	7440-47-3				17.6		0.847	0.081	13.5		0.936	0.09	13.8		0.81	0.078	12.1		0.899	0.086	17.6
Cobalt, Total	7440-48-4				3.21		1.69	0.141	3.02		1.87	0.155	4.13		1.62	0.134	5.2		1.8	0.149	5.37
Copper, Total	7440-50-8	270	270	50	13.1		0.847	0.219	10.6		0.936	0.241	13.5		0.81	0.209	8.47		0.899	0.232	15.1
Iron, Total	7439-89-6				12400		4.24	0.765	10900		4.68	0.845	12800		4.05	0.731	11600		4.5	0.812	14800
Lead, Total	7439-92-1	400	400	63	3.05	J	4.24	0.227	30.5		4.68	0.251	2.57	J	4.05	0.217	6.31		4.5	0.241	3.66
Magnesium, Total	7439-95-4				2010		8.47	1.3	1940		9.36	1.44	2260		8.1	1.25	1990		8.99	1.38	2780
Manganese, Total	7439-96-5	2000	2000	1600	290		0.847	0.135	157		0.936	0.149	445		0.81	0.129	150		0.899	0.143	236
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND		0.069	0.045	0.17		0.075	0.049	ND		0.068	0.044	ND		0.077	0.05	ND
Nickel, Total	7440-02-0	140	310	30	11		2.12	0.205	8.74		2.34	0.226	11.8		2.02	0.196	7.75		2.25	0.218	12.9
Potassium, Total	7440-09-7				2380		212	12.2	661		234	13.5	2970		202	11.7	327		225	12.9	2060
Selenium, Total	7782-49-2	36	180	3.9	ND		1.69	0.219	ND		1.87	0.241	ND		1.62	0.209	ND		1.8	0.232	ND
Silver, Total	7440-22-4	36	180	2	ND		0.847	0.24	ND		0.936	0.265	ND		0.81	0.229	ND		0.899	0.254	ND
Sodium, Total	7440-23-5				141	J	169	2.67	215		187	2.95	99.8	J	162	2.55	146	J	180	2.83	413
Thallium, Total	7440-28-0				ND		1.69	0.267	ND		1.87	0.295	ND		1.62	0.255	ND		1.8	0.283	ND
Vanadium, Total	7440-62-2				17.8		0.847	0.172	16.2		0.936	0.19	16.9		0.81	0.164	16.1		0.899	0.182	22.1
Zinc, Total	7440-66-6	2200	10000	109	21.3		4.24	0.248	25.5		4.68	0.274	20.1		4.05	0.237	19.6		4.5	0.263	22.9
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND		1	0.22	0.64	J	1.1	0.23	ND		1	0.22	ND		1.1	0.23	ND
Solids, Total	NONE				93.5		0.1	NA	84.6		0.1	NA	93.9		0.1	NA	87.3		0.1	NA	90.6

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY EPA 5035																
1,1,1,2-Tetrachloroethane	630-20-6				ND		0.00049	0.00013	ND		0.00046	0.00012	ND		0.00055	0.00015
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND		0.00049	0.00016	ND		0.00046	0.00015	ND		0.00055	0.00018
1,1,2,2-Tetrachloroethane	79-34-5				ND		0.00049	0.00016	ND		0.00046	0.00015	ND		0.00055	0.00018
1,1,2-Trichloroethane	79-00-5				ND		0.00098	0.00026	ND		0.00092	0.00024	ND		0.0011	0.0003
1,1-Dichloroethane	75-34-3	19	26	0.27	ND		0.00098	0.00014	ND		0.00092	0.00013	ND		0.0011	0.00016
1,1-Dichloroethene	75-35-4	100	100	0.33	ND		0.00098	0.00023	ND		0.00092	0.00022	ND		0.0011	0.00026
1,1-Dichloropropene	563-58-6				ND		0.00049	0.00016	ND		0.00046	0.00015	ND		0.00055	0.00018
1,2,3-Trichlorobenzene	87-61-6				ND		0.002	0.00032	ND		0.0018	0.0003	ND		0.0022	0.00036
1,2,3-Trichloropropane	96-18-4				ND		0.002	0.00012	ND		0.0018	0.00012	ND		0.0022	0.00014
1,2,4,5-Tetramethylbenzene	95-93-2				ND		0.002	0.00019	ND		0.0018	0.00018	ND		0.0022	0.00021
1,2,4-Trichlorobenzene	120-82-1				ND		0.002	0.00027	ND		0.0018	0.00025	ND		0.0022	0.0003
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND		0.002	0.00033	ND		0.0018	0.00031	ND		0.0022	0.00037
1,2-Dibromo-3-chloropropane	96-12-8				ND		0.0029	0.00098	ND		0.0028	0.00092	ND		0.0033	0.0011
1,2-Dibromoethane	106-93-4				ND		0.00098	0.00027	ND		0.00092	0.00026	ND		0.0011	0.00031
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND		0.002	0.00014	ND		0.0018	0.00013	ND		0.0022	0.00016
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND		0.00098	0.00025	ND		0.00092	0.00024	ND		0.0011	0.00028
1,2-Dichloroethene, Total	540-59-0				ND		0.00098	0.00013	ND		0.00092	0.00012	ND		0.0011	0.00015
1,2-Dichloropropane	78-87-5				ND		0.00098	0.00012	ND		0.00092	0.00011	ND		0.0011	0.00014
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND		0.002	0.00019	ND		0.0018	0.00018	ND		0.0022	0.00021
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND		0.002	0.00014	ND		0.0018	0.00014	ND		0.0022	0.00016
1,3-Dichloropropane	142-28-9				ND		0.002	0.00016	ND		0.0018	0.00015	ND		0.0022	0.00018
1,3-Dichloropropene, Total	542-75-6				ND		0.00049	0.00015	ND		0.00046	0.00014	ND		0.00055	0.00017
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND		0.002	0.00017	ND		0.0018	0.00016	ND		0.0022	0.00019
1,4-Dioxane	123-91-1	9.8	13	0.1	ND		0.078	0.034	ND		0.074	0.032	ND		0.088	0.039
2,2-Dichloropropane	594-20-7				ND		0.002	0.0002	ND		0.0018	0.00018	ND		0.0022	0.00022
2-Butanone	78-93-3	100	100	0.12	ND		0.0098	0.0022	ND		0.0092	0.002	ND		0.011	0.0024
2-Hexanone	591-78-6				ND		0.0098	0.0012	ND		0.0092	0.0011	ND		0.011	0.0013
4-Methyl-2-pentanone	108-10-1				ND		0.0098	0.0012	ND		0.0092	0.0012	ND		0.011	0.0014
Acetone	67-64-1	100	100	0.05	0.01	J	0.0098	0.0047	0.0094		0.0092	0.0044	ND		0.011	0.0053
Acrylonitrile	107-13-1				ND		0.0039	0.0011	ND		0.0037	0.001	ND		0.0044	0.0013
Benzene	71-43-2	2.9	4.8	0.06	ND		0.00049	0.00016	ND		0.00046	0.00015	ND		0.00055	0.00018
Bromobenzene	108-86-1				ND		0.002	0.00014	ND		0.0018	0.00013	ND		0.0022	0.00016
Bromochloromethane	74-97-5				ND		0.002	0.0002	ND		0.0018	0.00019	ND		0.0022	0.00023
Bromodichloromethane	75-27-4				ND		0.00049	0.00011	ND		0.00046	0.0001	ND		0.00055	0.00012
Bromoform	75-25-2				ND		0.0039	0.00024	ND		0.0037	0.00023	ND		0.0044	0.00027
Bromomethane	74-83-9				ND		0.002	0.00057	ND		0.0018	0.00053	ND		0.0022	0.00064
Carbon disulfide	75-15-0				ND		0.0098	0.0045	ND		0.0092	0.0042	ND		0.011	0.005
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND		0.00098	0.00022	ND		0.00092	0.00021	ND		0.0011	0.00025
Chlorobenzene	108-90-7	100	100	1.1	ND		0.00049	0.00012	ND		0.00046	0.00012	ND		0.00055	0.00014
Chloroethane	75-00-3				ND		0.002	0.00044	ND		0.0018	0.00042	ND		0.0022	0.0005
Chloroform	67-66-3	10	49	0.37	ND		0.0015	0.00014	ND		0.0014	0.00013	ND		0.0016	0.00015
Chloromethane	74-87-3				ND		0.0039	0.00091	ND		0.0037	0.00086	ND		0.0044	0.001
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND		0.00098	0.00017	ND		0.00092	0.00016	ND		0.0011	0.00019
cis-1,3-Dichloropropene	10061-01-5				ND		0.00049	0.00015	ND		0.00046	0.00014	ND		0.00055	0.00017
Dibromochloromethane	124-48-1				ND		0.00098	0.00014	ND		0.00092	0.00013	ND		0.0011	0.00015
Dibromomethane	74-95-3				ND		0.002	0.00023	ND		0.0018	0.00022	ND		0.0022	0.00026
Dichlorodifluoromethane	75-71-8				ND		0.0098	0.0009	ND		0.0092	0.00084	ND		0.011	0.001
Ethyl ether	60-29-7				ND		0.002	0.00033	ND		0.0018	0.00031	ND		0.0022	0.00038
Ethylbenzene	100-41-4	30	41	1	ND		0.00098	0.00014	ND		0.00092	0.00013	ND		0.0011	0.00016

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND		0.0039	0.00016	ND		0.0037	0.00016	ND		0.0044	0.00019
Isopropylbenzene	98-82-8				ND		0.00098	0.00011	ND		0.00092	0.0001	ND		0.0011	0.00012
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND		0.002	0.0002	ND		0.0018	0.00018	ND		0.0022	0.00022
Methylene chloride	75-09-2	51	100	0.05	ND		0.0049	0.0022	ND		0.0046	0.0021	ND		0.0055	0.0025
n-Butylbenzene	104-51-8	100	100	12	ND		0.00098	0.00016	ND		0.00092	0.00015	ND		0.0011	0.00018
n-Propylbenzene	103-65-1	100	100	3.9	ND		0.00098	0.00017	ND		0.00092	0.00016	ND		0.0011	0.00019
Naphthalene	91-20-3	100	100	12	ND		0.0039	0.00064	ND		0.0037	0.0006	ND		0.0044	0.00072
o-Chlorotoluene	95-49-8				ND		0.002	0.00019	ND		0.0018	0.00018	ND		0.0022	0.00021
o-Xylene	95-47-6				ND		0.00098	0.00028	ND		0.00092	0.00027	ND		0.0011	0.00032
p-Chlorotoluene	106-43-4				ND		0.002	0.0001	ND		0.0018	0.0001	ND		0.0022	0.00012
p-Diethylbenzene	105-05-5				ND		0.002	0.00017	ND		0.0018	0.00016	ND		0.0022	0.0002
p-Ethyltoluene	622-96-8				ND		0.002	0.00038	ND		0.0018	0.00035	ND		0.0022	0.00042
p-Isopropyltoluene	99-87-6				ND		0.00098	0.00011	ND		0.00092	0.0001	ND		0.0011	0.00012
p/m-Xylene	179601-23-1				ND		0.002	0.00055	ND		0.0018	0.00051	ND		0.0022	0.00062
sec-Butylbenzene	135-98-8	100	100	11	ND		0.00098	0.00014	ND		0.00092	0.00013	ND		0.0011	0.00016
Styrene	100-42-5				0.00064	J	0.00098	0.00019	0.00056	J	0.00092	0.00018	ND		0.0011	0.00022
tert-Butylbenzene	98-06-6	100	100	5.9	ND		0.002	0.00012	ND		0.0018	0.00011	ND		0.0022	0.00013
Tetrachloroethene	127-18-4	5.5	19	1.3	ND		0.00049	0.00019	ND		0.00046	0.00018	ND		0.00055	0.00022
Toluene	108-88-3	100	100	0.7	ND		0.00098	0.00053	ND		0.00092	0.0005	ND		0.0011	0.0006
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND		0.0015	0.00013	ND		0.0014	0.00012	ND		0.0016	0.00015
trans-1,3-Dichloropropene	10061-02-6				ND		0.00098	0.00027	ND		0.00092	0.00025	ND		0.0011	0.0003
trans-1,4-Dichloro-2-butene	110-57-6				ND		0.0049	0.0014	ND		0.0046	0.0013	ND		0.0055	0.0016
Trichloroethene	79-01-6	10	21	0.47	ND		0.00049	0.00013	ND		0.00046	0.00012	ND		0.00055	0.00015
Trichlorofluoromethane	75-69-4				ND		0.0039	0.00068	ND		0.0037	0.00064	ND		0.0044	0.00077
Vinyl acetate	108-05-4				ND		0.0098	0.0021	ND		0.0092	0.002	ND		0.011	0.0024
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND		0.00098	0.00033	ND		0.00092	0.00031	ND		0.0011	0.00037
Xylenes, Total	1330-20-7	100	100	0.26	ND		0.00098	0.00028	ND		0.00092	0.00027	ND		0.0011	0.00032
Total VOCs					0.01064	-	-	-	0.00996	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																
Cyclopentane	000287-92-3				-		-	-	-		-	-	-		-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	NJ	0	0	0.00538	NJ	0	0	0.00642	NJ	0	0
No Tentatively Identified Compounds					-		-	-	-		-	-	-		-	-
Pentane	000109-66-0				-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					0.00305	J	0	0	0.00238	J	0	0	0.00294	J	0	0
Unknown Cycloalkane					-		-	-	-		-	-	-		-	-
Total TIC Compounds					0.00951	J	0	0	0.00776	J	0	0	0.00936	J	0	0
PERFLUORINATED ALKYL ACIDS BY EPA 1633																
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-		-	-	-		-	-	-		-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-		-	-	-		-	-	-		-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-		-	-	-		-	-	-		-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-		-	-	-		-	-	-		-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-		-	-	-		-	-	-		-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-		-	-	-		-	-	-		-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-		-	-	-		-	-	-		-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-		-	-	-		-	-	-		-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-		-	-	-		-	-	-		-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-		-	-	-		-	-	-		-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-		-	-	-		-	-	-		-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-		-	-	-		-	-	-		-	-
PFOA/PFOS, Total					-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND		-	-	-		-	-	-		-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND		-	-	-		-	-	-		-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND		-	-	-		-	-	-		-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND		-	-	-		-	-	-		-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND		-	-	-		-	-	-		-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND		-	-	-		-	-	-		-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND		-	-	-		-	-	-		-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND		-	-	-		-	-	-		-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND		-	-	-		-	-	-		-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND		-	-	-		-	-	-		-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND		-	-	-		-	-	-		-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND		-	-	-		-	-	-		-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND		-	-	-		-	-	-		-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND		-	-	-		-	-	-		-	-
PFOA/PFOS, Total					ND		-	-	-		-	-	-		-	-
SEMIVOLATILE ORGANICS BY GC/MS																
1,2,4,5-Tetrachlorobenzene	95-94-3				ND		0.18	0.019	ND		0.18	0.019	ND		0.2	0.021
1,2,4-Trichlorobenzene	120-82-1				ND		0.18	0.021	ND		0.18	0.02	ND		0.2	0.023
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND		0.18	0.033	ND		0.18	0.032	ND		0.2	0.036
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND		0.18	0.031	ND		0.18	0.031	ND		0.2	0.034
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND		0.18	0.032	ND		0.18	0.031	ND		0.2	0.035
1,4-Dioxane	123-91-1	9.8	13	0.1	ND		0.027	0.0084	ND		0.027	0.0083	ND		0.03	0.0092
2,4,5-Trichlorophenol	95-95-4				ND		0.18	0.035	ND		0.18	0.034	ND		0.2	0.038
2,4,6-Trichlorophenol	88-06-2				ND		0.11	0.034	ND		0.11	0.034	ND		0.12	0.038
2,4-Dichlorophenol	120-83-2				ND		0.16	0.029	ND		0.16	0.029	ND		0.18	0.032
2,4-Dimethylphenol	105-67-9				ND		0.18	0.06	ND		0.18	0.059	ND		0.2	0.066
2,4-Dinitrophenol	51-28-5				ND		0.87	0.085	ND		0.86	0.084	ND		0.96	0.093
2,4-Dinitrotoluene	121-14-2				ND		0.18	0.036	ND		0.18	0.036	ND		0.2	0.04
2,6-Dinitrotoluene	606-20-2				ND		0.18	0.031	ND		0.18	0.031	ND		0.2	0.034
2-Chloronaphthalene	91-58-7				ND		0.18	0.018	ND		0.18	0.018	ND		0.2	0.02
2-Chlorophenol	95-57-8				ND		0.18	0.021	ND		0.18	0.021	ND		0.2	0.024
2-Methylnaphthalene	91-57-6				ND		0.22	0.022	ND		0.22	0.022	ND		0.24	0.024
2-Methylphenol	95-48-7	100	100	0.33	ND		0.18	0.028	ND		0.18	0.028	ND		0.2	0.031

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Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND		0.18	0.035	ND		0.18	0.035	ND		0.2	0.039
2-Nitrophenol	88-75-5				ND		0.39	0.068	ND		0.39	0.068	ND		0.43	0.075
3,3'-Dichlorobenzidine	91-94-1				ND		0.18	0.048	ND		0.18	0.048	ND		0.2	0.053
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND		0.26	0.028	ND		0.26	0.028	ND		0.29	0.031
3-Nitroaniline	99-09-2				ND		0.18	0.034	ND		0.18	0.034	ND		0.2	0.038
4,6-Dinitro-o-cresol	534-52-1				ND		0.47	0.087	ND		0.47	0.086	ND		0.52	0.096
4-Bromophenyl phenyl ether	101-55-3				ND		0.18	0.028	ND		0.18	0.027	ND		0.2	0.031
4-Chloroaniline	106-47-8				ND		0.18	0.033	ND		0.18	0.033	ND		0.2	0.036
4-Chlorophenyl phenyl ether	7005-72-3				ND		0.18	0.019	ND		0.18	0.019	ND		0.2	0.021
4-Nitroaniline	100-01-6				ND		0.18	0.075	ND		0.18	0.074	ND		0.2	0.083
4-Nitrophenol	100-02-7				ND		0.25	0.074	ND		0.25	0.073	ND		0.28	0.082
Acenaphthene	83-32-9	100	100	20	ND		0.14	0.019	ND		0.14	0.019	ND		0.16	0.021
Acenaphthylene	208-96-8	100	100	100	ND		0.14	0.028	ND		0.14	0.028	ND		0.16	0.031
Acetophenone	98-86-2				ND		0.18	0.022	ND		0.18	0.022	ND		0.2	0.025
Anthracene	120-12-7	100	100	100	ND		0.11	0.035	ND		0.11	0.035	ND		0.12	0.039
Benzo(a)anthracene	56-55-3	1	1	1	ND		0.11	0.02	ND		0.11	0.02	ND		0.12	0.022
Benzo(a)pyrene	50-32-8	1	1	1	ND		0.14	0.044	ND		0.14	0.044	ND		0.16	0.049
Benzo(b)fluoranthene	205-99-2	1	1	1	ND		0.11	0.03	ND		0.11	0.03	ND		0.12	0.034
Benzo(ghi)perylene	191-24-2	100	100	100	ND		0.14	0.021	ND		0.14	0.021	ND		0.16	0.024
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND		0.11	0.029	ND		0.11	0.029	ND		0.12	0.032
Benzoic Acid	65-85-0				ND		0.59	0.18	ND		0.58	0.18	ND		0.65	0.2
Benzyl Alcohol	100-51-6				ND		0.18	0.056	ND		0.18	0.055	ND		0.2	0.061
Biphenyl	92-52-4				ND		0.41	0.024	ND		0.41	0.023	ND		0.46	0.026
Bis(2-chloroethoxy)methane	111-91-1				ND		0.2	0.018	ND		0.19	0.018	ND		0.22	0.02
Bis(2-chloroethyl)ether	111-44-4				ND		0.16	0.025	ND		0.16	0.024	ND		0.18	0.027
Bis(2-chloroisopropyl)ether	108-60-1				ND		0.22	0.031	ND		0.22	0.031	ND		0.24	0.034
Bis(2-ethylhexyl)phthalate	117-81-7				ND		0.18	0.063	ND		0.18	0.062	ND		0.2	0.069
Butyl benzyl phthalate	85-68-7				ND		0.18	0.046	ND		0.18	0.045	ND		0.2	0.05
Carbazole	86-74-8				ND		0.18	0.018	ND		0.18	0.017	ND		0.2	0.019
Chrysene	218-01-9	1	3.9	1	ND		0.11	0.019	ND		0.11	0.019	ND		0.12	0.021
Di-n-butylphthalate	84-74-2				ND		0.18	0.034	ND		0.18	0.034	ND		0.2	0.038
Di-n-octylphthalate	117-84-0				ND		0.18	0.062	ND		0.18	0.061	ND		0.2	0.068
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND		0.11	0.021	ND		0.11	0.021	ND		0.12	0.023
Dibenzofuran	132-64-9	14	59	7	ND		0.18	0.017	ND		0.18	0.017	ND		0.2	0.019
Diethyl phthalate	84-66-2				ND		0.18	0.017	ND		0.18	0.017	ND		0.2	0.018
Dimethyl phthalate	131-11-3				ND		0.18	0.038	ND		0.18	0.038	ND		0.2	0.042
Fluoranthene	206-44-0	100	100	100	ND		0.11	0.021	ND		0.11	0.021	ND		0.12	0.023
Fluorene	86-73-7	100	100	30	ND		0.18	0.018	ND		0.18	0.017	ND		0.2	0.019
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND		0.11	0.02	ND		0.11	0.02	ND		0.12	0.022
Hexachlorobutadiene	87-68-3				ND		0.18	0.026	ND		0.18	0.026	ND		0.2	0.029
Hexachlorocyclopentadiene	77-47-4				ND		0.52	0.16	ND		0.51	0.16	ND		0.57	0.18
Hexachloroethane	67-72-1				ND		0.14	0.029	ND		0.14	0.029	ND		0.16	0.032
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND		0.14	0.025	ND		0.14	0.025	ND		0.16	0.028
Isophorone	78-59-1				ND		0.16	0.024	ND		0.16	0.023	ND		0.18	0.026
n-Nitrosodi-n-propylamine	621-64-7				ND		0.18	0.028	ND		0.18	0.028	ND		0.2	0.031
Naphthalene	91-20-3	100	100	12	ND		0.18	0.022	ND		0.18	0.022	ND		0.2	0.024
NDPA/DPA	86-30-6				ND		0.14	0.021	ND		0.14	0.02	ND		0.16	0.023
Nitrobenzene	98-95-3				ND		0.16	0.027	ND		0.16	0.027	ND		0.18	0.03
p-Chloro-m-cresol	59-50-7				ND		0.18	0.027	ND		0.18	0.027	ND		0.2	0.03
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND		0.14	0.04	ND		0.14	0.04	ND		0.16	0.044
Phenanthrene	85-01-8	100	100	100	ND		0.11	0.022	ND		0.11	0.022	ND		0.12	0.024

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND		0.18	0.027	ND		0.18	0.027	ND		0.2	0.03
Pyrene	129-00-0	100	100	100	ND		0.11	0.018	ND		0.11	0.018	ND		0.12	0.02
Total SVOCs					-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																
No Tentatively Identified Compounds					ND		0	0	ND		0	0	ND		0	0
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown					-		-	-	-		-	-	-		-	-
Unknown Alcohol					-		-	-	-		-	-	-		-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-
Unknown Ketone					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown PAH					-		-	-	-		-	-	-		-	-
Unknown Thiophene					-		-	-	-		-	-	-		-	-
Total TIC Compounds					-		-	-	-		-	-	-		-	-
ORGANOCHLORINE PESTICIDES BY GC																
4,4'-DDD	72-54-8	2.6	13	0.0033	ND		0.00168	0.000599	ND		0.00163	0.000582	ND		0.00191	0.000681
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND		0.00168	0.000388	ND		0.00163	0.000378	ND		0.00191	0.000442
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND		0.00168	0.00135	ND		0.00163	0.00131	ND		0.00191	0.00154
Aldrin	309-00-2	0.019	0.097	0.005	ND		0.00168	0.000591	ND		0.00163	0.000575	ND		0.00191	0.000673
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND		0.000699	0.000199	ND		0.00068	0.000193	ND		0.000796	0.000226
Beta-BHC	319-85-7	0.072	0.36	0.036	ND		0.00168	0.000636	ND		0.00163	0.000619	ND		0.00191	0.000724
Chlordane	57-74-9				ND		0.014	0.00556	ND		0.0136	0.00541	ND		0.0159	0.00633
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND		0.0021	0.000585	ND		0.00204	0.000569	ND		0.00239	0.000665
Delta-BHC	319-86-8	100	100	0.04	ND		0.00168	0.000329	ND		0.00163	0.00032	ND		0.00191	0.000374
Dieldrin	60-57-1	0.039	0.2	0.005	ND		0.00105	0.000524	ND		0.00102	0.00051	ND		0.00119	0.000597
Endosulfan I	959-98-8	4.8	24	2.4	ND		0.00168	0.000396	ND		0.00163	0.000386	ND		0.00191	0.000451
Endosulfan II	33213-65-9	4.8	24	2.4	ND		0.00168	0.000561	ND		0.00163	0.000546	ND		0.00191	0.000638
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND		0.000699	0.000333	ND		0.00068	0.000324	ND		0.000796	0.000379
Endrin	72-20-8	2.2	11	0.014	ND		0.000699	0.000287	ND		0.00068	0.000279	ND		0.000796	0.000326
Endrin aldehyde	7421-93-4				ND		0.0021	0.000734	ND		0.00204	0.000714	ND		0.00239	0.000836
Endrin ketone	53494-70-5				ND		0.00168	0.000432	ND		0.00163	0.00042	ND		0.00191	0.000492
Heptachlor	76-44-8	0.42	2.1	0.042	ND		0.000839	0.000376	ND		0.000817	0.000366	ND		0.000955	0.000428
Heptachlor epoxide	1024-57-3				ND		0.00315	0.000944	ND		0.00306	0.000919	ND		0.00358	0.00107
Lindane	58-89-9	0.28	1.3	0.1	ND		0.000699	0.000313	ND		0.00068	0.000304	ND		0.000796	0.000356
Methoxychlor	72-43-5				ND		0.00315	0.000979	ND		0.00306	0.000953	ND		0.00358	0.00111
Toxaphene	8001-35-2				ND		0.0315	0.00881	ND		0.0306	0.00857	ND		0.0358	0.01
trans-Chlordane	5103-74-2				ND		0.0021	0.000554	ND		0.00204	0.000539	ND		0.00239	0.00063
POLYCHLORINATED BIPHENYLS BY GC																

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-5 (6.5-7)				SB-6 (8.0-8.5)				SB-7 (6.5-7)			
				LAB ID:	L2242456-05				L2242456-06				L2242456-07			
				COLLECTION DATE:	8/6/2022				8/6/2022				8/6/2022			
				SAMPLE DEPTH:												
				SAMPLE MATRIX:	SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES												
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND		0.035	0.0031	ND		0.035	0.0031	ND		0.0393	0.00349
Aroclor 1221	11104-28-2	1	1	0.1	ND		0.035	0.0035	ND		0.035	0.0035	ND		0.0393	0.00393
Aroclor 1232	11141-16-5	1	1	0.1	ND		0.035	0.00741	ND		0.035	0.00741	ND		0.0393	0.00832
Aroclor 1242	53469-21-9	1	1	0.1	ND		0.035	0.00471	ND		0.035	0.00471	ND		0.0393	0.00529
Aroclor 1248	12672-29-6	1	1	0.1	ND		0.035	0.00524	ND		0.035	0.00524	ND		0.0393	0.00589
Aroclor 1254	11097-69-1	1	1	0.1	ND		0.035	0.00383	ND		0.035	0.00382	ND		0.0393	0.0043
Aroclor 1260	11096-82-5	1	1	0.1	ND		0.035	0.00646	ND		0.035	0.00646	ND		0.0393	0.00726
Aroclor 1262	37324-23-5	1	1	0.1	ND		0.035	0.00444	ND		0.035	0.00444	ND		0.0393	0.00499
Aroclor 1268	11100-14-4	1	1	0.1	ND		0.035	0.00362	ND		0.035	0.00362	ND		0.0393	0.00407
PCBs, Total	1336-36-3	1	1	0.1	ND		0.035	0.0031	ND		0.035	0.0031	ND		0.0393	0.00349
TOTAL METALS																
Aluminum, Total	7429-90-5				8950		8.41	2.27	6250		8.45	2.28	11200		9.67	2.61
Antimony, Total	7440-36-0				ND		4.21	0.32	ND		4.23	0.321	ND		4.84	0.367
Arsenic, Total	7440-38-2	16	16	13	0.421	J	0.841	0.175	ND		0.845	0.176	6.41		0.967	0.201
Barium, Total	7440-39-3	350	400	350	49		0.841	0.146	65.8		0.845	0.147	109		0.967	0.168
Beryllium, Total	7440-41-7	14	72	7.2	0.258	J	0.421	0.028	0.197	J	0.423	0.028	0.669		0.484	0.032
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	J	0.841	0.082	0.111	J	0.845	0.083	0.126	J	0.967	0.095
Calcium, Total	7440-70-2				611		8.41	2.94	806		8.45	2.96	2210		9.67	3.38
Chromium, Total	7440-47-3				17.6		0.841	0.081	14.6		0.845	0.081	21.8		0.967	0.093
Cobalt, Total	7440-48-4				3.21		1.68	0.14	4.48		1.69	0.14	11.4		1.93	0.16
Copper, Total	7440-50-8	270	270	50	13.1		0.841	0.217	13		0.845	0.218	13.5		0.967	0.25
Iron, Total	7439-89-6				12400		4.21	0.76	12600		4.23	0.763	15200		4.84	0.873
Lead, Total	7439-92-1	400	400	63	3.05	J	4.21	0.225	2.26	J	4.23	0.226	11.8		4.84	0.259
Magnesium, Total	7439-95-4				2010		8.41	1.3	2350		8.45	1.3	2950		9.67	1.49
Manganese, Total	7439-96-5	2000	2000	1600	290		0.841	0.134	217		0.845	0.134	140		0.967	0.154
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND		0.072	0.047	ND		0.072	0.047	ND		0.078	0.051
Nickel, Total	7440-02-0	140	310	30	11		2.1	0.204	12.9		2.11	0.205	13.6		2.42	0.234
Potassium, Total	7440-09-7				2380		210	12.1	3360		211	12.2	650		242	13.9
Selenium, Total	7782-49-2	36	180	3.9	ND		1.68	0.217	ND		1.69	0.218	ND		1.93	0.25
Silver, Total	7440-22-4	36	180	2	ND		0.841	0.238	ND		0.845	0.239	ND		0.967	0.274
Sodium, Total	7440-23-5				141		168	2.65	158	J	169	2.66	902		193	3.05
Thallium, Total	7440-28-0				ND		1.68	0.265	ND		1.69	0.266	ND		1.93	0.305
Vanadium, Total	7440-62-2				17.8		0.841	0.171	17.7		0.845	0.172	29.5		0.967	0.196
Zinc, Total	7440-66-6	2200	10000	109	21.3		4.21	0.246	21.6		4.23	0.248	36.8		4.84	0.283
GENERAL CHEMISTRY																
Cyanide, Total	57-12-5	27	27	27	ND		1.1	0.23	ND		1	0.22	2.1		1.1	0.24
Solids, Total	NONE				93.5		0.1	NA	91.9		0.1	NA	82		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)				SB-11 (7-7.5)			
				LAB ID:	L2242456-08					L2242456-09				L2242456-10			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY EPA 5035																	
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00047	0.00012	ND		0.00049	0.00013	ND		0.00053	0.00014
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00047	0.00016	ND		0.00049	0.00016	ND		0.00053	0.00018
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00047	0.00016	ND		0.00049	0.00016	ND		0.00053	0.00018
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00094	0.00025	ND		0.00098	0.00026	ND		0.0011	0.00028
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00094	0.00014	ND		0.00098	0.00014	ND		0.0011	0.00015
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00094	0.00022	ND		0.00098	0.00023	ND		0.0011	0.00025
1,1-Dichloropropene	563-58-6				ND	ND		0.00047	0.00015	ND		0.00049	0.00016	ND		0.00053	0.00017
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0019	0.0003	ND		0.002	0.00031	ND		0.0021	0.00034
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0019	0.00012	ND		0.002	0.00012	ND		0.0021	0.00013
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0019	0.00018	ND		0.002	0.00019	ND		0.0021	0.0002
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0019	0.00026	ND		0.002	0.00027	ND		0.0021	0.00029
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0019	0.00031	ND		0.002	0.00033	ND		0.0021	0.00035
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0028	0.00094	ND		0.0029	0.00098	ND		0.0032	0.001
1,2-Dibromoethane	106-93-4				ND	ND		0.00094	0.00026	ND		0.00098	0.00027	ND		0.0011	0.0003
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0019	0.00014	ND		0.002	0.00014	ND		0.0021	0.00015
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00094	0.00024	ND		0.00098	0.00025	ND		0.0011	0.00027
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00094	0.00013	ND		0.00098	0.00013	ND		0.0011	0.00014
1,2-Dichloropropane	78-87-5				ND	ND		0.00094	0.00012	ND		0.00098	0.00012	ND		0.0011	0.00013
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0019	0.00018	ND		0.002	0.00019	ND		0.0021	0.0002
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0019	0.00014	ND		0.002	0.00014	ND		0.0021	0.00016
1,3-Dichloropropane	142-28-9				ND	ND		0.0019	0.00016	ND		0.002	0.00016	ND		0.0021	0.00018
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00047	0.00015	ND		0.00049	0.00015	ND		0.00053	0.00017
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0019	0.00016	ND		0.002	0.00017	ND		0.0021	0.00018
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.075	0.033	ND		0.078	0.034	ND		0.085	0.037
2,2-Dichloropropane	594-20-7				ND	ND		0.0019	0.00019	ND		0.002	0.0002	ND		0.0021	0.00021
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0094	0.0021	ND		0.0098	0.0022	ND		0.011	0.0024
2-Hexanone	591-78-6				ND	ND		0.0094	0.0011	ND		0.0098	0.0012	ND		0.011	0.0012
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0094	0.0012	ND		0.0098	0.0012	ND		0.011	0.0014
Acetone	67-64-1	100	100	0.05	0.01	0.0049	J	0.0094	0.0045	0.0058	J	0.0098	0.0047	ND		0.011	0.0051
Acrylonitrile	107-13-1				ND	ND		0.0038	0.0011	ND		0.0039	0.0011	ND		0.0042	0.0012
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00047	0.00016	ND		0.00049	0.00016	ND		0.00053	0.00018
Bromobenzene	108-86-1				ND	ND		0.0019	0.00014	ND		0.002	0.00014	ND		0.0021	0.00015
Bromochloromethane	74-97-5				ND	ND		0.0019	0.00019	ND		0.002	0.0002	ND		0.0021	0.00022
Bromodichloromethane	75-27-4				ND	ND		0.00047	0.0001	ND		0.00049	0.00011	ND		0.00053	0.00012
Bromoform	75-25-2				ND	ND		0.0038	0.00023	ND		0.0039	0.00024	ND		0.0042	0.00026
Bromomethane	74-83-9				ND	ND		0.0019	0.00055	ND		0.002	0.00057	ND		0.0021	0.00062
Carbon disulfide	75-15-0				ND	ND		0.0094	0.0043	ND		0.0098	0.0044	ND		0.011	0.0048
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00094	0.00022	ND		0.00098	0.00022	ND		0.0011	0.00024
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00047	0.00012	ND		0.00049	0.00012	ND		0.00053	0.00013
Chloroethane	75-00-3				ND	ND		0.0019	0.00042	ND		0.002	0.00044	ND		0.0021	0.00048
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0014	0.00013	ND		0.0015	0.00014	ND		0.0016	0.00015
Chloromethane	74-87-3				ND	ND		0.0038	0.00088	ND		0.0039	0.00091	ND		0.0042	0.00099
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00094	0.00016	ND		0.00098	0.00017	ND		0.0011	0.00018
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00047	0.00015	ND		0.00049	0.00015	ND		0.00053	0.00017
Dibromochloromethane	124-48-1				ND	ND		0.00094	0.00013	ND		0.00098	0.00014	ND		0.0011	0.00015
Dibromomethane	74-95-3				ND	ND		0.0019	0.00022	ND		0.002	0.00023	ND		0.0021	0.00025
Dichlorodifluoromethane	75-71-8				ND	ND		0.0094	0.00086	ND		0.0098	0.0009	ND		0.011	0.00097
Ethyl ether	60-29-7				ND	ND		0.0019	0.00032	ND		0.002	0.00033	ND		0.0021	0.00036
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00094	0.00013	ND		0.00098	0.00014	ND		0.0011	0.00015

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)					SB-11 (7-7.5)				
				LAB ID:	L2242456-08					L2242456-09					L2242456-10				
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
Hexachlorobutadiene	87-68-3				ND	ND		0.0038	0.00016	ND		0.0039	0.00016		ND		0.0042	0.00018	
Isopropylbenzene	98-82-8				ND	ND		0.00094	0.0001	ND		0.00098	0.00011		ND		0.0011	0.00012	
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0019	0.00019	ND		0.002	0.0002		ND		0.0021	0.00021	
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0047	0.0022	ND		0.0049	0.0022		ND		0.0053	0.0024	
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00094	0.00016	ND		0.00098	0.00016		ND		0.0011	0.00018	
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00094	0.00016	ND		0.00098	0.00017		ND		0.0011	0.00018	
Naphthalene	91-20-3	100	100	12	ND	ND		0.0038	0.00061	ND		0.0039	0.00064		ND		0.0042	0.00069	
o-Chlorotoluene	95-49-8				ND	ND		0.0019	0.00018	ND		0.002	0.00019		ND		0.0021	0.0002	
o-Xylene	95-47-6				ND	ND		0.00094	0.00027	ND		0.00098	0.00028		ND		0.0011	0.00031	
p-Chlorotoluene	106-43-4				ND	ND		0.0019	0.0001	ND		0.002	0.0001		ND		0.0021	0.00011	
p-Diethylbenzene	105-05-5				ND	ND		0.0019	0.00017	ND		0.002	0.00017		ND		0.0021	0.00019	
p-Ethyltoluene	622-96-8				ND	ND		0.0019	0.00036	ND		0.002	0.00038		ND		0.0021	0.00041	
p-Isopropyltoluene	99-87-6				ND	ND		0.00094	0.0001	ND		0.00098	0.00011		ND		0.0011	0.00012	
p/m-Xylene	179601-23-1				ND	ND		0.0019	0.00053	ND		0.002	0.00055		ND		0.0021	0.00059	
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00094	0.00014	ND		0.00098	0.00014		ND		0.0011	0.00015	
Styrene	100-42-5				0.00064	0.00058	J	0.00094	0.00018	0.0006	J	0.00098	0.00019		ND		0.0011	0.00021	
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0019	0.00011	ND		0.002	0.00012		ND		0.0021	0.00012	
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00047	0.00018	ND		0.00049	0.00019		ND		0.00053	0.00021	
Toluene	108-88-3	100	100	0.7	ND	ND		0.00094	0.00051	ND		0.00098	0.00053		ND		0.0011	0.00058	
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0014	0.00013	ND		0.0015	0.00013		ND		0.0016	0.00014	
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00094	0.00026	ND		0.00098	0.00027		ND		0.0011	0.00029	
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0047	0.0013	ND		0.0049	0.0014		ND		0.0053	0.0015	
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00047	0.00013	ND		0.00049	0.00013		ND		0.00053	0.00014	
Trichlorofluoromethane	75-69-4				ND	ND		0.0038	0.00065	ND		0.0039	0.00068		ND		0.0042	0.00074	
Vinyl acetate	108-05-4				ND	ND		0.0094	0.002	ND		0.0098	0.0021		ND		0.011	0.0023	
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00094	0.00031	ND		0.00098	0.00033		ND		0.0011	0.00036	
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00094	0.00027	ND		0.00098	0.00028		ND		0.0011	0.00031	
Total VOCs					0.01064	0.00548	-	-	-	0.0064	-	-	-		-	-	-	-	
VOLATILE ORGANICS BY EPA 5035-TIC																			
Cyclopentane	000287-92-3				-	-		-	-	-		-	-		-		-	-	
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	0.00538	NJ	0	0	0.00552	NJ	0	0		0.00564	NJ	0	0	
No Tentatively Identified Compounds					-	-		-	-	-		-	-		-		-	-	
Pentane	000109-66-0				-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		0.0027	J	0	0	
Unknown					-	-		-	-	-		-	-		0.00342	J	0	0	
Unknown					0.00305	0.00272	J	0	0	0.00251	J	0	0		-		-	-	
Unknown Cycloalkane					-	-		-	-	-		-	-		-		-	-	
Total TIC Compounds					0.00951	0.0081	J	0	0	0.00803	J	0	0		0.0118	J	0	0	
PERFLUORINATED ALKYL ACIDS BY EPA 1633																			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-		-	-	-		-	-		-		-	-	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-		-	-	-		-	-		-		-	-	
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-		-	-	-		-	-		-		-	-	
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-		-	-	-		-	-		-		-	-	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-		-	-	-		-	-		-		-	-	
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-		-	-	-		-	-		-		-	-	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-		-	-	-		-	-		-		-	-	
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-		-	-	-		-	-		-		-	-	
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-		-	-	-		-	-		-		-	-	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-		-	-	-		-	-		-		-	-	
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-		-	-	-		-	-		-		-	-	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-		-	-	-		-	-		-		-	-	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)					SB-11 (7-7.5)				
				LAB ID:	L2242456-08					L2242456-09					L2242456-10				
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-		-	-	-		-	-		-		-	-	
Perfluorononanoic Acid (PFNA)	375-95-1				-	-		-	-	-		-	-		-		-	-	
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-		-	-	-		-	-		-		-	-	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-		-	-	-		-	-		-		-	-	
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-		-	-	-		-	-		-		-	-	
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-		-	-	-		-	-		-		-	-	
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-		-	-	-		-	-		-		-	-	
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-		-	-	-		-	-		-		-	-	
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-		-	-	-		-	-		-		-	-	
PFOA/PFOS, Total					-	-		-	-	-		-	-		-		-	-	
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-		-	-	-		-	-		ND		0.000527	0.000302	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-		-	-	-		-	-		ND		0.000527	0.000189	
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-		-	-	-		-	-		ND		0.000527	0.000089	
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-		-	-	-		-	-		ND		0.000527	0.000212	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-		-	-	-		-	-		ND		0.000263	0.000041	
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-		-	-	-		-	-		ND		0.000527	0.000024	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-		-	-	-		-	-		ND		0.000527	0.000161	
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-		-	-	-		-	-		ND		0.000263	0.000071	
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-		-	-	-		-	-		ND		0.000527	0.000074	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-		-	-	-		-	-		ND		0.000527	0.000144	
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-		-	-	-		-	-		ND		0.000263	0.000048	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-		-	-	-		-	-		ND		0.000263	0.000064	
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-		-	-	-		-	-		ND		0.000527	0.000055	
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-		-	-	-		-	-		ND		0.000263	0.000079	
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-		-	-	-		-	-		ND		0.000527	0.000103	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-		-	-	-		-	-		ND		0.000263	0.000137	
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-		-	-	-		-	-		ND		0.000263	0.000044	
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-		-	-	-		-	-		ND		0.000527	0.000048	
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-		-	-	-		-	-		ND		0.000527	0.000057	
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-		-	-	-		-	-		ND		0.000527	0.000215	
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-		-	-	-		-	-		ND		0.000527	0.000049	
PFOA/PFOS, Total					ND	-		-	-	-		-	-		ND		0.000263	0.000044	
SEMIVOLATILE ORGANICS BY GC/MS																			
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.18	0.019	ND		0.19	0.02		ND		0.18	0.018	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.18	0.021	ND		0.19	0.022		ND		0.18	0.02	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.18	0.032	ND		0.19	0.034		ND		0.18	0.032	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.18	0.031	ND		0.19	0.033		ND		0.18	0.03	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.18	0.032	ND		0.19	0.033		ND		0.18	0.031	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.027	0.0083	ND		0.029	0.0088		ND		0.027	0.0082	
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.18	0.035	ND		0.19	0.037		ND		0.18	0.034	
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.11	0.034	ND		0.12	0.036		ND		0.11	0.034	
2,4-Dichlorophenol	120-83-2				ND	ND		0.16	0.029	ND		0.17	0.031		ND		0.16	0.028	
2,4-Dimethylphenol	105-67-9				ND	ND		0.18	0.06	ND		0.19	0.063		ND		0.18	0.059	
2,4-Dinitrophenol	51-28-5				ND	ND		0.87	0.084	ND		0.92	0.089		ND		0.85	0.083	
2,4-Dinitrotoluene	121-14-2				ND	ND		0.18	0.036	ND		0.19	0.038		ND		0.18	0.036	
2,6-Dinitrotoluene	606-20-2				ND	ND		0.18	0.031	ND		0.19	0.033		ND		0.18	0.03	
2-Chloronaphthalene	91-58-7				ND	ND		0.18	0.018	ND		0.19	0.019		ND		0.18	0.018	
2-Chlorophenol	95-57-8				ND	ND		0.18	0.021	ND		0.19	0.023		ND		0.18	0.021	
2-Methylnaphthalene	91-57-6				ND	ND		0.22	0.022	ND		0.23	0.023		ND		0.21	0.021	
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.18	0.028	ND		0.19	0.03		ND		0.18	0.028	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)					SB-11 (7-7.5)				
				LAB ID:	L2242456-08					L2242456-09					L2242456-10				
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
2-Nitroaniline	88-74-4				ND	ND		0.18	0.035	ND		0.19	0.037		ND		0.18	0.034	
2-Nitrophenol	88-75-5				ND	ND		0.39	0.068	ND		0.41	0.072		ND		0.38	0.067	
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.18	0.048	ND		0.19	0.051		ND		0.18	0.047	
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.26	0.028	ND		0.28	0.03		ND		0.26	0.028	
3-Nitroaniline	99-09-2				ND	ND		0.18	0.034	ND		0.19	0.036		ND		0.18	0.034	
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.47	0.087	ND		0.5	0.092		ND		0.46	0.085	
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.18	0.028	ND		0.19	0.029		ND		0.18	0.027	
4-Chloroaniline	106-47-8				ND	ND		0.18	0.033	ND		0.19	0.035		ND		0.18	0.032	
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.18	0.019	ND		0.19	0.02		ND		0.18	0.019	
4-Nitroaniline	100-01-6				ND	ND		0.18	0.075	ND		0.19	0.079		ND		0.18	0.074	
4-Nitrophenol	100-02-7				ND	ND		0.25	0.074	ND		0.27	0.078		ND		0.25	0.072	
Acenaphthene	83-32-9	100	100	20	ND	ND		0.14	0.019	ND		0.15	0.02		ND		0.14	0.018	
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.14	0.028	ND		0.15	0.03		ND		0.14	0.027	
Acetophenone	98-86-2				ND	ND		0.18	0.022	ND		0.19	0.024		ND		0.18	0.022	
Anthracene	120-12-7	100	100	100	ND	ND		0.11	0.035	ND		0.12	0.037		ND		0.11	0.035	
Benzo(a)anthracene	56-55-3	1	1	1	ND	ND		0.11	0.02	ND		0.12	0.022		ND		0.11	0.02	
Benzo(a)pyrene	50-32-8	1	1	1	ND	ND		0.14	0.044	ND		0.15	0.047		ND		0.14	0.043	
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	ND		0.11	0.03	ND		0.12	0.032		ND		0.11	0.03	
Benzo(ghi)perylene	191-24-2	100	100	100	ND	ND		0.14	0.021	ND		0.15	0.022		ND		0.14	0.021	
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	ND		0.11	0.029	ND		0.12	0.031		ND		0.11	0.028	
Benzoic Acid	65-85-0				ND	ND		0.59	0.18	ND		0.62	0.19		ND		0.58	0.18	
Benzyl Alcohol	100-51-6				ND	ND		0.18	0.055	ND		0.19	0.059		ND		0.18	0.054	
Biphenyl	92-52-4				ND	ND		0.41	0.024	ND		0.44	0.025		ND		0.4	0.023	
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.2	0.018	ND		0.21	0.019		ND		0.19	0.018	
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.16	0.024	ND		0.17	0.026		ND		0.16	0.024	
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.22	0.031	ND		0.23	0.033		ND		0.21	0.03	
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.18	0.063	ND		0.19	0.066		ND		0.18	0.061	
Butyl benzyl phthalate	85-68-7				ND	ND		0.18	0.046	ND		0.19	0.048		ND		0.18	0.045	
Carbazole	86-74-8				ND	ND		0.18	0.018	ND		0.19	0.019		ND		0.18	0.017	
Chrysene	218-01-9	1	3.9	1	ND	ND		0.11	0.019	ND		0.12	0.02		ND		0.11	0.018	
Di-n-butylphthalate	84-74-2				ND	ND		0.18	0.034	ND		0.19	0.036		ND		0.18	0.034	
Di-n-octylphthalate	117-84-0				ND	ND		0.18	0.062	ND		0.19	0.065		ND		0.18	0.06	
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	ND		0.11	0.021	ND		0.12	0.022		ND		0.11	0.02	
Dibenzofuran	132-64-9	14	59	7	ND	ND		0.18	0.017	ND		0.19	0.018		ND		0.18	0.017	
Diethyl phthalate	84-66-2				ND	ND		0.18	0.017	ND		0.19	0.018		ND		0.18	0.016	
Dimethyl phthalate	131-11-3				ND	ND		0.18	0.038	ND		0.19	0.04		ND		0.18	0.037	
Fluoranthene	206-44-0	100	100	100	ND	ND		0.11	0.021	ND		0.12	0.022		ND		0.11	0.02	
Fluorene	86-73-7	100	100	30	ND	ND		0.18	0.018	ND		0.19	0.019		ND		0.18	0.017	
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.11	0.02	ND		0.12	0.021		ND		0.11	0.02	
Hexachlorobutadiene	87-68-3				ND	ND		0.18	0.026	ND		0.19	0.028		ND		0.18	0.026	
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.52	0.16	ND		0.55	0.17		ND		0.51	0.16	
Hexachloroethane	67-72-1				ND	ND		0.14	0.029	ND		0.15	0.031		ND		0.14	0.029	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	ND		0.14	0.025	ND		0.15	0.027		ND		0.14	0.025	
Isophorone	78-59-1				ND	ND		0.16	0.024	ND		0.17	0.025		ND		0.16	0.023	
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.18	0.028	ND		0.19	0.03		ND		0.18	0.027	
Naphthalene	91-20-3	100	100	12	ND	ND		0.18	0.022	ND		0.19	0.023		ND		0.18	0.022	
NDPA/DPA	86-30-6				ND	ND		0.14	0.021	ND		0.15	0.022		ND		0.14	0.02	
Nitrobenzene	98-95-3				ND	ND		0.16	0.027	ND		0.17	0.028		ND		0.16	0.026	
p-Chloro-m-cresol	59-50-7				ND	ND		0.18	0.027	ND		0.19	0.028		ND		0.18	0.026	
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.14	0.04	ND		0.15	0.042		ND		0.14	0.039	
Phenanthrene	85-01-8	100	100	100	ND	ND		0.11	0.022	ND		0.12	0.023		ND		0.11	0.022	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)					SB-11 (7-7.5)				
				LAB ID:	L2242456-08					L2242456-09					L2242456-10				
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
Phenol	108-95-2	100	100	0.33	ND	ND		0.18	0.027	ND		0.19	0.029		ND		0.18	0.027	
Pyrene	129-00-0	100	100	100	ND	ND		0.11	0.018	ND		0.12	0.019		ND		0.11	0.018	
Total SVOCs					-	-	-	-	-	-	-	-	-		-	-	-	-	
SEMIVOLATILE ORGANICS BY GC/MS-TIC																			
No Tentatively Identified Compounds					ND	ND		0	0	ND		0	0		ND		0	0	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown					-	-		-	-	-		-	-		-		-	-	
Unknown Alcohol					-	-		-	-	-		-	-		-		-	-	
Unknown Ketone					-	-		-	-	-		-	-		-		-	-	
Unknown Ketone					-	-		-	-	-		-	-		-		-	-	
Unknown Ketone					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown PAH					-	-		-	-	-		-	-		-		-	-	
Unknown Thiophene					-	-		-	-	-		-	-		-		-	-	
Total TIC Compounds					-	-		-	-	-		-	-		-		-	-	
ORGANOCHLORINE PESTICIDES BY GC																			
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00167	0.000596	ND		0.00178	0.000633		ND		0.00166	0.000593	
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00167	0.000386	ND		0.00178	0.000411		ND		0.00166	0.000385	
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	ND		0.00167	0.00134	ND		0.00178	0.00143		ND		0.00166	0.00134	
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00167	0.000588	ND		0.00178	0.000625		ND		0.00166	0.000586	
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000696	0.000198	ND		0.00074	0.00021		ND		0.000693	0.000197	
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00167	0.000633	ND		0.00178	0.000673		ND		0.00166	0.000631	
Chlordane	57-74-9				ND	ND		0.0139	0.00553	ND		0.0148	0.00588		ND		0.0139	0.00551	
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00209	0.000582	ND		0.00222	0.000618		ND		0.00208	0.00058	
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00167	0.000327	ND		0.00178	0.000348		ND		0.00166	0.000326	
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00104	0.000522	ND		0.00111	0.000555		ND		0.00104	0.00052	
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00167	0.000395	ND		0.00178	0.000419		ND		0.00166	0.000393	
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00167	0.000558	ND		0.00178	0.000593		ND		0.00166	0.000556	
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000696	0.000331	ND		0.00074	0.000352		ND		0.000693	0.00033	
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000696	0.000285	ND		0.00074	0.000303		ND		0.000693	0.000284	
Endrin aldehyde	7421-93-4				ND	ND		0.00209	0.000731	ND		0.00222	0.000777		ND		0.00208	0.000728	
Endrin ketone	53494-70-5				ND	ND		0.00167	0.00043	ND		0.00178	0.000457		ND		0.00166	0.000428	
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000835	0.000374	ND		0.000888	0.000398		ND		0.000832	0.000373	
Heptachlor epoxide	1024-57-3				ND	ND		0.00313	0.00094	ND		0.00333	0.000999		ND		0.00312	0.000936	
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000696	0.000311	ND		0.00074	0.000331		ND		0.000693	0.00031	
Methoxychlor	72-43-5				ND	ND		0.00313	0.000974	ND		0.00333	0.00104		ND		0.00312	0.000971	
Toxaphene	8001-35-2				ND	ND		0.0313	0.00877	ND		0.0333	0.00932		ND		0.0312	0.00874	
trans-Chlordane	5103-74-2				ND	ND		0.00209	0.000551	ND		0.00222	0.000586		ND		0.00208	0.000549	
POLYCHLORINATED BIPHENYLS BY GC																			

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-9 (8-8.5)					SB-10 (4-4.5)				SB-11 (7-7.5)			
				LAB ID:	L2242456-08					L2242456-09				L2242456-10			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0353	0.00313	ND		0.038	0.00338	ND		0.036	0.00319
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0353	0.00353	ND		0.038	0.00381	ND		0.036	0.0036
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0353	0.00748	ND		0.038	0.00806	ND		0.036	0.00762
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0353	0.00475	ND		0.038	0.00513	ND		0.036	0.00485
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0353	0.00529	ND		0.038	0.0057	ND		0.036	0.00539
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0353	0.00386	ND		0.038	0.00416	ND		0.036	0.00393
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0353	0.00652	ND		0.038	0.00703	ND		0.036	0.00664
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0353	0.00448	ND		0.038	0.00483	ND		0.036	0.00457
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0353	0.00365	ND		0.038	0.00394	ND		0.036	0.00372
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0353	0.00313	ND		0.038	0.00338	ND		0.036	0.00319
TOTAL METALS																	
Aluminum, Total	7429-90-5				8950	4960		8.55	2.31	13600		8.82	2.38	7670		8.48	2.29
Antimony, Total	7440-36-0				ND	ND		4.27	0.325	ND		4.41	0.335	ND		4.24	0.322
Arsenic, Total	7440-38-2	16	16	13	0.421	0.234	J	0.855	0.178	0.409	J	0.882	0.183	ND		0.848	0.176
Barium, Total	7440-39-3	350	400	350	49	47.6		0.855	0.149	93.3		0.882	0.154	51.6		0.848	0.148
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.19	J	0.427	0.028	0.494		0.441	0.029	0.272	J	0.424	0.028
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	ND		0.855	0.084	0.105	J	0.882	0.086	0.087	J	0.848	0.083
Calcium, Total	7440-70-2				611	676		8.55	2.99	581		8.82	3.09	481		8.48	2.97
Chromium, Total	7440-47-3				17.6	14		0.855	0.082	19		0.882	0.085	11.3		0.848	0.081
Cobalt, Total	7440-48-4				3.21	3.86		1.71	0.142	5.61		1.76	0.146	3.4		1.7	0.141
Copper, Total	7440-50-8	270	270	50	13.1	9.9		0.855	0.22	21		0.882	0.228	11.4		0.848	0.219
Iron, Total	7439-89-6				12400	9470		4.27	0.772	16300		4.41	0.797	10700		4.24	0.766
Lead, Total	7439-92-1	400	400	63	3.05	2.11	J	4.27	0.229	4.71		4.41	0.236	2.62	J	4.24	0.227
Magnesium, Total	7439-95-4				2010	1880		8.55	1.32	2850		8.82	1.36	1580		8.48	1.31
Manganese, Total	7439-96-5	2000	2000	1600	290	154		0.855	0.136	465		0.882	0.14	351		0.848	0.135
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	ND		0.075	0.049	ND		0.08	0.052	ND		0.079	0.051
Nickel, Total	7440-02-0	140	310	30	11	11		2.14	0.207	14.1		2.2	0.213	11.1		2.12	0.205
Potassium, Total	7440-09-7				2380	2550		214	12.3	3130		220	12.7	1930		212	12.2
Selenium, Total	7782-49-2	36	180	3.9	ND	ND		1.71	0.22	ND		1.76	0.228	ND		1.7	0.219
Silver, Total	7440-22-4	36	180	2	ND	ND		0.855	0.242	ND		0.882	0.25	ND		0.848	0.24
Sodium, Total	7440-23-5				141	103	J	171	2.69	314		176	2.78	239		170	2.67
Thallium, Total	7440-28-0				ND	ND		1.71	0.269	ND		1.76	0.278	ND		1.7	0.267
Vanadium, Total	7440-62-2				17.8	16.3		0.855	0.174	24.7		0.882	0.179	13.7		0.848	0.172
Zinc, Total	7440-66-6	2200	10000	109	21.3	15.7		4.27	0.25	24.4		4.41	0.258	14		4.24	0.248
GENERAL CHEMISTRY																	
Cyanide, Total	57-12-5	27	27	27	ND	ND		1	0.22	ND		1.1	0.23	ND		1	0.22
Solids, Total	NONE				93.5	91.1		0.1	NA	86.2		0.1	NA	92.4		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)					SB-13 (1-1.5)					SB-201 (4-4.5)				
				LAB ID:	L2242456-11					L2242456-12					L2242456-12 R1					L2305142-01				
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL		Conc	Q	RL	MDL	
VOLATILE ORGANICS BY EPA 5035																								
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00055	0.00014	ND		0.00047	0.00012		-		-	-		ND		0.0004	0.0001	
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00055	0.00018	ND		0.00047	0.00016		-		-	-		ND		0.0004	0.00013	
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00055	0.00018	ND		0.00047	0.00016		-		-	-		ND		0.0004	0.00013	
1,1,2-Trichloroethane	79-00-5				ND	ND		0.0011	0.00029	ND		0.00094	0.00025		-		-	-		ND		0.0008	0.00021	
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.0011	0.00016	ND		0.00094	0.00014		-		-	-		ND		0.0008	0.00012	
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.0011	0.00026	ND		0.00094	0.00022		-		-	-		0.00065	J	0.0008	0.00019	
1,1-Dichloropropene	563-58-6				ND	ND		0.00055	0.00018	ND		0.00047	0.00015		-		-	-		ND		0.0004	0.00013	
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0022	0.00036	ND		0.0019	0.0003		-		-	-		ND		0.0016	0.00026	
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0022	0.00014	ND		0.0019	0.00012		-		-	-		ND		0.0016	0.0001	
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0022	0.00021	ND		0.0019	0.00018		-		-	-		ND		0.0016	0.00015	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0022	0.0003	ND		0.0019	0.00025		-		-	-		ND		0.0016	0.00022	
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0022	0.00037	ND		0.0019	0.00031		-		-	-		ND		0.0016	0.00027	
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0033	0.0011	ND		0.0028	0.00093		-		-	-		ND		0.0024	0.0008	
1,2-Dibromoethane	106-93-4				ND	ND		0.0011	0.00031	ND		0.00094	0.00026		-		-	-		ND		0.0008	0.00022	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0022	0.00016	ND		0.0019	0.00013		-		-	-		ND		0.0016	0.00011	
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.0011	0.00028	ND		0.00094	0.00024		-		-	-		ND		0.0008	0.0002	
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.0011	0.00015	ND		0.00094	0.00013		-		-	-		ND		0.0008	0.00011	
1,2-Dichloropropane	78-87-5				ND	ND		0.0011	0.00014	ND		0.00094	0.00012		-		-	-		ND		0.0008	0.0001	
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0022	0.00021	ND		0.0019	0.00018		-		-	-		ND		0.0016	0.00015	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0022	0.00016	ND		0.0019	0.00014		-		-	-		ND		0.0016	0.00012	
1,3-Dichloropropane	142-28-9				ND	ND		0.0022	0.00018	ND		0.0019	0.00016		-		-	-		ND		0.0016	0.00013	
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00055	0.00017	ND		0.00047	0.00015		-		-	-		ND		0.0004	0.00013	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0022	0.00019	ND		0.0019	0.00016		-		-	-		ND		0.0016	0.00014	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.088	0.039	ND		0.075	0.033		-		-	-		ND		0.064	0.028	
2,2-Dichloropropane	594-20-7				ND	ND		0.0022	0.00022	ND		0.0019	0.00019		-		-	-		ND		0.0016	0.00016	
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.011	0.0024	ND		0.0094	0.0021		-		-	-		ND		0.008	0.0018	
2-Hexanone	591-78-6				ND	ND		0.011	0.0013	ND		0.0094	0.0011		-		-	-		ND		0.008	0.00094	
4-Methyl-2-pentanone	108-10-1				ND	ND		0.011	0.0014	ND		0.0094	0.0012		-		-	-		ND		0.008	0.001	
Acetone	67-64-1	100	100	0.05	0.01	0.0096	J	0.011	0.0053	ND		0.0094	0.0045		-		-	-		ND		0.008	0.0038	
Acrylonitrile	107-13-1				ND	ND		0.0044	0.0013	ND		0.0037	0.0011		-		-	-		ND		0.0032	0.00092	
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00055	0.00018	ND		0.00047	0.00016		-		-	-		ND		0.0004	0.00013	
Bromobenzene	108-86-1				ND	ND		0.0022	0.00016	ND		0.0019	0.00014		-		-	-		ND		0.0016	0.00012	
Bromochloromethane	74-97-5				ND	ND		0.0022	0.00023	ND		0.0019	0.00019		-		-	-		ND		0.0016	0.00016	
Bromodichloromethane	75-27-4				ND	ND		0.00055	0.00012	ND		0.00047	0.0001		-		-	-		ND		0.0004	0.00009	
Bromoform	75-25-2				ND	ND		0.0044	0.00027	ND		0.0037	0.00023		-		-	-		ND		0.0032	0.0002	
Bromomethane	74-83-9				ND	ND		0.0022	0.00064	ND		0.0019	0.00054		-		-	-		ND		0.0016	0.00046	
Carbon disulfide	75-15-0				ND	ND		0.011	0.005	ND		0.0094	0.0043		-		-	-		ND		0.008	0.0036	
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.0011	0.00025	ND		0.00094	0.00022		-		-	-		ND		0.0008	0.00018	
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00055	0.00014	ND		0.00047	0.00012		-		-	-		ND		0.0004	0.0001	
Chloroethane	75-00-3				ND	ND		0.0022	0.0005	ND		0.0019	0.00042		-		-	-		ND		0.0016	0.00036	
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0016	0.00015	ND		0.0014	0.00013		-		-	-		ND		0.0012	0.00011	
Chloromethane	74-87-3				ND	ND		0.0044	0.001	ND		0.0037	0.00087		-		-	-		ND		0.0032	0.00074	
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.0011	0.00019	ND		0.00094	0.00016		-		-	-		ND		0.0008	0.00014	
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00055	0.00017	ND		0.00047	0.00015		-		-	-		ND		0.0004	0.00013	
Dibromochloromethane	124-48-1				ND	ND		0.0011	0.00015	ND		0.00094	0.00013		-		-	-		ND		0.0008	0.00011	
Dibromomethane	74-95-3				ND	ND		0.0022	0.00026	ND		0.0019	0.00022		-		-	-		ND		0.0016	0.00019	
Dichlorodifluoromethane	75-71-8				ND	ND		0.011	0.001	ND		0.0094	0.00086		-		-	-		ND		0.008	0.00073	
Ethyl ether	60-29-7				ND	ND		0.0022	0.00038	ND		0.0019	0.00032		-		-	-		ND		0.0016	0.00027	
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.0011	0.00016	ND		0.00094	0.00013		-		-	-		ND		0.0008	0.00011	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)				SB-13 (1-1.5)				SB-201 (4-4.5)			
				LAB ID:	L2242456-11					L2242456-12				L2242456-12 R1				L2305142-01			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0044	0.00019	ND		0.0037	0.00016	-		-	-	ND		0.0032	0.00013
Isopropylbenzene	98-82-8				ND	ND		0.0011	0.00012	ND		0.00094	0.0001	-		-	-	ND		0.0008	0.00009
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0022	0.00022	ND		0.0019	0.00019	-		-	-	ND		0.0016	0.00016
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0055	0.0025	ND		0.0047	0.0021	-		-	-	ND		0.004	0.0018
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.0011	0.00018	ND		0.00094	0.00016	-		-	-	ND		0.0008	0.00013
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.0011	0.00019	ND		0.00094	0.00016	-		-	-	ND		0.0008	0.00014
Naphthalene	91-20-3	100	100	12	ND	ND		0.0044	0.00072	ND		0.0037	0.00061	-		-	-	ND		0.0032	0.00052
o-Chlorotoluene	95-49-8				ND	ND		0.0022	0.00021	ND		0.0019	0.00018	-		-	-	ND		0.0016	0.00015
o-Xylene	95-47-6				ND	ND		0.0011	0.00032	ND		0.00094	0.00027	-		-	-	ND		0.0008	0.00023
p-Chlorotoluene	106-43-4				ND	ND		0.0022	0.00012	ND		0.0019	0.0001	-		-	-	ND		0.0016	0.00009
p-Diethylbenzene	105-05-5				ND	ND		0.0022	0.0002	ND		0.0019	0.00016	-		-	-	ND		0.0016	0.00014
p-Ethyltoluene	622-96-8				ND	ND		0.0022	0.00042	ND		0.0019	0.00036	-		-	-	ND		0.0016	0.00031
p-Isopropyltoluene	99-87-6				ND	ND		0.0011	0.00012	ND		0.00094	0.0001	-		-	-	ND		0.0008	0.00009
p/m-Xylene	179601-23-1				ND	ND		0.0022	0.00062	ND		0.0019	0.00052	-		-	-	ND		0.0016	0.00045
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.0011	0.00016	ND		0.00094	0.00014	-		-	-	ND		0.0008	0.00012
Styrene	100-42-5				0.00064	ND		0.0011	0.00022	ND		0.00094	0.00018	-		-	-	ND		0.0008	0.00016
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0022	0.00013	ND		0.0019	0.00011	-		-	-	ND		0.0016	0.00009
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	0.00074		0.00055	0.00022	ND		0.00047	0.00018	-		-	-	ND		0.0004	0.00016
Toluene	108-88-3	100	100	0.7	ND	ND		0.0011	0.0006	ND		0.00094	0.00051	-		-	-	ND		0.0008	0.00043
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0016	0.00015	ND		0.0014	0.00013	-		-	-	ND		0.0012	0.00011
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.0011	0.0003	ND		0.00094	0.00026	-		-	-	ND		0.0008	0.00022
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0055	0.0016	ND		0.0047	0.0013	-		-	-	ND		0.004	0.0011
Trichloroethene	79-01-6	10	21	0.47	ND	0.00047	J	0.00055	0.00015	ND		0.00047	0.00013	-		-	-	ND		0.0004	0.00011
Trichlorofluoromethane	75-69-4				ND	ND		0.0044	0.00077	ND		0.0037	0.00065	-		-	-	ND		0.0032	0.00055
Vinyl acetate	108-05-4				ND	ND		0.011	0.0024	ND		0.0094	0.002	-		-	-	ND		0.008	0.0017
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.0011	0.00037	ND		0.00094	0.00031	-		-	-	ND		0.0008	0.00027
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.0011	0.00032	ND		0.00094	0.00027	-		-	-	ND		0.0008	0.00023
Total VOCs					0.01064	0.01081	-	-	-	-	-	-	-	-	-	-	-	0.00065	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	0.00577	NJ	0	0	0.00483	NJ	0	0	-		-	-	-		-	-
No Tentatively Identified Compounds					-	-		-	-	-		-	-	-		-	-	ND		0	0
Pentane	000109-66-0				-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					0.00305	0.00261	J	0	0	0.00215	J	0	0	-		-	-	-		-	-
Unknown Cycloalkane					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					0.00951	0.00838	J	0	0	0.00698	J	0	0	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-		-	-	-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-		-	-	-		-	-	-		-	-	-		-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)				SB-13 (1-1.5)				SB-201 (4-4.5)			
				LAB ID:	L2242456-11					L2242456-12				L2242456-12 R1				L2305142-01			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
PFOA/PFOS, Total					-	-		-	-	-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	-		-	-	ND		0.18	0.019	ND		0.18	0.019	ND		0.19	0.02
1,2,4-Trichlorobenzene	120-82-1				ND	-		-	-	ND		0.18	0.021	ND		0.18	0.021	ND		0.19	0.022
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	-		-	-	ND		0.18	0.033	ND		0.18	0.033	ND		0.19	0.035
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	-		-	-	ND		0.18	0.031	ND		0.18	0.031	ND		0.19	0.033
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	-		-	-	ND		0.18	0.032	ND		0.18	0.032	ND		0.19	0.034
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	-		-	-	ND		0.027	0.0084	ND		0.027	0.0084	ND		0.029	0.0089
2,4,5-Trichlorophenol	95-95-4				ND	-		-	-	ND		0.18	0.035	ND		0.18	0.035	ND		0.19	0.037
2,4,6-Trichlorophenol	88-06-2				ND	-		-	-	ND		0.11	0.034	ND		0.11	0.034	ND		0.12	0.037
2,4-Dichlorophenol	120-83-2				ND	-		-	-	ND		0.16	0.029	ND		0.16	0.029	ND		0.18	0.031
2,4-Dimethylphenol	105-67-9				ND	-		-	-	ND		0.18	0.06	ND		0.18	0.06	ND		0.19	0.064
2,4-Dinitrophenol	51-28-5				ND	-		-	-	ND		0.87	0.085	ND		0.87	0.085	ND		0.93	0.091
2,4-Dinitrotoluene	121-14-2				ND	-		-	-	ND		0.18	0.036	ND		0.18	0.036	ND		0.19	0.039
2,6-Dinitrotoluene	606-20-2				ND	-		-	-	ND		0.18	0.031	ND		0.18	0.031	ND		0.19	0.033
2-Chloronaphthalene	91-58-7				ND	-		-	-	ND		0.18	0.018	ND		0.18	0.018	ND		0.19	0.019
2-Chlorophenol	95-57-8				ND	-		-	-	ND		0.18	0.021	ND		0.18	0.021	ND		0.19	0.023
2-Methylnaphthalene	91-57-6				ND	-		-	-	ND		0.22	0.022	ND		0.22	0.022	ND		0.23	0.023
2-Methylphenol	95-48-7	100	100	0.33	ND	-		-	-	ND		0.18	0.028	ND		0.18	0.028	ND		0.19	0.03

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)				SB-13 (1-1.5)				SB-201 (4-4.5)			
				LAB ID:	L2242456-11					L2242456-12				L2242456-12 R1				L2305142-01			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	-		-	-	ND		0.18	0.035	ND		0.18	0.035	ND		0.19	0.038
2-Nitrophenol	88-75-5				ND	-		-	-	ND		0.39	0.068	ND		0.39	0.068	ND		0.42	0.073
3,3'-Dichlorobenzidine	91-94-1				ND	-		-	-	ND		0.18	0.048	ND		0.18	0.048	ND		0.19	0.052
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	-		-	-	ND		0.26	0.028	ND		0.26	0.028	ND		0.28	0.03
3-Nitroaniline	99-09-2				ND	-		-	-	ND		0.18	0.034	ND		0.18	0.034	ND		0.19	0.037
4,6-Dinitro-o-cresol	534-52-1				ND	-		-	-	ND		0.47	0.087	ND		0.47	0.087	ND		0.5	0.093
4-Bromophenyl phenyl ether	101-55-3				ND	-		-	-	ND		0.18	0.028	ND		0.18	0.028	ND		0.19	0.03
4-Chloroaniline	106-47-8				ND	-		-	-	ND		0.18	0.033	ND		0.18	0.033	ND		0.19	0.035
4-Chlorophenyl phenyl ether	7005-72-3				ND	-		-	-	ND		0.18	0.019	ND		0.18	0.019	ND		0.19	0.021
4-Nitroaniline	100-01-6				ND	-		-	-	ND		0.18	0.075	ND		0.18	0.075	ND		0.19	0.08
4-Nitrophenol	100-02-7				ND	-		-	-	ND		0.25	0.074	ND		0.25	0.074	ND		0.27	0.079
Acenaphthene	83-32-9	100	100	20	ND	-		-	-	ND		0.14	0.019	ND		0.14	0.019	ND		0.16	0.02
Acenaphthylene	208-96-8	100	100	100	ND	-		-	-	ND		0.14	0.028	ND		0.14	0.028	ND		0.16	0.03
Acetophenone	98-86-2				ND	-		-	-	ND		0.18	0.022	ND		0.18	0.022	ND		0.19	0.024
Anthracene	120-12-7	100	100	100	ND	-		-	-	ND		0.11	0.035	ND		0.11	0.035	ND		0.12	0.038
Benzo(a)anthracene	56-55-3	1	1	1	ND	-		-	-	ND		0.11	0.02	ND		0.11	0.02	0.097	J	0.12	0.022
Benzo(a)pyrene	50-32-8	1	1	1	ND	-		-	-	ND		0.14	0.044	ND		0.14	0.044	0.1	J	0.16	0.047
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	-		-	-	ND		0.11	0.031	ND		0.11	0.031	0.13		0.12	0.033
Benzo(ghi)perylene	191-24-2	100	100	100	ND	-		-	-	ND		0.14	0.021	ND		0.14	0.021	0.073	J	0.16	0.023
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	-		-	-	ND		0.11	0.029	ND		0.11	0.029	0.042	J	0.12	0.031
Benzoic Acid	65-85-0				ND	-		-	-	ND		0.59	0.18	ND		0.59	0.18	ND		0.63	0.2
Benzyl Alcohol	100-51-6				ND	-		-	-	ND		0.18	0.056	ND		0.18	0.056	ND		0.19	0.06
Biphenyl	92-52-4				ND	-		-	-	ND		0.41	0.024	ND		0.41	0.024	ND		0.44	0.025
Bis(2-chloroethoxy)methane	111-91-1				ND	-		-	-	ND		0.2	0.018	ND		0.2	0.018	ND		0.21	0.019
Bis(2-chloroethyl)ether	111-44-4				ND	-		-	-	ND		0.16	0.025	ND		0.16	0.025	ND		0.18	0.026
Bis(2-chloroisopropyl)ether	108-60-1				ND	-		-	-	ND		0.22	0.031	ND		0.22	0.031	ND		0.23	0.033
Bis(2-ethylhexyl)phthalate	117-81-7				ND	-		-	-	ND		0.18	0.063	0.063	J	0.18	0.063	ND		0.19	0.067
Butyl benzyl phthalate	85-68-7				ND	-		-	-	0.056	J	0.18	0.046	ND		0.18	0.046	ND		0.19	0.049
Carbazole	86-74-8				ND	-		-	-	ND		0.18	0.018	ND		0.18	0.018	ND		0.19	0.019
Chrysene	218-01-9	1	3.9	1	ND	-		-	-	ND		0.11	0.019	ND		0.11	0.019	0.084	J	0.12	0.02
Di-n-butylphthalate	84-74-2				ND	-		-	-	ND		0.18	0.034	ND		0.18	0.034	ND		0.19	0.037
Di-n-octylphthalate	117-84-0				ND	-		-	-	ND		0.18	0.062	ND		0.18	0.062	ND		0.19	0.066
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	-		-	-	ND		0.11	0.021	ND		0.11	0.021	ND		0.12	0.022
Dibenzofuran	132-64-9	14	59	7	ND	-		-	-	ND		0.18	0.017	ND		0.18	0.017	ND		0.19	0.018
Diethyl phthalate	84-66-2				ND	-		-	-	ND		0.18	0.017	ND		0.18	0.017	ND		0.19	0.018
Dimethyl phthalate	131-11-3				ND	-		-	-	ND		0.18	0.038	ND		0.18	0.038	ND		0.19	0.041
Fluoranthene	206-44-0	100	100	100	ND	-		-	-	ND		0.11	0.021	0.032	J	0.11	0.021	0.13		0.12	0.022
Fluorene	86-73-7	100	100	30	ND	-		-	-	ND		0.18	0.018	ND		0.18	0.018	ND		0.19	0.019
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	-		-	-	ND		0.11	0.02	ND		0.11	0.02	ND		0.12	0.022
Hexachlorobutadiene	87-68-3				ND	-		-	-	ND		0.18	0.027	ND		0.18	0.027	ND		0.19	0.028
Hexachlorocyclopentadiene	77-47-4				ND	-		-	-	ND		0.52	0.16	ND		0.52	0.16	ND		0.56	0.18
Hexachloroethane	67-72-1				ND	-		-	-	ND		0.14	0.029	ND		0.14	0.029	ND		0.16	0.031
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	-		-	-	ND		0.14	0.025	ND		0.14	0.025	0.083	J	0.16	0.027
Isophorone	78-59-1				ND	-		-	-	ND		0.16	0.024	ND		0.16	0.024	ND		0.18	0.025
n-Nitrosodi-n-propylamine	621-64-7				ND	-		-	-	ND		0.18	0.028	ND		0.18	0.028	ND		0.19	0.03
Naphthalene	91-20-3	100	100	12	ND	-		-	-	ND		0.18	0.022	ND		0.18	0.022	ND		0.19	0.024
NDPA/DPA	86-30-6				ND	-		-	-	ND		0.14	0.021	ND		0.14	0.021	ND		0.16	0.022
Nitrobenzene	98-95-3				ND	-		-	-	ND		0.16	0.027	ND		0.16	0.027	ND		0.18	0.029
p-Chloro-m-cresol	59-50-7				ND	-		-	-	ND		0.18	0.027	ND		0.18	0.027	ND		0.19	0.029
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	-		-	-	ND		0.14	0.04	ND		0.14	0.04	ND		0.16	0.043
Phenanthrene	85-01-8	100	100	100	ND	-		-	-	0.022	J	0.11	0.022	ND		0.11	0.022	ND		0.12	0.024

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)				SB-13 (1-1.5)				SB-201 (4-4.5)			
				LAB ID:	L2242456-11					L2242456-12				L2242456-12 R1				L2305142-01			
				COLLECTION DATE:	8/6/2022					8/6/2022				8/6/2022				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	-		-	-	0.042	J	0.18	0.027	0.033	J	0.18	0.027	ND		0.19	0.029
Pyrene	129-00-0	100	100	100	ND	-		-	-	0.02	J	0.11	0.018	0.028	J	0.11	0.018	0.12		0.12	0.019
Total SVOCs					-	-	-	-	-	0.14	-	-	-	0.156	-	-	-	0.859	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	-		-	-	-		-	-	-		-	-	ND		0	0
Unknown					-	-		-	-	0.338	J	0	0	0.174	J	0	0	-	-	-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Alcohol					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Thiophene					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					-	-		-	-	0.338	J	0	0	0.174	J	0	0	-		-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	-		-	-	ND		0.0017	0.000606	-		-	-	ND		0.00187	0.000667
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	-		-	-	ND		0.0017	0.000393	-		-	-	ND		0.00187	0.000432
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	-		-	-	ND		0.0017	0.00137	-		-	-	ND		0.00187	0.0015
Aldrin	309-00-2	0.019	0.097	0.005	ND	-		-	-	ND		0.0017	0.000598	-		-	-	ND		0.00187	0.000658
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	-		-	-	ND		0.000708	0.000201	-		-	-	ND		0.000779	0.000221
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	-		-	-	ND		0.0017	0.000644	-		-	-	ND		0.00187	0.000709
Chlordane	57-74-9				ND	-		-	-	ND		0.0142	0.00563	-		-	-	ND		0.0156	0.00619
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	-		-	-	ND		0.00212	0.000592	-		-	-	ND		0.00234	0.000651
Delta-BHC	319-86-8	100	100	0.04	ND	-		-	-	ND		0.0017	0.000333	-		-	-	ND		0.00187	0.000366
Dieldrin	60-57-1	0.039	0.2	0.005	ND	-		-	-	ND		0.00106	0.000531	-		-	-	ND		0.00117	0.000584
Endosulfan I	959-98-8	4.8	24	2.4	ND	-		-	-	ND		0.0017	0.000401	-		-	-	ND		0.00187	0.000442
Endosulfan II	33213-65-9	4.8	24	2.4	ND	-		-	-	ND		0.0017	0.000568	-		-	-	ND		0.00187	0.000624
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	-		-	-	ND		0.000708	0.000337	-		-	-	ND		0.000779	0.000371
Endrin	72-20-8	2.2	11	0.014	ND	-		-	-	ND		0.000708	0.00029	-		-	-	ND		0.000779	0.000319
Endrin aldehyde	7421-93-4				ND	-		-	-	ND		0.00212	0.000743	-		-	-	ND		0.00234	0.000818
Endrin ketone	53494-70-5				ND	-		-	-	ND		0.0017	0.000437	-		-	-	ND		0.00187	0.000481
Heptachlor	76-44-8	0.42	2.1	0.042	ND	-		-	-	ND		0.000849	0.000381	-		-	-	ND		0.000934	0.000419
Heptachlor epoxide	1024-57-3				ND	-		-	-	ND		0.00318	0.000956	-		-	-	ND		0.0035	0.00105
Lindane	58-89-9	0.28	1.3	0.1	ND	-		-	-	ND		0.000708	0.000316	-		-	-	ND		0.000779	0.000348
Methoxychlor	72-43-5				ND	-		-	-	ND		0.00318	0.000991	-		-	-	ND		0.0035	0.00109
Toxaphene	8001-35-2				ND	-		-	-	ND		0.0318	0.00892	-		-	-	ND		0.035	0.00981
trans-Chlordane	5103-74-2				ND	-		-	-	ND		0.00212	0.00056	-		-	-	ND		0.00234	0.000617
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-12 (0.5-1.0)					SB-13 (1-1.5)					SB-13 (1-1.5)					SB-201 (4-4.5)			
				LAB ID:	L2242456-11					L2242456-12					L2242456-12 R1					L2305142-01			
				COLLECTION DATE:	8/6/2022					8/6/2022					8/6/2022					1/28/2023			
				SAMPLE DEPTH:																			
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																			
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL		Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	-		-	-	ND		0.0365	0.00324		-		-	-		ND		0.0387	0.00344
Aroclor 1221	11104-28-2	1	1	0.1	ND	-		-	-	ND		0.0365	0.00366		-		-	-		ND		0.0387	0.00388
Aroclor 1232	11141-16-5	1	1	0.1	ND	-		-	-	ND		0.0365	0.00774		-		-	-		ND		0.0387	0.0082
Aroclor 1242	53469-21-9	1	1	0.1	ND	-		-	-	ND		0.0365	0.00492		-		-	-		ND		0.0387	0.00521
Aroclor 1248	12672-29-6	1	1	0.1	ND	-		-	-	ND		0.0365	0.00548		-		-	-		ND		0.0387	0.0058
Aroclor 1254	11097-69-1	1	1	0.1	ND	-		-	-	ND		0.0365	0.00399		-		-	-		ND		0.0387	0.00423
Aroclor 1260	11096-82-5	1	1	0.1	ND	-		-	-	ND		0.0365	0.00674		-		-	-		ND		0.0387	0.00715
Aroclor 1262	37324-23-5	1	1	0.1	ND	-		-	-	ND		0.0365	0.00464		-		-	-		ND		0.0387	0.00491
Aroclor 1268	11100-14-4	1	1	0.1	ND	-		-	-	ND		0.0365	0.00378		-		-	-		ND		0.0387	0.00401
PCBs, Total	1336-36-3	1	1	0.1	ND	-		-	-	ND		0.0365	0.00324		-		-	-		ND		0.0387	0.00344
TOTAL METALS																							
Aluminum, Total	7429-90-5				8950	-		-	-	5970		8.62	2.33		-		-	-		7680		9.12	2.46
Antimony, Total	7440-36-0				ND	-		-	-	ND		4.31	0.328		-		-	-		1.57	J	4.56	0.346
Arsenic, Total	7440-38-2	16	16	13	0.421	-		-	-	ND		0.862	0.179		-		-	-		5.06		0.912	0.19
Barium, Total	7440-39-3	350	400	350	49	-		-	-	64.3		0.862	0.15		-		-	-		205		0.912	0.159
Beryllium, Total	7440-41-7	14	72	7.2	0.258	-		-	-	0.233	J	0.431	0.028		-		-	-		0.197	J	0.456	0.03
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	-		-	-	ND		0.862	0.085		-		-	-		ND		0.912	0.089
Calcium, Total	7440-70-2				611	-		-	-	1390		8.62	3.02		-		-	-		31100		9.12	3.19
Chromium, Total	7440-47-3				17.6	-		-	-	17.1		0.862	0.083		-		-	-		14.3		0.912	0.088
Cobalt, Total	7440-48-4				3.21	-		-	-	5.42		1.72	0.143		-		-	-		4.38		1.82	0.151
Copper, Total	7440-50-8	270	270	50	13.1	-		-	-	13.4		0.862	0.222		-		-	-		36.7		0.912	0.235
Iron, Total	7439-89-6				12400	-		-	-	12500		4.31	0.778		-		-	-		15800		4.56	0.823
Lead, Total	7439-92-1	400	400	63	3.05	-		-	-	2.72	J	4.31	0.231		-		-	-		56.9		4.56	0.244
Magnesium, Total	7439-95-4				2010	-		-	-	2880		8.62	1.33		-		-	-		2660		9.12	1.4
Manganese, Total	7439-96-5	2000	2000	1600	290	-		-	-	116		0.862	0.137		-		-	-		175		0.912	0.145
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	-		-	-	ND		0.077	0.05		-		-	-		0.114		0.077	0.05
Nickel, Total	7440-02-0	140	310	30	11	-		-	-	14.2		2.16	0.209		-		-	-		11.7		2.28	0.221
Potassium, Total	7440-09-7				2380	-		-	-	3620		216	12.4		-		-	-		1180		228	13.1
Selenium, Total	7782-49-2	36	180	3.9	ND	-		-	-	0.254	J	1.72	0.222		-		-	-		ND		1.82	0.235
Silver, Total	7440-22-4	36	180	2	ND	-		-	-	ND		0.862	0.244		-		-	-		ND		0.456	0.258
Sodium, Total	7440-23-5				141	-		-	-	111	J	172	2.72		-		-	-		247		182	2.87
Thallium, Total	7440-28-0				ND	-		-	-	ND		1.72	0.272		-		-	-		ND		1.82	0.287
Vanadium, Total	7440-62-2				17.8	-		-	-	18		0.862	0.175		-		-	-		20.6		0.912	0.185
Zinc, Total	7440-66-6	2200	10000	109	21.3	-		-	-	21.7		4.31	0.253		-		-	-		127		4.56	0.267
GENERAL CHEMISTRY																							
Cyanide, Total	57-12-5	27	27	27	ND	-		-	-	ND		1	0.22		-		-	-		ND		1.2	0.25
Solids, Total	NONE				93.5	85.2		0.1	NA	89.7		0.1	NA		-		-	-		84.7		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)					SB-204 (1-1.5)					SB-205 (2.5-3)				
				LAB ID:	L2305142-02					L2305142-03					L2305142-04					L2305142-05				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL		Conc	Q	RL	MDL	
VOLATILE ORGANICS BY EPA 5035																								
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00041	0.00011	ND		0.00034	0.00009		ND		0.00018	0.00005		ND		0.00027	0.00007	
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00041	0.00014	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00041	0.00014	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00083	0.00022	ND		0.00068	0.00018		ND		0.00037	0.0001		ND		0.00054	0.00014	
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00083	0.00012	ND		0.00068	0.0001		ND		0.00037	0.00005		ND		0.00054	0.00008	
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00083	0.0002	ND		0.00068	0.00016		ND		0.00037	0.00009		ND		0.00054	0.00013	
1,1-Dichloropropene	563-58-6				ND	ND		0.00041	0.00013	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0016	0.00027	ND		0.0014	0.00022		ND		0.00074	0.00012		ND		0.0011	0.00017	
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0016	0.0001	ND		0.0014	0.00009		ND		0.00074	0.00005		ND		0.0011	0.00007	
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0016	0.00016	ND		0.0014	0.00013		ND		0.00074	0.00007		ND		0.0011	0.0001	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0016	0.00022	ND		0.0014	0.00018		ND		0.00074	0.0001		ND		0.0011	0.00015	
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0016	0.00028	ND		0.0014	0.00023		ND		0.00074	0.00012		ND		0.0011	0.00018	
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0025	0.00082	ND		0.002	0.00068		ND		0.0011	0.00037		ND		0.0016	0.00054	
1,2-Dibromoethane	106-93-4				ND	ND		0.00083	0.00023	ND		0.00068	0.00019		ND		0.00037	0.0001		ND		0.00054	0.00015	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0016	0.00012	ND		0.0014	0.0001		ND		0.00074	0.00005		ND		0.0011	0.00008	
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00083	0.00021	ND		0.00068	0.00017		ND		0.00037	0.0001		ND		0.00054	0.00014	
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00083	0.00011	ND		0.00068	0.00009		ND		0.00037	0.00005		ND		0.00054	0.00007	
1,2-Dichloropropane	78-87-5				ND	ND		0.00083	0.0001	ND		0.00068	0.00009		ND		0.00037	0.00005		ND		0.00054	0.00007	
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0016	0.00016	ND		0.0014	0.00013		ND		0.00074	0.00007		ND		0.0011	0.0001	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0016	0.00012	ND		0.0014	0.0001		ND		0.00074	0.00006		ND		0.0011	0.00008	
1,3-Dichloropropane	142-28-9				ND	ND		0.0016	0.00014	ND		0.0014	0.00011		ND		0.00074	0.00006		ND		0.0011	0.00009	
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00041	0.00013	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0016	0.00014	ND		0.0014	0.00012		ND		0.00074	0.00006		ND		0.0011	0.00009	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.066	0.029	ND		0.054	0.024		ND		0.03	0.013		ND		0.043	0.019	
2,2-Dichloropropane	594-20-7				ND	ND		0.0016	0.00017	ND		0.0014	0.00014		ND		0.00074	0.00008		ND		0.0011	0.00011	
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0083	0.0018	ND		0.0068	0.0015		ND		0.0037	0.00082		ND		0.0054	0.0012	
2-Hexanone	591-78-6				ND	ND		0.0083	0.00098	ND		0.0068	0.0008		ND		0.0037	0.00044		ND		0.0054	0.00064	
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0083	0.001	ND		0.0068	0.00087		ND		0.0037	0.00047		ND		0.0054	0.00069	
Acetone	67-64-1	100	100	0.05	0.01	ND		0.0083	0.004	0.012		0.0068	0.0032		ND		0.0037	0.0018		ND		0.0054	0.0026	
Acrylonitrile	107-13-1				ND	ND		0.0033	0.00095	ND		0.0027	0.00078		ND		0.0015	0.00042		ND		0.0022	0.00062	
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00041	0.00014	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
Bromobenzene	108-86-1				ND	ND		0.0016	0.00012	ND		0.0014	0.0001		ND		0.00074	0.00005		ND		0.0011	0.00008	
Bromochloromethane	74-97-5				ND	ND		0.0016	0.00017	ND		0.0014	0.00014		ND		0.00074	0.00008		ND		0.0011	0.00011	
Bromodichloromethane	75-27-4				ND	ND		0.00041	0.00009	ND		0.00034	0.00007		ND		0.00018	0.00004		ND		0.00027	0.00006	
Bromoform	75-25-2				ND	ND		0.0033	0.0002	ND		0.0027	0.00017		ND		0.0015	0.00009		ND		0.0022	0.00013	
Bromomethane	74-83-9				ND	ND		0.0016	0.00048	ND		0.0014	0.00039		ND		0.00074	0.00021		ND		0.0011	0.00031	
Carbon disulfide	75-15-0				ND	ND		0.0083	0.0038	ND		0.0068	0.0031		ND		0.0037	0.0017		ND		0.0054	0.0025	
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00083	0.00019	ND		0.00068	0.00016		ND		0.00037	0.00009		ND		0.00054	0.00012	
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00041	0.0001	ND		0.00034	0.00009		ND		0.00018	0.00005		ND		0.00027	0.00007	
Chloroethane	75-00-3				ND	ND		0.0016	0.00037	ND		0.0014	0.00031		ND		0.00074	0.00017		ND		0.0011	0.00024	
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0012	0.00012	ND		0.001	0.0001		ND		0.00055	0.00005		ND		0.00081	0.00008	
Chloromethane	74-87-3				ND	ND		0.0033	0.00077	ND		0.0027	0.00063		ND		0.0015	0.00034		ND		0.0022	0.0005	
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00083	0.00014	ND		0.00068	0.00012		ND		0.00037	0.00007		ND		0.00054	0.0001	
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00041	0.00013	ND		0.00034	0.00011		ND		0.00018	0.00006		ND		0.00027	0.00009	
Dibromochloromethane	124-48-1				ND	ND		0.00083	0.00012	ND		0.00068	0.0001		ND		0.00037	0.00005		ND		0.00054	0.00008	
Dibromomethane	74-95-3				ND	ND		0.0016	0.0002	ND		0.0014	0.00016		ND		0.00074	0.00009		ND		0.0011	0.00013	
Dichlorodifluoromethane	75-71-8				ND	ND		0.0083	0.00076	ND		0.0068	0.00062		ND		0.0037	0.00034		ND		0.0054	0.00049	
Ethyl ether	60-29-7				ND	ND		0.0016	0.00028	ND		0.0014	0.00023		ND		0.00074	0.00013		ND		0.0011	0.00018	
Ethylbenzene	100-41-4	30	41	1	ND	0.00012	J	0.00083	0.00012	0.00033	J	0.00068	0.0001		ND		0.00037	0.00005		ND		0.00054	0.00008	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)					SB-204 (1-1.5)					SB-205 (2.5-3)				
				LAB ID:	L2305142-02					L2305142-03					L2305142-04					L2305142-05				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0033	0.00014	ND		0.0027	0.00011	ND		0.0015	0.00006	ND		0.0022	0.00009
Isopropylbenzene	98-82-8				ND	ND		0.00083	0.00009	ND		0.00068	0.00007	ND		0.00037	0.00004	ND		0.00054	0.00006
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0016	0.00017	ND		0.0014	0.00014	ND		0.00074	0.00007	ND		0.0011	0.00011
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0041	0.0019	ND		0.0034	0.0016	ND		0.0018	0.00085	ND		0.0027	0.0012
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00083	0.00014	ND		0.00068	0.00011	ND		0.00037	0.00006	ND		0.00054	0.00009
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00083	0.00014	ND		0.00068	0.00012	ND		0.00037	0.00006	ND		0.00054	0.00009
Naphthalene	91-20-3	100	100	12	ND	ND		0.0033	0.00054	ND		0.0027	0.00044	ND		0.0015	0.00024	ND		0.0022	0.00035
o-Chlorotoluene	95-49-8				ND	ND		0.0016	0.00016	ND		0.0014	0.00013	ND		0.00074	0.00007	ND		0.0011	0.0001
o-Xylene	95-47-6				ND	ND		0.00083	0.00024	0.00055	J	0.00068	0.0002	ND		0.00037	0.00011	ND		0.00054	0.00016
p-Chlorotoluene	106-43-4				ND	ND		0.0016	0.00009	ND		0.0014	0.00007	ND		0.00074	0.00004	ND		0.0011	0.00006
p-Diethylbenzene	105-05-5				ND	ND		0.0016	0.00015	ND		0.0014	0.00012	ND		0.00074	0.00007	ND		0.0011	0.0001
p-Ethyltoluene	622-96-8				ND	ND		0.0016	0.00032	ND		0.0014	0.00026	ND		0.00074	0.00014	ND		0.0011	0.00021
p-Isopropyltoluene	99-87-6				ND	ND		0.00083	0.00009	ND		0.00068	0.00007	ND		0.00037	0.00004	ND		0.00054	0.00006
p/m-Xylene	179601-23-1				ND	ND		0.0016	0.00046	0.0016		0.0014	0.00038	ND		0.00074	0.00021	ND		0.0011	0.0003
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00083	0.00012	ND		0.00068	0.0001	ND		0.00037	0.00005	ND		0.00054	0.00008
Styrene	100-42-5				0.00064	ND		0.00083	0.00016	ND		0.00068	0.00013	ND		0.00037	0.00007	ND		0.00054	0.00011
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0016	0.0001	ND		0.0014	0.00008	ND		0.00074	0.00004	ND		0.0011	0.00006
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00041	0.00016	ND		0.00034	0.00013	ND		0.00018	0.00007	ND		0.00027	0.00011
Toluene	108-88-3	100	100	0.7	ND	ND		0.00083	0.00045	ND		0.00068	0.00037	ND		0.00037	0.0002	ND		0.00054	0.00029
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0012	0.00011	ND		0.001	0.00009	ND		0.00055	0.00005	ND		0.00081	0.00007
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00083	0.00022	ND		0.00068	0.00018	ND		0.00037	0.0001	ND		0.00054	0.00015
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0041	0.0012	ND		0.0034	0.00096	ND		0.0018	0.00052	ND		0.0027	0.00077
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00041	0.00011	ND		0.00034	0.00009	ND		0.00018	0.00005	ND		0.00027	0.00007
Trichlorofluoromethane	75-69-4				ND	ND		0.0033	0.00057	ND		0.0027	0.00047	ND		0.0015	0.00026	ND		0.0022	0.00038
Vinyl acetate	108-05-4				ND	ND		0.0083	0.0018	ND		0.0068	0.0014	ND		0.0037	0.00079	ND		0.0054	0.0012
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00083	0.00028	ND		0.00068	0.00023	ND		0.00037	0.00012	ND		0.00054	0.00018
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00083	0.00024	0.0022	J	0.00068	0.0002	ND		0.00037	0.00011	ND		0.00054	0.00016
Total VOCs					0.01064	0.00012	-	-	-	0.01448	-	-	-	-	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-		-	-	-		-	-	-		-	-	0.00137	NJ	0	0
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	-		-	-	-		-	-	-		-	-	-		-	-
No Tentatively Identified Compounds					-	ND		0	0	-		-	-	-		-	-	-		-	-
Pentane	000109-66-0				-	-		-	-	-		-	-	-		-	-	0.00221	NJ	0	0
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					0.00305	-		-	-	0.00276	J	0	0	0.00193	J	0	0	-		-	-
Unknown Cycloalkane					-	-		-	-	-		-	-	0.00124	J	0	0	-	-	-	-
Total TIC Compounds					0.00951	-		-	-	0.00276	J	0	0	0.00317	J	0	0	0.00358	J	0	0
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-		-	-	-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-		-	-	-		-	-	-		-	-	-		-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)					SB-204 (1-1.5)					SB-205 (2.5-3)			
				LAB ID:	L2305142-02					L2305142-03					L2305142-04					L2305142-05			
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023			
				SAMPLE DEPTH:																			
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																			
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
PFOA/PFOS, Total					-	-		-	-	-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.19	0.02	ND		0.18	0.019	ND		0.17	0.018	ND		0.19	0.02
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.19	0.022	ND		0.18	0.02	ND		0.17	0.02	ND		0.19	0.022
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.19	0.034	ND		0.18	0.032	ND		0.17	0.031	ND		0.19	0.034
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.19	0.033	ND		0.18	0.031	ND		0.17	0.03	ND		0.19	0.033
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.19	0.033	ND		0.18	0.031	ND		0.17	0.03	ND		0.19	0.033
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.028	0.0087	ND		0.027	0.0082	ND		0.026	0.008	ND		0.029	0.0088
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.19	0.036	ND		0.18	0.034	ND		0.17	0.034	ND		0.19	0.036
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.11	0.036	ND		0.11	0.034	ND		0.1	0.033	ND		0.11	0.036
2,4-Dichlorophenol	120-83-2				ND	ND		0.17	0.03	ND		0.16	0.029	ND		0.16	0.028	ND		0.17	0.031
2,4-Dimethylphenol	105-67-9				ND	ND		0.19	0.063	ND		0.18	0.059	ND		0.17	0.058	ND		0.19	0.063
2,4-Dinitrophenol	51-28-5				ND	ND		0.91	0.088	ND		0.86	0.084	ND		0.84	0.082	ND		0.92	0.089
2,4-Dinitrotoluene	121-14-2				ND	ND		0.19	0.038	ND		0.18	0.036	ND		0.17	0.035	ND		0.19	0.038
2,6-Dinitrotoluene	606-20-2				ND	ND		0.19	0.033	ND		0.18	0.031	ND		0.17	0.03	ND		0.19	0.033
2-Chloronaphthalene	91-58-7				ND	ND		0.19	0.019	ND		0.18	0.018	ND		0.17	0.017	ND		0.19	0.019
2-Chlorophenol	95-57-8				ND	ND		0.19	0.022	ND		0.18	0.021	ND		0.17	0.021	ND		0.19	0.022
2-Methylnaphthalene	91-57-6				ND	ND		0.23	0.023	ND		0.22	0.022	ND		0.21	0.021	ND		0.23	0.023
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.19	0.029	ND		0.18	0.028	ND		0.17	0.027	ND		0.19	0.03

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)					SB-204 (1-1.5)					SB-205 (2.5-3)				
				LAB ID:	L2305142-02					L2305142-03					L2305142-04					L2305142-05				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	ND		0.19	0.037	ND		0.18	0.034	ND		0.17	0.034	ND		0.19	0.037
2-Nitrophenol	88-75-5				ND	ND		0.41	0.071	ND		0.39	0.067	ND		0.38	0.066	ND		0.41	0.072
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.19	0.05	ND		0.18	0.048	ND		0.17	0.046	ND		0.19	0.051
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.27	0.03	ND		0.26	0.028	ND		0.25	0.027	ND		0.27	0.03
3-Nitroaniline	99-09-2				ND	ND		0.19	0.036	ND		0.18	0.034	ND		0.17	0.033	ND		0.19	0.036
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.49	0.091	ND		0.47	0.086	ND		0.45	0.084	ND		0.5	0.092
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.19	0.029	ND		0.18	0.027	ND		0.17	0.027	ND		0.19	0.029
4-Chloroaniline	106-47-8				ND	ND		0.19	0.034	ND		0.18	0.033	ND		0.17	0.032	ND		0.19	0.035
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.19	0.02	ND		0.18	0.019	ND		0.17	0.019	ND		0.19	0.02
4-Nitroaniline	100-01-6				ND	ND		0.19	0.079	ND		0.18	0.074	ND		0.17	0.072	ND		0.19	0.079
4-Nitrophenol	100-02-7				ND	ND		0.26	0.078	ND		0.25	0.073	ND		0.24	0.071	ND		0.27	0.078
Acenaphthene	83-32-9	100	100	20	ND	ND		0.15	0.02	ND		0.14	0.018	0.044	J	0.14	0.018	ND		0.15	0.02
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.15	0.029	ND		0.14	0.028	ND		0.14	0.027	ND		0.15	0.029
Acetophenone	98-86-2				ND	ND		0.19	0.024	ND		0.18	0.022	ND		0.17	0.022	ND		0.19	0.024
Anthracene	120-12-7	100	100	100	ND	ND		0.11	0.037	ND		0.11	0.035	0.12		0.1	0.034	ND		0.11	0.037
Benzo(a)anthracene	56-55-3	1	1	1	ND	0.35		0.11	0.021	0.078	J	0.11	0.02	0.44		0.1	0.02	0.12		0.11	0.021
Benzo(a)pyrene	50-32-8	1	1	1	ND	0.38		0.15	0.046	0.081	J	0.14	0.044	0.41		0.14	0.043	0.14	J	0.15	0.046
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	0.47		0.11	0.032	0.1	J	0.11	0.03	0.52		0.1	0.029	0.16		0.11	0.032
Benzo(ghi)perylene	191-24-2	100	100	100	ND	0.22		0.15	0.022	0.074	J	0.14	0.021	0.24		0.14	0.02	0.1	J	0.15	0.022
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	0.15		0.11	0.03	0.032	J	0.11	0.029	0.15		0.1	0.028	0.057	J	0.11	0.03
Benzoic Acid	65-85-0				ND	ND		0.62	0.19	ND		0.58	0.18	ND		0.57	0.18	ND		0.62	0.19
Benzyl Alcohol	100-51-6				ND	ND		0.19	0.058	ND		0.18	0.055	ND		0.17	0.054	ND		0.19	0.058
Biphenyl	92-52-4				ND	ND		0.43	0.025	ND		0.41	0.023	ND		0.4	0.023	ND		0.44	0.025
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.2	0.019	ND		0.19	0.018	ND		0.19	0.018	ND		0.21	0.019
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.17	0.026	ND		0.16	0.024	ND		0.16	0.024	ND		0.17	0.026
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.23	0.032	ND		0.22	0.031	ND		0.21	0.03	ND		0.23	0.033
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.19	0.066	ND		0.18	0.062	ND		0.17	0.06	ND		0.19	0.066
Butyl benzyl phthalate	85-68-7				ND	ND		0.19	0.048	ND		0.18	0.045	ND		0.17	0.044	ND		0.19	0.048
Carbazole	86-74-8				ND	0.019	J	0.19	0.018	ND		0.18	0.017	0.056	J	0.17	0.017	ND		0.19	0.018
Chrysene	218-01-9	1	3.9	1	ND	0.35		0.11	0.02	0.08	J	0.11	0.019	0.4		0.1	0.018	0.12		0.11	0.02
Di-n-butylphthalate	84-74-2				ND	ND		0.19	0.036	ND		0.18	0.034	ND		0.17	0.033	ND		0.19	0.036
Di-n-octylphthalate	117-84-0				ND	ND		0.19	0.064	ND		0.18	0.061	ND		0.17	0.059	ND		0.19	0.065
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	0.052	J	0.11	0.022	ND		0.11	0.021	0.059	J	0.1	0.02	0.022	J	0.11	0.022
Dibenzofuran	132-64-9	14	59	7	ND	ND		0.19	0.018	ND		0.18	0.017	0.021	J	0.17	0.016	ND		0.19	0.018
Diethyl phthalate	84-66-2				ND	ND		0.19	0.018	ND		0.18	0.017	ND		0.17	0.016	ND		0.19	0.018
Dimethyl phthalate	131-11-3				ND	ND		0.19	0.04	ND		0.18	0.038	ND		0.17	0.037	ND		0.19	0.04
Fluoranthene	206-44-0	100	100	100	ND	0.54		0.11	0.022	0.14		0.11	0.02	0.88		0.1	0.02	0.17		0.11	0.022
Fluorene	86-73-7	100	100	30	ND	ND		0.19	0.018	ND		0.18	0.017	0.043	J	0.17	0.017	ND		0.19	0.018
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.11	0.021	ND		0.11	0.02	ND		0.1	0.02	ND		0.11	0.021
Hexachlorobutadiene	87-68-3				ND	ND		0.19	0.028	ND		0.18	0.026	ND		0.17	0.026	ND		0.19	0.028
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.54	0.17	ND		0.51	0.16	ND		0.5	0.16	ND		0.55	0.17
Hexachloroethane	67-72-1				ND	ND		0.15	0.031	ND		0.14	0.029	ND		0.14	0.028	ND		0.15	0.031
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	0.27		0.15	0.026	0.064	J	0.14	0.025	0.29		0.14	0.024	0.1	J	0.15	0.027
Isophorone	78-59-1				ND	ND		0.17	0.025	ND		0.16	0.023	ND		0.16	0.023	ND		0.17	0.025
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.19	0.029	ND		0.18	0.028	ND		0.17	0.027	ND		0.19	0.029
Naphthalene	91-20-3	100	100	12	ND	ND		0.19	0.023	ND		0.18	0.022	0.03	J	0.17	0.021	ND		0.19	0.023
NDPA/DPA	86-30-6				ND	ND		0.15	0.022	ND		0.14	0.02	ND		0.14	0.02	ND		0.15	0.022
Nitrobenzene	98-95-3				ND	ND		0.17	0.028	ND		0.16	0.026	ND		0.16	0.026	ND		0.17	0.028
p-Chloro-m-cresol	59-50-7				ND	ND		0.19	0.028	ND		0.18	0.027	ND		0.17	0.026	ND		0.19	0.028
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.15	0.042	0.075	J	0.14	0.039	ND		0.14	0.038	ND		0.15	0.042
Phenanthrene	85-01-8	100	100	100	ND	0.096	J	0.11	0.023	0.064	J	0.11	0.022	0.52		0.1	0.021	0.078	J	0.11	0.023

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)				SB-204 (1-1.5)				SB-205 (2.5-3)			
				LAB ID:	L2305142-02					L2305142-03				L2305142-04				L2305142-05			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	ND		0.19	0.029	ND		0.18	0.027	ND		0.17	0.026	ND		0.19	0.029
Pyrene	129-00-0	100	100	100	ND	0.49		0.11	0.019	0.12		0.11	0.018	0.72		0.1	0.017	0.16		0.11	0.019
Total SVOCs					-	3.387	-	-	-	0.908	-	-	-	4.943	-	-	-	1.227	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	-		-	-	ND		0	0	-		-	-	ND		0	0
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Alcohol					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	0.264	J	0	0	-		-	-	0.282	J	0	0	-		-	-
Unknown Thiophene					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					-	0.264	J	0	0	-		-	-	0.282	J	0	0	-		-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00181	0.000644	0.0212		0.00166	0.000593	0.0192		0.00163	0.00058	ND		0.00179	0.000638
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00181	0.000418	0.0183		0.00166	0.000385	0.0414		0.00163	0.000376	ND		0.00179	0.000414
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	ND		0.00181	0.00145	0.0151		0.00166	0.00134	0.0421		0.00163	0.00131	ND		0.00179	0.00144
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00181	0.000636	ND		0.00166	0.000586	ND		0.00163	0.000573	ND		0.00179	0.00063
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000753	0.000214	ND		0.000693	0.000197	ND		0.000678	0.000192	ND		0.000745	0.000212
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00181	0.000685	ND		0.00166	0.000631	ND		0.00163	0.000617	ND		0.00179	0.000678
Chlordane	57-74-9				ND	ND		0.015	0.00598	0.0392	P	0.0139	0.00551	0.121		0.0136	0.00539	ND		0.0149	0.00592
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00226	0.000629	0.00752		0.00208	0.000579	0.0108		0.00203	0.000567	ND		0.00224	0.000623
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00181	0.000354	ND		0.00166	0.000326	ND		0.00163	0.000318	ND		0.00179	0.00035
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00113	0.000564	0.00706		0.00104	0.00052	ND		0.00102	0.000508	ND		0.00112	0.000559
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00181	0.000427	ND		0.00166	0.000393	ND		0.00163	0.000384	ND		0.00179	0.000422
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00181	0.000604	ND		0.00166	0.000556	ND		0.00163	0.000544	ND		0.00179	0.000598
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000753	0.000358	ND		0.000693	0.00033	ND		0.000678	0.000323	ND		0.000745	0.000355
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000753	0.000308	ND		0.000693	0.000284	ND		0.000678	0.000278	ND		0.000745	0.000306
Endrin aldehyde	7421-93-4				ND	ND		0.00226	0.00079	ND		0.00208	0.000728	ND		0.00203	0.000712	ND		0.00224	0.000782
Endrin ketone	53494-70-5				ND	ND		0.00181	0.000465	ND		0.00166	0.000428	ND		0.00163	0.000419	ND		0.00179	0.00046
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000903	0.000405	ND		0.000832	0.000373	ND		0.000813	0.000365	ND		0.000894	0.000401
Heptachlor epoxide	1024-57-3				ND	ND		0.00339	0.00102	ND		0.00312	0.000936	ND		0.00305	0.000915	ND		0.00335	0.00101
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000753	0.000336	ND		0.000693	0.00031	ND		0.000678	0.000303	ND		0.000745	0.000333
Methoxychlor	72-43-5				ND	ND		0.00339	0.00105	ND		0.00312	0.00097	ND		0.00305	0.000949	ND		0.00335	0.00104
Toxaphene	8001-35-2				ND	ND		0.0339	0.00948	ND		0.0312	0.00873	ND		0.0305	0.00854	ND		0.0335	0.00939
trans-Chlordane	5103-74-2				ND	ND		0.00226	0.000596	0.00637		0.00208	0.000549	0.00876		0.00203	0.000537	ND		0.00224	0.00059
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-202 (1.5-2)					SB-203 (3.5-4)				SB-204 (1-1.5)				SB-205 (2.5-3)			
				LAB ID:	L2305142-02					L2305142-03				L2305142-04				L2305142-05			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0379	0.00336	ND		0.0345	0.00306	ND		0.0346	0.00307	ND		0.037	0.00329
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0379	0.0038	ND		0.0345	0.00345	ND		0.0346	0.00347	ND		0.037	0.00371
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0379	0.00803	ND		0.0345	0.00731	ND		0.0346	0.00734	ND		0.037	0.00785
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0379	0.0051	ND		0.0345	0.00465	ND		0.0346	0.00467	ND		0.037	0.00499
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0379	0.00568	ND		0.0345	0.00517	ND		0.0346	0.00519	ND		0.037	0.00555
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0379	0.00414	ND		0.0345	0.00377	ND		0.0346	0.00379	ND		0.037	0.00405
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0379	0.007	0.0072	J	0.0345	0.00637	0.0086	J	0.0346	0.0064	ND		0.037	0.00684
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0379	0.00481	ND		0.0345	0.00438	ND		0.0346	0.0044	ND		0.037	0.0047
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0379	0.00392	ND		0.0345	0.00357	0.00408	J	0.0346	0.00359	ND		0.037	0.00384
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0379	0.00336	0.0072	J	0.0345	0.00306	0.0127	J	0.0346	0.00307	ND		0.037	0.00329
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950	9520		9.06	2.44	9400		8.59	2.32	8130		8.52	2.3	1910		9.12	2.46
Antimony, Total	7440-36-0				ND	1.47	J	4.53	0.344	1.21	J	4.3	0.326	1.52	J	4.26	0.324	0.528	J	4.56	0.347
Arsenic, Total	7440-38-2	16	16	13	0.421	5.84		0.906	0.188	4.12		0.859	0.179	7.74		0.852	0.177	7.81		0.912	0.19
Barium, Total	7440-39-3	350	400	350	49	131		0.906	0.158	76.8		0.859	0.15	91.1		0.852	0.148	38.3		0.912	0.159
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.334	J	0.453	0.03	0.197	J	0.43	0.028	0.283	J	0.426	0.028	ND		0.456	0.03
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.472	J	0.906	0.089	0.272	J	0.859	0.084	0.375	J	0.852	0.084	0.207	J	0.912	0.089
Calcium, Total	7440-70-2				611	13700		9.06	3.17	3870		8.59	3.01	1040		8.52	2.98	149000		91.2	31.9
Chromium, Total	7440-47-3				17.6	17.2		0.906	0.087	18.1		0.859	0.083	15		0.852	0.082	3.81		0.912	0.088
Cobalt, Total	7440-48-4				3.21	5.52		1.81	0.15	5.26		1.72	0.143	4.02		1.7	0.142	2.63		1.82	0.151
Copper, Total	7440-50-8	270	270	50	13.1	23.7		0.906	0.234	19.7		0.859	0.222	35.8		0.852	0.22	14.5		0.912	0.235
Iron, Total	7439-89-6				12400	14000		4.53	0.818	14500		4.3	0.776	11700		4.26	0.77	6440		4.56	0.824
Lead, Total	7439-92-1	400	400	63	3.05	505		4.53	0.243	334		4.3	0.23	287		4.26	0.228	89.3		4.56	0.244
Magnesium, Total	7439-95-4				2010	4580		9.06	1.39	2420		8.59	1.32	1770		8.52	1.31	69100		9.12	1.4
Manganese, Total	7439-96-5	2000	2000	1600	290	343		0.906	0.144	334		0.859	0.137	261		0.852	0.136	116		0.912	0.145
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	23		0.794	0.518	0.079		0.072	0.047	0.341		0.072	0.047	0.158		0.077	0.051
Nickel, Total	7440-02-0	140	310	30	11	11.8		2.26	0.219	12.7		2.15	0.208	10.6		2.13	0.206	5.35		2.28	0.221
Potassium, Total	7440-09-7				2380	1120		226	13	1540		215	12.4	864		213	12.3	364		228	13.1
Selenium, Total	7782-49-2	36	180	3.9	ND	0.53	J	1.81	0.234	0.528	J	1.72	0.222	0.802	J	1.7	0.22	0.277	J	1.82	0.235
Silver, Total	7440-22-4	36	180	2	ND	ND		0.453	0.256	ND		0.43	0.243	ND		0.426	0.241	ND		0.456	0.258
Sodium, Total	7440-23-5				141	272		181	2.85	276		172	2.71	54.8	J	170	2.68	188		182	2.87
Thallium, Total	7440-28-0				ND	ND		1.81	0.285	ND		1.72	0.271	ND		1.7	0.268	0.468	J	1.82	0.287
Vanadium, Total	7440-62-2				17.8	23.6		0.906	0.184	23.5		0.859	0.174	21.9		0.852	0.173	10.8		0.912	0.185
Zinc, Total	7440-66-6	2200	10000	109	21.3	213		4.53	0.265	102		4.3	0.252	164		4.26	0.25	43		4.56	0.267
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND	ND		1.1	0.23	ND		1	0.21	ND		1	0.22	ND		1.1	0.23
Solids, Total	NONE				93.5	86		0.1	NA	92.5		0.1	NA	92.5		0.1	NA	86.8		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)				SB-208 (4-4.5)				SB-209 (2.5-3)			
				LAB ID:	L2305142-06					L2305142-07				L2305142-08				L2305142-09			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY EPA 5035																					
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00036	0.0001	ND		0.00031	0.00008	ND		0.00024	0.00006	ND		0.00025	0.00007
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00036	0.00012	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00036	0.00012	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00072	0.00019	ND		0.00062	0.00017	ND		0.00047	0.00013	ND		0.00049	0.00013
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00072	0.0001	ND		0.00062	0.00009	ND		0.00047	0.00007	ND		0.00049	0.00007
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00072	0.00017	ND		0.00062	0.00015	ND		0.00047	0.00011	ND		0.00049	0.00012
1,1-Dichloropropene	563-58-6				ND	ND		0.00036	0.00011	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0014	0.00023	ND		0.0012	0.0002	ND		0.00095	0.00015	ND		0.00098	0.00016
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0014	0.00009	ND		0.0012	0.00008	ND		0.00095	0.00006	ND		0.00098	0.00006
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0014	0.00014	ND		0.0012	0.00012	ND		0.00095	0.00009	ND		0.00098	0.00009
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0014	0.0002	ND		0.0012	0.00017	ND		0.00095	0.00013	ND		0.00098	0.00013
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0014	0.00024	ND		0.0012	0.00021	ND		0.00095	0.00016	ND		0.00098	0.00016
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0022	0.00072	ND		0.0019	0.00062	ND		0.0014	0.00047	ND		0.0015	0.00049
1,2-Dibromoethane	106-93-4				ND	ND		0.00072	0.0002	ND		0.00062	0.00017	ND		0.00047	0.00013	ND		0.00049	0.00014
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0014	0.0001	ND		0.0012	0.00009	ND		0.00095	0.00007	ND		0.00098	0.00007
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00072	0.00018	ND		0.00062	0.00016	ND		0.00047	0.00012	ND		0.00049	0.00013
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00072	0.0001	ND		0.00062	0.00009	ND		0.00047	0.00007	ND		0.00049	0.00007
1,2-Dichloropropane	78-87-5				ND	ND		0.00072	0.00009	ND		0.00062	0.00008	ND		0.00047	0.00006	ND		0.00049	0.00006
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0014	0.00014	ND		0.0012	0.00012	ND		0.00095	0.00009	ND		0.00098	0.0001
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0014	0.00011	ND		0.0012	0.00009	ND		0.00095	0.00007	ND		0.00098	0.00007
1,3-Dichloropropane	142-28-9				ND	ND		0.0014	0.00012	ND		0.0012	0.0001	ND		0.00095	0.00008	ND		0.00098	0.00008
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00036	0.00011	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0014	0.00012	ND		0.0012	0.00011	ND		0.00095	0.00008	ND		0.00098	0.00008
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.058	0.025	ND		0.05	0.022	ND		0.038	0.017	ND		0.039	0.017
2,2-Dichloropropane	594-20-7				ND	ND		0.0014	0.00014	ND		0.0012	0.00012	ND		0.00095	0.0001	ND		0.00098	0.0001
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0072	0.0016	ND		0.0062	0.0014	ND		0.0047	0.001	ND		0.0049	0.0011
2-Hexanone	591-78-6				ND	ND		0.0072	0.00085	ND		0.0062	0.00073	ND		0.0047	0.00056	ND		0.0049	0.00058
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0072	0.00092	ND		0.0062	0.0008	ND		0.0047	0.00061	ND		0.0049	0.00063
Acetone	67-64-1	100	100	0.05	0.01	ND		0.0072	0.0035	ND		0.0062	0.003	ND		0.0047	0.0023	ND		0.0049	0.0024
Acrylonitrile	107-13-1				ND	ND		0.0029	0.00083	ND		0.0025	0.00072	ND		0.0019	0.00055	ND		0.002	0.00057
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00036	0.00012	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
Bromobenzene	108-86-1				ND	ND		0.0014	0.0001	ND		0.0012	0.00009	ND		0.00095	0.00007	ND		0.00098	0.00007
Bromochloromethane	74-97-5				ND	ND		0.0014	0.00015	ND		0.0012	0.00013	ND		0.00095	0.0001	ND		0.00098	0.0001
Bromodichloromethane	75-27-4				ND	ND		0.00036	0.00008	ND		0.00031	0.00007	ND		0.00024	0.00005	ND		0.00025	0.00005
Bromoform	75-25-2				ND	ND		0.0029	0.00018	ND		0.0025	0.00015	ND		0.0019	0.00012	ND		0.002	0.00012
Bromomethane	74-83-9				ND	ND		0.0014	0.00042	ND		0.0012	0.00036	ND		0.00095	0.00028	ND		0.00098	0.00029
Carbon disulfide	75-15-0				ND	ND		0.0072	0.0033	ND		0.0062	0.0028	ND		0.0047	0.0022	ND		0.0049	0.0022
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00072	0.00016	ND		0.00062	0.00014	ND		0.00047	0.00011	ND		0.00049	0.00011
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00036	0.00009	ND		0.00031	0.00008	ND		0.00024	0.00006	ND		0.00025	0.00006
Chloroethane	75-00-3				ND	ND		0.0014	0.00032	ND		0.0012	0.00028	ND		0.00095	0.00021	ND		0.00098	0.00022
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0011	0.0001	ND		0.00093	0.00009	ND		0.00071	0.00007	ND		0.00074	0.00007
Chloromethane	74-87-3				ND	ND		0.0029	0.00067	ND		0.0025	0.00058	ND		0.0019	0.00044	ND		0.002	0.00046
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00072	0.00013	ND		0.00062	0.00011	ND		0.00047	0.00008	ND		0.00049	0.00009
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00036	0.00011	ND		0.00031	0.0001	ND		0.00024	0.00008	ND		0.00025	0.00008
Dibromochloromethane	124-48-1				ND	ND		0.00072	0.0001	ND		0.00062	0.00009	ND		0.00047	0.00007	ND		0.00049	0.00007
Dibromomethane	74-95-3				ND	ND		0.0014	0.00017	ND		0.0012	0.00015	ND		0.00095	0.00011	ND		0.00098	0.00012
Dichlorodifluoromethane	75-71-8				ND	ND		0.0072	0.00066	ND		0.0062	0.00057	ND		0.0047	0.00043	ND		0.0049	0.00045
Ethyl ether	60-29-7				ND	ND		0.0014	0.00024	ND		0.0012	0.00021	ND		0.00095	0.00016	ND		0.00098	0.00017
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00072	0.0001	ND		0.00062	0.00009	0.00035	J	0.00047	0.00007	ND		0.00049	0.00007

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)				SB-208 (4-4.5)				SB-209 (2.5-3)			
				LAB ID:	L2305142-06					L2305142-07				L2305142-08				L2305142-09			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0029	0.00012	ND		0.0025	0.0001	ND		0.0019	0.00008	ND		0.002	0.00008
Isopropylbenzene	98-82-8				ND	ND		0.00072	0.00008	ND		0.00062	0.00007	ND		0.00047	0.00005	ND		0.00049	0.00005
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0014	0.00014	ND		0.0012	0.00012	ND		0.00095	0.0001	ND		0.00098	0.0001
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0036	0.0016	ND		0.0031	0.0014	ND		0.0024	0.0011	ND		0.0025	0.0011
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00072	0.00012	ND		0.00062	0.0001	ND		0.00047	0.00008	ND		0.00049	0.00008
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00072	0.00012	ND		0.00062	0.00011	ND		0.00047	0.00008	ND		0.00049	0.00008
Naphthalene	91-20-3	100	100	12	ND	ND		0.0029	0.00047	ND		0.0025	0.0004	ND		0.0019	0.00031	ND		0.002	0.00032
o-Chlorotoluene	95-49-8				ND	ND		0.0014	0.00014	ND		0.0012	0.00012	ND		0.00095	0.00009	ND		0.00098	0.00009
o-Xylene	95-47-6				ND	ND		0.00072	0.00021	ND		0.00062	0.00018	0.00055		0.00047	0.00014	ND		0.00049	0.00014
p-Chlorotoluene	106-43-4				ND	ND		0.0014	0.00008	ND		0.0012	0.00007	ND		0.00095	0.00005	ND		0.00098	0.00005
p-Diethylbenzene	105-05-5				ND	ND		0.0014	0.00013	ND		0.0012	0.00011	ND		0.00095	0.00008	ND		0.00098	0.00009
p-Ethyltoluene	622-96-8				ND	ND		0.0014	0.00028	ND		0.0012	0.00024	ND		0.00095	0.00018	ND		0.00098	0.00019
p-Isopropyltoluene	99-87-6				ND	ND		0.00072	0.00008	ND		0.00062	0.00007	ND		0.00047	0.00005	ND		0.00049	0.00005
p/m-Xylene	179601-23-1				ND	ND		0.0014	0.0004	ND		0.0012	0.00035	0.0016		0.00095	0.00026	ND		0.00098	0.00028
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00072	0.0001	ND		0.00062	0.00009	ND		0.00047	0.00007	ND		0.00049	0.00007
Styrene	100-42-5				0.00064	ND		0.00072	0.00014	ND		0.00062	0.00012	ND		0.00047	0.00009	ND		0.00049	0.0001
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0014	0.00009	ND		0.0012	0.00007	ND		0.00095	0.00006	ND		0.00098	0.00006
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00036	0.00014	ND		0.00031	0.00012	ND		0.00024	0.00009	ND		0.00025	0.0001
Toluene	108-88-3	100	100	0.7	ND	ND		0.00072	0.00039	ND		0.00062	0.00034	ND		0.00047	0.00026	ND		0.00049	0.00027
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0011	0.0001	ND		0.00093	0.00009	ND		0.00071	0.00007	ND		0.00074	0.00007
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00072	0.0002	ND		0.00062	0.00017	ND		0.00047	0.00013	ND		0.00049	0.00013
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0036	0.001	ND		0.0031	0.00088	ND		0.0024	0.00067	ND		0.0025	0.0007
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00036	0.0001	ND		0.00031	0.00009	ND		0.00024	0.00007	ND		0.00025	0.00007
Trichlorofluoromethane	75-69-4				ND	ND		0.0029	0.0005	ND		0.0025	0.00043	ND		0.0019	0.00033	ND		0.002	0.00034
Vinyl acetate	108-05-4				ND	ND		0.0072	0.0015	ND		0.0062	0.0013	ND		0.0047	0.001	ND		0.0049	0.001
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00072	0.00024	ND		0.00062	0.00021	ND		0.00047	0.00016	ND		0.00049	0.00016
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00072	0.00021	ND		0.00062	0.00018	0.0022		0.00047	0.00014	ND		0.00049	0.00014
Total VOCs					0.01064	-	-	-	-	-	-	-	-	0.0025	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	-		-	-	-		-	-	-		-	-	-		-	-
No Tentatively Identified Compounds					-	ND		0	0	ND		0	0	ND		0	0	ND		0	0
Pentane	000109-66-0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					0.00305	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Cycloalkane					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TIC Compounds					0.00951	-		-	-	-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-		-	-	-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-		-	-	-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-		-	-	-		-	-	-		-	-	-		-	-

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Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)					SB-208 (4-4.5)					SB-209 (2.5-3)			
				LAB ID:	L2305142-06					L2305142-07					L2305142-08					L2305142-09			
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023			
				SAMPLE DEPTH:																			
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																			
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-		-	-	-		-	-	-		-	-	-		-	-
PFOA/PFOS, Total					-	-		-	-	-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.19	0.02	ND		0.19	0.02	ND		0.19	0.02	ND		0.19	0.02
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.19	0.022	ND		0.19	0.022	ND		0.19	0.022	ND		0.19	0.022
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.19	0.034	ND		0.19	0.034	ND		0.19	0.034	ND		0.19	0.035
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.19	0.033	ND		0.19	0.033	ND		0.19	0.032	ND		0.19	0.033
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.19	0.033	ND		0.19	0.033	ND		0.19	0.033	ND		0.19	0.034
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.028	0.0087	ND		0.028	0.0088	ND		0.028	0.0087	ND		0.029	0.0089
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.037
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.11	0.036	ND		0.11	0.036	ND		0.11	0.036	ND		0.12	0.037
2,4-Dichlorophenol	120-83-2				ND	ND		0.17	0.03	ND		0.17	0.031	ND		0.17	0.03	ND		0.17	0.031
2,4-Dimethylphenol	105-67-9				ND	ND		0.19	0.063	ND		0.19	0.063	ND		0.19	0.062	ND		0.19	0.064
2,4-Dinitrophenol	51-28-5				ND	ND		0.91	0.088	ND		0.91	0.089	ND		0.91	0.088	ND		0.93	0.09
2,4-Dinitrotoluene	121-14-2				ND	ND		0.19	0.038	ND		0.19	0.038	ND		0.19	0.038	ND		0.19	0.039
2,6-Dinitrotoluene	606-20-2				ND	ND		0.19	0.033	ND		0.19	0.033	ND		0.19	0.032	ND		0.19	0.033
2-Chloronaphthalene	91-58-7				ND	ND		0.19	0.019	ND		0.19	0.019	ND		0.19	0.019	ND		0.19	0.019
2-Chlorophenol	95-57-8				ND	ND		0.19	0.022	ND		0.19	0.022	ND		0.19	0.022	ND		0.19	0.023
2-Methylnaphthalene	91-57-6				ND	ND		0.23	0.023	ND		0.23	0.023	ND		0.23	0.023	ND		0.23	0.023
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.19	0.029	ND		0.19	0.03	ND		0.19	0.029	ND		0.19	0.03

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)					SB-208 (4-4.5)					SB-209 (2.5-3)				
				LAB ID:	L2305142-06					L2305142-07					L2305142-08					L2305142-09				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	ND		0.19	0.037	ND		0.19	0.037	ND		0.19	0.036	ND		0.19	0.037
2-Nitrophenol	88-75-5				ND	ND		0.41	0.071	ND		0.41	0.072	ND		0.41	0.071	ND		0.42	0.073
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.19	0.05	ND		0.19	0.051	ND		0.19	0.05	ND		0.19	0.052
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.27	0.03	ND		0.27	0.03	ND		0.27	0.03	ND		0.28	0.03
3-Nitroaniline	99-09-2				ND	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.036
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.49	0.091	ND		0.49	0.091	ND		0.49	0.091	ND		0.5	0.093
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.19	0.029	ND		0.19	0.03
4-Chloroaniline	106-47-8				ND	ND		0.19	0.034	ND		0.19	0.035	ND		0.19	0.034	ND		0.19	0.035
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.19	0.02	ND		0.19	0.02	ND		0.19	0.02	ND		0.19	0.021
4-Nitroaniline	100-01-6				ND	ND		0.19	0.079	ND		0.19	0.079	ND		0.19	0.078	ND		0.19	0.08
4-Nitrophenol	100-02-7				ND	ND		0.26	0.078	ND		0.27	0.078	ND		0.26	0.077	ND		0.27	0.079
Acenaphthene	83-32-9	100	100	20	ND	ND		0.15	0.02	0.023	J	0.15	0.02	0.067	J	0.15	0.02	0.06	J	0.16	0.02
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.15	0.029	0.064	J	0.15	0.029	0.032	J	0.15	0.029	0.031	J	0.16	0.03
Acetophenone	98-86-2				ND	ND		0.19	0.024	ND		0.19	0.024	ND		0.19	0.023	ND		0.19	0.024
Anthracene	120-12-7	100	100	100	ND	ND		0.11	0.037	0.093	J	0.11	0.037	0.13		0.11	0.037	0.14		0.12	0.038
Benzo(a)anthracene	56-55-3	1	1	1	ND	0.051	J	0.11	0.021	0.58		0.11	0.021	0.42		0.11	0.021	0.62		0.12	0.022
Benzo(a)pyrene	50-32-8	1	1	1	ND	0.062	J	0.15	0.046	0.63		0.15	0.046	0.38		0.15	0.046	0.58		0.16	0.047
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	0.074	J	0.11	0.032	0.77		0.11	0.032	0.46		0.11	0.032	0.67		0.12	0.033
Benzo(ghi)perylene	191-24-2	100	100	100	ND	0.042	J	0.15	0.022	0.37		0.15	0.022	0.22		0.15	0.022	0.32		0.16	0.023
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	ND		0.11	0.03	0.24		0.11	0.03	0.17		0.11	0.03	0.26		0.12	0.031
Benzoic Acid	65-85-0				ND	ND		0.62	0.19	ND		0.62	0.19	ND		0.61	0.19	ND		0.63	0.2
Benzyl Alcohol	100-51-6				ND	ND		0.19	0.058	ND		0.19	0.058	ND		0.19	0.058	ND		0.19	0.059
Biphenyl	92-52-4				ND	ND		0.43	0.025	ND		0.43	0.025	ND		0.43	0.025	ND		0.44	0.025
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.2	0.019	ND		0.2	0.019	ND		0.2	0.019	ND		0.21	0.019
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.17	0.026	ND		0.17	0.026	ND		0.17	0.026	ND		0.17	0.026
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.23	0.032	ND		0.23	0.032	ND		0.23	0.032	ND		0.23	0.033
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.19	0.066	ND		0.19	0.066	ND		0.19	0.066	ND		0.19	0.067
Butyl benzyl phthalate	85-68-7				ND	ND		0.19	0.048	ND		0.19	0.048	ND		0.19	0.048	ND		0.19	0.049
Carbazole	86-74-8				ND	ND		0.19	0.018	0.036	J	0.19	0.018	0.056	J	0.19	0.018	0.042	J	0.19	0.019
Chrysene	218-01-9	1	3.9	1	ND	0.051	J	0.11	0.02	0.6		0.11	0.02	0.39		0.11	0.02	0.58		0.12	0.02
Di-n-butylphthalate	84-74-2				ND	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.036	ND		0.19	0.037
Di-n-octylphthalate	117-84-0				ND	ND		0.19	0.064	ND		0.19	0.065	ND		0.19	0.064	ND		0.19	0.066
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	ND		0.11	0.022	0.088	J	0.11	0.022	0.057	J	0.11	0.022	0.083	J	0.12	0.022
Dibenzofuran	132-64-9	14	59	7	ND	ND		0.19	0.018	ND		0.19	0.018	0.022	J	0.19	0.018	ND		0.19	0.018
Diethyl phthalate	84-66-2				ND	ND		0.19	0.018	ND		0.19	0.018	ND		0.19	0.018	ND		0.19	0.018
Dimethyl phthalate	131-11-3				ND	ND		0.19	0.04	ND		0.19	0.04	ND		0.19	0.04	ND		0.19	0.041
Fluoranthene	206-44-0	100	100	100	ND	0.077	J	0.11	0.022	1		0.11	0.022	0.78		0.11	0.022	1.1		0.12	0.022
Fluorene	86-73-7	100	100	30	ND	ND		0.19	0.018	0.028	J	0.19	0.018	0.051	J	0.19	0.018	0.034	J	0.19	0.019
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.11	0.021	ND		0.11	0.021	ND		0.11	0.021	ND		0.12	0.022
Hexachlorobutadiene	87-68-3				ND	ND		0.19	0.028	ND		0.19	0.028	ND		0.19	0.028	ND		0.19	0.028
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.54	0.17	ND		0.54	0.17	ND		0.54	0.17	ND		0.55	0.18
Hexachloroethane	67-72-1				ND	ND		0.15	0.031	ND		0.15	0.031	ND		0.15	0.031	ND		0.16	0.031
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	0.046	J	0.15	0.026	0.44		0.15	0.026	0.26		0.15	0.026	0.39		0.16	0.027
Isophorone	78-59-1				ND	ND		0.17	0.025	ND		0.17	0.025	ND		0.17	0.024	ND		0.17	0.025
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.19	0.029	ND		0.19	0.03
Naphthalene	91-20-3	100	100	12	ND	ND		0.19	0.023	0.023	J	0.19	0.023	ND		0.19	0.023	ND		0.19	0.024
NDPA/DPA	86-30-6				ND	ND		0.15	0.022	ND		0.15	0.022	ND		0.15	0.022	ND		0.16	0.022
Nitrobenzene	98-95-3				ND	ND		0.17	0.028	ND		0.17	0.028	ND		0.17	0.028	ND		0.17	0.029
p-Chloro-m-cresol	59-50-7				ND	ND		0.19	0.028	ND		0.19	0.028	ND		0.19	0.028	ND		0.19	0.029
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.15	0.042	ND		0.15	0.042	ND		0.15	0.042	ND		0.16	0.043
Phenanthrene	85-01-8	100	100	100	ND	ND		0.11	0.023	0.34		0.11	0.023	0.51		0.11	0.023	0.47		0.12	0.024

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)					SB-208 (4-4.5)					SB-209 (2.5-3)			
				LAB ID:	L2305142-06					L2305142-07					L2305142-08					L2305142-09			
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023			
				SAMPLE DEPTH:																			
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																			
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.19	0.028	ND		0.19	0.029
Pyrene	129-00-0	100	100	100	ND	0.074	J	0.11	0.019	0.9		0.11	0.019	0.61		0.11	0.019	0.88		0.12	0.019
Total SVOCs					-	0.477	-	-	-	6.225	-	-	-	4.615	-	-	-	6.26	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	ND		0	0	-		-	-	-		-	-	-		-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	0.224	J	0	0	0.191	J	0	0	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	0.197	J	0	0	0.916	J	0	0	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Alcohol					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	0.166	J	0	0	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	0.414	J	0	0	-		-	-	-		-	-
Unknown PAH					-	-		-	-	0.162	J	0	0	-		-	-	0.367	J	0	0
Unknown PAH					-	-		-	-	0.166	J	0	0	-		-	-	0.173	J	0	0
Unknown PAH					-	-		-	-	-		-	-	0.25	J	0	0	-		-	-
Unknown Thiophene					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					-	-		-	-	1.33	J	0	0	1.36	J	0	0	0.54	J	0	0
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	0.00349		0.00178	0.000633	ND		0.00178	0.000635	ND		0.00174	0.000622	ND		0.00188	0.000671
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00178	0.000411	ND		0.00178	0.000412	0.00359		0.00174	0.000403	ND		0.00188	0.000435
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	0.00686		0.00178	0.00143	ND		0.00178	0.00143	0.00253	IP	0.00174	0.0014	ND		0.00188	0.00151
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00178	0.000625	ND		0.00178	0.000627	ND		0.00174	0.000614	ND		0.00188	0.000662
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.00074	0.00021	ND		0.000742	0.000211	ND		0.000726	0.000206	ND		0.000783	0.000222
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00178	0.000673	ND		0.00178	0.000675	ND		0.00174	0.000661	ND		0.00188	0.000713
Chlordane	57-74-9				ND	ND		0.0148	0.00588	ND		0.0148	0.0059	ND		0.0145	0.00577	ND		0.0157	0.00623
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00222	0.000618	ND		0.00222	0.00062	ND		0.00218	0.000607	ND		0.00235	0.000655
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00178	0.000348	ND		0.00178	0.000348	ND		0.00174	0.000341	ND		0.00188	0.000368
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00111	0.000555	ND		0.00111	0.000556	ND		0.00109	0.000545	ND		0.00118	0.000588
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00178	0.00042	ND		0.00178	0.00042	ND		0.00174	0.000412	ND		0.00188	0.000444
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00178	0.000593	ND		0.00178	0.000595	ND		0.00174	0.000582	ND		0.00188	0.000628
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.00074	0.000352	ND		0.000742	0.000353	ND		0.000726	0.000346	ND		0.000783	0.000373
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.00074	0.000303	ND		0.000742	0.000304	ND		0.000726	0.000298	ND		0.000783	0.000321
Endrin aldehyde	7421-93-4				ND	ND		0.00222	0.000777	ND		0.00222	0.000779	ND		0.00218	0.000762	ND		0.00235	0.000823
Endrin ketone	53494-70-5				ND	ND		0.00178	0.000457	ND		0.00178	0.000458	ND		0.00174	0.000449	ND		0.00188	0.000484
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000888	0.000398	ND		0.00089	0.000399	ND		0.000871	0.000391	ND		0.00094	0.000421
Heptachlor epoxide	1024-57-3				ND	ND		0.00333	0.000999	ND		0.00334	0.001	ND		0.00327	0.00098	ND		0.00352	0.00106
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.00074	0.000331	ND		0.000742	0.000331	ND		0.000726	0.000325	ND		0.000783	0.00035
Methoxychlor	72-43-5				ND	ND		0.00333	0.00104	ND		0.00334	0.00104	ND		0.00327	0.00102	ND		0.00352	0.0011
Toxaphene	8001-35-2				ND	ND		0.0333	0.00932	ND		0.0334	0.00934	ND		0.0327	0.00915	ND		0.0352	0.00987
trans-Chlordane	5103-74-2				ND	ND		0.00222	0.000586	ND		0.00222	0.000587	ND		0.00218	0.000575	ND		0.00235	0.00062
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-206 (3.5-4)					SB-207 (3-3.5)				SB-208 (4-4.5)				SB-209 (2.5-3)			
				LAB ID:	L2305142-06					L2305142-07				L2305142-08				L2305142-09			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0366	0.00325	ND		0.0381	0.00338	ND		0.0368	0.00327	ND		0.0394	0.0035
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0366	0.00366	ND		0.0381	0.00381	ND		0.0368	0.00369	ND		0.0394	0.00395
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0366	0.00775	ND		0.0381	0.00807	ND		0.0368	0.0078	ND		0.0394	0.00836
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0366	0.00493	ND		0.0381	0.00513	ND		0.0368	0.00496	ND		0.0394	0.00532
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0366	0.00548	ND		0.0381	0.00571	ND		0.0368	0.00552	ND		0.0394	0.00592
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0366	0.004	ND		0.0381	0.00416	ND		0.0368	0.00402	ND		0.0394	0.00432
Aroclor 1260	11096-82-5	1	1	0.1	ND	0.0084	J	0.0366	0.00676	ND		0.0381	0.00703	0.0151	JP	0.0368	0.0068	ND		0.0394	0.00729
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0366	0.00464	ND		0.0381	0.00483	ND		0.0368	0.00467	ND		0.0394	0.00501
Aroclor 1268	11100-14-4	1	1	0.1	ND	0.0049	J	0.0366	0.00379	ND		0.0381	0.00394	0.00458	J	0.0368	0.00381	ND		0.0394	0.00409
PCBs, Total	1336-36-3	1	1	0.1	ND	0.0133	J	0.0366	0.00325	ND		0.0381	0.00338	0.0197	J	0.0368	0.00327	ND		0.0394	0.0035
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950	5390		8.77	2.37	7550		8.97	2.42	5780		8.6	2.32	9290		9.14	2.47
Antimony, Total	7440-36-0				ND	4.12	J	4.38	0.333	1.13	J	4.49	0.341	1.03	J	4.3	0.327	1.48	J	4.57	0.347
Arsenic, Total	7440-38-2	16	16	13	0.421	6.81		0.877	0.182	5.36		0.897	0.187	4.5		0.86	0.179	7		0.914	0.19
Barium, Total	7440-39-3	350	400	350	49	109		0.877	0.152	99.9		0.897	0.156	105		0.86	0.15	509		0.914	0.159
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.141	J	0.438	0.029	0.377	J	0.449	0.03	0.276	J	0.43	0.028	0.436	J	0.457	0.03
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.29	J	0.877	0.086	0.454	J	0.897	0.088	0.26	J	0.86	0.084	0.653	J	0.914	0.09
Calcium, Total	7440-70-2				611	30900		8.77	3.07	6600		8.97	3.14	20100		8.6	3.01	14100		9.14	3.2
Chromium, Total	7440-47-3				17.6	13		0.877	0.084	30.1		0.897	0.086	10.3		0.86	0.083	31.1		0.914	0.088
Cobalt, Total	7440-48-4				3.21	4.65		1.75	0.146	5.93		1.79	0.149	3.56		1.72	0.143	6.04		1.83	0.152
Copper, Total	7440-50-8	270	270	50	13.1	32.7		0.877	0.226	30.4		0.897	0.232	22.7		0.86	0.222	84.3		0.914	0.236
Iron, Total	7439-89-6				12400	11600		4.38	0.792	13100		4.49	0.81	10200		4.3	0.776	17900		4.57	0.825
Lead, Total	7439-92-1	400	400	63	3.05	335		4.38	0.235	360		4.49	0.24	131		4.3	0.23	626		4.57	0.245
Magnesium, Total	7439-95-4				2010	17400		8.77	1.35	4110		8.97	1.38	2860		8.6	1.32	4070		9.14	1.41
Manganese, Total	7439-96-5	2000	2000	1600	290	274		0.877	0.139	282		0.897	0.143	184		0.86	0.137	419		0.914	0.145
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	0.251		0.075	0.049	6.46		0.8	0.521	0.187		0.076	0.049	7.86		0.756	0.493
Nickel, Total	7440-02-0	140	310	30	11	10.8		2.19	0.212	11.8		2.24	0.217	7.99		2.15	0.208	13.7		2.28	0.221
Potassium, Total	7440-09-7				2380	1340		219	12.6	1140		224	12.9	792		215	12.4	2190		228	13.2
Selenium, Total	7782-49-2	36	180	3.9	ND	0.561	J	1.75	0.226	0.734	J	1.79	0.232	0.3	J	1.72	0.222	ND		1.83	0.236
Silver, Total	7440-22-4	36	180	2	ND	ND		0.438	0.248	ND		0.449	0.254	ND		0.43	0.243	ND		0.457	0.259
Sodium, Total	7440-23-5				141	267		175	2.76	284		179	2.83	195		172	2.71	474		183	2.88
Thallium, Total	7440-28-0				ND	0.316	J	1.75	0.276	0.338	J	1.79	0.283	ND		1.72	0.271	0.428	J	1.83	0.288
Vanadium, Total	7440-62-2				17.8	19.1		0.877	0.178	21.1		0.897	0.182	14.7		0.86	0.174	25.2		0.914	0.186
Zinc, Total	7440-66-6	2200	10000	109	21.3	117		4.38	0.257	162		4.49	0.263	87.7		4.3	0.252	443		4.57	0.268
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND	ND		1	0.22	ND		1.1	0.24	ND		1.1	0.23	0.4	J	1.1	0.24
Solids, Total	NONE				93.5	87.2		0.1	NA	85.4		0.1	NA	87.1		0.1	NA	83.7		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)					SB-212 (3-3.5)					SB-213 (3-3.5)				
				LAB ID:	L2305142-10					L2305142-11					L2305142-12					L2305142-13				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL		Conc	Q	RL	MDL	
VOLATILE ORGANICS BY EPA 5035																								
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00024	0.00006	ND		0.00032	0.00009		ND		0.00039	0.0001		ND		0.00032	0.00008	
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00024	0.00008	ND		0.00032	0.00011		ND		0.00039	0.00013		ND		0.00032	0.00011	
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00024	0.00008	ND		0.00032	0.00011		ND		0.00039	0.00013		ND		0.00032	0.00011	
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00049	0.00013	ND		0.00064	0.00017		ND		0.00078	0.00021		ND		0.00064	0.00017	
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00049	0.00007	ND		0.00064	0.00009		ND		0.00078	0.00011		ND		0.00064	0.00009	
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00049	0.00012	ND		0.00064	0.00015		ND		0.00078	0.00019		ND		0.00064	0.00015	
1,1-Dichloropropene	563-58-6				ND	ND		0.00024	0.00008	ND		0.00032	0.0001		ND		0.00039	0.00012		ND		0.00032	0.0001	
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.00097	0.00016	ND		0.0013	0.00021		ND		0.0016	0.00025		ND		0.0013	0.0002	
1,2,3-Trichloropropane	96-18-4				ND	ND		0.00097	0.00006	ND		0.0013	0.00008		ND		0.0016	0.0001		ND		0.0013	0.00008	
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.00097	0.00009	ND		0.0013	0.00012		ND		0.0016	0.00015		ND		0.0013	0.00012	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.00097	0.00013	ND		0.0013	0.00018		ND		0.0016	0.00021		ND		0.0013	0.00017	
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.00097	0.00016	ND		0.0013	0.00022		ND		0.0016	0.00026		ND		0.0013	0.00021	
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0014	0.00048	ND		0.0019	0.00064		ND		0.0024	0.00078		ND		0.0019	0.00064	
1,2-Dibromoethane	106-93-4				ND	ND		0.00049	0.00014	ND		0.00064	0.00018		ND		0.00078	0.00022		ND		0.00064	0.00018	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.00097	0.00007	ND		0.0013	0.00009		ND		0.0016	0.00011		ND		0.0013	0.00009	
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00049	0.00012	ND		0.00064	0.00016		ND		0.00078	0.0002		ND		0.00064	0.00016	
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00049	0.00007	ND		0.00064	0.00009		ND		0.00078	0.00011		ND		0.00064	0.00009	
1,2-Dichloropropane	78-87-5				ND	ND		0.00049	0.00006	ND		0.00064	0.00008		ND		0.00078	0.0001		ND		0.00064	0.00008	
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.00097	0.00009	ND		0.0013	0.00012		ND		0.0016	0.00015		ND		0.0013	0.00012	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.00097	0.00007	ND		0.0013	0.0001		ND		0.0016	0.00012		ND		0.0013	0.00009	
1,3-Dichloropropane	142-28-9				ND	ND		0.00097	0.00008	ND		0.0013	0.00011		ND		0.0016	0.00013		ND		0.0013	0.00011	
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00024	0.00008	ND		0.00032	0.0001		ND		0.00039	0.00012		ND		0.00032	0.0001	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.00097	0.00008	ND		0.0013	0.00011		ND		0.0016	0.00013		ND		0.0013	0.00011	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.039	0.017	ND		0.052	0.023		ND		0.063	0.028		ND		0.051	0.022	
2,2-Dichloropropane	594-20-7				ND	ND		0.00097	0.0001	ND		0.0013	0.00013		ND		0.0016	0.00016		ND		0.0013	0.00013	
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0049	0.0011	ND		0.0064	0.0014		ND		0.0078	0.0017		ND		0.0064	0.0014	
2-Hexanone	591-78-6				ND	ND		0.0049	0.00057	ND		0.0064	0.00076		ND		0.0078	0.00092		ND		0.0064	0.00075	
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0049	0.00062	ND		0.0064	0.00082		ND		0.0078	0.001		ND		0.0064	0.00082	
Acetone	67-64-1	100	100	0.05	0.01	ND		0.0049	0.0023	ND		0.0064	0.0031		ND		0.0078	0.0038		0.0037	J	0.0064	0.0031	
Acrylonitrile	107-13-1				ND	ND		0.0019	0.00056	ND		0.0026	0.00074		ND		0.0031	0.0009		ND		0.0026	0.00074	
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00024	0.00008	ND		0.00032	0.00011		ND		0.00039	0.00013		ND		0.00032	0.00011	
Bromobenzene	108-86-1				ND	ND		0.00097	0.00007	ND		0.0013	0.00009		ND		0.0016	0.00011		ND		0.0013	0.00009	
Bromochloromethane	74-97-5				ND	ND		0.00097	0.0001	ND		0.0013	0.00013		ND		0.0016	0.00016		ND		0.0013	0.00013	
Bromodichloromethane	75-27-4				ND	ND		0.00024	0.00005	ND		0.00032	0.00007		ND		0.00039	0.00009		ND		0.00032	0.00007	
Bromoform	75-25-2				ND	ND		0.0019	0.00012	ND		0.0026	0.00016		ND		0.0031	0.00019		ND		0.0026	0.00016	
Bromomethane	74-83-9				ND	ND		0.00097	0.00028	ND		0.0013	0.00037		ND		0.0016	0.00046		ND		0.0013	0.00037	
Carbon disulfide	75-15-0				ND	ND		0.0049	0.0022	ND		0.0064	0.0029		ND		0.0078	0.0036		ND		0.0064	0.0029	
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00049	0.00011	ND		0.00064	0.00015		ND		0.00078	0.00018		ND		0.00064	0.00015	
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00024	0.00006	ND		0.00032	0.00008		ND		0.00039	0.0001		ND		0.00032	0.00008	
Chloroethane	75-00-3				ND	ND		0.00097	0.00022	ND		0.0013	0.00029		ND		0.0016	0.00035		ND		0.0013	0.00029	
Chloroform	67-66-3	10	49	0.37	ND	ND		0.00073	0.00007	ND		0.00097	0.00009		ND		0.0012	0.00011		ND		0.00096	0.00009	
Chloromethane	74-87-3				ND	ND		0.0019	0.00045	ND		0.0026	0.0006		ND		0.0031	0.00073		ND		0.0026	0.0006	
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00049	0.00009	ND		0.00064	0.00011		ND		0.00078	0.00014		ND		0.00064	0.00011	
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00024	0.00008	ND		0.00032	0.0001		ND		0.00039	0.00012		ND		0.00032	0.0001	
Dibromochloromethane	124-48-1				ND	ND		0.00049	0.00007	ND		0.00064	0.00009		ND		0.00078	0.00011		ND		0.00064	0.00009	
Dibromomethane	74-95-3				ND	ND		0.00097	0.00012	ND		0.0013	0.00015		ND		0.0016	0.00019		ND		0.0013	0.00015	
Dichlorodifluoromethane	75-71-8				ND	ND		0.0049	0.00044	ND		0.0064	0.00059		ND		0.0078	0.00072		ND		0.0064	0.00058	
Ethyl ether	60-29-7				ND	ND		0.00097	0.00016	ND		0.0013	0.00022		ND		0.0016	0.00027		ND		0.0013	0.00022	
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00049	0.00007	ND		0.00064	0.00009		ND		0.00078	0.00011		ND		0.00064	0.00009	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)					SB-212 (3-3.5)					SB-213 (3-3.5)				
				LAB ID:	L2305142-10					L2305142-11					L2305142-12					L2305142-13				
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0019	0.00008	ND		0.0026	0.00011	ND		0.0031	0.00013	ND		0.0026	0.00011
Isopropylbenzene	98-82-8				ND	ND		0.00049	0.00005	ND		0.00064	0.00007	ND		0.00078	0.00009	ND		0.00064	0.00007
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.00097	0.0001	ND		0.0013	0.00013	ND		0.0016	0.00016	ND		0.0013	0.00013
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0024	0.0011	ND		0.0032	0.0015	ND		0.0039	0.0018	ND		0.0032	0.0015
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00049	0.00008	ND		0.00064	0.00011	ND		0.00078	0.00013	ND		0.00064	0.00011
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00049	0.00008	ND		0.00064	0.00011	ND		0.00078	0.00013	ND		0.00064	0.00011
Naphthalene	91-20-3	100	100	12	ND	ND		0.0019	0.00032	ND		0.0026	0.00042	ND		0.0031	0.00051	ND		0.0026	0.00042
o-Chlorotoluene	95-49-8				ND	ND		0.00097	0.00009	ND		0.0013	0.00012	ND		0.0016	0.00015	ND		0.0013	0.00012
o-Xylene	95-47-6				ND	ND		0.00049	0.00014	ND		0.00064	0.00019	ND		0.00078	0.00023	ND		0.00064	0.00018
p-Chlorotoluene	106-43-4				ND	ND		0.00097	0.00005	ND		0.0013	0.00007	ND		0.0016	0.00009	ND		0.0013	0.00007
p-Diethylbenzene	105-05-5				ND	ND		0.00097	0.00009	ND		0.0013	0.00011	ND		0.0016	0.00014	ND		0.0013	0.00011
p-Ethyltoluene	622-96-8				ND	ND		0.00097	0.00019	ND		0.0013	0.00025	ND		0.0016	0.0003	ND		0.0013	0.00024
p-Isopropyltoluene	99-87-6				ND	ND		0.00049	0.00005	ND		0.00064	0.00007	ND		0.00078	0.00009	ND		0.00064	0.00007
p/m-Xylene	179601-23-1				ND	ND		0.00097	0.00027	ND		0.0013	0.00036	ND		0.0016	0.00044	ND		0.0013	0.00036
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00049	0.00007	ND		0.00064	0.00009	ND		0.00078	0.00011	ND		0.00064	0.00009
Styrene	100-42-5				0.00064	ND		0.00049	0.0001	ND		0.00064	0.00013	ND		0.00078	0.00015	ND		0.00064	0.00012
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.00097	0.00006	ND		0.0013	0.00008	ND		0.0016	0.00009	ND		0.0013	0.00008
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00024	0.0001	ND		0.00032	0.00013	ND		0.00039	0.00015	ND		0.00032	0.00012
Toluene	108-88-3	100	100	0.7	ND	ND		0.00049	0.00026	ND		0.00064	0.00035	ND		0.00078	0.00042	ND		0.00064	0.00035
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.00073	0.00007	ND		0.00097	0.00009	ND		0.0012	0.00011	ND		0.00096	0.00009
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00049	0.00013	ND		0.00064	0.00018	ND		0.00078	0.00021	ND		0.00064	0.00017
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0024	0.00069	ND		0.0032	0.00091	ND		0.0039	0.0011	ND		0.0032	0.00091
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00024	0.00007	ND		0.00032	0.00009	ND		0.00039	0.00011	ND		0.00032	0.00009
Trichlorofluoromethane	75-69-4				ND	ND		0.0019	0.00034	ND		0.0026	0.00045	ND		0.0031	0.00054	ND		0.0026	0.00044
Vinyl acetate	108-05-4				ND	ND		0.0049	0.001	ND		0.0064	0.0014	ND		0.0078	0.0017	ND		0.0064	0.0014
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00049	0.00016	ND		0.00064	0.00022	ND		0.00078	0.00026	ND		0.00064	0.00021
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00049	0.00014	ND		0.00064	0.00019	ND		0.00078	0.00023	ND		0.00064	0.00018
Total VOCs					0.01064	-	-	-	-	-	-	-	-	-	-	-	-	0.0037	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	-		-	-	-		-	-	-		-	-	-		-	-
No Tentatively Identified Compounds					-	-		-	-	ND		0	0	ND		0	0	ND		0	0
Pentane	000109-66-0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	0.000996	J	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	0.00213	J	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					0.00305	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Cycloalkane					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TIC Compounds					0.00951	0.00313	J	0	0	-		-	-	-		-	-	-		-	-
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	ND		0.000791	0.000383	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	ND		0.000791	0.000277	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	ND		0.000198	0.000081	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	ND		0.000198	0.000099	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	ND		0.000198	0.000043	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	ND		0.000791	0.00005	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	ND		0.000198	0.000032	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	ND		0.000198	0.000074	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	ND		0.000198	0.00004	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	ND		0.000198	0.000036	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	ND		0.000198	0.000023	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	ND		0.000198	0.000059	-	-	-	-	-	-	-	-	-	-	-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)				SB-212 (3-3.5)				SB-213 (3-3.5)			
				LAB ID:	L2305142-10					L2305142-11				L2305142-12				L2305142-13			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	ND		0.000198	0.000046	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	ND		0.000198	0.000078	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	ND		0.000198	0.000043	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	0.000126	J	0.000198	0.000078	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	ND		0.000198	0.000051	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	ND		0.000395	0.000055	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	ND		0.000198	0.000105	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	ND		0.000198	0.000052	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	ND		0.000198	0.000051	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					-	0.000126	J	0.000198	0.000051	-	-	-	-	-	-	-	-	-	-	-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.19	0.019	ND		0.18	0.019	ND		0.18	0.019	ND		0.17	0.018
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.19	0.021	ND		0.18	0.02	ND		0.18	0.021	ND		0.17	0.02
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.19	0.033	ND		0.18	0.032	ND		0.18	0.032	ND		0.17	0.031
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.19	0.032	ND		0.18	0.031	ND		0.18	0.031	ND		0.17	0.03
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.19	0.032	ND		0.18	0.031	ND		0.18	0.031	ND		0.17	0.03
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.028	0.0086	ND		0.027	0.0082	ND		0.027	0.0083	ND		0.026	0.008
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.19	0.036	ND		0.18	0.034	ND		0.18	0.034	ND		0.17	0.033
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.11	0.035	ND		0.11	0.034	ND		0.11	0.034	ND		0.1	0.033
2,4-Dichlorophenol	120-83-2				ND	ND		0.17	0.03	ND		0.16	0.029	ND		0.16	0.029	ND		0.16	0.028
2,4-Dimethylphenol	105-67-9				ND	ND		0.19	0.061	ND		0.18	0.059	ND		0.18	0.059	ND		0.17	0.057
2,4-Dinitrophenol	51-28-5				ND	ND		0.89	0.087	ND		0.86	0.083	ND		0.86	0.084	ND		0.84	0.081
2,4-Dinitrotoluene	121-14-2				ND	ND		0.19	0.037	ND		0.18	0.036	ND		0.18	0.036	ND		0.17	0.035
2,6-Dinitrotoluene	606-20-2				ND	ND		0.19	0.032	ND		0.18	0.031	ND		0.18	0.031	ND		0.17	0.03
2-Chloronaphthalene	91-58-7				ND	ND		0.19	0.018	ND		0.18	0.018	ND		0.18	0.018	ND		0.17	0.017
2-Chlorophenol	95-57-8				ND	ND		0.19	0.022	ND		0.18	0.021	ND		0.18	0.021	ND		0.17	0.02
2-Methylnaphthalene	91-57-6				ND	ND		0.22	0.022	ND		0.21	0.022	ND		0.22	0.022	ND		0.21	0.021
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.19	0.029	ND		0.18	0.028	ND		0.18	0.028	ND		0.17	0.027

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)					SB-212 (3-3.5)					SB-213 (3-3.5)			
				LAB ID:	L2305142-10					L2305142-11					L2305142-12					L2305142-13			
				COLLECTION DATE:	1/28/2023					1/28/2023					1/28/2023					1/28/2023			
				SAMPLE DEPTH:																			
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																			
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	ND		0.19	0.036	ND		0.18	0.034	ND		0.18	0.035	ND		0.17	0.034
2-Nitrophenol	88-75-5				ND	ND		0.4	0.07	ND		0.39	0.067	ND		0.39	0.068	ND		0.38	0.065
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.19	0.05	ND		0.18	0.048	ND		0.18	0.048	ND		0.17	0.046
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	0.09	J	0.27	0.029	ND		0.26	0.028	ND		0.26	0.028	ND		0.25	0.027
3-Nitroaniline	99-09-2				ND	ND		0.19	0.035	ND		0.18	0.034	ND		0.18	0.034	ND		0.17	0.033
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.48	0.089	ND		0.46	0.086	ND		0.47	0.086	ND		0.45	0.084
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.19	0.028	ND		0.18	0.027	ND		0.18	0.027	ND		0.17	0.026
4-Chloroaniline	106-47-8				ND	ND		0.19	0.034	ND		0.18	0.032	ND		0.18	0.033	ND		0.17	0.032
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.19	0.02	ND		0.18	0.019	ND		0.18	0.019	ND		0.17	0.019
4-Nitroaniline	100-01-6				ND	ND		0.19	0.077	ND		0.18	0.074	ND		0.18	0.074	ND		0.17	0.072
4-Nitrophenol	100-02-7				ND	ND		0.26	0.076	ND		0.25	0.073	ND		0.25	0.073	ND		0.24	0.071
Acenaphthene	83-32-9	100	100	20	ND	0.04	J	0.15	0.019	ND		0.14	0.018	0.027	J	0.14	0.019	ND		0.14	0.018
Acenaphthylene	208-96-8	100	100	100	ND	1.4		0.15	0.029	0.088	J	0.14	0.028	ND		0.14	0.028	ND		0.14	0.027
Acetophenone	98-86-2				ND	ND		0.19	0.023	ND		0.18	0.022	ND		0.18	0.022	ND		0.17	0.022
Anthracene	120-12-7	100	100	100	ND	0.8		0.11	0.036	ND		0.11	0.035	0.26		0.11	0.035	ND		0.1	0.034
Benzo(a)anthracene	56-55-3	1	1	1	ND	2.7		0.11	0.021	0.16		0.11	0.02	1.3		0.11	0.02	0.047	J	0.1	0.02
Benzo(a)pyrene	50-32-8	1	1	1	ND	3		0.15	0.045	0.28		0.14	0.044	1.2		0.14	0.044	0.05	J	0.14	0.042
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	3.5		0.11	0.031	0.36		0.11	0.03	1.4		0.11	0.03	0.059	J	0.1	0.029
Benzo(ghi)perylene	191-24-2	100	100	100	ND	1.8		0.15	0.022	0.22		0.14	0.021	0.72		0.14	0.021	0.033	J	0.14	0.02
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	1.2		0.11	0.03	0.13		0.11	0.029	0.48		0.11	0.029	ND		0.1	0.028
Benzoic Acid	65-85-0				ND	ND		0.6	0.19	ND		0.58	0.18	ND		0.58	0.18	ND		0.56	0.18
Benzyl Alcohol	100-51-6				ND	ND		0.19	0.057	ND		0.18	0.055	ND		0.18	0.055	ND		0.17	0.053
Biphenyl	92-52-4				ND	ND		0.42	0.024	ND		0.41	0.023	ND		0.41	0.023	ND		0.4	0.023
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.2	0.019	ND		0.19	0.018	ND		0.19	0.018	ND		0.19	0.017
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.17	0.025	ND		0.16	0.024	ND		0.16	0.024	ND		0.16	0.024
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.22	0.032	ND		0.21	0.03	ND		0.22	0.031	ND		0.21	0.03
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.19	0.064	ND		0.18	0.062	ND		0.18	0.062	ND		0.17	0.06
Butyl benzyl phthalate	85-68-7				ND	ND		0.19	0.047	ND		0.18	0.045	ND		0.18	0.045	ND		0.17	0.044
Carbazole	86-74-8				ND	0.18	J	0.19	0.018	0.043	J	0.18	0.017	0.034	J	0.18	0.018	ND		0.17	0.017
Chrysene	218-01-9	1	3.9	1	ND	2.5		0.11	0.019	0.22		0.11	0.019	1.2		0.11	0.019	0.046	J	0.1	0.018
Di-n-butylphthalate	84-74-2				ND	ND		0.19	0.035	ND		0.18	0.034	ND		0.18	0.034	ND		0.17	0.033
Di-n-octylphthalate	117-84-0				ND	ND		0.19	0.063	ND		0.18	0.061	ND		0.18	0.061	ND		0.17	0.059
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	0.46		0.11	0.022	0.049	J	0.11	0.021	0.14		0.11	0.021	ND		0.1	0.02
Dibenzofuran	132-64-9	14	59	7	ND	0.023	J	0.19	0.018	ND		0.18	0.017	ND		0.18	0.017	ND		0.17	0.016
Diethyl phthalate	84-66-2				ND	ND		0.19	0.017	ND		0.18	0.016	ND		0.18	0.017	ND		0.17	0.016
Dimethyl phthalate	131-11-3				ND	ND		0.19	0.039	ND		0.18	0.038	ND		0.18	0.038	ND		0.17	0.036
Fluoranthene	206-44-0	100	100	100	ND	4.8		0.11	0.021	0.24		0.11	0.02	2.8		0.11	0.021	0.08	J	0.1	0.02
Fluorene	86-73-7	100	100	30	ND	0.083	J	0.19	0.018	ND		0.18	0.017	0.022	J	0.18	0.018	ND		0.17	0.017
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.11	0.021	ND		0.11	0.02	ND		0.11	0.02	ND		0.1	0.019
Hexachlorobutadiene	87-68-3				ND	ND		0.19	0.027	ND		0.18	0.026	ND		0.18	0.026	ND		0.17	0.025
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.53	0.17	ND		0.51	0.16	ND		0.52	0.16	ND		0.5	0.16
Hexachloroethane	67-72-1				ND	ND		0.15	0.03	ND		0.14	0.029	ND		0.14	0.029	ND		0.14	0.028
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	2.2		0.15	0.026	0.25		0.14	0.025	0.83		0.14	0.025	0.035	J	0.14	0.024
Isophorone	78-59-1				ND	ND		0.17	0.024	ND		0.16	0.023	ND		0.16	0.023	ND		0.16	0.022
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.19	0.029	ND		0.18	0.028	ND		0.18	0.028	ND		0.17	0.027
Naphthalene	91-20-3	100	100	12	ND	0.07	J	0.19	0.023	ND		0.18	0.022	ND		0.18	0.022	ND		0.17	0.021
NDPA/DPA	86-30-6				ND	ND		0.15	0.021	ND		0.14	0.02	ND		0.14	0.02	ND		0.14	0.02
Nitrobenzene	98-95-3				ND	ND		0.17	0.028	ND		0.16	0.026	ND		0.16	0.027	ND		0.16	0.026
p-Chloro-m-cresol	59-50-7				ND	ND		0.19	0.028	ND		0.18	0.027	ND		0.18	0.027	ND		0.17	0.026
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.15	0.041	ND		0.14	0.039	ND		0.14	0.04	ND		0.14	0.038
Phenanthrene	85-01-8	100	100	100	ND	1.2		0.11	0.023	0.097	J	0.11	0.022	0.88		0.11	0.022	0.032	J	0.1	0.021

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)				SB-212 (3-3.5)				SB-213 (3-3.5)			
				LAB ID:	L2305142-10					L2305142-11				L2305142-12				L2305142-13			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	0.047	J	0.19	0.028	ND		0.18	0.027	ND		0.18	0.027	ND		0.17	0.026
Pyrene	129-00-0	100	100	100	ND	4		0.11	0.018	0.2		0.11	0.018	2.3		0.11	0.018	0.075	J	0.1	0.017
Total SVOCs					-	30.093	-	-	-	2.337	-	-	-	13.593	-	-	-	0.457	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	-		-	-	-		-	-	-		-	-	ND		0	0
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	0.303	J	0	0	0.164	J	0	0	0.155	J	0	0	-		-	-
Unknown					-	0.515	J	0	0	-		-	-	-		-	-	-		-	-
Unknown					-	0.244	J	0	0	-		-	-	0.193	J	0	0	-		-	-
Unknown					-	0.33	J	0	0	0.152	J	0	0	0.17	J	0	0	-		-	-
Unknown					-	0.745	J	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alcohol					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	0.436	J	0	0	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-		-	-	-		-	-	0.15	J	0	0	-	-	-	-
Unknown Ketone					-	-		-	-	-		-	-	0.216	J	0	0	-	-	-	-
Unknown PAH					-	0.587	J	0	0	-		-	-	-		-	-	-		-	-
Unknown PAH					-	0.439	J	0	0	-		-	-	-		-	-	-		-	-
Unknown PAH					-	0.584	J	0	0	-		-	-	-		-	-	-		-	-
Unknown PAH					-	1.93	J	0	0	-		-	-	0.193	J	0	0	-		-	-
Unknown PAH					-	1.04	J	0	0	-		-	-	0.173	J	0	0	-		-	-
Unknown PAH					-	0.28	J	0	0	-		-	-	0.248	J	0	0	-		-	-
Unknown PAH					-	0.643	J	0	0	-		-	-	0.783	J	0	0	-		-	-
Unknown PAH					-	0.282	J	0	0	-		-	-	0.283	J	0	0	-		-	-
Unknown PAH					-	0.627	J	0	0	-		-	-	0.164	J	0	0	-		-	-
Unknown PAH					-	-		-	-	0.221	J	0	0	-		-	-	-		-	-
Unknown Thiophene					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					-	8.99	J	0	0	0.537	J	0	0	2.73	J	0	0	-		-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00171	0.00061	ND		0.00165	0.000589	ND		0.00171	0.000611	ND		0.00168	0.000599
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00171	0.000396	ND		0.00165	0.000382	ND		0.00171	0.000396	ND		0.00168	0.000389
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	ND		0.00171	0.00138	ND		0.00165	0.00133	ND		0.00171	0.00138	ND		0.00168	0.00135
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00171	0.000602	ND		0.00165	0.000582	ND		0.00171	0.000603	ND		0.00168	0.000592
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000713	0.000202	ND		0.000688	0.000195	ND		0.000714	0.000203	ND		0.0007	0.000199
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00171	0.000649	ND		0.00165	0.000626	ND		0.00171	0.000649	ND		0.00168	0.000637
Chlordane	57-74-9				ND	ND		0.0142	0.00567	ND		0.0138	0.00547	ND		0.0143	0.00567	ND		0.014	0.00557
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00214	0.000596	ND		0.00206	0.000575	ND		0.00214	0.000596	ND		0.0021	0.000585
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00171	0.000335	ND		0.00165	0.000324	ND		0.00171	0.000335	ND		0.00168	0.000329
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00107	0.000535	ND		0.00103	0.000516	ND		0.00107	0.000535	ND		0.00105	0.000525
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00171	0.000404	ND		0.00165	0.00039	ND		0.00171	0.000405	ND		0.00168	0.000397
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00171	0.000572	ND		0.00165	0.000552	ND		0.00171	0.000572	ND		0.00168	0.000562
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000713	0.000339	ND		0.000688	0.000328	ND		0.000714	0.00034	ND		0.0007	0.000333
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000713	0.000292	ND		0.000688	0.000282	ND		0.000714	0.000292	ND		0.0007	0.000287
Endrin aldehyde	7421-93-4				ND	ND		0.00214	0.000748	ND		0.00206	0.000723	ND		0.00214	0.000749	ND		0.0021	0.000735
Endrin ketone	53494-70-5				ND	ND		0.00171	0.00044	ND		0.00165	0.000425	ND		0.00171	0.000441	ND		0.00168	0.000433
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000855	0.000384	ND		0.000826	0.00037	ND		0.000856	0.000384	ND		0.00084	0.000377
Heptachlor epoxide	1024-57-3				ND	ND		0.00321	0.000962	ND		0.0031	0.000929	ND		0.00321	0.000963	ND		0.00315	0.000945
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000713	0.000319	ND		0.000688	0.000308	ND		0.000714	0.000319	ND		0.0007	0.000313
Methoxychlor	72-43-5				ND	ND		0.00321	0.000998	ND		0.0031	0.000964	ND		0.00321	0.000999	ND		0.00315	0.00098
Toxaphene	8001-35-2				ND	ND		0.0321	0.00898	ND		0.031	0.00867	ND		0.0321	0.00899	ND		0.0315	0.00882
trans-Chlordane	5103-74-2				ND	ND		0.00214	0.000564	ND		0.00206	0.000545	ND		0.00214	0.000565	ND		0.0021	0.000554
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-210 (2.5-3)					SB-211 (3.5-4)				SB-212 (3-3.5)				SB-213 (3-3.5)			
				LAB ID:	L2305142-10					L2305142-11				L2305142-12				L2305142-13			
				COLLECTION DATE:	1/28/2023					1/28/2023				1/28/2023				1/28/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0366	0.00325	ND		0.0353	0.00314	ND		0.0355	0.00315	ND		0.0344	0.00306
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0366	0.00366	ND		0.0353	0.00354	ND		0.0355	0.00356	ND		0.0344	0.00345
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0366	0.00775	ND		0.0353	0.00749	ND		0.0355	0.00752	ND		0.0344	0.0073
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0366	0.00493	ND		0.0353	0.00476	ND		0.0355	0.00478	ND		0.0344	0.00464
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0366	0.00548	ND		0.0353	0.0053	ND		0.0355	0.00532	ND		0.0344	0.00516
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0366	0.004	ND		0.0353	0.00387	ND		0.0355	0.00388	ND		0.0344	0.00377
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0366	0.00676	ND		0.0353	0.00653	ND		0.0355	0.00656	ND		0.0344	0.00636
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0366	0.00464	ND		0.0353	0.00449	ND		0.0355	0.00451	ND		0.0344	0.00437
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0366	0.00379	ND		0.0353	0.00366	ND		0.0355	0.00368	ND		0.0344	0.00357
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0366	0.00325	ND		0.0353	0.00314	ND		0.0355	0.00315	ND		0.0344	0.00306
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950	6020		8.53	2.3	6120		8.51	2.3	10200		8.65	2.34	9290		8.21	2.22
Antimony, Total	7440-36-0				ND	1.4	J	4.27	0.324	1.22	J	4.26	0.323	0.945	J	4.33	0.329	1.16	J	4.11	0.312
Arsenic, Total	7440-38-2	16	16	13	0.421	4.42		0.853	0.178	1.88		0.851	0.177	1.67		0.865	0.18	3.59		0.821	0.171
Barium, Total	7440-39-3	350	400	350	49	75.9		0.853	0.148	66.5		0.851	0.148	147		0.865	0.15	73.7		0.821	0.143
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.419	J	0.427	0.028	0.373	J	0.426	0.028	0.43	J	0.433	0.029	0.421		0.411	0.027
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.329	J	0.853	0.084	0.13	J	0.851	0.083	0.114	J	0.865	0.085	0.122	J	0.821	0.081
Calcium, Total	7440-70-2				611	13300		8.53	2.99	4800		8.51	2.98	1380		8.65	3.03	3430		8.21	2.87
Chromium, Total	7440-47-3				17.6	23.5		0.853	0.082	19.4		0.851	0.082	18.2		0.865	0.083	17.1		0.821	0.079
Cobalt, Total	7440-48-4				3.21	7.89		1.71	0.142	6.84		1.7	0.141	6.5		1.73	0.144	5.29		1.64	0.136
Copper, Total	7440-50-8	270	270	50	13.1	41.9		0.853	0.22	24.3		0.851	0.22	15.9		0.865	0.223	12.7		0.821	0.212
Iron, Total	7439-89-6				12400	21000		4.27	0.771	16600		4.26	0.769	15700		4.33	0.781	13200		4.11	0.742
Lead, Total	7439-92-1	400	400	63	3.05	62.7		4.27	0.229	20.3		4.26	0.228	24		4.33	0.232	83.4		4.11	0.22
Magnesium, Total	7439-95-4				2010	7050		8.53	1.31	2840		8.51	1.31	2680		8.65	1.33	3010		8.21	1.26
Manganese, Total	7439-96-5	2000	2000	1600	290	233		0.853	0.136	244		0.851	0.135	438		0.865	0.138	261		0.821	0.13
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	0.126		0.078	0.051	ND		0.08	0.052	ND		0.072	0.047	0.233		0.077	0.05
Nickel, Total	7440-02-0	140	310	30	11	22.1		2.13	0.206	17		2.13	0.206	14.4		2.16	0.209	13.5		2.05	0.199
Potassium, Total	7440-09-7				2380	2920		213	12.3	3030		213	12.2	2550		216	12.5	1230		205	11.8
Selenium, Total	7782-49-2	36	180	3.9	ND	ND		1.71	0.22	ND		1.7	0.22	ND		1.73	0.223	0.272	J	1.64	0.212
Silver, Total	7440-22-4	36	180	2	ND	ND		1.07	0.604	ND		0.426	0.241	ND		0.433	0.245	ND		0.411	0.232
Sodium, Total	7440-23-5				141	103	J	171	2.69	259		170	2.68	474		173	2.73	299		164	2.59
Thallium, Total	7440-28-0				ND	0.319	J	1.71	0.269	ND		1.7	0.268	0.389	J	1.73	0.273	ND		1.64	0.259
Vanadium, Total	7440-62-2				17.8	26.4		0.853	0.173	22.3		0.851	0.173	24.3		0.865	0.176	21.9		0.821	0.167
Zinc, Total	7440-66-6	2200	10000	109	21.3	67.7		4.27	0.25	42.7		4.26	0.249	49.7		4.33	0.254	47.4		4.11	0.241
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND	ND		1	0.22	ND		1	0.22	ND		1	0.22	ND		1	0.22
Solids, Total	NONE				93.5	88.9		0.1	NA	91.2		0.1	NA	90.7		0.1	NA	92.8		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)					SB-301 (2-2.5)					SB-302 (1-1.5)				
				LAB ID:	L2305142-14					L2305142-15					L2359919-01					L2359919-02				
				COLLECTION DATE:	1/28/2023					1/28/2023					10/10/2023					10/10/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL		Conc	Q	RL	MDL	
VOLATILE ORGANICS BY EPA 5035																								
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00031	0.00008	ND		0.00027	0.00007		ND		0.00056	0.00015		ND		0.0007	0.00018	
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00019		ND		0.0007	0.00023	
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00019		ND		0.0007	0.00023	
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00061	0.00016	ND		0.00055	0.00015		ND		0.0011	0.0003		ND		0.0014	0.00038	
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00061	0.00009	ND		0.00055	0.00008		ND		0.0011	0.00016		ND		0.0014	0.0002	
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00061	0.00014	ND		0.00055	0.00013		ND		0.0011	0.00027		ND		0.0014	0.00033	
1,1-Dichloropropene	563-58-6				ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00018		ND		0.0007	0.00022	
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0012	0.0002	ND		0.0011	0.00018		ND		0.0022	0.00036		ND		0.0028	0.00045	
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0012	0.00008	ND		0.0011	0.00007		ND		0.0022	0.00014		ND		0.0028	0.00018	
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0012	0.00012	ND		0.0011	0.0001		ND		0.0022	0.00021		ND		0.0028	0.00027	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0012	0.00017	ND		0.0011	0.00015		ND		0.0022	0.00031		ND		0.0028	0.00038	
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0012	0.0002	ND		0.0011	0.00018		ND		0.0022	0.00038		ND		0.0028	0.00047	
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0018	0.00061	ND		0.0016	0.00055		ND		0.0034	0.0011		ND		0.0042	0.0014	
1,2-Dibromoethane	106-93-4				ND	ND		0.00061	0.00017	ND		0.00055	0.00015		ND		0.0011	0.00031		ND		0.0014	0.00039	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0012	0.00009	ND		0.0011	0.00008		ND		0.0022	0.00016		ND		0.0028	0.0002	
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00061	0.00016	ND		0.00055	0.00014		ND		0.0011	0.00029		ND		0.0014	0.00036	
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00061	0.00008	ND		0.00055	0.00008		ND		0.0011	0.00015		ND		0.0014	0.00019	
1,2-Dichloropropane	78-87-5				ND	ND		0.00061	0.00008	ND		0.00055	0.00007		ND		0.0011	0.00014		ND		0.0014	0.00018	
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0012	0.00012	ND		0.0011	0.0001		ND		0.0022	0.00022		ND		0.0028	0.00027	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0012	0.00009	ND		0.0011	0.00008		ND		0.0022	0.00017		ND		0.0028	0.00021	
1,3-Dichloropropane	142-28-9				ND	ND		0.0012	0.0001	ND		0.0011	0.00009		ND		0.0022	0.00019		ND		0.0028	0.00023	
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00018		ND		0.0007	0.00022	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0012	0.0001	ND		0.0011	0.00009		ND		0.0022	0.00019		ND		0.0028	0.00024	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.049	0.022	ND		0.044	0.019		ND		0.09	0.039		ND		0.11	0.049	
2,2-Dichloropropane	594-20-7				ND	ND		0.0012	0.00012	ND		0.0011	0.00011		ND		0.0022	0.00023		ND		0.0028	0.00028	
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0061	0.0014	ND		0.0055	0.0012		ND		0.011	0.0025		ND		0.014	0.0031	
2-Hexanone	591-78-6				ND	ND		0.0061	0.00072	ND		0.0055	0.00065		ND		0.011	0.0013		ND		0.014	0.0016	
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0061	0.00078	ND		0.0055	0.0007		ND		0.011	0.0014		ND		0.014	0.0018	
Acetone	67-64-1	100	100	0.05	0.01	0.0033	J	0.0061	0.003	ND		0.0055	0.0026		ND		0.011	0.0054		ND		0.014	0.0068	
Acrylonitrile	107-13-1				ND	ND		0.0024	0.0007	ND		0.0022	0.00063		ND		0.0045	0.0013		ND		0.0056	0.0016	
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00019		ND		0.0007	0.00023	
Bromobenzene	108-86-1				ND	ND		0.0012	0.00009	ND		0.0011	0.00008		ND		0.0022	0.00016		ND		0.0028	0.0002	
Bromochloromethane	74-97-5				ND	ND		0.0012	0.00012	ND		0.0011	0.00011		ND		0.0022	0.00023		ND		0.0028	0.00029	
Bromodichloromethane	75-27-4				ND	ND		0.00031	0.00007	ND		0.00027	0.00006		ND		0.00056	0.00012		ND		0.0007	0.00015	
Bromoform	75-25-2				ND	ND		0.0024	0.00015	ND		0.0022	0.00013		ND		0.0045	0.00028		ND		0.0056	0.00034	
Bromomethane	74-83-9				ND	ND		0.0012	0.00036	ND		0.0011	0.00032		ND		0.0022	0.00065		ND		0.0028	0.00082	
Carbon disulfide	75-15-0				ND	ND		0.0061	0.0028	ND		0.0055	0.0025		ND		0.011	0.0051		ND		0.014	0.0064	
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00061	0.00014	ND		0.00055	0.00012		ND		0.0011	0.00026		ND		0.0014	0.00032	
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00031	0.00008	ND		0.00027	0.00007		ND		0.00056	0.00014		ND		0.0007	0.00018	
Chloroethane	75-00-3				ND	ND		0.0012	0.00028	ND		0.0011	0.00025		ND		0.0022	0.00051		ND		0.0028	0.00064	
Chloroform	67-66-3	10	49	0.37	ND	ND		0.00092	0.00009	ND		0.00082	0.00008		ND		0.0017	0.00016		ND		0.0021	0.0002	
Chloromethane	74-87-3				ND	ND		0.0024	0.00057	ND		0.0022	0.00051		ND		0.0045	0.001		ND		0.0056	0.0013	
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00061	0.00011	ND		0.00055	0.0001		ND		0.0011	0.0002		ND		0.0014	0.00024	
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00031	0.0001	ND		0.00027	0.00009		ND		0.00056	0.00018		ND		0.0007	0.00022	
Dibromochloromethane	124-48-1				ND	ND		0.00061	0.00009	ND		0.00055	0.00008		ND		0.0011	0.00016		ND		0.0014	0.0002	
Dibromomethane	74-95-3				ND	ND		0.0012	0.00014	ND		0.0011	0.00013		ND		0.0022	0.00027		ND		0.0028	0.00033	
Dichlorodifluoromethane	75-71-8				ND	ND		0.0061	0.00056	ND		0.0055	0.0005		ND		0.011	0.001		ND		0.014	0.0013	
Ethyl ether	60-29-7				ND	ND		0.0012	0.00021	ND		0.0011	0.00019		ND		0.0022	0.00038		ND		0.0028	0.00048	
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00061	0.00009	ND		0.00055	0.00008		ND		0.0011	0.00016		ND		0.0014	0.0002	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)					SB-301 (2-2.5)					SB-302 (1-1.5)				
				LAB ID:	L2305142-14					L2305142-15					L2359919-01					L2359919-02				
				COLLECTION DATE:	1/28/2023					1/28/2023					10/10/2023					10/10/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0024	0.0001	ND		0.0022	0.00009	ND		0.0045	0.00019	ND		0.0056	0.00024
Isopropylbenzene	98-82-8				ND	ND		0.00061	0.00007	ND		0.00055	0.00006	ND		0.0011	0.00012	ND		0.0014	0.00015
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0012	0.00012	ND		0.0011	0.00011	ND		0.0022	0.00023	ND		0.0028	0.00028
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0031	0.0014	ND		0.0027	0.0012	ND		0.0056	0.0026	ND		0.007	0.0032
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00061	0.0001	ND		0.00055	0.00009	ND		0.0011	0.00019	ND		0.0014	0.00023
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00061	0.0001	ND		0.00055	0.00009	ND		0.0011	0.00019	ND		0.0014	0.00024
Naphthalene	91-20-3	100	100	12	ND	ND		0.0024	0.0004	ND		0.0022	0.00036	ND		0.0045	0.00073	ND		0.0056	0.00091
o-Chlorotoluene	95-49-8				ND	ND		0.0012	0.00012	ND		0.0011	0.0001	ND		0.0022	0.00021	ND		0.0028	0.00027
o-Xylene	95-47-6				ND	ND		0.00061	0.00018	ND		0.00055	0.00016	ND		0.0011	0.00033	ND		0.0014	0.00041
p-Chlorotoluene	106-43-4				ND	ND		0.0012	0.00007	ND		0.0011	0.00006	ND		0.0022	0.00012	ND		0.0028	0.00015
p-Diethylbenzene	105-05-5				ND	ND		0.0012	0.00011	ND		0.0011	0.0001	ND		0.0022	0.0002	ND		0.0028	0.00025
p-Ethyltoluene	622-96-8				ND	ND		0.0012	0.00024	ND		0.0011	0.00021	ND		0.0022	0.00043	ND		0.0028	0.00054
p-Isopropyltoluene	99-87-6				ND	ND		0.00061	0.00007	ND		0.00055	0.00006	ND		0.0011	0.00012	ND		0.0014	0.00015
p/m-Xylene	179601-23-1				ND	ND		0.0012	0.00034	ND		0.0011	0.00031	ND		0.0022	0.00063	ND		0.0028	0.00079
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00061	0.00009	ND		0.00055	0.00008	ND		0.0011	0.00016	ND		0.0014	0.0002
Styrene	100-42-5				0.00064	ND		0.00061	0.00012	ND		0.00055	0.00011	ND		0.0011	0.00022	ND		0.0014	0.00028
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0012	0.00007	ND		0.0011	0.00007	ND		0.0022	0.00013	ND		0.0028	0.00016
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00031	0.00012	ND		0.00027	0.00011	ND		0.00056	0.00022	ND		0.0007	0.00028
Toluene	108-88-3	100	100	0.7	ND	ND		0.00061	0.00033	ND		0.00055	0.0003	ND		0.0011	0.00061	ND		0.0014	0.00076
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.00092	0.00008	ND		0.00082	0.00008	ND		0.0017	0.00015	ND		0.0021	0.00019
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00061	0.00017	ND		0.00055	0.00015	ND		0.0011	0.00031	ND		0.0014	0.00038
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0031	0.00087	ND		0.0027	0.00078	ND		0.0056	0.0016	ND		0.007	0.002
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00031	0.00008	ND		0.00027	0.00008	ND		0.00056	0.00015	ND		0.0007	0.00019
Trichlorofluoromethane	75-69-4				ND	ND		0.0024	0.00043	ND		0.0022	0.00038	ND		0.0045	0.00078	ND		0.0056	0.00098
Vinyl acetate	108-05-4				ND	ND		0.0061	0.0013	ND		0.0055	0.0012	ND		0.011	0.0024	ND		0.014	0.003
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00061	0.0002	ND		0.00055	0.00018	ND		0.0011	0.00038	ND		0.0014	0.00047
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00061	0.00018	ND		0.00055	0.00016	ND		0.0011	0.00033	ND		0.0014	0.00041
Total VOCs					0.01064	0.0033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	-		-	-	-		-	-	-		-	-	0.00299	NJ	0	0
No Tentatively Identified Compounds					-	ND		0	0	-	-	-	-	-	-	-	-	-	-	-	-
Pentane	000109-66-0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					0.00305	-		-	-	0.00217	J	0	0	0.00266	J	0	0	-		-	-
Unknown Cycloalkane					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TIC Compounds					0.00951	-		-	-	0.00217	J	0	0	0.00266	J	0	0	0.00299	J	0	0
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)				SB-301 (2-2.5)				SB-302 (1-1.5)			
				LAB ID:	L2305142-14					L2305142-15				L2359919-01				L2359919-02			
				COLLECTION DATE:	1/28/2023					1/28/2023				10/10/2023				10/10/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000797	0.000386
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000797	0.000279
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000199	0.000082
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000199	0.0001
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000073	J	0.000199	0.000043
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000301	J	0.000797	0.00005
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000068	J	0.000199	0.000032
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000598		0.000199	0.000075
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000276		0.000199	0.000041
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000199	0.000037
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000114	J	0.000199	0.000023
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000199	0.000059
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000238		0.000199	0.000046
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000276		0.000199	0.000078
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-	-	-	-	-	ND		0.000199	0.000043
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-	-	-	-	-	0.00105		0.000199	0.000079
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000374		0.000199	0.000052
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000272	J	0.000398	0.000056
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000123	J	0.000199	0.000106
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000139	J	0.000199	0.000053
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-	-	-	-	-	0.000258		0.000199	0.000051
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-	-	-	-	-	0.00142		0.000199	0.000052
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.18	0.018	ND		0.18	0.019	ND		0.2	0.02	ND		0.2	0.021
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.18	0.02	ND		0.18	0.021	ND		0.2	0.022	ND		0.2	0.023
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.18	0.032	ND		0.18	0.033	ND		0.2	0.035	ND		0.2	0.036
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.18	0.03	ND		0.18	0.031	ND		0.2	0.034	ND		0.2	0.034
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.18	0.031	ND		0.18	0.032	ND		0.2	0.034	ND		0.2	0.035
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.026	0.0081	ND		0.027	0.0084	ND		0.03	0.009	ND		0.03	0.0092
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.18	0.034	ND		0.18	0.035	ND		0.2	0.038	ND		0.2	0.038
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.1	0.033	ND		0.11	0.034	ND		0.12	0.037	ND		0.12	0.038
2,4-Dichlorophenol	120-83-2				ND	ND		0.16	0.028	ND		0.16	0.029	ND		0.18	0.032	ND		0.18	0.032
2,4-Dimethylphenol	105-67-9				ND	ND		0.18	0.058	ND		0.18	0.06	ND		0.2	0.065	ND		0.2	0.066
2,4-Dinitrophenol	51-28-5				ND	ND		0.85	0.082	ND		0.87	0.084	ND		0.94	0.092	ND		0.96	0.093
2,4-Dinitrotoluene	121-14-2				ND	ND		0.18	0.035	ND		0.18	0.036	ND		0.2	0.039	ND		0.2	0.04
2,6-Dinitrotoluene	606-20-2				ND	ND		0.18	0.03	ND		0.18	0.031	ND		0.2	0.034	ND		0.2	0.034
2-Chloronaphthalene	91-58-7				ND	ND		0.18	0.018	ND		0.18	0.018	ND		0.2	0.02	ND		0.2	0.02
2-Chlorophenol	95-57-8				ND	ND		0.18	0.021	ND		0.18	0.021	ND		0.2	0.023	ND		0.2	0.024
2-Methylnaphthalene	91-57-6				ND	ND		0.21	0.021	ND		0.22	0.022	ND		0.24	0.024	ND		0.24	0.024
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.18	0.027	ND		0.18	0.028	ND		0.2	0.03	ND		0.2	0.031

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)					SB-301 (2-2.5)					SB-302 (1-1.5)				
				LAB ID:	L2305142-14					L2305142-15					L2359919-01					L2359919-02				
				COLLECTION DATE:	1/28/2023					1/28/2023					10/10/2023					10/10/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	ND		0.18	0.034	ND		0.18	0.035	ND		0.2	0.038	ND		0.2	0.039
2-Nitrophenol	88-75-5				ND	ND		0.38	0.066	ND		0.39	0.068	ND		0.42	0.074	ND		0.43	0.075
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.18	0.047	ND		0.18	0.048	ND		0.2	0.052	ND		0.2	0.053
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.25	0.028	ND		0.26	0.028	ND		0.28	0.031	ND		0.29	0.031
3-Nitroaniline	99-09-2				ND	ND		0.18	0.033	ND		0.18	0.034	ND		0.2	0.037	ND		0.2	0.038
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.46	0.085	ND		0.47	0.087	ND		0.51	0.094	ND		0.52	0.096
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.18	0.027	ND		0.18	0.028	ND		0.2	0.03	ND		0.2	0.03
4-Chloroaniline	106-47-8				ND	ND		0.18	0.032	ND		0.18	0.033	ND		0.2	0.036	ND		0.2	0.036
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.18	0.019	ND		0.18	0.019	ND		0.2	0.021	ND		0.2	0.021
4-Nitroaniline	100-01-6				ND	ND		0.18	0.073	ND		0.18	0.075	ND		0.2	0.082	ND		0.2	0.083
4-Nitrophenol	100-02-7				ND	ND		0.25	0.072	ND		0.25	0.074	ND		0.28	0.08	ND		0.28	0.082
Acenaphthene	83-32-9	100	100	20	ND	ND		0.14	0.018	ND		0.14	0.019	ND		0.16	0.02	ND		0.16	0.021
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.14	0.027	ND		0.14	0.028	0.051	J	0.16	0.03	0.038	J	0.16	0.031
Acetophenone	98-86-2				ND	ND		0.18	0.022	ND		0.18	0.022	ND		0.2	0.024	ND		0.2	0.025
Anthracene	120-12-7	100	100	100	ND	ND		0.1	0.034	ND		0.11	0.035	ND		0.12	0.038	ND		0.12	0.039
Benzo(a)anthracene	56-55-3	1	1	1	ND	0.027	J	0.1	0.02	0.057	J	0.11	0.02	0.096	J	0.12	0.022	0.12		0.12	0.022
Benzo(a)pyrene	50-32-8	1	1	1	ND	ND		0.14	0.043	0.065	J	0.14	0.044	0.086	J	0.16	0.048	0.11	J	0.16	0.049
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	0.033	J	0.1	0.03	0.079	J	0.11	0.03	0.11	J	0.12	0.033	0.13		0.12	0.034
Benzo(ghi)perylene	191-24-2	100	100	100	ND	0.023	J	0.14	0.021	0.045	J	0.14	0.021	0.058	J	0.16	0.023	0.071	J	0.16	0.024
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	ND		0.1	0.028	0.03	J	0.11	0.029	0.035	J	0.12	0.032	0.048	J	0.12	0.032
Benzoic Acid	65-85-0				ND	ND		0.57	0.18	ND		0.59	0.18	ND		0.64	0.2	ND		0.65	0.2
Benzyl Alcohol	100-51-6				ND	ND		0.18	0.054	ND		0.18	0.056	ND		0.2	0.06	ND		0.2	0.061
Biphenyl	92-52-4				ND	ND		0.4	0.023	ND		0.41	0.024	ND		0.45	0.026	ND		0.46	0.026
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.19	0.018	ND		0.2	0.018	ND		0.21	0.02	ND		0.22	0.02
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.16	0.024	ND		0.16	0.025	ND		0.18	0.027	ND		0.18	0.027
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.21	0.03	ND		0.22	0.031	ND		0.24	0.034	ND		0.24	0.034
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.18	0.061	ND		0.18	0.063	ND		0.2	0.068	ND		0.2	0.069
Butyl benzyl phthalate	85-68-7				ND	ND		0.18	0.044	ND		0.18	0.046	ND		0.2	0.05	ND		0.2	0.05
Carbazole	86-74-8				ND	ND		0.18	0.017	ND		0.18	0.018	ND		0.2	0.019	ND		0.2	0.019
Chrysene	218-01-9	1	3.9	1	ND	0.027	J	0.1	0.018	0.062	J	0.11	0.019	0.1	J	0.12	0.02	0.14		0.12	0.021
Di-n-butylphthalate	84-74-2				ND	ND		0.18	0.033	ND		0.18	0.034	ND		0.2	0.037	ND		0.2	0.038
Di-n-octylphthalate	117-84-0				ND	ND		0.18	0.06	ND		0.18	0.062	ND		0.2	0.067	ND		0.2	0.068
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	ND		0.1	0.02	ND		0.11	0.021	ND		0.12	0.023	ND		0.12	0.023
Dibenzofuran	132-64-9	14	59	7	ND	ND		0.18	0.017	ND		0.18	0.017	ND		0.2	0.019	ND		0.2	0.019
Diethyl phthalate	84-66-2				ND	ND		0.18	0.016	ND		0.18	0.017	ND		0.2	0.018	ND		0.2	0.018
Dimethyl phthalate	131-11-3				ND	ND		0.18	0.037	ND		0.18	0.038	ND		0.2	0.041	ND		0.2	0.042
Fluoranthene	206-44-0	100	100	100	ND	0.04	J	0.1	0.02	0.086	J	0.11	0.021	0.15		0.12	0.023	0.2		0.12	0.023
Fluorene	86-73-7	100	100	30	ND	ND		0.18	0.017	ND		0.18	0.018	ND		0.2	0.019	ND		0.2	0.019
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.1	0.02	ND		0.11	0.02	ND		0.12	0.022	ND		0.12	0.022
Hexachlorobutadiene	87-68-3				ND	ND		0.18	0.026	ND		0.18	0.026	ND		0.2	0.029	ND		0.2	0.029
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.5	0.16	ND		0.52	0.16	ND		0.56	0.18	ND		0.57	0.18
Hexachloroethane	67-72-1				ND	ND		0.14	0.028	ND		0.14	0.029	ND		0.16	0.032	ND		0.16	0.032
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	ND		0.14	0.025	0.049	J	0.14	0.025	0.063	J	0.16	0.027	0.073	J	0.16	0.028
Isophorone	78-59-1				ND	ND		0.16	0.023	ND		0.16	0.024	ND		0.18	0.026	ND		0.18	0.026
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.18	0.027	ND		0.18	0.028	ND		0.2	0.03	ND		0.2	0.031
Naphthalene	91-20-3	100	100	12	ND	ND		0.18	0.022	ND		0.18	0.022	ND		0.2	0.024	ND		0.2	0.024
NDPA/DPA	86-30-6				ND	ND		0.14	0.02	ND		0.14	0.021	ND		0.16	0.022	ND		0.16	0.023
Nitrobenzene	98-95-3				ND	ND		0.16	0.026	ND		0.16	0.027	ND		0.18	0.029	ND		0.18	0.03
p-Chloro-m-cresol	59-50-7				ND	ND		0.18	0.026	ND		0.18	0.027	ND		0.2	0.029	ND		0.2	0.03
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.14	0.039	ND		0.14	0.04	ND		0.16	0.043	ND		0.16	0.044
Phenanthrene	85-01-8	100	100	100	ND	ND		0.1	0.021	ND		0.11	0.022	0.067	J	0.12	0.024	0.14		0.12	0.024

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)				SB-301 (2-2.5)				SB-302 (1-1.5)			
				LAB ID:	L2305142-14					L2305142-15				L2359919-01				L2359919-02			
				COLLECTION DATE:	1/28/2023					1/28/2023				10/10/2023				10/10/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	ND		0.18	0.027	ND		0.18	0.027	ND		0.2	0.03	ND		0.2	0.03
Pyrene	129-00-0	100	100	100	ND	0.037	J	0.1	0.018	0.079	J	0.11	0.018	0.14		0.12	0.02	0.22		0.12	0.02
Total SVOCs					-	0.187	-	-	-	0.552	-	-	-	0.956	-	-	-	1.29	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	-		-	-	ND		0	0	ND		0	0	ND		0	0
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alcohol					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	0.164	J	0	0	-		-	-	-		-	-	-		-	-
Unknown Ketone					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Ketone					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown PAH					-	-		-	-	-		-	-	-		-	-	-		-	-
Unknown Thiophene					-	-		-	-	-		-	-	-		-	-	-		-	-
Total TIC Compounds					-	0.164	J	0	0	-		-	-	-		-	-	-		-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00171	0.000611	ND		0.0017	0.000605	ND		0.00182	0.000649	ND		0.00187	0.000666
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00171	0.000396	ND		0.0017	0.000392	0.00397		0.00182	0.000421	0.00518		0.00187	0.000432
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	ND		0.00171	0.00138	ND		0.0017	0.00136	0.00714		0.00182	0.00146	0.0119		0.00187	0.0015
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00171	0.000603	ND		0.0017	0.000597	ND		0.00182	0.000641	ND		0.00187	0.000657
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000713	0.000203	ND		0.000706	0.000201	ND		0.000759	0.000215	ND		0.000778	0.000221
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00171	0.000649	ND		0.0017	0.000643	ND		0.00182	0.00069	ND		0.00187	0.000708
Chlordane	57-74-9				ND	ND		0.0143	0.00567	ND		0.0141	0.00562	ND		0.0152	0.00603	ND		0.0156	0.00618
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00214	0.000596	ND		0.00212	0.00059	ND		0.00228	0.000634	ND		0.00233	0.00065
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00171	0.000335	ND		0.0017	0.000332	ND		0.00182	0.000357	ND		0.00187	0.000366
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00107	0.000535	ND		0.00106	0.00053	ND		0.00114	0.000569	0.00115	J	0.00117	0.000583
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00171	0.000404	ND		0.0017	0.0004	ND		0.00182	0.00043	ND		0.00187	0.000441
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00171	0.000572	ND		0.0017	0.000566	ND		0.00182	0.000608	ND		0.00187	0.000624
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000713	0.00034	ND		0.000706	0.000336	ND		0.000759	0.000361	ND		0.000778	0.00037
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000713	0.000292	ND		0.000706	0.00029	ND		0.000759	0.000311	ND		0.000778	0.000319
Endrin aldehyde	7421-93-4				ND	ND		0.00214	0.000749	ND		0.00212	0.000742	ND		0.00228	0.000797	ND		0.00233	0.000817
Endrin ketone	53494-70-5				ND	ND		0.00171	0.000441	ND		0.0017	0.000436	ND		0.00182	0.000469	ND		0.00187	0.000481
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000856	0.000384	ND		0.000848	0.00038	ND		0.00091	0.000408	ND		0.000933	0.000418
Heptachlor epoxide	1024-57-3				ND	ND		0.00321	0.000963	ND		0.00318	0.000954	ND		0.00341	0.00102	ND		0.0035	0.00105
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000713	0.000319	ND		0.000706	0.000316	ND		0.000759	0.000339	ND		0.000778	0.000348
Methoxychlor	72-43-5				ND	ND		0.00321	0.000999	ND		0.00318	0.000989	ND		0.00341	0.00106	ND		0.0035	0.00109
Toxaphene	8001-35-2				ND	ND		0.0321	0.00899	ND		0.0318	0.0089	ND		0.0341	0.00956	ND		0.035	0.0098
trans-Chlordane	5103-74-2				ND	ND		0.00214	0.000565	ND		0.00212	0.000559	ND		0.00228	0.000601	ND		0.00233	0.000616
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-214 (4-4.5)					SB-215 (1-1.5)				SB-301 (2-2.5)				SB-302 (1-1.5)			
				LAB ID:	L2305142-14					L2305142-15				L2359919-01				L2359919-02			
				COLLECTION DATE:	1/28/2023					1/28/2023				10/10/2023				10/10/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0344	0.00306	ND		0.0353	0.00314	ND		0.0568	0.00504	ND		0.0605	0.00537
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0344	0.00345	ND		0.0353	0.00354	ND		0.0568	0.00569	ND		0.0605	0.00606
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0344	0.0073	ND		0.0353	0.00749	ND		0.0568	0.012	ND		0.0605	0.0128
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0344	0.00464	ND		0.0353	0.00476	ND		0.0568	0.00766	ND		0.0605	0.00815
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0344	0.00516	ND		0.0353	0.0053	ND		0.0568	0.00852	ND		0.0605	0.00907
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0344	0.00377	ND		0.0353	0.00386	ND		0.0568	0.00621	ND		0.0605	0.00662
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0344	0.00636	ND		0.0353	0.00653	ND		0.0568	0.0105	ND		0.0605	0.0112
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0344	0.00437	ND		0.0353	0.00448	ND		0.0568	0.00721	ND		0.0605	0.00768
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0344	0.00357	ND		0.0353	0.00366	ND		0.0568	0.00588	ND		0.0605	0.00627
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0344	0.00306	ND		0.0353	0.00314	ND		0.0568	0.00504	ND		0.0605	0.00537
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950	11500		8.46	2.28	12400		8.72	2.36	11900		9.09	2.46	10100		9.56	2.58
Antimony, Total	7440-36-0				ND	1.44	J	4.23	0.321	1.34	J	4.36	0.332	0.498	J	4.55	0.346	ND		4.78	0.363
Arsenic, Total	7440-38-2	16	16	13	0.421	2.89		0.846	0.176	3.92		0.872	0.181	3.92		0.909	0.189	6.29		0.956	0.199
Barium, Total	7440-39-3	350	400	350	49	78.7		0.846	0.147	87		0.872	0.152	108		0.909	0.158	242		0.956	0.166
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.602		0.423	0.028	0.568		0.436	0.029	0.49		0.455	0.03	0.452	J	0.478	0.032
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.181	J	0.846	0.083	0.124	J	0.872	0.086	0.14	J	0.909	0.089	1.27		0.956	0.094
Calcium, Total	7440-70-2				611	3150		8.46	2.96	3240		8.72	3.05	1920		9.09	3.18	5520		9.56	3.35
Chromium, Total	7440-47-3				17.6	28.1		0.846	0.081	18.8		0.872	0.084	18.6		0.909	0.087	18.9		0.956	0.092
Cobalt, Total	7440-48-4				3.21	8.42		1.69	0.14	7.16		1.74	0.145	4.93		1.82	0.151	4.88		1.91	0.159
Copper, Total	7440-50-8	270	270	50	13.1	21.6		0.846	0.218	15.6		0.872	0.225	25.8		0.909	0.235	42.9		0.956	0.247
Iron, Total	7439-89-6				12400	25200		4.23	0.764	15400		4.36	0.788	14100		4.55	0.821	16200		4.78	0.864
Lead, Total	7439-92-1	400	400	63	3.05	36.7		4.23	0.227	171		4.36	0.234	362		4.55	0.244	335		4.78	0.256
Magnesium, Total	7439-95-4				2010	3730		8.46	1.3	3930		8.72	1.34	3000		9.09	1.4	2630		9.56	1.47
Manganese, Total	7439-96-5	2000	2000	1600	290	651		0.846	0.134	345		0.872	0.139	273		0.909	0.145	328		0.956	0.152
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	0.202		0.072	0.047	0.195		0.074	0.048	0.159		0.075	0.049	0.388		0.077	0.05
Nickel, Total	7440-02-0	140	310	30	11	15.6		2.11	0.205	13		2.18	0.211	13.4		2.27	0.22	15.4		2.39	0.231
Potassium, Total	7440-09-7				2380	2380		211	12.2	1180		218	12.6	1900		227	13.1	1090		239	13.8
Selenium, Total	7782-49-2	36	180	3.9	ND	0.728	J	1.69	0.218	ND		1.74	0.225	0.537	J	1.82	0.235	0.651	J	1.91	0.247
Silver, Total	7440-22-4	36	180	2	ND	ND		1.06	0.598	ND		0.436	0.247	ND		0.455	0.257	0.867		0.478	0.271
Sodium, Total	7440-23-5				141	424		169	2.66	246		174	2.75	64.1	J	182	2.86	81	J	191	3.01
Thallium, Total	7440-28-0				ND	0.429	J	1.69	0.266	0.349	J	1.74	0.275	0.853	J	1.82	0.286	0.626	J	1.91	0.301
Vanadium, Total	7440-62-2				17.8	39.7		0.846	0.172	27.4		0.872	0.177	33.8		0.909	0.185	29.8		0.956	0.194
Zinc, Total	7440-66-6	2200	10000	109	21.3	40.5		4.23	0.248	51		4.36	0.256	129		4.55	0.266	386		4.78	0.28
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND	ND		1	0.21	ND		1.1	0.23	ND		1.1	0.24	ND		1.2	0.25
Solids, Total	NONE				93.5	92.1		0.1	NA	90.4		0.1	NA	84		0.1	NA	82		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)				SB-305 (2-2.5)				SB-306 (6-6.5)			
				LAB ID:	L2360344-01					L2360711-01				L2361112-01				L2361279-01			
				COLLECTION DATE:	10/11/2023					10/12/2023				10/13/2023				10/16/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY EPA 5035																					
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00048	0.00013	ND		0.00054	0.00014	ND		0.00078	0.00021	ND		0.00047	0.00012
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00048	0.00016	ND		0.00054	0.00018	ND		0.00078	0.00026	ND		0.00047	0.00016
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00048	0.00016	ND		0.00054	0.00018	ND		0.00078	0.00026	ND		0.00047	0.00015
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00097	0.00026	ND		0.0011	0.00029	ND		0.0016	0.00042	ND		0.00093	0.00025
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00097	0.00014	ND		0.0011	0.00016	ND		0.0016	0.00023	ND		0.00093	0.00014
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00097	0.00023	ND		0.0011	0.00026	ND		0.0016	0.00037	ND		0.00093	0.00022
1,1-Dichloropropene	563-58-6				ND	ND		0.00048	0.00015	ND		0.00054	0.00017	ND		0.00078	0.00025	ND		0.00047	0.00015
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0019	0.00031	ND		0.0022	0.00035	ND		0.0031	0.0005	ND		0.0019	0.0003
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0019	0.00012	ND		0.0022	0.00014	ND		0.0031	0.0002	ND		0.0019	0.00012
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0019	0.00018	ND		0.0022	0.00021	ND		0.0031	0.0003	ND		0.0019	0.00018
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0019	0.00026	ND		0.0022	0.0003	ND		0.0031	0.00043	ND		0.0019	0.00025
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0019	0.00032	ND		0.0022	0.00036	ND		0.0031	0.00052	ND		0.0019	0.00031
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0029	0.00097	ND		0.0033	0.0011	ND		0.0047	0.0016	ND		0.0028	0.00093
1,2-Dibromoethane	106-93-4				ND	ND		0.00097	0.00027	ND		0.0011	0.0003	ND		0.0016	0.00044	ND		0.00093	0.00026
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0019	0.00014	ND		0.0022	0.00016	ND		0.0031	0.00023	ND		0.0019	0.00013
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00097	0.00025	ND		0.0011	0.00028	ND		0.0016	0.0004	ND		0.00093	0.00024
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00097	0.00013	ND		0.0011	0.00015	ND		0.0016	0.00022	ND		0.00093	0.00013
1,2-Dichloropropane	78-87-5				ND	ND		0.00097	0.00012	ND		0.0011	0.00014	ND		0.0016	0.0002	ND		0.00093	0.00012
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0019	0.00019	ND		0.0022	0.00021	ND		0.0031	0.0003	ND		0.0019	0.00018
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0019	0.00014	ND		0.0022	0.00016	ND		0.0031	0.00023	ND		0.0019	0.00014
1,3-Dichloropropane	142-28-9				ND	ND		0.0019	0.00016	ND		0.0022	0.00018	ND		0.0031	0.00026	ND		0.0019	0.00016
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00048	0.00015	ND		0.00054	0.00017	ND		0.00078	0.00025	ND		0.00047	0.00015
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0019	0.00016	ND		0.0022	0.00019	ND		0.0031	0.00027	ND		0.0019	0.00016
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.078	0.034	ND		0.087	0.038	ND		0.12	0.055	ND		0.075	0.033
2,2-Dichloropropane	594-20-7				ND	ND		0.0019	0.0002	ND		0.0022	0.00022	ND		0.0031	0.00032	ND		0.0019	0.00019
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0097	0.0022	ND		0.011	0.0024	ND		0.016	0.0035	ND		0.0093	0.0021
2-Hexanone	591-78-6				ND	ND		0.0097	0.0011	ND		0.011	0.0013	ND		0.016	0.0018	ND		0.0093	0.0011
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0097	0.0012	ND		0.011	0.0014	ND		0.016	0.002	ND		0.0093	0.0012
Acetone	67-64-1	100	100	0.05	0.01	ND		0.0097	0.0047	ND		0.011	0.0052	0.014	J	0.016	0.0076	ND		0.0093	0.0045
Acrylonitrile	107-13-1				ND	ND		0.0039	0.0011	ND		0.0044	0.0012	ND		0.0063	0.0018	ND		0.0037	0.0011
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00048	0.00016	ND		0.00054	0.00018	ND		0.00078	0.00026	ND		0.00047	0.00015
Bromobenzene	108-86-1				ND	ND		0.0019	0.00014	ND		0.0022	0.00016	ND		0.0031	0.00023	ND		0.0019	0.00014
Bromochloromethane	74-97-5				ND	ND		0.0019	0.0002	ND		0.0022	0.00022	ND		0.0031	0.00032	ND		0.0019	0.00019
Bromodichloromethane	75-27-4				ND	ND		0.00048	0.0001	ND		0.00054	0.00012	ND		0.00078	0.00017	ND		0.00047	0.0001
Bromoform	75-25-2				ND	ND		0.0039	0.00024	ND		0.0044	0.00027	ND		0.0063	0.00039	ND		0.0037	0.00023
Bromomethane	74-83-9				ND	ND		0.0019	0.00056	ND		0.0022	0.00063	ND		0.0031	0.00091	ND		0.0019	0.00054
Carbon disulfide	75-15-0				ND	ND		0.0097	0.0044	ND		0.011	0.005	ND		0.016	0.0071	ND		0.0093	0.0042
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00097	0.00022	ND		0.0011	0.00025	ND		0.0016	0.00036	ND		0.00093	0.00021
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00048	0.00012	ND		0.00054	0.00014	ND		0.00078	0.0002	ND		0.00047	0.00012
Chloroethane	75-00-3				ND	ND		0.0019	0.00044	ND		0.0022	0.00049	ND		0.0031	0.00071	ND		0.0019	0.00042
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0014	0.00014	ND		0.0016	0.00015	ND		0.0024	0.00022	ND		0.0014	0.00013
Chloromethane	74-87-3				ND	ND		0.0039	0.0009	ND		0.0044	0.001	ND		0.0063	0.0015	ND		0.0037	0.00087
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00097	0.00017	ND		0.0011	0.00019	ND		0.0016	0.00027	ND		0.00093	0.00016
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00048	0.00015	ND		0.00054	0.00017	ND		0.00078	0.00025	ND		0.00047	0.00015
Dibromochloromethane	124-48-1				ND	ND		0.00097	0.00014	ND		0.0011	0.00015	ND		0.0016	0.00022	ND		0.00093	0.00013
Dibromomethane	74-95-3				ND	ND		0.0019	0.00023	ND		0.0022	0.00026	ND		0.0031	0.00037	ND		0.0019	0.00022
Dichlorodifluoromethane	75-71-8				ND	ND		0.0097	0.00089	ND		0.011	0.001	ND		0.016	0.0014	ND		0.0093	0.00085
Ethyl ether	60-29-7				ND	ND		0.0019	0.00033	ND		0.0022	0.00037	ND		0.0031	0.00054	ND		0.0019	0.00032
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00097	0.00014	ND		0.0011	0.00015	ND		0.0016	0.00022	ND		0.00093	0.00013

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)				SB-305 (2-2.5)				SB-306 (6-6.5)			
				LAB ID:	L2360344-01					L2360711-01				L2361112-01				L2361279-01			
				COLLECTION DATE:	10/11/2023					10/12/2023				10/13/2023				10/16/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0039	0.00016	ND		0.0044	0.00018	ND		0.0063	0.00026	ND		0.0037	0.00016
Isopropylbenzene	98-82-8				ND	ND		0.00097	0.0001	ND		0.0011	0.00012	ND		0.0016	0.00017	ND		0.00093	0.0001
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0019	0.00019	ND		0.0022	0.00022	ND		0.0031	0.00032	ND		0.0019	0.00019
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0048	0.0022	ND		0.0054	0.0025	ND		0.0078	0.0036	ND		0.0047	0.0021
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00097	0.00016	ND		0.0011	0.00018	ND		0.0016	0.00026	ND		0.00093	0.00016
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00097	0.00016	ND		0.0011	0.00019	ND		0.0016	0.00027	ND		0.00093	0.00016
Naphthalene	91-20-3	100	100	12	ND	ND		0.0039	0.00063	ND		0.0044	0.00071	ND		0.0063	0.001	ND		0.0037	0.00061
o-Chlorotoluene	95-49-8				ND	ND		0.0019	0.00018	ND		0.0022	0.00021	ND		0.0031	0.0003	ND		0.0019	0.00018
o-Xylene	95-47-6				ND	ND		0.00097	0.00028	ND		0.0011	0.00032	ND		0.0016	0.00046	ND		0.00093	0.00027
p-Chlorotoluene	106-43-4				ND	ND		0.0019	0.0001	ND		0.0022	0.00012	ND		0.0031	0.00017	ND		0.0019	0.0001
p-Diethylbenzene	105-05-5				ND	ND		0.0019	0.00017	ND		0.0022	0.00019	ND		0.0031	0.00028	ND		0.0019	0.00016
p-Ethyltoluene	622-96-8				ND	ND		0.0019	0.00037	ND		0.0022	0.00042	ND		0.0031	0.0006	ND		0.0019	0.00036
p-Isopropyltoluene	99-87-6				ND	ND		0.00097	0.0001	ND		0.0011	0.00012	ND		0.0016	0.00017	ND		0.00093	0.0001
p/m-Xylene	179601-23-1				ND	ND		0.0019	0.00054	ND		0.0022	0.00061	ND		0.0031	0.00088	ND		0.0019	0.00052
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00097	0.00014	ND		0.0011	0.00016	ND		0.0016	0.00023	ND		0.00093	0.00014
Styrene	100-42-5				0.00064	ND		0.00097	0.00019	ND		0.0011	0.00021	ND		0.0016	0.00031	ND		0.00093	0.00018
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0019	0.00011	ND		0.0022	0.00013	ND		0.0031	0.00018	ND		0.0019	0.00011
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00048	0.00019	ND		0.00054	0.00021	ND		0.00078	0.00031	ND		0.00047	0.00018
Toluene	108-88-3	100	100	0.7	ND	ND		0.00097	0.00053	ND		0.0011	0.00059	ND		0.0016	0.00085	ND		0.00093	0.00051
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0014	0.00013	ND		0.0016	0.00015	ND		0.0024	0.00022	ND		0.0014	0.00013
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00097	0.00026	ND		0.0011	0.0003	ND		0.0016	0.00043	ND		0.00093	0.00025
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0048	0.0014	ND		0.0054	0.0015	ND		0.0078	0.0022	ND		0.0047	0.0013
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00048	0.00013	ND		0.00054	0.00015	ND		0.00078	0.00022	ND		0.00047	0.00013
Trichlorofluoromethane	75-69-4				ND	ND		0.0039	0.00067	ND		0.0044	0.00076	ND		0.0063	0.0011	ND		0.0037	0.00065
Vinyl acetate	108-05-4				ND	ND		0.0097	0.0021	ND		0.011	0.0023	ND		0.016	0.0034	ND		0.0093	0.002
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00097	0.00032	ND		0.0011	0.00036	ND		0.0016	0.00052	ND		0.00093	0.00031
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00097	0.00028	ND		0.0011	0.00032	ND		0.0016	0.00046	ND		0.00093	0.00027
Total VOCs					0.01064	-	-	-	-	-	-	-	-	0.014	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																					
Cyclopentane	000287-92-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	0.00382	NJ	0	0	0.00392	NJ	0	0	-	-	-	-	-	-	-	-
No Tentatively Identified Compounds					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentane	000109-66-0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					0.00305	0.00195	J	0	0	-		-	-	0.0045	J	0	0	0.00771	J	0	0
Unknown Cycloalkane					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TIC Compounds					0.00951	0.00577	J	0	0	0.00392	J	0	0	0.0045	J	0	0	0.00771	J	0	0
PERFLUORINATED ALKYL ACIDS BY EPA 1633																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)				SB-305 (2-2.5)				SB-306 (6-6.5)			
				LAB ID:	L2360344-01					L2360711-01				L2361112-01				L2361279-01			
				COLLECTION DATE:	10/11/2023					10/12/2023				10/13/2023				10/16/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFOA/PFOS, Total					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION																					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	ND		0.000807	0.000391	ND		0.000814	0.000394	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND	-	-	-	-	ND		0.000807	0.000282	ND		0.000814	0.000285	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	ND		0.000202	0.000083	ND		0.000203	0.000084	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	ND		0.000202	0.000101	ND		0.000203	0.000102	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	ND		0.000202	0.000044	ND		0.000203	0.000044	-	-	-	-
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	0.000102	J	0.000807	0.000051	ND		0.000814	0.000051	-	-	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	ND		0.000202	0.000032	0.000042	J	0.000203	0.000033	-	-	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	0.000099	J	0.000202	0.000076	0.000088	J	0.000203	0.000077	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	ND		0.000202	0.000041	ND		0.000203	0.000042	-	-	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	ND		0.000202	0.000037	ND		0.000203	0.000037	-	-	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	0.000071	J	0.000202	0.000023	0.000039	J	0.000203	0.000024	-	-	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	ND		0.000202	0.00006	ND		0.000203	0.00006	-	-	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	0.000122	J	0.000202	0.000047	0.000092	J	0.000203	0.000047	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	0.000273		0.000202	0.000079	ND		0.000203	0.00008	-	-	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	ND		0.000202	0.000044	ND		0.000203	0.000044	-	-	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	0.00092		0.000202	0.00008	0.00056		0.000203	0.000081	-	-	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	0.000274		0.000202	0.000053	0.000101	J	0.000203	0.000053	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	0.000199	J	0.000404	0.000057	0.000126	J	0.000407	0.000057	-	-	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	ND		0.000202	0.000107	ND		0.000203	0.000108	-	-	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	ND		0.000202	0.000053	ND		0.000203	0.000054	-	-	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	ND		0.000202	0.000052	ND		0.000203	0.000052	-	-	-	-
PFOA/PFOS, Total					ND	-	-	-	-	0.00119		0.000202	0.000053	0.000661	J	0.000203	0.000053	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																					
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.19	0.02	ND		0.19	0.02	ND		0.18	0.019	ND		0.18	0.019
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.19	0.022	ND		0.19	0.022	ND		0.18	0.021	ND		0.18	0.02
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.19	0.034	ND		0.19	0.035	ND		0.18	0.033	ND		0.18	0.032
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.19	0.033	ND		0.19	0.033	ND		0.18	0.031	ND		0.18	0.031
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.19	0.034	ND		0.19	0.034	ND		0.18	0.032	ND		0.18	0.031
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.029	0.0088	ND		0.029	0.0089	ND		0.027	0.0084	ND		0.027	0.0083
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.19	0.037	ND		0.19	0.037	ND		0.18	0.035	ND		0.18	0.034
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.12	0.036	ND		0.12	0.037	ND		0.11	0.035	ND		0.11	0.034
2,4-Dichlorophenol	120-83-2				ND	ND		0.17	0.031	ND		0.17	0.031	ND		0.16	0.029	ND		0.16	0.029
2,4-Dimethylphenol	105-67-9				ND	ND		0.19	0.064	ND		0.19	0.064	ND		0.18	0.06	ND		0.18	0.059
2,4-Dinitrophenol	51-28-5				ND	ND		0.92	0.09	ND		0.93	0.09	ND		0.88	0.085	ND		0.86	0.084
2,4-Dinitrotoluene	121-14-2				ND	ND		0.19	0.038	ND		0.19	0.039	ND		0.18	0.037	ND		0.18	0.036
2,6-Dinitrotoluene	606-20-2				ND	ND		0.19	0.033	ND		0.19	0.033	ND		0.18	0.031	ND		0.18	0.031
2-Chloronaphthalene	91-58-7				ND	ND		0.19	0.019	ND		0.19	0.019	ND		0.18	0.018	ND		0.18	0.018
2-Chlorophenol	95-57-8				ND	ND		0.19	0.023	ND		0.19	0.023	ND		0.18	0.022	ND		0.18	0.021
2-Methylnaphthalene	91-57-6				ND	0.025	J	0.23	0.023	ND		0.23	0.023	0.034	J	0.22	0.022	ND		0.22	0.022
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.19	0.03	ND		0.19	0.03	ND		0.18	0.028	ND		0.18	0.028

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)					SB-305 (2-2.5)					SB-306 (6-6.5)				
				LAB ID:	L2360344-01					L2360711-01					L2361112-01					L2361279-01				
				COLLECTION DATE:	10/11/2023					10/12/2023					10/13/2023					10/16/2023				
				SAMPLE DEPTH:																				
				SAMPLE MATRIX:	SOIL					SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES																				
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
2-Nitroaniline	88-74-4				ND	ND		0.19	0.037	ND		0.19	0.037	ND		0.18	0.035	ND		0.18	0.035
2-Nitrophenol	88-75-5				ND	ND		0.42	0.072	ND		0.42	0.073	ND		0.4	0.069	ND		0.39	0.068
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.19	0.051	ND		0.19	0.051	ND		0.18	0.049	ND		0.18	0.048
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.28	0.03	ND		0.28	0.03	ND		0.26	0.029	ND		0.26	0.028
3-Nitroaniline	99-09-2				ND	ND		0.19	0.036	ND		0.19	0.036	ND		0.18	0.034	ND		0.18	0.034
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.5	0.092	ND		0.5	0.093	ND		0.48	0.088	ND		0.47	0.086
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.18	0.028	ND		0.18	0.027
4-Chloroaniline	106-47-8				ND	ND		0.19	0.035	ND		0.19	0.035	ND		0.18	0.033	ND		0.18	0.033
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.19	0.02	ND		0.19	0.021	ND		0.18	0.02	ND		0.18	0.019
4-Nitroaniline	100-01-6				ND	ND		0.19	0.08	ND		0.19	0.08	ND		0.18	0.076	ND		0.18	0.074
4-Nitrophenol	100-02-7				ND	ND		0.27	0.078	ND		0.27	0.079	ND		0.26	0.075	ND		0.25	0.073
Acenaphthene	83-32-9	100	100	20	ND	0.062	J	0.15	0.02	0.03	J	0.15	0.02	0.31		0.15	0.019	ND		0.14	0.019
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.15	0.03	0.031	J	0.15	0.03	0.092	J	0.15	0.028	ND		0.14	0.028
Acetophenone	98-86-2				ND	ND		0.19	0.024	ND		0.19	0.024	ND		0.18	0.023	ND		0.18	0.022
Anthracene	120-12-7	100	100	100	ND	0.14		0.12	0.038	0.078	J	0.12	0.038	0.64		0.11	0.036	ND		0.11	0.035
Benzo(a)anthracene	56-55-3	1	1	1	ND	0.29		0.12	0.022	0.31		0.12	0.022	2.3		0.11	0.021	ND		0.11	0.02
Benzo(a)pyrene	50-32-8	1	1	1	ND	0.29		0.15	0.047	0.32		0.15	0.047	2.2		0.15	0.045	ND		0.14	0.044
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	0.32		0.12	0.032	0.39		0.12	0.032	2.8		0.11	0.031	ND		0.11	0.03
Benzo(ghi)perylene	191-24-2	100	100	100	ND	0.18		0.15	0.023	0.17		0.15	0.023	1.1		0.15	0.022	ND		0.14	0.021
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	0.11	J	0.12	0.031	0.15		0.12	0.031	0.92		0.11	0.029	ND		0.11	0.029
Benzoic Acid	65-85-0				ND	ND		0.62	0.19	ND		0.62	0.2	ND		0.59	0.18	ND		0.58	0.18
Benzyl Alcohol	100-51-6				ND	ND		0.19	0.059	ND		0.19	0.059	ND		0.18	0.056	ND		0.18	0.055
Biphenyl	92-52-4				ND	ND		0.44	0.025	ND		0.44	0.025	ND		0.42	0.024	ND		0.41	0.023
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.21	0.019	ND		0.21	0.019	ND		0.2	0.018	ND		0.19	0.018
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.17	0.026	ND		0.17	0.026	ND		0.16	0.025	ND		0.16	0.024
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.23	0.033	ND		0.23	0.033	ND		0.22	0.031	ND		0.22	0.031
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.19	0.066	0.078	J	0.19	0.067	0.083	J	0.18	0.063	ND		0.18	0.062
Butyl benzyl phthalate	85-68-7				ND	ND		0.19	0.048	ND		0.19	0.049	ND		0.18	0.046	ND		0.18	0.045
Carbazole	86-74-8				ND	0.064	J	0.19	0.019	0.045	J	0.19	0.019	0.23		0.18	0.018	ND		0.18	0.017
Chrysene	218-01-9	1	3.9	1	ND	0.27		0.12	0.02	0.28		0.12	0.02	2		0.11	0.019	ND		0.11	0.019
Di-n-butylphthalate	84-74-2				ND	ND		0.19	0.036	ND		0.19	0.037	ND		0.18	0.035	ND		0.18	0.034
Di-n-octylphthalate	117-84-0				ND	ND		0.19	0.065	ND		0.19	0.066	ND		0.18	0.062	ND		0.18	0.061
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	0.042	J	0.12	0.022	0.044	J	0.12	0.022	0.29		0.11	0.021	ND		0.11	0.021
Dibenzofuran	132-64-9	14	59	7	ND	0.048	J	0.19	0.018	ND		0.19	0.018	0.097	J	0.18	0.017	ND		0.18	0.017
Diethyl phthalate	84-66-2				ND	ND		0.19	0.018	ND		0.19	0.018	ND		0.18	0.017	ND		0.18	0.017
Dimethyl phthalate	131-11-3				ND	ND		0.19	0.04	ND		0.19	0.04	ND		0.18	0.038	ND		0.18	0.038
Fluoranthene	206-44-0	100	100	100	ND	0.72		0.12	0.022	0.6		0.12	0.022	4.2		0.11	0.021	ND		0.11	0.021
Fluorene	86-73-7	100	100	30	ND	0.045	J	0.19	0.019	0.027	J	0.19	0.019	0.22		0.18	0.018	ND		0.18	0.017
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.12	0.022	ND		0.12	0.022	ND		0.11	0.02	ND		0.11	0.02
Hexachlorobutadiene	87-68-3				ND	ND		0.19	0.028	ND		0.19	0.028	ND		0.18	0.027	ND		0.18	0.026
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.55	0.17	ND		0.55	0.17	ND		0.52	0.16	ND		0.51	0.16
Hexachloroethane	67-72-1				ND	ND		0.15	0.031	ND		0.15	0.031	ND		0.15	0.03	ND		0.14	0.029
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	0.22		0.15	0.027	0.2		0.15	0.027	1.3		0.15	0.026	ND		0.14	0.025
Isophorone	78-59-1				ND	ND		0.17	0.025	ND		0.17	0.025	ND		0.16	0.024	ND		0.16	0.023
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.19	0.03	ND		0.19	0.03	ND		0.18	0.028	ND		0.18	0.028
Naphthalene	91-20-3	100	100	12	ND	0.035	J	0.19	0.023	ND		0.19	0.024	0.076	J	0.18	0.022	ND		0.18	0.022
NDPA/DPA	86-30-6				ND	ND		0.15	0.022	ND		0.15	0.022	ND		0.15	0.021	ND		0.14	0.02
Nitrobenzene	98-95-3				ND	ND		0.17	0.028	ND		0.17	0.028	ND		0.16	0.027	ND		0.16	0.026
p-Chloro-m-cresol	59-50-7				ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.18	0.027	ND		0.18	0.027
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.15	0.042	ND		0.15	0.042	ND		0.15	0.04	ND		0.14	0.04
Phenanthrene	85-01-8	100	100	100	ND	0.72		0.12	0.023	0.33		0.12	0.023	2.3		0.11	0.022	ND		0.11	0.022

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)				SB-305 (2-2.5)				SB-306 (6-6.5)			
				LAB ID:	L2360344-01					L2360711-01				L2361112-01				L2361279-01			
				COLLECTION DATE:	10/11/2023					10/12/2023				10/13/2023				10/16/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	ND		0.19	0.029	ND		0.19	0.029	ND		0.18	0.028	ND		0.18	0.027
Pyrene	129-00-0	100	100	100	ND	0.63		0.12	0.019	0.48		0.12	0.019	3.4		0.11	0.018	ND		0.11	0.018
Total SVOCs					-	4.211	-	-	-	3.563	-	-	-	24.592	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																					
No Tentatively Identified Compounds					ND	-		-	-	-		-	-	-		-	-	ND		0	0
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	0.326	J	0	0	0.407	J	0	0	-	-	-	-
Unknown					-	-		-	-	-		-	-	0.217	J	0	0	-	-	-	-
Unknown					-	-		-	-	-		-	-	0.224	J	0	0	-	-	-	-
Unknown					-	-		-	-	0.275	J	0	0	0.241	J	0	0	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alcohol					-	-		-	-	0.204	J	0	0	-	-	-	-	-	-	-	-
Unknown Ketone					-	-		-	-	-		-	-	0.196	J	0	0	-	-	-	-
Unknown Ketone					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Ketone					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.97	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.164	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.371	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.184	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.165	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.191	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.452	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.324	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.452	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.324	J	0	0	-	-	-	-
Unknown PAH					-	-		-	-	-		-	-	0.268	J	0	0	-	-	-	-
Unknown PAH					-	0.178	J	0	0	0.219	J	0	0	-	-	-	-	-	-	-	-
Unknown Thiophene					-	-		-	-	-		-	-	0.169	J	0	0	-	-	-	-
Total TIC Compounds					-	0.178	J	0	0	1.02	J	0	0	4.54	J	0	0	-	-	-	-
ORGANOCHLORINE PESTICIDES BY GC																					
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00178	0.000637	ND		0.00186	0.000663	ND		0.00176	0.000627	ND		0.00167	0.000597
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	0.00144	J	0.00178	0.000413	0.00164	J	0.00186	0.00043	ND		0.00176	0.000406	ND		0.00167	0.000387
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	0.00232		0.00178	0.00144	0.0042		0.00186	0.00149	ND		0.00176	0.00141	ND		0.00167	0.00135
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00178	0.000629	ND		0.00186	0.000654	ND		0.00176	0.000619	ND		0.00167	0.00059
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000744	0.000211	ND		0.000774	0.00022	ND		0.000732	0.000208	ND		0.000698	0.000198
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00178	0.000677	ND		0.00186	0.000705	ND		0.00176	0.000666	ND		0.00167	0.000635
Chlordane	57-74-9				ND	ND		0.0149	0.00591	ND		0.0155	0.00616	ND		0.0146	0.00582	ND		0.014	0.00555
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00223	0.000622	ND		0.00232	0.000647	ND		0.0022	0.000612	ND		0.00209	0.000583
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00178	0.00035	ND		0.00186	0.000364	ND		0.00176	0.000344	ND		0.00167	0.000328
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00112	0.000558	ND		0.00116	0.000581	ND		0.0011	0.000549	ND		0.00105	0.000523
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00178	0.000422	ND		0.00186	0.000439	ND		0.00176	0.000415	ND		0.00167	0.000396
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00178	0.000597	ND		0.00186	0.000621	ND		0.00176	0.000587	ND		0.00167	0.00056
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000744	0.000354	ND		0.000774	0.000369	ND		0.000732	0.000348	ND		0.000698	0.000332
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000744	0.000305	ND		0.000774	0.000318	ND		0.000732	0.0003	ND		0.000698	0.000286
Endrin aldehyde	7421-93-4				ND	ND		0.00223	0.000781	ND		0.00232	0.000813	ND		0.0022	0.000769	ND		0.00209	0.000733
Endrin ketone	53494-70-5				ND	ND		0.00178	0.00046	ND		0.00186	0.000478	ND		0.00176	0.000452	ND		0.00167	0.000431
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000893	0.0004	ND		0.000929	0.000417	ND		0.000879	0.000394	ND		0.000837	0.000375
Heptachlor epoxide	1024-57-3				ND	ND		0.00335	0.001	ND		0.00348	0.00104	ND		0.0033	0.000988	ND		0.00314	0.000942
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000744	0.000332	ND		0.000774	0.000346	ND		0.000732	0.000327	ND		0.000698	0.000312
Methoxychlor	72-43-5				ND	ND		0.00335	0.00104	ND		0.00348	0.00108	ND		0.0033	0.00102	ND		0.00314	0.000977
Toxaphene	8001-35-2				ND	ND		0.0335	0.00937	ND		0.0348	0.00976	ND		0.033	0.00923	ND		0.0314	0.00879
trans-Chlordane	5103-74-2				ND	ND		0.00223	0.000589	ND		0.00232	0.000613	ND		0.0022	0.00058	ND		0.00209	0.000553
POLYCHLORINATED BIPHENYLS BY GC																					

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-303 (3-3.5)					SB-304 (2.5-3)				SB-305 (2-2.5)				SB-306 (6-6.5)			
				LAB ID:	L2360344-01					L2360711-01				L2361112-01				L2361279-01			
				COLLECTION DATE:	10/11/2023					10/12/2023				10/13/2023				10/16/2023			
				SAMPLE DEPTH:																	
				SAMPLE MATRIX:	SOIL					SOIL				SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES																	
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0583	0.00518	ND		0.054	0.0048	ND		0.0546	0.00485	ND		0.0518	0.0046
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0583	0.00584	ND		0.054	0.00541	ND		0.0546	0.00548	ND		0.0518	0.00519
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0583	0.0124	ND		0.054	0.0114	ND		0.0546	0.0116	ND		0.0518	0.011
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0583	0.00786	ND		0.054	0.00728	0.013	J	0.0546	0.00737	ND		0.0518	0.00698
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0583	0.00875	ND		0.054	0.0081	ND		0.0546	0.0082	ND		0.0518	0.00777
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0583	0.00638	ND		0.054	0.00591	ND		0.0546	0.00598	ND		0.0518	0.00567
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0583	0.0108	ND		0.054	0.00998	ND		0.0546	0.0101	ND		0.0518	0.00957
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0583	0.0074	ND		0.054	0.00686	ND		0.0546	0.00694	ND		0.0518	0.00658
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0583	0.00604	ND		0.054	0.00559	ND		0.0546	0.00566	ND		0.0518	0.00537
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0583	0.00518	ND		0.054	0.0048	0.013	J	0.0546	0.00485	ND		0.0518	0.0046
TOTAL METALS																					
Aluminum, Total	7429-90-5				8950	12600		9.24	2.5	15700		9.28	2.5	7040		8.57	2.31	8150		8.36	2.26
Antimony, Total	7440-36-0				ND	0.822	J	4.62	0.351	0.472	J	4.64	0.352	ND		4.29	0.326	ND		4.18	0.318
Arsenic, Total	7440-38-2	16	16	13	0.421	11.6		0.924	0.192	9.98		0.928	0.193	3.6		0.857	0.178	1.28		0.836	0.174
Barium, Total	7440-39-3	350	400	350	49	95.3		0.924	0.161	132		0.928	0.161	70.8		0.857	0.149	62.7		0.836	0.145
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.444	J	0.462	0.031	0.534		0.464	0.031	0.279	J	0.429	0.028	0.27	J	0.418	0.028
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.117	J	0.924	0.091	0.193	J	0.928	0.091	0.218	J	0.857	0.084	ND		0.836	0.082
Calcium, Total	7440-70-2				611	7500		9.24	3.23	3750		9.28	3.25	48700		8.57	3	1010		8.36	2.92
Chromium, Total	7440-47-3				17.6	28.1		0.924	0.089	37.9		0.928	0.089	15.4		0.857	0.082	16.7		0.836	0.08
Cobalt, Total	7440-48-4				3.21	8.73		1.85	0.153	10.5		1.86	0.154	4.2		1.71	0.142	4.46		1.67	0.139
Copper, Total	7440-50-8	270	270	50	13.1	24.2		0.924	0.238	28.8		0.928	0.239	25.2		0.857	0.221	14.4		0.836	0.216
Iron, Total	7439-89-6				12400	19800		4.62	0.834	22000		4.64	0.838	12400		4.29	0.774	13200		4.18	0.754
Lead, Total	7439-92-1	400	400	63	3.05	112		4.62	0.248	102		4.64	0.249	88.8		4.29	0.23	3.66	J	4.18	0.224
Magnesium, Total	7439-95-4				2010	5000		9.24	1.42	6440		9.28	1.43	21300		8.57	1.32	1990		8.36	1.29
Manganese, Total	7439-96-5	2000	2000	1600	290	361		0.924	0.147	399		0.928	0.148	260		0.857	0.136	384		0.836	0.133
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	0.064	J	0.078	0.051	0.086		0.076	0.05	0.168		0.074	0.048	ND		0.078	0.051
Nickel, Total	7440-02-0	140	310	30	11	26.4		2.31	0.224	30.2		2.32	0.224	13.3		2.14	0.207	13.6		2.09	0.202
Potassium, Total	7440-09-7				2380	3770		231	13.3	5280		232	13.4	1820		214	12.3	2150		209	12
Selenium, Total	7782-49-2	36	180	3.9	ND	0.509	J	1.85	0.238	ND		1.86	0.239	ND		1.71	0.221	ND		1.67	0.216
Silver, Total	7440-22-4	36	180	2	ND	ND		0.462	0.262	ND		0.464	0.262	ND		0.429	0.242	ND		0.418	0.236
Sodium, Total	7440-23-5				141	102	J	185	2.91	99.4	J	186	2.92	457		171	2.7	113	J	167	2.63
Thallium, Total	7440-28-0				ND	1.08	J	1.85	0.291	1.57	J	1.86	0.292	1.62	J	1.71	0.27	1.85		1.67	0.263
Vanadium, Total	7440-62-2				17.8	32.6		0.924	0.188	39.9		0.928	0.188	22.9		0.857	0.174	19.5		0.836	0.17
Zinc, Total	7440-66-6	2200	10000	109	21.3	74.9		4.62	0.271	93.5		4.64	0.272	101		4.29	0.251	20		4.18	0.245
GENERAL CHEMISTRY																					
Cyanide, Total	57-12-5	27	27	27	ND	ND		1.1	0.23	ND		1.1	0.24	ND		1.1	0.22	ND		1	0.21
Solids, Total	NONE				93.5	85.4		0.1	NA	84.4		0.1	NA	90.5		0.1	NA	91.5		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)					SB-309 (3-3.5)				
				LAB ID:	L2361842-02					L2361842-01					L2362230-01				
				COLLECTION DATE:	10/18/2023					10/18/2023					10/19/2023				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
VOLATILE ORGANICS BY EPA 5035																			
1,1,1,2-Tetrachloroethane	630-20-6				ND	ND		0.00046	0.00012	ND		0.00051	0.00013		ND		0.00049	0.00013	
1,1,1-Trichloroethane	71-55-6	100	100	0.68	ND	ND		0.00046	0.00015	ND		0.00051	0.00017		ND		0.00049	0.00016	
1,1,2,2-Tetrachloroethane	79-34-5				ND	ND		0.00046	0.00015	ND		0.00051	0.00017		ND		0.00049	0.00016	
1,1,2-Trichloroethane	79-00-5				ND	ND		0.00092	0.00024	ND		0.001	0.00027		ND		0.00098	0.00026	
1,1-Dichloroethane	75-34-3	19	26	0.27	ND	ND		0.00092	0.00013	ND		0.001	0.00015		ND		0.00098	0.00014	
1,1-Dichloroethene	75-35-4	100	100	0.33	ND	ND		0.00092	0.00022	ND		0.001	0.00024		ND		0.00098	0.00023	
1,1-Dichloropropene	563-58-6				ND	ND		0.00046	0.00015	ND		0.00051	0.00016		ND		0.00049	0.00016	
1,2,3-Trichlorobenzene	87-61-6				ND	ND		0.0018	0.0003	ND		0.002	0.00033		ND		0.002	0.00032	
1,2,3-Trichloropropane	96-18-4				ND	ND		0.0018	0.00012	ND		0.002	0.00013		ND		0.002	0.00012	
1,2,4,5-Tetramethylbenzene	95-93-2				ND	ND		0.0018	0.00018	ND		0.002	0.00019		ND		0.002	0.00019	
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.0018	0.00025	ND		0.002	0.00028		ND		0.002	0.00027	
1,2,4-Trimethylbenzene	95-63-6	47	52	3.6	ND	ND		0.0018	0.00031	ND		0.002	0.00034		ND		0.002	0.00033	
1,2-Dibromo-3-chloropropane	96-12-8				ND	ND		0.0028	0.00092	ND		0.003	0.001		ND		0.003	0.00098	
1,2-Dibromoethane	106-93-4				ND	ND		0.00092	0.00026	ND		0.001	0.00028		ND		0.00098	0.00027	
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.0018	0.00013	ND		0.002	0.00015		ND		0.002	0.00014	
1,2-Dichloroethane	107-06-2	2.3	3.1	0.02	ND	ND		0.00092	0.00024	ND		0.001	0.00026		ND		0.00098	0.00025	
1,2-Dichloroethene, Total	540-59-0				ND	ND		0.00092	0.00012	ND		0.001	0.00014		ND		0.00098	0.00013	
1,2-Dichloropropane	78-87-5				ND	ND		0.00092	0.00011	ND		0.001	0.00013		ND		0.00098	0.00012	
1,3,5-Trimethylbenzene	108-67-8	47	52	8.4	ND	ND		0.0018	0.00018	ND		0.002	0.0002		ND		0.002	0.00019	
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.0018	0.00014	ND		0.002	0.00015		ND		0.002	0.00014	
1,3-Dichloropropane	142-28-9				ND	ND		0.0018	0.00015	ND		0.002	0.00017		ND		0.002	0.00016	
1,3-Dichloropropene, Total	542-75-6				ND	ND		0.00046	0.00014	ND		0.00051	0.00016		ND		0.00049	0.00016	
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.0018	0.00016	ND		0.002	0.00017		ND		0.002	0.00017	
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.073	0.032	ND		0.081	0.036		ND		0.079	0.034	
2,2-Dichloropropane	594-20-7				ND	ND		0.0018	0.00018	ND		0.002	0.0002		ND		0.002	0.0002	
2-Butanone	78-93-3	100	100	0.12	ND	ND		0.0092	0.002	ND		0.01	0.0022		ND		0.0098	0.0022	
2-Hexanone	591-78-6				ND	ND		0.0092	0.0011	ND		0.01	0.0012		ND		0.0098	0.0012	
4-Methyl-2-pentanone	108-10-1				ND	ND		0.0092	0.0012	ND		0.01	0.0013		ND		0.0098	0.0013	
Acetone	67-64-1	100	100	0.05	0.01	ND		0.0092	0.0044	ND		0.01	0.0049		ND		0.0098	0.0047	
Acrylonitrile	107-13-1				ND	ND		0.0037	0.001	ND		0.004	0.0012		ND		0.0039	0.0011	
Benzene	71-43-2	2.9	4.8	0.06	ND	ND		0.00046	0.00015	ND		0.00051	0.00017		ND		0.00049	0.00016	
Bromobenzene	108-86-1				ND	ND		0.0018	0.00013	ND		0.002	0.00015		ND		0.002	0.00014	
Bromochloromethane	74-97-5				ND	ND		0.0018	0.00019	ND		0.002	0.00021		ND		0.002	0.0002	
Bromodichloromethane	75-27-4				ND	ND		0.00046	0.0001	ND		0.00051	0.00011		ND		0.00049	0.00011	
Bromoform	75-25-2				ND	ND		0.0037	0.00022	ND		0.004	0.00025		ND		0.0039	0.00024	
Bromomethane	74-83-9				ND	ND		0.0018	0.00053	ND		0.002	0.00059		ND		0.002	0.00057	
Carbon disulfide	75-15-0				ND	ND		0.0092	0.0042	ND		0.01	0.0046		ND		0.0098	0.0045	
Carbon tetrachloride	56-23-5	1.4	2.4	0.76	ND	ND		0.00092	0.00021	ND		0.001	0.00023		ND		0.00098	0.00023	
Chlorobenzene	108-90-7	100	100	1.1	ND	ND		0.00046	0.00012	ND		0.00051	0.00013		ND		0.00049	0.00012	
Chloroethane	75-00-3				ND	ND		0.0018	0.00042	ND		0.002	0.00046		ND		0.002	0.00044	
Chloroform	67-66-3	10	49	0.37	ND	ND		0.0014	0.00013	ND		0.0015	0.00014		ND		0.0015	0.00014	
Chloromethane	74-87-3				ND	ND		0.0037	0.00086	ND		0.004	0.00094		ND		0.0039	0.00092	
cis-1,2-Dichloroethene	156-59-2	59	100	0.25	ND	ND		0.00092	0.00016	ND		0.001	0.00018		ND		0.00098	0.00017	
cis-1,3-Dichloropropene	10061-01-5				ND	ND		0.00046	0.00014	ND		0.00051	0.00016		ND		0.00049	0.00016	
Dibromochloromethane	124-48-1				ND	ND		0.00092	0.00013	ND		0.001	0.00014		ND		0.00098	0.00014	
Dibromomethane	74-95-3				ND	ND		0.0018	0.00022	ND		0.002	0.00024		ND		0.002	0.00023	
Dichlorodifluoromethane	75-71-8				ND	ND		0.0092	0.00084	ND		0.01	0.00093		ND		0.0098	0.0009	
Ethyl ether	60-29-7				ND	ND		0.0018	0.00031	ND		0.002	0.00035		ND		0.002	0.00034	
Ethylbenzene	100-41-4	30	41	1	ND	ND		0.00092	0.00013	ND		0.001	0.00014		ND		0.00098	0.00014	

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Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)				SB-309 (3-3.5)			
				LAB ID:	L2361842-02					L2361842-01				L2362230-01			
				COLLECTION DATE:	10/18/2023					10/18/2023				10/19/2023			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Hexachlorobutadiene	87-68-3				ND	ND		0.0037	0.00016	ND		0.004	0.00017	ND		0.0039	0.00017
Isopropylbenzene	98-82-8				ND	ND		0.00092	0.0001	ND		0.001	0.00011	ND		0.00098	0.00011
Methyl tert butyl ether	1634-04-4	62	100	0.93	ND	ND		0.0018	0.00018	ND		0.002	0.0002	ND		0.002	0.0002
Methylene chloride	75-09-2	51	100	0.05	ND	ND		0.0046	0.0021	ND		0.0051	0.0023	ND		0.0049	0.0022
n-Butylbenzene	104-51-8	100	100	12	ND	ND		0.00092	0.00015	ND		0.001	0.00017	ND		0.00098	0.00016
n-Propylbenzene	103-65-1	100	100	3.9	ND	ND		0.00092	0.00016	ND		0.001	0.00017	ND		0.00098	0.00017
Naphthalene	91-20-3	100	100	12	ND	ND		0.0037	0.0006	ND		0.004	0.00066	ND		0.0039	0.00064
o-Chlorotoluene	95-49-8				ND	ND		0.0018	0.00018	ND		0.002	0.00019	ND		0.002	0.00019
o-Xylene	95-47-6				ND	ND		0.00092	0.00027	ND		0.001	0.0003	ND		0.00098	0.00029
p-Chlorotoluene	106-43-4				ND	ND		0.0018	0.0001	ND		0.002	0.00011	ND		0.002	0.00011
p-Diethylbenzene	105-05-5				ND	ND		0.0018	0.00016	ND		0.002	0.00018	ND		0.002	0.00017
p-Ethyltoluene	622-96-8				ND	ND		0.0018	0.00035	ND		0.002	0.00039	ND		0.002	0.00038
p-Isopropyltoluene	99-87-6				ND	ND		0.00092	0.0001	ND		0.001	0.00011	ND		0.00098	0.00011
p/m-Xylene	179601-23-1				ND	ND		0.0018	0.00051	ND		0.002	0.00057	ND		0.002	0.00055
sec-Butylbenzene	135-98-8	100	100	11	ND	ND		0.00092	0.00013	ND		0.001	0.00015	ND		0.00098	0.00014
Styrene	100-42-5				0.00064	ND		0.00092	0.00018	ND		0.001	0.0002	ND		0.00098	0.00019
tert-Butylbenzene	98-06-6	100	100	5.9	ND	ND		0.0018	0.00011	ND		0.002	0.00012	ND		0.002	0.00012
Tetrachloroethene	127-18-4	5.5	19	1.3	ND	ND		0.00046	0.00018	ND		0.00051	0.0002	ND		0.00049	0.00019
Toluene	108-88-3	100	100	0.7	ND	ND		0.00092	0.0005	ND		0.001	0.00055	ND		0.00098	0.00053
trans-1,2-Dichloroethene	156-60-5	100	100	0.19	ND	ND		0.0014	0.00012	ND		0.0015	0.00014	ND		0.0015	0.00013
trans-1,3-Dichloropropene	10061-02-6				ND	ND		0.00092	0.00025	ND		0.001	0.00028	ND		0.00098	0.00027
trans-1,4-Dichloro-2-butene	110-57-6				ND	ND		0.0046	0.0013	ND		0.0051	0.0014	ND		0.0049	0.0014
Trichloroethene	79-01-6	10	21	0.47	ND	ND		0.00046	0.00012	ND		0.00051	0.00014	ND		0.00049	0.00013
Trichlorofluoromethane	75-69-4				ND	ND		0.0037	0.00064	ND		0.004	0.0007	ND		0.0039	0.00068
Vinyl acetate	108-05-4				ND	ND		0.0092	0.002	ND		0.01	0.0022	ND		0.0098	0.0021
Vinyl chloride	75-01-4	0.21	0.9	0.02	ND	ND		0.00092	0.00031	ND		0.001	0.00034	ND		0.00098	0.00033
Xylenes, Total	1330-20-7	100	100	0.26	ND	ND		0.00092	0.00027	ND		0.001	0.0003	ND		0.00098	0.00029
Total VOCs					0.01064	-	-	-	-	-	-	-	-	-	-	-	-
VOLATILE ORGANICS BY EPA 5035-TIC																	
Cyclopentane	000287-92-3				-	-	-	-	-	-	-	-	-	ND		0	0
Cyclotrisiloxane, Hexamethyl-	000541-05-9				0.00646	-		-	-	-		-	-	-	-	-	-
No Tentatively Identified Compounds					-	-	-	-	-	-	-	-	-	-	-	-	-
Pentane	000109-66-0				-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					-	-		-	-	0.00238	NJ	0	0	-	-	-	-
Unknown					-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown					0.00305	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Cycloalkane					-	0.0087	J	0	0	0.00959	J	0	0	-	-	-	-
Total TIC Compounds					0.00951	-		-	-	0.00214	J	0	0	-	-	-	-
PERFLUORINATED ALKYL ACIDS BY EPA 1633						-	-	-	-	-	-	-	-				
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				-	0.0087	J	0	0	0.0141	J	0	0				
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				-												
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				-	-	-	-	-	-	-	-	-				
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				-	-	-	-	-	-	-	-	-				
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				-	-	-	-	-	-	-	-	-				
Perfluorobutanoic Acid (PFBA)	375-22-4				-	-	-	-	-	-	-	-	-				
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				-	-	-	-	-	-	-	-	-				
Perfluorodecanoic Acid (PFDA)	335-76-2				-	-	-	-	-	-	-	-	-				
Perfluorododecanoic Acid (PFDoA)	307-55-1				-	-	-	-	-	-	-	-	-				
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				-	-	-	-	-	-	-	-	-				
Perfluoroheptanoic Acid (PFHpA)	375-85-9				-	-	-	-	-	-	-	-	-				
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				-	-	-	-	-	-	-	-	-				

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)				SB-309 (3-3.5)			
				LAB ID:	L2361842-02					L2361842-01				L2362230-01			
				COLLECTION DATE:	10/18/2023					10/18/2023				10/19/2023			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorohexanoic Acid (PFHxA)	307-24-4				-	-	-	-	-	-	-	-	-				
Perfluorononanoic Acid (PFNA)	375-95-1				-	-	-	-	-	-	-	-	-				
Perfluorooctanesulfonamide (PFOSA)	754-91-6				-	-	-	-	-	-	-	-	-				
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1				-	-	-	-	-	-	-	-	-				
Perfluorooctanoic Acid (PFOA)	335-67-1				-	-	-	-	-	-	-	-	-				
Perfluoropentanoic Acid (PFPeA)	2706-90-3				-	-	-	-	-	-	-	-	-				
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7				-	-	-	-	-	-	-	-	-				
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				-	-	-	-	-	-	-	-	-				
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				-	-	-	-	-	-	-	-	-				
PFOA/PFOS, Total					-	-	-	-	-	-	-	-	-				
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION						-	-	-	-	-	-	-	-				
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2	39108-34-4				ND	-	-	-	-	-	-	-	-				
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2F	27619-97-2				ND												
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (	2991-50-6				ND	-	-	-	-	-	-	-	-				
N-Methyl Perfluorooctanesulfonamidoacetic Acid	2355-31-9				ND	-	-	-	-	-	-	-	-				
Perfluorobutanesulfonic Acid (PFBS)	375-73-5				ND	-	-	-	-	-	-	-	-				
Perfluorobutanoic Acid (PFBA)	375-22-4				ND	-	-	-	-	-	-	-	-				
Perfluorodecanesulfonic Acid (PFDS)	335-77-3				ND	-	-	-	-	-	-	-	-				
Perfluorodecanoic Acid (PFDA)	335-76-2				ND	-	-	-	-	-	-	-	-				
Perfluorododecanoic Acid (PFDoA)	307-55-1				ND	-	-	-	-	-	-	-	-				
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8				ND	-	-	-	-	-	-	-	-				
Perfluoroheptanoic Acid (PFHpA)	375-85-9				ND	-	-	-	-	-	-	-	-				
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4				ND	-	-	-	-	-	-	-	-				
Perfluorohexanoic Acid (PFHxA)	307-24-4				ND	-	-	-	-	-	-	-	-				
Perfluorononanoic Acid (PFNA)	375-95-1				ND	-	-	-	-	-	-	-	-				
Perfluorooctanesulfonamide (FOSA)	754-91-6				ND	-	-	-	-	-	-	-	-				
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.044	0.0088	0.00088	ND	-	-	-	-	-	-	-	-				
Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.0066	0.00066	ND	-	-	-	-	-	-	-	-				
Perfluoropentanoic Acid (PFPeA)	2706-90-3				ND	-	-	-	-	-	-	-	-				
Perfluorotetradecanoic Acid (PFTA)	376-06-7				ND	-	-	-	-	-	-	-	-				
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8				ND	-	-	-	-	-	-	-	-				
Perfluoroundecanoic Acid (PFUnA)	2058-94-8				ND	-	-	-	-	-	-	-	-				
PFOA/PFOS, Total					ND	-	-	-	-	-	-	-	-				
SEMIVOLATILE ORGANICS BY GC/MS																	
1,2,4,5-Tetrachlorobenzene	95-94-3				ND	ND		0.18	0.019	ND		0.17	0.018	ND		0.18	0.019
1,2,4-Trichlorobenzene	120-82-1				ND	ND		0.18	0.021	ND		0.17	0.019	ND		0.18	0.021
1,2-Dichlorobenzene	95-50-1	100	100	1.1	ND	ND		0.18	0.033	ND		0.17	0.03	ND		0.18	0.033
1,3-Dichlorobenzene	541-73-1	17	49	2.4	ND	ND		0.18	0.031	ND		0.17	0.029	ND		0.18	0.031
1,4-Dichlorobenzene	106-46-7	9.8	13	1.8	ND	ND		0.18	0.032	ND		0.17	0.03	ND		0.18	0.032
1,4-Dioxane	123-91-1	9.8	13	0.1	ND	ND		0.027	0.0084	ND		0.026	0.0078	ND		0.027	0.0084
2,4,5-Trichlorophenol	95-95-4				ND	ND		0.18	0.035	ND		0.17	0.033	ND		0.18	0.035
2,4,6-Trichlorophenol	88-06-2				ND	ND		0.11	0.034	ND		0.1	0.032	ND		0.11	0.035
2,4-Dichlorophenol	120-83-2				ND	ND		0.16	0.029	ND		0.15	0.027	ND		0.16	0.029
2,4-Dimethylphenol	105-67-9				ND	ND		0.18	0.06	ND		0.17	0.056	ND		0.18	0.06
2,4-Dinitrophenol	51-28-5				ND	ND		0.88	0.085	ND		0.82	0.079	ND		0.88	0.085
2,4-Dinitrotoluene	121-14-2				ND	ND		0.18	0.036	ND		0.17	0.034	ND		0.18	0.036
2,6-Dinitrotoluene	606-20-2				ND	ND		0.18	0.031	ND		0.17	0.029	ND		0.18	0.031
2-Chloronaphthalene	91-58-7				ND	ND		0.18	0.018	ND		0.17	0.017	ND		0.18	0.018
2-Chlorophenol	95-57-8				ND	ND		0.18	0.022	ND		0.17	0.02	ND		0.18	0.022
2-Methylnaphthalene	91-57-6				ND	ND		0.22	0.022	ND		0.2	0.02	ND		0.22	0.022
2-Methylphenol	95-48-7	100	100	0.33	ND	ND		0.18	0.028	ND		0.17	0.026	ND		0.18	0.028

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)					SB-309 (3-3.5)				
				LAB ID:	L2361842-02					L2361842-01					L2362230-01				
				COLLECTION DATE:	10/18/2023					10/18/2023					10/19/2023				
				SAMPLE DEPTH:															
				SAMPLE MATRIX:	SOIL					SOIL					SOIL				
		NY-RESR	NY-RESRR	NY-UNRES															
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL		Conc	Q	RL	MDL	
2-Nitroaniline	88-74-4				ND	ND		0.18	0.035	ND		0.17	0.033		ND		0.18	0.035	
2-Nitrophenol	88-75-5				ND	ND		0.39	0.068	ND		0.37	0.064		ND		0.39	0.069	
3,3'-Dichlorobenzidine	91-94-1				ND	ND		0.18	0.048	ND		0.17	0.045		ND		0.18	0.049	
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	34	100	0.33	ND	ND		0.26	0.028	ND		0.24	0.027		ND		0.26	0.029	
3-Nitroaniline	99-09-2				ND	ND		0.18	0.034	ND		0.17	0.032		ND		0.18	0.034	
4,6-Dinitro-o-cresol	534-52-1				ND	ND		0.47	0.088	ND		0.44	0.082		ND		0.48	0.088	
4-Bromophenyl phenyl ether	101-55-3				ND	ND		0.18	0.028	ND		0.17	0.026		ND		0.18	0.028	
4-Chloroaniline	106-47-8				ND	ND		0.18	0.033	ND		0.17	0.031		ND		0.18	0.033	
4-Chlorophenyl phenyl ether	7005-72-3				ND	ND		0.18	0.02	ND		0.17	0.018		ND		0.18	0.02	
4-Nitroaniline	100-01-6				ND	ND		0.18	0.076	ND		0.17	0.07		ND		0.18	0.076	
4-Nitrophenol	100-02-7				ND	ND		0.26	0.074	ND		0.24	0.069		ND		0.26	0.074	
Acenaphthene	83-32-9	100	100	20	ND	ND		0.14	0.019	ND		0.14	0.018		ND		0.15	0.019	
Acenaphthylene	208-96-8	100	100	100	ND	ND		0.14	0.028	0.064	J	0.14	0.026		ND		0.15	0.028	
Acetophenone	98-86-2				ND	ND		0.18	0.022	ND		0.17	0.021		ND		0.18	0.023	
Anthracene	120-12-7	100	100	100	ND	ND		0.11	0.036	0.082	J	0.1	0.033		ND		0.11	0.036	
Benzo(a)anthracene	56-55-3	1	1	1	ND	ND		0.11	0.02	0.036	J	0.1	0.019		ND		0.11	0.02	
Benzo(a)pyrene	50-32-8	1	1	1	ND	ND		0.14	0.044	ND		0.14	0.042		ND		0.15	0.044	
Benzo(b)fluoranthene	205-99-2	1	1	1	ND	ND		0.11	0.031	ND		0.1	0.029		ND		0.11	0.031	
Benzo(ghi)perylene	191-24-2	100	100	100	ND	ND		0.14	0.021	0.62		0.14	0.02		ND		0.15	0.021	
Benzo(k)fluoranthene	207-08-9	1	3.9	0.8	ND	ND		0.11	0.029	ND		0.1	0.027		ND		0.11	0.029	
Benzoic Acid	65-85-0				ND	ND		0.59	0.18	ND		0.55	0.17		ND		0.59	0.18	
Benzyl Alcohol	100-51-6				ND	ND		0.18	0.056	ND		0.17	0.052		ND		0.18	0.056	
Biphenyl	92-52-4				ND	ND		0.42	0.024	ND		0.39	0.022		ND		0.42	0.024	
Bis(2-chloroethoxy)methane	111-91-1				ND	ND		0.2	0.018	ND		0.18	0.017		ND		0.2	0.018	
Bis(2-chloroethyl)ether	111-44-4				ND	ND		0.16	0.025	ND		0.15	0.023		ND		0.16	0.025	
Bis(2-chloroisopropyl)ether	108-60-1				ND	ND		0.22	0.031	ND		0.2	0.029		ND		0.22	0.031	
Bis(2-ethylhexyl)phthalate	117-81-7				ND	ND		0.18	0.063	ND		0.17	0.059		ND		0.18	0.063	
Butyl benzyl phthalate	85-68-7				ND	ND		0.18	0.046	ND		0.17	0.043		ND		0.18	0.046	
Carbazole	86-74-8				ND	ND		0.18	0.018	0.027	J	0.17	0.016		ND		0.18	0.018	
Chrysene	218-01-9	1	3.9	1	ND	ND		0.11	0.019	0.027	J	0.1	0.018		ND		0.11	0.019	
Di-n-butylphthalate	84-74-2				ND	ND		0.18	0.034	ND		0.17	0.032		ND		0.18	0.035	
Di-n-octylphthalate	117-84-0				ND	ND		0.18	0.062	ND		0.17	0.058		ND		0.18	0.062	
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.33	ND	ND		0.11	0.021	ND		0.1	0.02		ND		0.11	0.021	
Dibenzofuran	132-64-9	14	59	7	ND	ND		0.18	0.017	ND		0.17	0.016		ND		0.18	0.017	
Diethyl phthalate	84-66-2				ND	ND		0.18	0.017	ND		0.17	0.016		ND		0.18	0.017	
Dimethyl phthalate	131-11-3				ND	ND		0.18	0.038	ND		0.17	0.036		ND		0.18	0.038	
Fluoranthene	206-44-0	100	100	100	ND	ND		0.11	0.021	0.056	J	0.1	0.02		ND		0.11	0.021	
Fluorene	86-73-7	100	100	30	ND	ND		0.18	0.018	ND		0.17	0.016		ND		0.18	0.018	
Hexachlorobenzene	118-74-1	0.33	1.2	0.33	ND	ND		0.11	0.02	ND		0.1	0.019		ND		0.11	0.02	
Hexachlorobutadiene	87-68-3				ND	ND		0.18	0.027	ND		0.17	0.025		ND		0.18	0.027	
Hexachlorocyclopentadiene	77-47-4				ND	ND		0.52	0.16	ND		0.49	0.15		ND		0.52	0.16	
Hexachloroethane	67-72-1				ND	ND		0.14	0.03	ND		0.14	0.028		ND		0.15	0.03	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	ND	ND		0.14	0.025	0.27		0.14	0.024		ND		0.15	0.025	
Isophorone	78-59-1				ND	ND		0.16	0.024	ND		0.15	0.022		ND		0.16	0.024	
n-Nitrosodi-n-propylamine	621-64-7				ND	ND		0.18	0.028	ND		0.17	0.026		ND		0.18	0.028	
Naphthalene	91-20-3	100	100	12	ND	ND		0.18	0.022	ND		0.17	0.021		ND		0.18	0.022	
NDPA/DPA	86-30-6				ND	ND		0.14	0.021	ND		0.14	0.019		ND		0.15	0.021	
Nitrobenzene	98-95-3				ND	ND		0.16	0.027	ND		0.15	0.025		ND		0.16	0.027	
p-Chloro-m-cresol	59-50-7				ND	ND		0.18	0.027	ND		0.17	0.025		ND		0.18	0.027	
Pentachlorophenol	87-86-5	2.4	6.7	0.8	ND	ND		0.14	0.04	ND		0.14	0.037		ND		0.15	0.04	
Phenanthrene	85-01-8	100	100	100	ND	ND		0.11	0.022	0.074	J	0.1	0.021		ND		0.11	0.022	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)				SB-309 (3-3.5)			
				LAB ID:	L2361842-02					L2361842-01				L2362230-01			
				COLLECTION DATE:	10/18/2023					10/18/2023				10/19/2023			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Phenol	108-95-2	100	100	0.33	ND	ND		0.18	0.028	ND		0.17	0.026	ND		0.18	0.028
Pyrene	129-00-0	100	100	100	ND	ND		0.11	0.018	0.051	J	0.1	0.017	ND		0.11	0.018
Total SVOCs					-	-	-	-	-	1.307	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
No Tentatively Identified Compounds					ND	ND		0	0	-		-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown					-	-	-	-	-	-	-	-	-				
Unknown Alcohol					-	-	-	-	-	-	-	-	-				
Unknown Ketone					-	-	-	-	-	-	-	-	-				
Unknown Ketone					-	-	-	-	-	-	-	-	-				
Unknown Ketone					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-		-	-	0.252	J	0	0				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown PAH					-	-	-	-	-	-	-	-	-				
Unknown Thiophene					-	-	-	-	-	-	-	-	-				
Total TIC Compounds					-	-		-	-	0.252	J	0	0				
ORGANOCHLORINE PESTICIDES BY GC																	
4,4'-DDD	72-54-8	2.6	13	0.0033	ND	ND		0.00171	0.000609	ND		0.00161	0.000574	ND		0.00174	0.00062
4,4'-DDE	72-55-9	1.8	8.9	0.0033	ND	ND		0.00171	0.000395	ND		0.00161	0.000372	ND		0.00174	0.000402
4,4'-DDT	50-29-3	1.7	7.9	0.0033	ND	ND		0.00171	0.00137	ND		0.00161	0.0013	ND		0.00174	0.0014
Aldrin	309-00-2	0.019	0.097	0.005	ND	ND		0.00171	0.000602	ND		0.00161	0.000567	ND		0.00174	0.000612
Alpha-BHC	319-84-6	0.097	0.48	0.02	ND	ND		0.000712	0.000202	ND		0.000671	0.00019	ND		0.000724	0.000206
Beta-BHC	319-85-7	0.072	0.36	0.036	ND	ND		0.00171	0.000648	ND		0.00161	0.000611	ND		0.00174	0.000659
Chlordane	57-74-9				ND	ND		0.0142	0.00566	ND		0.0134	0.00533	ND		0.0145	0.00576
cis-Chlordane	5103-71-9	0.91	4.2	0.094	ND	ND		0.00214	0.000595	ND		0.00201	0.000561	ND		0.00217	0.000606
Delta-BHC	319-86-8	100	100	0.04	ND	ND		0.00171	0.000334	ND		0.00161	0.000315	ND		0.00174	0.00034
Dieldrin	60-57-1	0.039	0.2	0.005	ND	ND		0.00107	0.000534	ND		0.00101	0.000503	ND		0.00109	0.000543
Endosulfan I	959-98-8	4.8	24	2.4	ND	ND		0.00171	0.000404	ND		0.00161	0.00038	ND		0.00174	0.000411
Endosulfan II	33213-65-9	4.8	24	2.4	ND	ND		0.00171	0.000571	ND		0.00161	0.000538	ND		0.00174	0.000581
Endosulfan sulfate	1031-07-8	4.8	24	2.4	ND	ND		0.000712	0.000339	ND		0.000671	0.000319	ND		0.000724	0.000345
Endrin	72-20-8	2.2	11	0.014	ND	ND		0.000712	0.000292	ND		0.000671	0.000275	ND		0.000724	0.000297
Endrin aldehyde	7421-93-4				ND	ND		0.00214	0.000747	ND		0.00201	0.000704	ND		0.00217	0.000761
Endrin ketone	53494-70-5				ND	ND		0.00171	0.00044	ND		0.00161	0.000415	ND		0.00174	0.000448
Heptachlor	76-44-8	0.42	2.1	0.042	ND	ND		0.000854	0.000383	ND		0.000805	0.000361	ND		0.000869	0.00039
Heptachlor epoxide	1024-57-3				ND	ND		0.0032	0.000961	ND		0.00302	0.000906	ND		0.00326	0.000978
Lindane	58-89-9	0.28	1.3	0.1	ND	ND		0.000712	0.000318	ND		0.000671	0.0003	ND		0.000724	0.000324
Methoxychlor	72-43-5				ND	ND		0.0032	0.000997	ND		0.00302	0.000939	ND		0.00326	0.00101
Toxaphene	8001-35-2				ND	ND		0.032	0.00897	ND		0.0302	0.00846	ND		0.0326	0.00913
trans-Chlordane	5103-74-2				ND	ND		0.00214	0.000564	ND		0.00201	0.000531	ND		0.00217	0.000574
POLYCHLORINATED BIPHENYLS BY GC																	

Table 2.2
Summary of Soil Analytical Results

				SAMPLE ID:	SB-307 (9.5-10)					SB-308 (3.5-4)				SB-309 (3-3.5)			
				LAB ID:	L2361842-02					L2361842-01				L2362230-01			
				COLLECTION DATE:	10/18/2023					10/18/2023				10/19/2023			
				SAMPLE DEPTH:													
				SAMPLE MATRIX:	SOIL					SOIL				SOIL			
		NY-RESR	NY-RESRR	NY-UNRES													
ANALYTE	CAS	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Aroclor 1016	12674-11-2	1	1	0.1	ND	ND		0.0536	0.00476	ND		0.0499	0.00443	ND		0.0544	0.00483
Aroclor 1221	11104-28-2	1	1	0.1	ND	ND		0.0536	0.00538	ND		0.0499	0.005	ND		0.0544	0.00545
Aroclor 1232	11141-16-5	1	1	0.1	ND	ND		0.0536	0.0114	ND		0.0499	0.0106	ND		0.0544	0.0115
Aroclor 1242	53469-21-9	1	1	0.1	ND	ND		0.0536	0.00723	ND		0.0499	0.00672	ND		0.0544	0.00733
Aroclor 1248	12672-29-6	1	1	0.1	ND	ND		0.0536	0.00805	ND		0.0499	0.00748	ND		0.0544	0.00815
Aroclor 1254	11097-69-1	1	1	0.1	ND	ND		0.0536	0.00587	ND		0.0499	0.00546	ND		0.0544	0.00595
Aroclor 1260	11096-82-5	1	1	0.1	ND	ND		0.0536	0.00991	ND		0.0499	0.00922	ND		0.0544	0.01
Aroclor 1262	37324-23-5	1	1	0.1	ND	ND		0.0536	0.00681	ND		0.0499	0.00634	ND		0.0544	0.0069
Aroclor 1268	11100-14-4	1	1	0.1	ND	ND		0.0536	0.00556	ND		0.0499	0.00517	ND		0.0544	0.00563
PCBs, Total	1336-36-3	1	1	0.1	ND	ND		0.0536	0.00476	ND		0.0499	0.00443	ND		0.0544	0.00483
TOTAL METALS																	
Aluminum, Total	7429-90-5				8950	8890		8.62	2.33	7450		7.97	2.15	15900		8.7	2.35
Antimony, Total	7440-36-0				ND	ND		4.31	0.327	ND		3.99	0.303	ND		4.35	0.331
Arsenic, Total	7440-38-2	16	16	13	0.421	1.6		0.862	0.179	1.67		0.797	0.166	1.94		0.87	0.181
Barium, Total	7440-39-3	350	400	350	49	68.4		0.862	0.15	40.8		0.797	0.139	111		0.87	0.151
Beryllium, Total	7440-41-7	14	72	7.2	0.258	0.241	J	0.431	0.028	0.225	J	0.399	0.026	0.536		0.435	0.029
Cadmium, Total	7440-43-9	2.5	4.3	2.5	0.103	0.087	J	0.862	0.084	0.098	J	0.797	0.078	ND		0.87	0.085
Calcium, Total	7440-70-2				611	820		8.62	3.02	3300		7.97	2.79	910		8.7	3.04
Chromium, Total	7440-47-3				17.6	18.3		0.862	0.083	35.4		0.797	0.077	27.4		0.87	0.084
Cobalt, Total	7440-48-4				3.21	4.43		1.72	0.143	7.6		1.59	0.132	9.91		1.74	0.144
Copper, Total	7440-50-8	270	270	50	13.1	12.4		0.862	0.222	28.7		0.797	0.206	24.3		0.87	0.224
Iron, Total	7439-89-6				12400	14000		4.31	0.778	13000		3.99	0.72	19500		4.35	0.786
Lead, Total	7439-92-1	400	400	63	3.05	3.69	J	4.31	0.231	20.6		3.99	0.214	15.7		4.35	0.233
Magnesium, Total	7439-95-4				2010	2460		8.62	1.33	3520		7.97	1.23	4320		8.7	1.34
Manganese, Total	7439-96-5	2000	2000	1600	290	232		0.862	0.137	174		0.797	0.127	513		0.87	0.138
Mercury, Total	7439-97-6	0.81	0.81	0.18	ND	ND		0.072	0.047	ND		0.075	0.049	ND		0.077	0.05
Nickel, Total	7440-02-0	140	310	30	11	12		2.15	0.208	52.1		1.99	0.193	19.6		2.18	0.21
Potassium, Total	7440-09-7				2380	3030		215	12.4	1200		199	11.5	5420		218	12.5
Selenium, Total	7782-49-2	36	180	3.9	ND	ND		1.72	0.222	0.417	J	1.59	0.206	ND		1.74	0.224
Silver, Total	7440-22-4	36	180	2	ND	ND		0.431	0.244	ND		0.399	0.226	ND		0.435	0.246
Sodium, Total	7440-23-5				141	189		172	2.71	133	J	159	2.51	143	J	174	2.74
Thallium, Total	7440-28-0				ND	1.08	J	1.72	0.271	0.619	J	1.59	0.251	4		1.74	0.274
Vanadium, Total	7440-62-2				17.8	18.5		0.862	0.175	18.5		0.797	0.162	34		0.87	0.177
Zinc, Total	7440-66-6	2200	10000	109	21.3	25.5		4.31	0.252	20		3.99	0.234	41.8		4.35	0.255
GENERAL CHEMISTRY																	
Cyanide, Total	57-12-5	27	27	27	ND	ND		1	0.22	ND		1	0.21	ND		1	0.22
Solids, Total	NONE				93.5	89.7		0.1	NA	95.1		0.1	NA	90.7		0.1	NA

* Comparison is not performed on parameters with non-numeric criteria.

NY-RESR: New York NYCRR Part 375 Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-2				MW-1				TW-202			
LAB ID:			L2242491-02				L2242491-03				L2305142-17			
COLLECTION DATE:			8/6/2022				8/6/2022				1/28/2023			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOCs (ug/l)														
1,1,1,2-Tetrachloroethane	630-20-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1,1-Trichloroethane	71-55-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	79-34-5	5	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
1,1,2-Trichloroethane	79-00-5	1	ND		1.5	0.5	ND		1.5	0.5	ND		1.5	0.5
1,1-Dichloroethane	75-34-3	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1-Dichloroethene	75-35-4	5	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
1,1-Dichloropropene	563-58-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichlorobenzene	87-61-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichloropropane	96-18-4	0.04	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,4,5-Tetramethylbenzene	95-93-2	5	ND		2	0.54	ND		2	0.54	ND		2	0.54
1,2,4-Trichlorobenzene	120-82-1	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,4-Trimethylbenzene	95-63-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	96-12-8	0.04	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromoethane	106-93-4	0.0006	ND		2	0.65	ND		2	0.65	ND		2	0.65
1,2-Dichlorobenzene	95-50-1	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloroethane	107-06-2	0.6	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloroethene, Total	540-59-0		ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloropropane	78-87-5	1	ND		1	0.14	ND		1	0.14	ND		1	0.14
1,3,5-Trimethylbenzene	108-67-8	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichlorobenzene	541-73-1	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropane	142-28-9	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropene, Total	542-75-6		ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14
1,4-Dichlorobenzene	106-46-7	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,4-Dioxane	123-91-1	0.35	ND		250	61	ND		250	61	ND		250	61
2,2-Dichloropropane	594-20-7	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
2-Butanone	78-93-3	50	ND		5	1.9	ND		5	1.9	ND		5	1.9
2-Hexanone	591-78-6	50	ND		5	1	ND		5	1	ND		5	1
4-Methyl-2-pentanone	108-10-1		ND		5	1	ND		5	1	ND		5	1
Acetone	67-64-1	50	3.1	J	5	1.5	ND		5	1.5	ND		5	1.5
Acrylonitrile	107-13-1	5	ND		5	1.5	ND		5	1.5	ND		5	1.5
Benzene	71-43-2	1	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
Bromobenzene	108-86-1	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Bromochloromethane	74-97-5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Bromodichloromethane	75-27-4	50	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19
Bromoform	75-25-2	50	ND		2	0.65	ND		2	0.65	ND		2	0.65
Bromomethane	74-83-9	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Carbon disulfide	75-15-0	60	ND		5	1	ND		5	1	ND		5	1
Carbon tetrachloride	56-23-5	5	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
Chlorobenzene	108-90-7	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Chloroethane	75-00-3	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Chloroform	67-66-3	7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Chloromethane	74-87-3		ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
cis-1,2-Dichloroethene	156-59-2	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
cis-1,3-Dichloropropene	10061-01-5	0.4	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14
Dibromochloromethane	124-48-1	50	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15
Dibromomethane	74-95-3	5	ND		5	1	ND		5	1	ND		5	1
Dichlorodifluoromethane	75-71-8	5	ND		5	1	ND		5	1	ND		5	1
Ethyl ether	60-29-7		ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Ethylbenzene	100-41-4	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Hexachlorobutadiene	87-68-3	0.5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Isopropylbenzene	98-82-8	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Methyl tert butyl ether	1634-04-4	10	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Methylene chloride	75-09-2	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
n-Butylbenzene	104-51-8	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
n-Propylbenzene	103-65-1	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Naphthalene	91-20-3	10	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
o-Chlorotoluene	95-49-8	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
o-Xylene	95-47-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p-Chlorotoluene	106-43-4	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p-Diethylbenzene	105-05-5		ND		2	0.7	ND		2	0.7	ND		2	0.7
p-Ethyltoluene	622-96-8		ND		2	0.7	ND		2	0.7	ND		2	0.7
p-Isopropyltoluene	99-87-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p/m-Xylene	179601-23-1	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
sec-Butylbenzene	135-98-8	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Styrene	100-42-5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
tert-Butylbenzene	98-06-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	127-18-4	5	ND		0.5	0.18	ND		0.5	0.18	ND		0.5	0.18
Toluene	108-88-3	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
trans-1,2-Dichloroethene	156-60-5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
trans-1,3-Dichloropropene	10061-02-6	0.4	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
trans-1,4-Dichloro-2-butene	110-57-6	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Trichloroethene	79-01-6	5	ND		0.5	0.18	ND		0.5	0.18	ND		0.5	0.18
Trichlorofluoromethane	75-69-4	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Vinyl acetate	108-05-4		ND		5	1	ND		5	1	ND		5	1
Vinyl chloride	75-01-4	2	ND		1	0.07	ND		1	0.07	ND		1	0.07
Xylenes, Total	1330-20-7		ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Total VOCs			3.1	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane (ug/l)														
1,4-Dioxane	123-91-1	0.35	-		-	-	-		-	-	-		-	-
PFAS (ug/l)														
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	763051-92-9		-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4		ND		0.00176	0.00106	ND		0.00178	0.00108	ND		0.0083	0.00323
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4		-		-	-	-		-	-	-		-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2		ND		0.00176	0.00117	ND		0.00178	0.00119	ND		0.0083	0.0028
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3		-		-	-	-		-	-	-		-	-
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4		-		-	-	-		-	-	-		-	-
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5		-		-	-	-		-	-	-		-	-
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4		-		-	-	-		-	-	-		-	-
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	756426-58-1		-		-	-	-		-	-	-		-	-
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	13252-13-6		-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2		-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2		-		-	-	-		-	-	-		-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6		ND		0.00176	0.000707	ND		0.00178	0.000717	ND		0.00208	0.00112
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8		-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7		-		-	-	-		-	-	-		-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9		ND		0.00176	0.00057	ND		0.00178	0.000578	ND		0.00208	0.00113
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6		-		-	-	-		-	-	-		-	-
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7		-		-	-	-		-	-	-		-	-
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1		-		-	-	-		-	-	-		-	-
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5		-		-	-	-		-	-	-		-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5		0.00388		0.00176	0.000209	0.00609		0.00178	0.000212	0.00249		0.00208	0.000695
Perfluorobutanoic Acid (PFBA)	375-22-4		0.00445		0.00176	0.000359	0.00841		0.00178	0.000364	0.0146		0.0083	0.00133

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-2				MW-1				TW-202			
LAB ID:			L2242491-02				L2242491-03				L2305142-17			
COLLECTION DATE:			8/6/2022				8/6/2022				1/28/2023			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorodecanesulfonic Acid (PFDS)	335-77-3		ND		0.00176	0.000861	ND		0.00178	0.000874	0.00239		0.00208	0.000477
Perfluorodecanoic Acid (PFDA)	335-76-2		ND		0.00176	0.000267	ND		0.00178	0.000271	0.0121		0.00208	0.000841
Perfluorododecanesulfonic Acid (PFDoS)	79780-39-5		-		-	-	-		-	-	-		-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1		ND		0.00176	0.000327	ND		0.00178	0.000332	ND		0.00208	0.000955
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8		ND		0.00176	0.000605	ND		0.00178	0.000614	ND		0.00208	0.00056
Perfluoroheptanoic Acid (PFHpA)	375-85-9		0.0039		0.00176	0.000198	0.00448		0.00178	0.000201	0.00955		0.00208	0.000415
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4		0.00121	JF	0.00176	0.00033	0.000867	J	0.00178	0.000336	ND		0.00208	0.000498
Perfluorohexanoic Acid (PFHxA)	307-24-4		0.00432		0.00176	0.000288	0.00935		0.00178	0.000293	0.0199		0.00208	0.000612
Perfluorononanesulfonic Acid (PFNS)	68259-12-1		-		-	-	-		-	-	-		-	-
Perfluorononanoic Acid (PFNA)	375-95-1		0.000967	JF	0.00176	0.000274	0.00164	J	0.00178	0.000278	0.00934		0.00208	0.000654
Perfluorooctanesulfonamide (PFOSA)	754-91-6		ND		0.00176	0.00051	ND		0.00178	0.000518	ND		0.00208	0.00056
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027	0.0105		0.00176	0.000443	0.014		0.00178	0.00045	0.0372		0.00208	0.000944
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067	0.0128		0.00176	0.000207	0.0112		0.00178	0.000211	0.0161		0.00208	0.000903
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4		-		-	-	-		-	-	-		-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3		0.0037		0.00176	0.000348	0.0106		0.00178	0.000353	0.0253		0.00415	0.00111
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		ND		0.00176	0.000218	ND		0.00178	0.000221	ND		0.00208	0.00055
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		ND		0.00176	0.000288	ND		0.00178	0.000292	ND		0.00208	0.000778
Perfluoroundecanoic Acid (PFUnA)	2058-94-8		ND		0.00176	0.000228	ND		0.00178	0.000232	0.0147		0.00208	0.000903
PFOA/PFOS, Total			0.0233		0.00176	0.000207	0.0252		0.00178	0.000211	0.0533		0.00208	0.000903
SVOCs (ug/l)														
1,2,4,5-Tetrachlorobenzene	95-94-3	5	ND		10	0.44	ND		10	0.44	ND		10	0.44
1,2,4-Trichlorobenzene	120-82-1	5	ND		5	0.5	ND		5	0.5	ND		5	0.5
1,2-Dichlorobenzene	95-50-1	3	ND		2	0.45	ND		2	0.45	ND		2	0.45
1,3-Dichlorobenzene	541-73-1	3	ND		2	0.4	ND		2	0.4	ND		2	0.4
1,4-Dichlorobenzene	106-46-7	3	ND		2	0.43	ND		2	0.43	ND		2	0.43
2,4,5-Trichlorophenol	95-95-4		ND		5	0.77	ND		5	0.77	ND		5	0.77
2,4,6-Trichlorophenol	88-06-2		ND		5	0.61	ND		5	0.61	ND		5	0.61
2,4-Dichlorophenol	120-83-2	1	ND		5	0.41	ND		5	0.41	ND		5	0.41
2,4-Dimethylphenol	105-67-9	50	ND		5	1.8	ND		5	1.8	ND		5	1.8
2,4-Dinitrophenol	51-28-5	10	ND		20	6.6	ND		20	6.6	ND		20	6.6
2,4-Dinitrotoluene	121-14-2	5	ND		5	1.2	ND		5	1.2	ND		5	1.2
2,6-Dinitrotoluene	606-20-2	5	ND		5	0.93	ND		5	0.93	ND		5	0.93
2-Chlorophenol	95-57-8		ND		2	0.48	ND		2	0.48	ND		2	0.48
2-Methylphenol	95-48-7		ND		5	0.49	ND		5	0.49	ND		5	0.49
2-Nitroaniline	88-74-4	5	ND		5	0.5	ND		5	0.5	ND		5	0.5
2-Nitrophenol	88-75-5		ND		10	0.85	ND		10	0.85	ND		10	0.85
3,3'-Dichlorobenzidine	91-94-1	5	ND		5	1.6	ND		5	1.6	ND		5	1.6
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		ND		5	0.48	ND		5	0.48	ND		5	0.48
3-Nitroaniline	99-09-2	5	ND		5	0.81	ND		5	0.81	ND		5	0.81
4,6-Dinitro-o-cresol	534-52-1		ND		10	1.8	ND		10	1.8	ND		10	1.8
4-Bromophenyl phenyl ether	101-55-3		ND		2	0.38	ND		2	0.38	ND		2	0.38
4-Chloroaniline	106-47-8	5	ND		5	1.1	ND		5	1.1	ND		5	1.1
4-Chlorophenyl phenyl ether	7005-72-3		ND		2	0.49	ND		2	0.49	ND		2	0.49
4-Nitroaniline	100-01-6	5	ND		5	0.8	ND		5	0.8	ND		5	0.8
4-Nitrophenol	100-02-7		ND		10	0.67	ND		10	0.67	ND		10	0.67
Acetophenone	98-86-2		ND		5	0.53	ND		5	0.53	ND		5	0.53
Benzoic Acid	65-85-0		ND		50	2.6	ND		50	2.6	ND		50	2.6
Benzyl Alcohol	100-51-6		ND		2	0.59	ND		2	0.59	ND		2	0.59
Biphenyl	92-52-4		ND		2	0.46	ND		2	0.46	ND		2	0.46
Bis(2-chloroethoxy)methane	111-91-1	5	ND		5	0.5	ND		5	0.5	ND		5	0.5
Bis(2-chloroethyl)ether	111-44-4	1	ND		2	0.5	ND		2	0.5	ND		2	0.5
Bis(2-chloroisopropyl)ether	108-60-1	5	ND		2	0.53	ND		2	0.53	ND		2	0.53
Bis(2-ethylhexyl)phthalate	117-81-7	5	ND		3	1.5	ND		3	1.5	ND		3	1.5
Butyl benzyl phthalate	85-68-7	50	ND		5	1.2	ND		5	1.2	ND		5	1.2
Carbazole	86-74-8		ND		2	0.49	ND		2	0.49	ND		2	0.49
Di-n-butylphthalate	84-74-2	50	ND		5	0.39	ND		5	0.39	0.69	J	5	0.39
Di-n-octylphthalate	117-84-0	50	ND		5	1.3	ND		5	1.3	ND		5	1.3
Dibenzofuran	132-64-9		ND		2	0.5	ND		2	0.5	ND		2	0.5
Diethyl phthalate	84-66-2	50	ND		5	0.38	ND		5	0.38	ND		5	0.38
Dimethyl phthalate	131-11-3	50	ND		5	1.8	ND		5	1.8	ND		5	1.8
Hexachlorocyclopentadiene	77-47-4	5	ND		20	0.69	ND		20	0.69	ND		20	0.69
Isophorone	78-59-1	50	ND		5	1.2	ND		5	1.2	ND		5	1.2
n-Nitrosodi-n-propylamine	621-64-7		ND		5	0.64	ND		5	0.64	ND		5	0.64
NDPA/DPA	86-30-6	50	ND		2	0.42	ND		2	0.42	ND		2	0.42
Nitrobenzene	98-95-3	0.4	ND		2	0.77	ND		2	0.77	ND		2	0.77
p-Chloro-m-cresol	59-50-7		ND		2	0.35	ND		2	0.35	ND		2	0.35
Phenol	108-95-2	1	ND		5	0.57	ND		5	0.57	ND		5	0.57
Total SVOCs			-	-	-	-	-	-	-	-	0.69	-	-	-
SVOCs - SIM (ug/l)														
2-Chloronaphthalene	91-58-7	10	ND		0.2	0.02	ND		0.2	0.02	ND		0.2	0.02
2-Methylnaphthalene	91-57-6		ND		0.1	0.02	ND		0.1	0.02	ND		0.1	0.02
Acenaphthene	83-32-9	20	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01
Acenaphthylene	208-96-8		ND		0.1	0.01	0.02	J	0.1	0.01	ND		0.1	0.01
Anthracene	120-12-7	50	ND		0.1	0.01	0.02	J	0.1	0.01	0.02	J	0.1	0.01
Benzo(a)anthracene	56-55-3	0.002	ND		0.1	0.02	0.11		0.1	0.02	0.03	J	0.1	0.02
Benzo(a)pyrene	50-32-8	0	ND		0.1	0.02	0.13		0.1	0.02	ND		0.1	0.02
Benzo(b)fluoranthene	205-99-2	0.002	ND		0.1	0.01	0.27		0.1	0.01	ND		0.1	0.01
Benzo(ghi)perylene	191-24-2		ND		0.1	0.01	0.2		0.1	0.01	ND		0.1	0.01
Benzo(k)fluoranthene	207-08-9	0.002	ND		0.1	0.01	0.08	J	0.1	0.01	ND		0.1	0.01
Chrysene	218-01-9	0.002	ND		0.1	0.01	0.13		0.1	0.01	ND		0.1	0.01
Dibenzo(a,h)anthracene	53-70-3		ND		0.1	0.01	0.04	J	0.1	0.01	ND		0.1	0.01
Fluoranthene	206-44-0	50	0.02	J	0.1	0.02	0.04	J	0.1	0.02	0.02	J	0.1	0.02
Fluorene	86-73-7	50	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01
Hexachlorobenzene	118-74-1	0.04	ND		0.8	0.01	ND		0.8	0.01	ND		0.8	0.01
Hexachlorobutadiene	87-68-3	0.5	ND		0.5	0.05	ND		0.5	0.05	ND		0.5	0.05
Hexachloroethane	67-72-1	5	ND		0.8	0.06	ND		0.8	0.06	ND		0.8	0.06
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	ND		0.1	0.01	0.2		0.1	0.01	ND		0.1	0.01
Naphthalene	91-20-3	10	ND		0.1	0.05	ND		0.1	0.05	ND		0.1	0.05
Pentachlorophenol	87-86-5	1	ND		0.8	0.01	ND		0.8	0.01	ND		0.8	0.01
Phenanthrene	85-01-8	50	ND		0.1	0.02	0.03	J	0.1	0.02	0.04	J	0.1	0.02
Pyrene	129-00-0	50	ND		0.1	0.02	0.03	J	0.1	0.02	0.02	J	0.1	0.02
Total SVOCs			0.02	-	-	-	1.3	-	-	-	0.13	-	-	-
Pesticides (ug/l)														
4,4'-DDD	72-54-8	0.3	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
4,4'-DDE	72-55-9	0.2	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
4,4'-DDT	50-29-3	0.2	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
Aldrin	309-00-2	0	ND		0.014	0.002	ND		0.014	0.002	ND		0.014	0.002
Alpha-BHC	319-84-6	0.01	ND		0.014	0.003	ND		0.014	0.003	ND		0.014	0.003
Beta-BHC	319-85-7	0.04	ND		0.014	0.004	ND		0.014	0.004	ND		0.014	0.004
Chlordane	57-74-9	0.05	ND		0.143	0.033	ND		0.143	0.033	ND		0.143	0.033
cis-Chlordane	5103-71-9		ND		0.014	0.005	ND		0.014	0.005	ND		0.014	0.005
Delta-BHC	319-86-8	0.04	ND		0.014	0.003	ND		0.014	0.003	ND		0.014	0.003
Dieldrin	60-57-1	0.004	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-2				MW-1				TW-202			
LAB ID:			L2242491-02				L2242491-03				L2305142-17			
COLLECTION DATE:			8/6/2022				8/6/2022				1/28/2023			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Endosulfan I	959-98-8		ND		0.014	0.002	ND		0.014	0.002	ND		0.014	0.002
Endosulfan II	33213-65-9		ND		0.029	0.004	ND		0.029	0.004	ND		0.029	0.004
Endosulfan sulfate	1031-07-8		ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
Endrin	72-20-8	0	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
Endrin aldehyde	7421-93-4	5	ND		0.029	0.006	ND		0.029	0.006	ND		0.029	0.006
Endrin ketone	53494-70-5	5	ND		0.029	0.003	ND		0.029	0.003	ND		0.029	0.003
Heptachlor	76-44-8	0.04	ND		0.014	0.002	ND		0.014	0.002	ND		0.014	0.002
Heptachlor epoxide	1024-57-3	0.03	ND		0.014	0.003	ND		0.014	0.003	ND		0.014	0.003
Lindane	58-89-9	0.05	ND		0.014	0.003	ND		0.014	0.003	ND		0.014	0.003
Methoxychlor	72-43-5	35	ND		0.143	0.005	ND		0.143	0.005	ND		0.143	0.005
Toxaphene	8001-35-2	0.06	ND		0.143	0.045	ND		0.143	0.045	ND		0.143	0.045
trans-Chlordane	5103-74-2		ND		0.014	0.004	ND		0.014	0.004	ND		0.014	0.004
PCBs (ug/l)														
Aroclor 1016	12674-11-2	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1221	11104-28-2	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1232	11141-16-5	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1242	53469-21-9	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1248	12672-29-6	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1254	11097-69-1	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1260	11096-82-5	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1262	37324-23-5	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Aroclor 1268	11100-14-4	0.09	ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
PCBs, Total	1336-36-3		ND		0.071	0.061	ND		0.071	0.061	ND		0.071	0.061
Metals (ug/l)														
Aluminum, Total	7429-90-5		10100		10	3.27	2290		10	3.27	150000		10	3.27
Antimony, Total	7440-36-0	3	ND		4	0.42	ND		4	0.42	ND		4	0.42
Arsenic, Total	7440-38-2	25	0.7		0.5	0.16	0.79		0.5	0.16	41.51		0.5	0.16
Barium, Total	7440-39-3	1000	197		0.5	0.17	163		0.5	0.17	11710		10	1.73
Beryllium, Total	7440-41-7	3	0.29	J	0.5	0.1	ND		0.5	0.1	14		0.5	0.1
Cadmium, Total	7440-43-9	5	ND		0.2	0.05	ND		0.2	0.05	6.58		0.2	0.05
Calcium, Total	7440-70-2		74600		100	39.4	84300		100	39.4	271000		100	39.4
Chromium, Total	7440-47-3	50	25.09		1	0.17	13.09		1	0.17	396.7		1	0.17
Cobalt, Total	7440-48-4		11.16		0.5	0.16	5.47		0.5	0.16	423.9		0.5	0.16
Copper, Total	7440-50-8	200	24.94		1	0.38	8.07		1	0.38	597.5		1	0.38
Iron, Total	7439-89-6	300	18800		50	19.1	4960		50	19.1	165000		50	19.1
Lead, Total	7439-92-1	25	4.25		1	0.34	2.76		1	0.34	286.5		1	0.34
Magnesium, Total	7439-95-4	35000	30700		70	24.2	46300		70	24.2	117000		70	24.2
Manganese, Total	7439-96-5	300	853.6		1	0.44	1127		1	0.44	88680		10	4.4
Mercury, Total	7439-97-6	0.7	ND		0.2	0.09	ND		0.2	0.09	0.49		0.2	0.09
Nickel, Total	7440-02-0	100	26.17		2	0.55	11.02		2	0.55	733.2		2	0.55
Potassium, Total	7440-09-7		10700		100	30.9	14600		100	30.9	36400		100	30.9
Selenium, Total	7782-49-2	10	9.39		5	1.73	5.15		5	1.73	169		5	1.73
Silver, Total	7440-22-4	50	ND		0.4	0.16	ND		0.4	0.16	0.53		0.4	0.16
Sodium, Total	7440-23-5	20000	124000		100	29.3	124000		100	29.3	109000		100	29.3
Thallium, Total	7440-28-0	0.5	0.25	J	1	0.14	ND		1	0.14	2.47		2	0.14
Vanadium, Total	7440-62-2		24.77		5	1.57	8.46		5	1.57	128.3		5	1.57
Zinc, Total	7440-66-6	2000	30.32		10	3.41	7.87	J	10	3.41	451.3		10	3.41
General Chemistry														
Cyanide, Total	57-12-5	200	ND		5	1	ND		5	1	ND		5	1

Notes
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards & Guidance Values Criteria per Standards & Guidance Values including all addenda through February 2023.
Exceedance of NY-AWQS
J = Estimated
ND = Not Detected
- = Not Tested

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-303				TW-401			
LAB ID:			L2362532-01				L2511313-06			
COLLECTION DATE:			10/20/2023				2/28/2025			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOCs (ug/l)										
1,1,1,2-Tetrachloroethane	630-20-6	5	ND		2.5	0.7	ND		2.5	0.7
1,1,1-Trichloroethane	71-55-6	5	ND		2.5	0.7	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	79-34-5	5	ND		0.5	0.17	ND		0.5	0.17
1,1,2-Trichloroethane	79-00-5	1	ND		1.5	0.5	ND		1.5	0.5
1,1-Dichloroethane	75-34-3	5	ND		2.5	0.7	ND		2.5	0.7
1,1-Dichloroethene	75-35-4	5	ND		0.5	0.17	ND		0.5	0.17
1,1-Dichloropropene	563-58-6	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichlorobenzene	87-61-6	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichloropropane	96-18-4	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2,4,5-Tetramethylbenzene	95-93-2	5	ND		2	0.54	ND		2	0.54
1,2,4-Trichlorobenzene	120-82-1	5	ND		2.5	0.7	ND		2.5	0.7
1,2,4-Trimethylbenzene	95-63-6	5	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	96-12-8	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromoethane	106-93-4	0.0006	ND		2	0.65	ND		2	0.65
1,2-Dichlorobenzene	95-50-1	3	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloroethane	107-06-2	0.6	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloroethene, Total	540-59-0		ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloropropane	78-87-5	1	ND		1	0.14	ND		1	0.14
1,3,5-Trimethylbenzene	108-67-8	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichlorobenzene	541-73-1	3	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropane	142-28-9	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropene, Total	542-75-6		ND		0.5	0.14	ND		0.5	0.14
1,4-Dichlorobenzene	106-46-7	3	ND		2.5	0.7	ND		2.5	0.7
1,4-Dioxane	123-91-1	0.35	ND		250	61	ND		250	61
2,2-Dichloropropane	594-20-7	5	ND		2.5	0.7	ND		2.5	0.7
2-Butanone	78-93-3	50	4.4	J	5	1.9	ND		5	1.9
2-Hexanone	591-78-6	50	ND		5	1	ND		5	1
4-Methyl-2-pentanone	108-10-1		ND		5	1	ND		5	1
Acetone	67-64-1	50	22		5	1.5	1.7	J	5	1.5
Acrylonitrile	107-13-1	5	ND		5	1.5	ND		5	1.5
Benzene	71-43-2	1	1.3		0.5	0.16	ND		0.5	0.16
Bromobenzene	108-86-1	5	ND		2.5	0.7	ND		2.5	0.7
Bromochloromethane	74-97-5	5	ND		2.5	0.7	ND		2.5	0.7
Bromodichloromethane	75-27-4	50	0.38	J	0.5	0.19	ND		0.5	0.19
Bromoform	75-25-2	50	ND		2	0.65	ND		2	0.65
Bromomethane	74-83-9	5	ND		2.5	0.7	ND		2.5	0.7
Carbon disulfide	75-15-0	60	ND		5	1	ND		5	1
Carbon tetrachloride	56-23-5	5	ND		0.5	0.13	ND		0.5	0.13
Chlorobenzene	108-90-7	5	ND		2.5	0.7	ND		2.5	0.7
Chloroethane	75-00-3	5	ND		2.5	0.7	ND		2.5	0.7
Chloroform	67-66-3	7	21		2.5	0.7	ND		2.5	0.7
Chloromethane	74-87-3		ND		2.5	0.7	ND		2.5	0.7
cis-1,2-Dichloroethene	156-59-2	5	ND		2.5	0.7	ND		2.5	0.7
cis-1,3-Dichloropropene	10061-01-5	0.4	ND		0.5	0.14	ND		0.5	0.14
Dibromochloromethane	124-48-1	50	ND		0.5	0.15	ND		0.5	0.15
Dibromomethane	74-95-3	5	ND		5	1	ND		5	1
Dichlorodifluoromethane	75-71-8	5	ND		5	1	ND		5	1
Ethyl ether	60-29-7		ND		2.5	0.7	ND		2.5	0.7
Ethylbenzene	100-41-4	5	ND		2.5	0.7	ND		2.5	0.7
Hexachlorobutadiene	87-68-3	0.5	ND		2.5	0.7	ND		2.5	0.7
Isopropylbenzene	98-82-8	5	ND		2.5	0.7	ND		2.5	0.7
Methyl tert butyl ether	1634-04-4	10	ND		2.5	0.7	ND		2.5	0.17
Methylene chloride	75-09-2	5	ND		2.5	0.7	ND		2.5	0.7
n-Butylbenzene	104-51-8	5	ND		2.5	0.7	ND		2.5	0.7
n-Propylbenzene	103-65-1	5	ND		2.5	0.7	ND		2.5	0.7
Naphthalene	91-20-3	10	ND		2.5	0.7	ND		2.5	0.7
o-Chlorotoluene	95-49-8	5	ND		2.5	0.7	ND		2.5	0.7
o-Xylene	95-47-6	5	ND		2.5	0.7	ND		2.5	0.7
p-Chlorotoluene	106-43-4	5	ND		2.5	0.7	ND		2.5	0.7
p-Diethylbenzene	105-05-5		ND		2	0.7	ND		2	0.7
p-Ethyltoluene	622-96-8		ND		2	0.7	ND		2	0.7
p-Isopropyltoluene	99-87-6	5	ND		2.5	0.7	ND		2.5	0.7
p/m-Xylene	179601-23-1	5	ND		2.5	0.7	ND		2.5	0.7
sec-Butylbenzene	135-98-8	5	ND		2.5	0.7	ND		2.5	0.7
Styrene	100-42-5	5	ND		2.5	0.7	ND		2.5	0.7
tert-Butylbenzene	98-06-6	5	ND		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	127-18-4	5	ND		0.5	0.18	ND		0.5	0.18
Toluene	108-88-3	5	1.6	J	2.5	0.7	ND		2.5	0.7
trans-1,2-Dichloroethene	156-60-5	5	ND		2.5	0.7	ND		2.5	0.7
trans-1,3-Dichloropropene	10061-02-6	0.4	ND		0.5	0.16	ND		0.5	0.16
trans-1,4-Dichloro-2-butene	110-57-6	5	ND		2.5	0.7	ND		2.5	0.7
Trichloroethene	79-01-6	5	ND		0.5	0.18	ND		0.5	0.18
Trichlorofluoromethane	75-69-4	5	ND		2.5	0.7	ND		2.5	0.7
Vinyl acetate	108-05-4		ND		5	1	ND		5	1
Vinyl chloride	75-01-4	2	ND		1	0.07	ND		1	0.07
Xylenes, Total	1330-20-7		ND		2.5	0.7	ND		2.5	0.7
Total VOCs			50.68	-	-	-	1.7	-	-	-
1,4-Dioxane (ug/l)										
1,4-Dioxane	123-91-1	0.35	-		-	-	ND		0.139	0.0314
PFAS (ug/l)										
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	763051-92-9		ND		0.64	0.132	-	-	-	-
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4		ND		0.64	0.249	ND		0.064	0.0122
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4		ND		0.64	0.167	-	-	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2		ND		0.64	0.216	ND		0.064	0.0482
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3		ND		4	0.936	-	-	-	-
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4		ND		4	0.631	-	-	-	-
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5		ND		0.8	0.264	-	-	-	-
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4		ND		0.64	0.101	-	-	-	-
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	756426-58-1		ND		0.64	0.132	-	-	-	-
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	13252-13-6		ND		0.64	0.0896	-	-	-	-
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2		ND		0.16	0.0736	-	-	-	-
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2		ND		1.6	0.196	-	-	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6		ND		0.16	0.0864	ND		0.016	0.0048
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8		ND		0.16	0.0696	-	-	-	-
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7		ND		1.6	0.376	-	-	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9		ND		0.16	0.0872	ND		0.016	0.0048
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6		ND		0.32	0.189	-	-	-	-
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7		ND		0.32	0.0352	-	-	-	-
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1		ND		0.32	0.0456	-	-	-	-
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5		ND		0.32	0.0424	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5		ND		0.16	0.0536	0.00552	J	0.016	0.004
Perfluorobutanoic Acid (PFBA)	375-22-4		ND		0.64	0.102	0.0092	J	0.064	0.00528

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-303				TW-401			
LAB ID:			L2362532-01				L2511313-06			
COLLECTION DATE:			10/20/2023				2/28/2025			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Perfluorodecanesulfonic Acid (PFDS)	335-77-3		ND		0.16	0.0368	0.00432	J	0.016	0.00136
Perfluorodecanoic Acid (PFDA)	335-76-2		ND		0.16	0.0648	0.00344	J	0.016	0.00208
Perfluorododecanesulfonic Acid (PFDoS)	79780-39-5		ND		0.16	0.0608	-	-	-	-
Perfluorododecanoic Acid (PFDoA)	307-55-1		ND		0.16	0.0736	ND		0.016	0.00216
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8		ND		0.16	0.0432	ND		0.016	0.002
Perfluoroheptanoic Acid (PFHpA)	375-85-9		ND		0.16	0.032	0.00416	JF	0.016	0.0024
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4		ND		0.16	0.0384	0.00328	J	0.016	0.00136
Perfluorohexanoic Acid (PFHxA)	307-24-4		ND		0.16	0.0472	0.00912	J	0.016	0.00248
Perfluorononanesulfonic Acid (PFNS)	68259-12-1		ND		0.16	0.0496	-	-	-	-
Perfluorononanoic Acid (PFNA)	375-95-1		ND		0.16	0.0504	0.004	J	0.016	0.00264
Perfluorooctanesulfonamide (PFOSA)	754-91-6		ND		0.16	0.0432	ND		0.016	0.00096
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027	ND		0.16	0.0728	0.057		0.016	0.00264
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067	ND		0.16	0.0696	0.0161		0.016	0.00264
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4		ND		0.16	0.028	-	-	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3		ND		0.32	0.0856	0.0112	J	0.032	0.0036
Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		ND		0.16	0.0424	ND		0.016	0.0016
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		ND		0.16	0.06	ND		0.016	0.00184
Perfluoroundecanoic Acid (PFUnA)	2058-94-8		ND		0.16	0.0696	ND		0.016	0.00176
PFOA/PFOS, Total			-		-	-	0.0731		0.016	0.00264
SVOCs (ug/l)										
1,2,4,5-Tetrachlorobenzene	95-94-3	5	ND		10	0.44	ND		10	0.24
1,2,4-Trichlorobenzene	120-82-1	5	ND		5	0.5	ND		5	0.98
1,2-Dichlorobenzene	95-50-1	3	ND		2	0.45	ND		2	0.33
1,3-Dichlorobenzene	541-73-1	3	ND		2	0.4	ND		2	0.32
1,4-Dichlorobenzene	106-46-7	3	ND		2	0.43	ND		2	0.39
2,4,5-Trichlorophenol	95-95-4		ND		5	0.77	ND		5	2.1
2,4,6-Trichlorophenol	88-06-2		ND		5	0.61	ND		5	2.1
2,4-Dichlorophenol	120-83-2	1	ND		5	0.41	ND		5	1.7
2,4-Dimethylphenol	105-67-9	50	ND		5	1.8	ND		5	2
2,4-Dinitrophenol	51-28-5	10	ND		20	6.6	ND		20	5.4
2,4-Dinitrotoluene	121-14-2	5	ND		5	1.2	ND		5	0.54
2,6-Dinitrotoluene	606-20-2	5	ND		5	0.93	ND		5	0.84
2-Chlorophenol	95-57-8		ND		2	0.48	ND		2	0.65
2-Methylphenol	95-48-7		ND		5	0.49	ND		5	2.3
2-Nitroaniline	88-74-4	5	ND		5	0.5	ND		5	1
2-Nitrophenol	88-75-5		ND		10	0.85	ND		10	2
3,3'-Dichlorobenzidine	91-94-1	5	ND		5	1.6	ND		5	1.8
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		ND		5	0.48	ND		5	1.4
3-Nitroaniline	99-09-2	5	ND		5	0.81	ND		5	1.2
4,6-Dinitro-o-cresol	534-52-1		ND		10	1.8	ND		10	2.3
4-Bromophenyl phenyl ether	101-55-3		ND		2	0.38	ND		2	0.24
4-Chloroaniline	106-47-8	5	ND		5	1.1	ND		5	0.47
4-Chlorophenyl phenyl ether	7005-72-3		ND		2	0.49	ND		2	0.39
4-Nitroaniline	100-01-6	5	ND		5	0.8	ND		5	1.4
4-Nitrophenol	100-02-7		ND		10	0.67	ND		10	1.4
Acetophenone	98-86-2		ND		5	0.53	ND		5	0.92
Benzoic Acid	65-85-0		ND		50	2.6	14	J	50	2.6
Benzyl Alcohol	100-51-6		ND		2	0.59	ND		2	0.38
Biphenyl	92-52-4		ND		2	0.46	ND		2	0.2
Bis(2-chloroethoxy)methane	111-91-1	5	ND		5	0.5	ND		5	0.84
Bis(2-chloroethyl)ether	111-44-4	1	ND		2	0.5	ND		2	0.39
Bis(2-chloroisopropyl)ether	108-60-1	5	ND		2	0.53	ND		2	0.4
Bis(2-ethylhexyl)phthalate	117-81-7	5	4.4		3	1.5	ND		3	1.4
Butyl benzyl phthalate	85-68-7	50	ND		5	1.2	ND		5	2.6
Carbazole	86-74-8		ND		2	0.49	ND		2	0.31
Di-n-butylphthalate	84-74-2	50	ND		5	0.39	ND		5	0.96
Di-n-octylphthalate	117-84-0	50	ND		5	1.3	ND		5	2.3
Dibenzofuran	132-64-9		ND		2	0.5	ND		2	0.4
Diethyl phthalate	84-66-2	50	ND		5	0.38	ND		5	0.76
Dimethyl phthalate	131-11-3	50	ND		5	1.8	ND		5	0.92
Hexachlorocyclopentadiene	77-47-4	5	ND		20	0.69	ND		20	1.2
Isophorone	78-59-1	50	ND		5	1.2	ND		5	0.86
n-Nitrosodi-n-propylamine	621-64-7		ND		5	0.64	ND		5	0.91
NDPA/DPA	86-30-6	50	ND		2	0.42	ND		2	0.92
Nitrobenzene	98-95-3	0.4	ND		2	0.77	ND		2	0.2
p-Chloro-m-cresol	59-50-7		ND		2	0.35	ND		2	0.61
Phenol	108-95-2	1	1.7	J	5	0.57	ND		5	0.35
Total SVOCs			6.1	-	-	-	14	-	-	-
SVOCs - SIM (ug/l)										
2-Chloronaphthalene	91-58-7	10	ND		0.2	0.02	ND		0.2	0.02
2-Methylnaphthalene	91-57-6		ND		0.1	0.02	ND		0.1	0.03
Acenaphthene	83-32-9	20	ND		0.1	0.01	ND		0.1	0.02
Acenaphthylene	208-96-8		ND		0.1	0.01	ND		0.1	0.02
Anthracene	120-12-7	50	ND		0.1	0.01	ND		0.1	0.02
Benzo(a)anthracene	56-55-3	0.002	0.02	J	0.1	0.02	0.04	J	0.1	0.03
Benzo(a)pyrene	50-32-8	0	0.03	J	0.1	0.02	0.03	J	0.1	0.02
Benzo(b)fluoranthene	205-99-2	0.002	0.04	J	0.1	0.01	0.05	J	0.1	0.03
Benzo(ghi)perylene	191-24-2		0.02	J	0.1	0.01	0.04	J	0.1	0.02
Benzo(k)fluoranthene	207-08-9	0.002	0.02	J	0.1	0.01	ND		0.1	0.03
Chrysene	218-01-9	0.002	0.02	J	0.1	0.01	0.04	J	0.1	0.03
Dibenzo(a,h)anthracene	53-70-3		ND		0.1	0.01	ND		0.1	0.02
Fluoranthene	206-44-0	50	0.05	J	0.1	0.02	0.05	J	0.1	0.03
Fluorene	86-73-7	50	ND		0.1	0.01	ND		0.1	0.03
Hexachlorobenzene	118-74-1	0.04	ND		0.8	0.01	ND		0.8	0.01
Hexachlorobutadiene	87-68-3	0.5	ND		0.5	0.05	ND		0.5	0.02
Hexachloroethane	67-72-1	5	ND		0.8	0.06	ND		0.8	0.02
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	0.02	J	0.1	0.01	0.04	J	0.1	0.02
Naphthalene	91-20-3	10	0.4		0.1	0.05	ND		0.1	0.02
Pentachlorophenol	87-86-5	1	0.1	J	0.8	0.01	ND		0.8	0.06
Phenanthrene	85-01-8	50	0.06	J	0.1	0.02	ND		0.1	0.04
Pyrene	129-00-0	50	0.05	J	0.1	0.02	0.06	J	0.1	0.04
Total SVOCs			0.83	-	-	-	0.35	-	-	-
Pesticides (ug/l)										
4,4'-DDD	72-54-8	0.3	ND		0.029	0.003	ND		0.029	0.01
4,4'-DDE	72-55-9	0.2	ND		0.029	0.003	ND		0.029	0.01
4,4'-DDT	50-29-3	0.2	ND		0.029	0.003	ND		0.029	0.013
Aldrin	309-00-2	0	ND		0.014	0.002	ND		0.014	0.005
Alpha-BHC	319-84-6	0.01	ND		0.014	0.003	ND		0.014	0.005
Beta-BHC	319-85-7	0.04	ND		0.014	0.004	ND		0.02	0.014
Chlordane	57-74-9	0.05	ND		0.143	0.033	ND		0.143	0.098
cis-Chlordane	5103-71-9		ND		0.014	0.005	ND		0.02	0.007
Delta-BHC	319-86-8	0.04	ND		0.014	0.003	ND		0.014	0.006
Dieldrin	60-57-1	0.004	ND		0.029	0.003	ND		0.029	0.004

Table 2.4 - Summary of Groundwater Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:			TW-303				TW-401			
LAB ID:			L2362532-01				L2511313-06			
COLLECTION DATE:			10/20/2023				2/28/2025			
ANALYTE	CAS	NY-AWQS	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Endosulfan I	959-98-8		ND		0.014	0.002	ND		0.014	0.005
Endosulfan II	33213-65-9		ND		0.029	0.004	ND		0.029	0.008
Endosulfan sulfate	1031-07-8		ND		0.029	0.003	ND		0.029	0.007
Endrin	72-20-8	0	ND		0.029	0.003	ND		0.029	0.008
Endrin aldehyde	7421-93-4	5	ND		0.029	0.006	ND		0.03	0.018
Endrin ketone	53494-70-5	5	ND		0.029	0.003	ND		0.029	0.014
Heptachlor	76-44-8	0.04	ND		0.014	0.002	ND		0.014	0.005
Heptachlor epoxide	1024-57-3	0.03	ND		0.014	0.003	ND		0.014	0.005
Lindane	58-89-9	0.05	ND		0.014	0.003	ND		0.014	0.005
Methoxychlor	72-43-5	35	ND		0.143	0.005	ND		0.143	0.014
Toxaphene	8001-35-2	0.06	ND		0.143	0.045	ND		0.2	0.094
trans-Chlordane	5103-74-2		ND		0.014	0.004	ND		0.02	0.011
PCBs (ug/l)										
Aroclor 1016	12674-11-2	0.09	ND		0.071	0.061	ND		0.071	0.013
Aroclor 1221	11104-28-2	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1232	11141-16-5	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1242	53469-21-9	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1248	12672-29-6	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1254	11097-69-1	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1260	11096-82-5	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1262	37324-23-5	0.09	ND		0.071	0.061	ND		0.071	0.015
Aroclor 1268	11100-14-4	0.09	ND		0.071	0.061	ND		0.071	0.015
PCBs, Total	1336-36-3		ND		0.071	0.061	ND		0.071	0.013
Metals (ug/l)										
Aluminum, Total	7429-90-5		54000		10	3.27	140000		100	32.7
Antimony, Total	7440-36-0	3	0.43	J	4	0.42	1.71	J	4	0.42
Arsenic, Total	7440-38-2	25	9.92		0.5	0.16	27.96		0.5	0.16
Barium, Total	7440-39-3	1000	4302		0.5	0.17	4480		0.5	0.17
Beryllium, Total	7440-41-7	3	3.98		0.5	0.1	12.04		0.5	0.1
Cadmium, Total	7440-43-9	5	4.53		0.2	0.05	5.91		0.2	0.05
Calcium, Total	7440-70-2		283000		100	39.4	386000		1000	394
Chromium, Total	7440-47-3	50	1083		1	0.17	213.5		1	0.17
Cobalt, Total	7440-48-4		387.5		0.5	0.16	154.3		5	1.63
Copper, Total	7440-50-8	200	876.8		1	0.38	876.6		1	0.38
Iron, Total	7439-89-6	300	368000		50	19.1	129000		50	19.1
Lead, Total	7439-92-1	25	481.3		1	0.34	2508		1	0.34
Magnesium, Total	7439-95-4	35000	77400		70	24.2	91100		70	24.2
Manganese, Total	7439-96-5	300	48620		10	4.4	22610		10	4.4
Mercury, Total	7439-97-6	0.7	3.04		1	0.45	4.36		0.2	0.09
Nickel, Total	7440-02-0	100	1334		2	0.55	226.8		2	0.55
Potassium, Total	7440-09-7		41200		100	30.9	37800		100	30.9
Selenium, Total	7782-49-2	10	44.5		5	1.73	26.9		5	1.73
Silver, Total	7440-22-4	50	23.67		0.4	0.16	3.19		0.4	0.16
Sodium, Total	7440-23-5	20000	60200		100	29.3	42300		500	29.3
Thallium, Total	7440-28-0	0.5	1.63		1	0.14	3		1	0.14
Vanadium, Total	7440-62-2		93.77		5	1.57	281.6		50	15.7
Zinc, Total	7440-66-6	2000	526.6		10	3.41	1254		10	3.41
General Chemistry										
Cyanide, Total	57-12-5	200	ND		5	1	ND		5	1

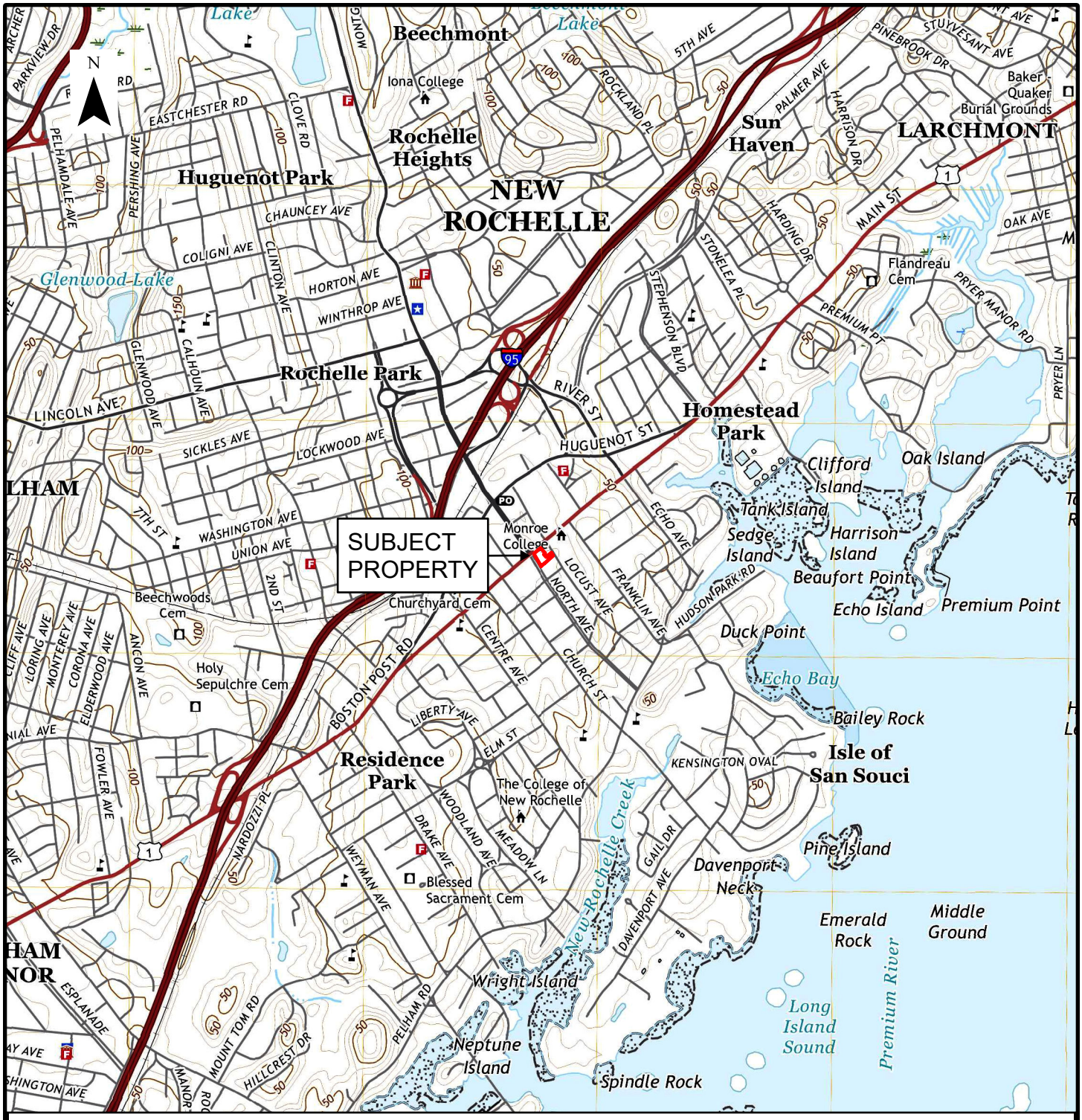
Notes
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards & Guidance Values Criteria per Standards & G
Exceedance of NY-AWQS
J = Estimated
ND = Not Detected
- = Not Tested

Table 2.6 - Summary of Soil Vapor Analytical Results
466 Main Street, New Rochelle, NY; Block 215, Lot 34

SAMPLE ID:															SV-2				AA-1				SV-202				SV-303				SV-302				AA-1			
LAB ID:															L2242461-02				L2242461-03				L2304933-02				L2514233-01				L2514233-02				L2514233-03			
COLLECTION DATE:															8/6/2022				8/6/2022				1/28/2023				3/12/2025				3/12/2025				3/12/2025			
SAMPLE MATRIX:															SOIL_VAPOR				AIR				SOIL_VAPOR				SOIL_VAPOR				SOIL_VAPOR				AIR			
ANALYTE	CAS	NY-IAC-A	NY-SSC-A	NY-IAC-B	NY-SSC-B	NY-IAC-C	NY-SSC-C	NY-IAC-D	NY-SSC-D	NY-IAC-E	NY-SSC-E	NY-IAC-F	NY-SSC-F		Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOCs (ug/m3)																																						
1,1,1-Trichloroethane	71-55-6			3	100										ND		1.09	-	ND		1.09	-	ND		2.6	-	ND		1.09	-	ND		1.09	-	ND		0.109	-
1,1,2,2-Tetrachloroethane	79-34-5														ND		1.37	-	ND		1.37	-	ND		3.27	-	ND		1.37	-	ND		1.37	-	ND		1.37	-
1,1,2-Trichloroethane	79-00-5														ND		1.09	-	ND		1.09	-	ND		2.6	-	ND		1.09	-	ND		1.09	-	ND		1.09	-
1,1-Dichloroethane	75-34-3														ND		0.809	-	ND		0.809	-	ND		1.93	-	0.903		0.809	-	ND		0.809	-	ND		0.809	-
1,1-Dichloroethene	75-35-4	0.2	6												ND		0.793	-	ND		0.793	-	ND		1.89	-	ND		0.793	-	ND		0.793	-	ND		0.079	-
1,2,4-Trichlorobenzene	120-82-1														ND		1.48	-	ND		1.48	-	ND		3.53	-	ND		1.48	-	ND		1.48	-	ND		1.48	-
1,2,4-Trimethylbenzene	95-63-6							2	60						7.82		0.983	-	ND		0.983	-	2.82		2.34	-	4.67		0.983	-	6.74		0.983	-	**2.4**		0.983	-
1,2-Dibromoethane	106-93-4														ND		1.54	-	ND		1.54	-	ND		3.66	-	ND		1.54	-	ND		1.54	-	ND		1.54	-
1,2-Dichlorobenzene	95-50-1														ND		1.2	-	ND		1.2	-	ND		2.86	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,2-Dichloroethane	107-06-2														ND		0.809	-	ND		0.809	-	ND		1.93	-	ND		0.809	-	0.834		0.809	-	ND		0.809	-
1,2-Dichloropropane	78-87-5														ND		0.924	-	ND		0.924	-	ND		2.2	-	ND		0.924	-	ND		0.924	-	ND		0.924	-
1,3,5-Trimethylbenzene	108-67-8							2	60						8.6		0.983	-	ND		0.983	-	ND		2.34	-	1.17		0.983	-	2.31		0.983	-	ND		0.983	-
1,3-Butadiene	106-99-0														15.9		0.442	-	ND		0.442	-	ND		1.05	-	ND		0.442	-	ND		0.442	-	ND		0.442	-
1,3-Dichlorobenzene	541-73-1														ND		1.2	-	ND		1.2	-	ND		2.86	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,4-Dichlorobenzene	106-46-7														ND		1.2	-	ND		1.2	-	ND		2.86	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,4-Dioxane	123-91-1														ND		0.721	-	ND		0.721	-	ND		1.72	-	ND		0.721	-	3.6		0.721	-	ND		0.721	-
2,2,4-Trimethylpentane	540-84-1							2	60						ND		0.934	-	ND		0.934	-	ND		2.22	-	ND		0.934	-	1.97		0.934	-	ND		0.934	-
2-Butanone	78-93-3														101		1.47	-	ND		1.47	-	56.9		3.51	-	1.71		1.47	-	1.5		1.47	-	4.31		1.47	-
2-Hexanone	591-78-6														35		0.82	-	ND		0.82	-	ND		1.95	-	ND		0.82	-	ND		0.82	-	ND		0.82	-
3-Chloropropene	107-05-1														ND		0.626	-	ND		0.626	-	ND		1.49	-	ND		0.626	-	ND		0.626	-	ND		0.626	-
4-Ethyltoluene	622-96-8														3.52		0.983	-	ND		0.983	-	ND		2.34	-	ND		0.983	-	1.35		0.983	-	ND		0.983	-
4-Methyl-2-pentanone	108-10-1														24.9		2.05	-	ND		2.05	-	ND		4.88	-	ND		2.05	-	ND		2.05	-	ND		2.05	-
Acetone	67-64-1														432		2.38	-	13.5		2.38	-	52		5.65	-	16.4		2.38	-	15.8		2.38	-	86.7		2.38	-
Benzene	71-43-2							2	60						23.7		0.639	-	ND		0.639	-	ND		1.52	-	1.09		0.639	-	5.18		0.639	-	1.09		0.639	-
Benzyl chloride	100-44-7														ND		1.04	-	ND		1.04	-	ND		2.46	-	ND		1.04	-	ND		1.04	-	ND		1.04	-
Bromodichloromethane	75-27-4														ND		1.34	-	ND		1.34	-	ND		3.19	-	ND		1.34	-	1.47		1.34	-	ND		1.34	-
Bromoform	75-25-2														ND		2.07	-	ND		2.07	-	ND		4.92	-	ND		2.07	-	ND		2.07	-	ND		2.07	-
Bromomethane	74-83-9														ND		0.777	-	ND		0.777	-	ND		1.85	-	ND		0.777	-	ND		0.777	-	ND		0.777	-
Carbon disulfide	75-15-0														51.4		0.623	-	ND		0.623	-	ND		1.48	-	1		0.623	-	13.8		0.623	-	ND		0.623	-
Carbon tetrachloride	56-23-5	0.2	6												ND		1.26	-	ND		1.26	-	ND		2.99	-	**29.5**		1.26	-	**7.67**		1.26	-	**0.516**		0.126	-
Chlorobenzene	108-90-7														ND		0.921	-	ND		0.921	-	ND		2.19	-	ND		0.921	-	ND		0.921	-	ND		0.921	-
Chloroethane	75-00-3														3.64		0.528	-	ND		0.528	-	ND		1.26	-	ND		0.528	-	ND		0.528	-	ND		0.528	-
Chloroform	67-66-3														ND		0.977	-	ND		0.977	-	ND		2.32	-	24.8		0.977	-	31.6		0.977	-	ND		0.977	-
Chloromethane	74-87-3														8.78		0.413	-	1.44		0.413	-	ND		0.983	-	ND		0.413	-	0.776		0.413	-	1.27		0.413	-
cis-1,2-Dichloroethene	156-59-2	0.2	6												ND		0.793	-	ND		0.793	-	ND		1.89	-	**304**		0.793	-	ND		0.793	-	ND		0.079	-
cis-1,3-Dichloropropene	10061-01-5														ND		0.908	-	ND		0.908	-	ND		2.16	-	ND		0.908	-	ND		0.908	-	ND		0.908	-
Cyclohexane	110-82-7							2	60						13.7		0.688	-	ND		0.688	-	1.65		1.64	-	ND		0.688	-	1.64		0.688	-	ND		0.688	-
Dibromochloromethane	124-48-1														ND		1.7	-	ND		1.7	-	ND		4.06	-	ND		1.7	-	ND		1.7	-	ND		1.7	-
Dichlorodifluoromethane	75-71-8														2.76		0.989	-	2.46		0.989	-	ND		2.35	-	4.21		0.989	-	3.33		0.989	-	2.47		0.989	-
Ethanol	64-17-5														35		9.42	-	17.8		9.42	-	92.7		22.4	-	288		9.42	-	187		9.42	-	24.5		9.42	-
Ethyl Acetate	141-78-6														4.97		1.8	-	ND		1.8	-	17.8		4.29	-	2.81		1.8	-	2.16		1.8	-	ND		1.8	-
Ethylbenzene	100-41-4							2	60						7.12		0.869	-	ND		0.869	-	**405**		2.07	-	1.87		0.869	-	6.25		0.869	-	1.06		0.869	-
Freon-113	76-13-1														ND		1.53	-	ND		1.53	-	ND		3.65	-	ND		1.53	-	ND		1.53	-	ND		1.53	-
Freon-114	76-14-2														ND		1.4	-	ND		1.4	-	ND		3.33	-	ND		1.4	-	ND		1.4	-	ND		1.4	-
Heptane	142-82-5									6	200				14.8		0.82	-	ND		0.82	-	8.97		1.95	-	0.848		0.82	-	1.9		0.82	-	ND		0.82	-
Hexachlorobutadiene	87-68-3														ND		2.13	-	ND		2.13	-	ND		5.08	-	ND		2.13	-	ND		2.13	-	ND		2.13	-
Isopropanol	67-63-0														15.4		1.23	-	8.11		1.23	-	8.53		2.93	-	143		2.46	-	49.7		2.46	-	54.6		2.46	-
Methyl tert butyl ether	1634-04-4														ND		0.721	-	ND		0.721	-	ND		1.72	-	ND		0.721	-	ND		0.721	-	ND		0.721	-
Methylene chloride	75-09-2			3	100										ND		1.74	-	ND		1.74	-	ND		4.13	-	ND		1.74	-	ND		1.74	-	ND		1.74	-
n-Hexane	110-54-3									6	200				20.2		0.705	-	ND		0.705	-	7.12		1.68	-	0.973		0.705	-	2.19		0.705	-	0.737		0.705	-
Naphthalene	91-20-3							2	60																	ND		0.996	-	ND		0.996	-	ND		0.996	-
o-Xylene	95-47-6							2	60						9.43		0.869	-	ND		0.869	-	**337**		2.07	-	2.89		0.869	-	7.43		0.869	-	1.67		0.869	-
p/m-Xylene	179601-23-1									6	200				22.4		1.74	-	ND		1.74	-	**1240**		4.14	-	6.12		1.74	-	20.9		1.74	-	3.64		1.74	-
Styrene	100-42-5														0.988		0.852	-	ND		0.852	-	ND		2.03	-	ND		0.852	-	ND		0.852	-	ND		0.852	-
Tertiary butyl Alcohol	75-65-0														63.4		1.52	-	ND		1.52	-	ND		3.61	-	ND		1.52	-	1.64		1.52	-	ND		1.52	-
Tetrachloroethene	127-18-4			3	100										7.26		1.36	-	ND		1.36	-	8.07		3.23	-	**411**		1.36	-	60.4		1.36	-	ND		0.136	-
Tetrahydrofuran	109-99-9														5.93		1.47	-	ND		1.47	-	ND		3.51	-	ND		1.47	-	ND		1.47	-	5.01		1.47	-
Toluene	108-88-3											10	300		21.2		0.754	-	3.92		0.754	-	65.6		1.79	-	8.71		0.754	-	31.4		0.754	-	2.56		0.754	-
trans-1,2-Dichloroethene	156-60-5														ND		0.793	-	ND		0.793	-	ND		1.89	-	61.1		0.793	-	ND		0.793	-	ND		0.793	-
trans-1,3-Dichloropropene	10061-02-6														ND		0.908	-	ND		0.908	-	ND		2.16	-	ND		0.908	-	ND		0.908	-	ND		0.908	-
Trichloroethene	79-01-6	0.2	6												ND		1.07	-	ND		1.07	-	ND		2.56	-	**404**		1.07	-	**16.9**		1.07	-	ND		0.107	-
Trichlorofluoromethane	75-69-4														2.47		1.12	-	1.36		1.12	-	ND		2.67	-	2.12		1.12	-	1.29		1.12	-	1.15		1.12	-
Vinyl bromide	593-60-2														ND		0.874	-	ND		0.874	-	ND		2.08	-	ND		0.874	-	ND		0.874	-	ND		0.874	-
Vinyl chloride	75-01-4					0.2	6								0.657		0.511	-	ND		0.511	-	ND		1.22	-	ND		0.511	-	ND		0.511	-	ND		0.051	-

Notes
ug/m^{-3}: Micrograms per cubic meter
Bold: Elevated Concentration
Action Required by NYSDOH Decision Matrix
NY-IAC-A: New York DOH Matrix A Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-B: New York DOH Matrix B Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-C: New York DOH Matrix C Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-D: New York DOH Matrix D Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-E: New York DOH Matrix E Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-F: New York DOH Matrix F Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-A: New York DOH Matrix A Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-B: New York DOH Matrix B Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-C: New York DOH Matrix C Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-D: New York DOH Matrix D Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-E: New York DOH Matrix E Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-F: New York DOH Matrix F Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.

Figures



REFERENCE:

UNITED STATES GEOLOGICAL SURVEY (USGS)
MOUNT VERNON, NY USGS QUADRANGLE - 2019

LEGEND:

SUBJECT PROPERTY LOCATION

SCALE: 1" = 2,000'

0 1,000 2,000 4,000 FEET

466 MAIN STREET
BLOCK 215, LOT ~~29, 34, 42~~ 32
NEW ROCHELLE, NY

SITE LOCATION MAP

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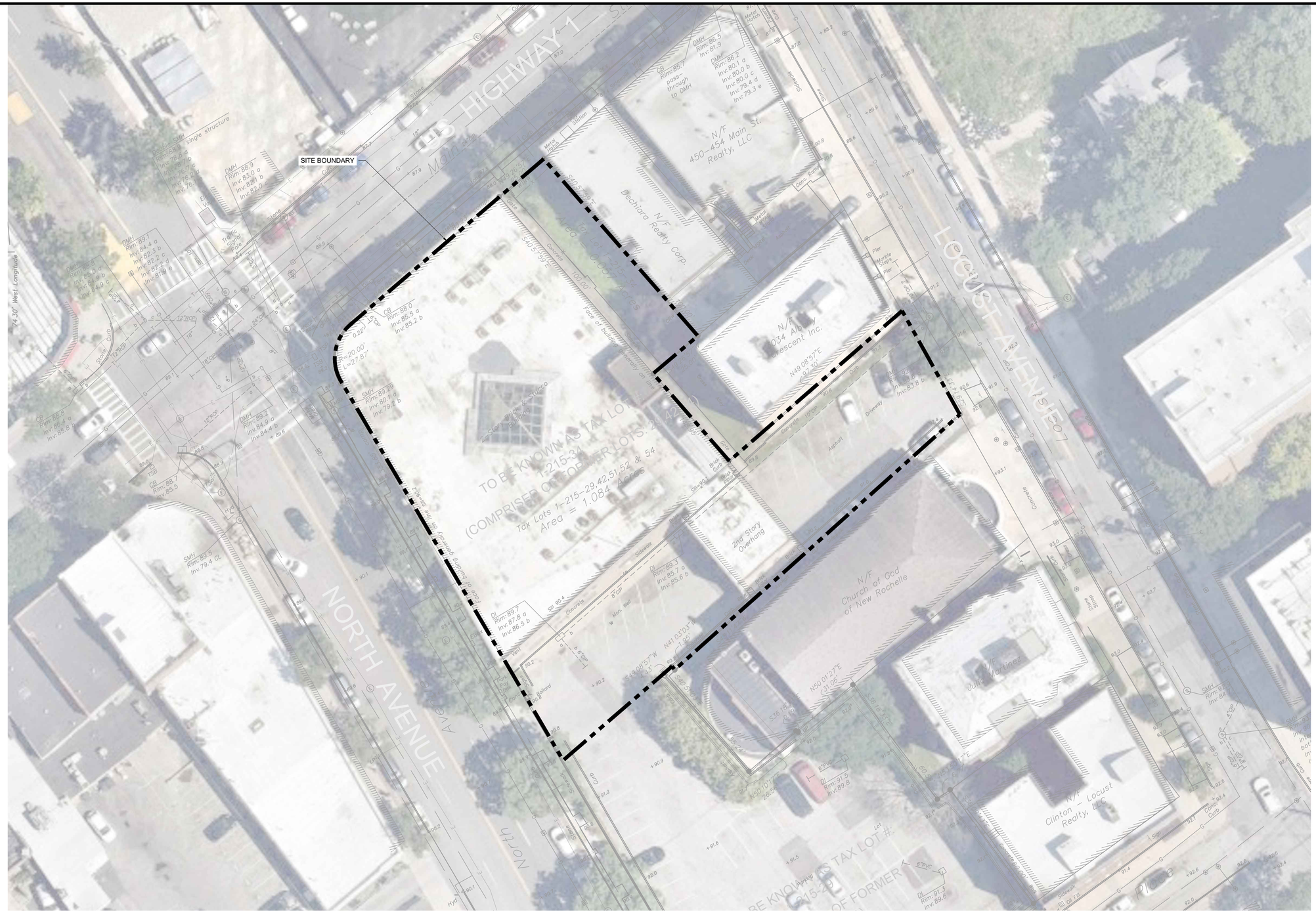
959 ROUTE 46E, 3RD FLOOR, PARSIPPANY, NJ 07054 PH: 973.808.9050

FIG-1.1	
DRAWN BY:	KBV
CHECKED BY:	CM
SCALE:	AS NOTED
DATE:	3/27/2025
JOB NO:	12587

Y:\GIS\Project_Numbers\12587\APRX_PROJECT\APRX_Phase1_Prj_No.aprx, 3/27/2025 5:24 PM, Kim Vanderklein, LAYOUT: FIG-1.1



LEGEND:

- - - - SITE BOUNDARY

REFERENCE:

1. AERIAL PHOTOGRAPHY TAKEN FROM 2022 MICROSOFT/BING CORP. 2022 MAXAR, CNES (2022) DISTRIBUTION AIRBUS DS AERIAL IMAGING.

Scale: 1"= 20'

0 10 20 40 60 80

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rev	date	description	by

dwg by: KBV
chk by: CM
scale: AS NOTED
date: 05/13/2025

466 MAIN STREET
REMEDIAL INVESTIGATION
BLOCK 215, LOT 32
NEW ROCHELLE, NEW YORK

SITE PLAN

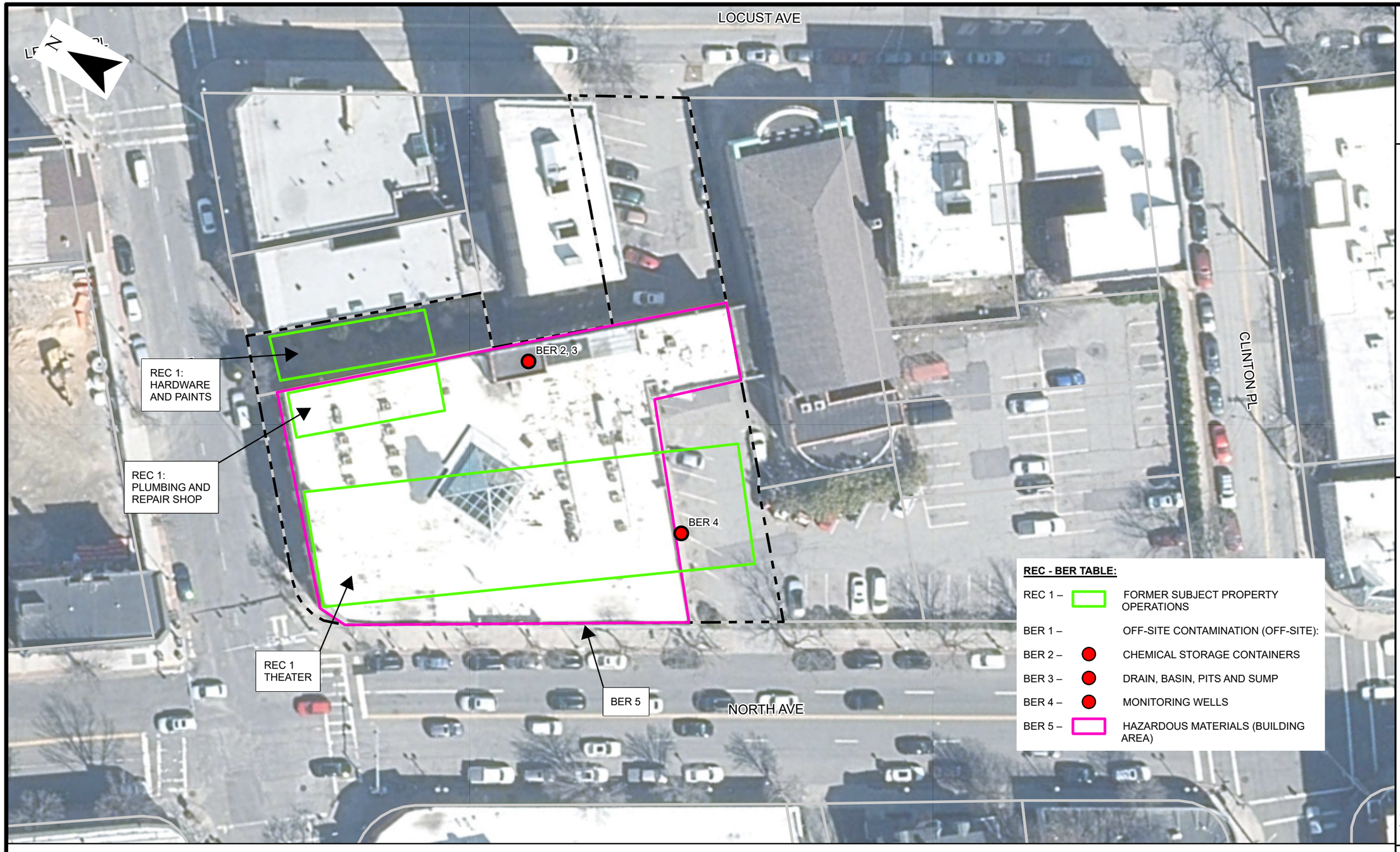
title:

job no. 12587
drawing no.

FIG-2.1

1 of 1

N:\ACAD\12587\CAD\ENVIRONMENTAL\PHASE II\NORTH SECTION\12587SWG.PH II SITE ASSESSMENT.DWG 05/13/25 02:50:39PM tim.vanderlaan LAYOUT: SITE PLAN



dwg by: KBV
chk by: CM
scale: AS NOTED
date: 5/13/2025

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project: 466 MAIN STREET
BLOCK 215, LOT 32
NEW ROCHELLE, NY

title: REC LOCATION PLAN

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REFERENCE:

NEW YORK STATE, MAXAR, MICROSOFT, NYS OFFICE OF INFORMATION TECHNOLOGYSERVICES - GIS PROGRAM OFFICE, NYS DEPT OF TAXATION AND FINANCE'S OFFICE OF REAL PROPERTY TAX SERVICES

LEGEND:

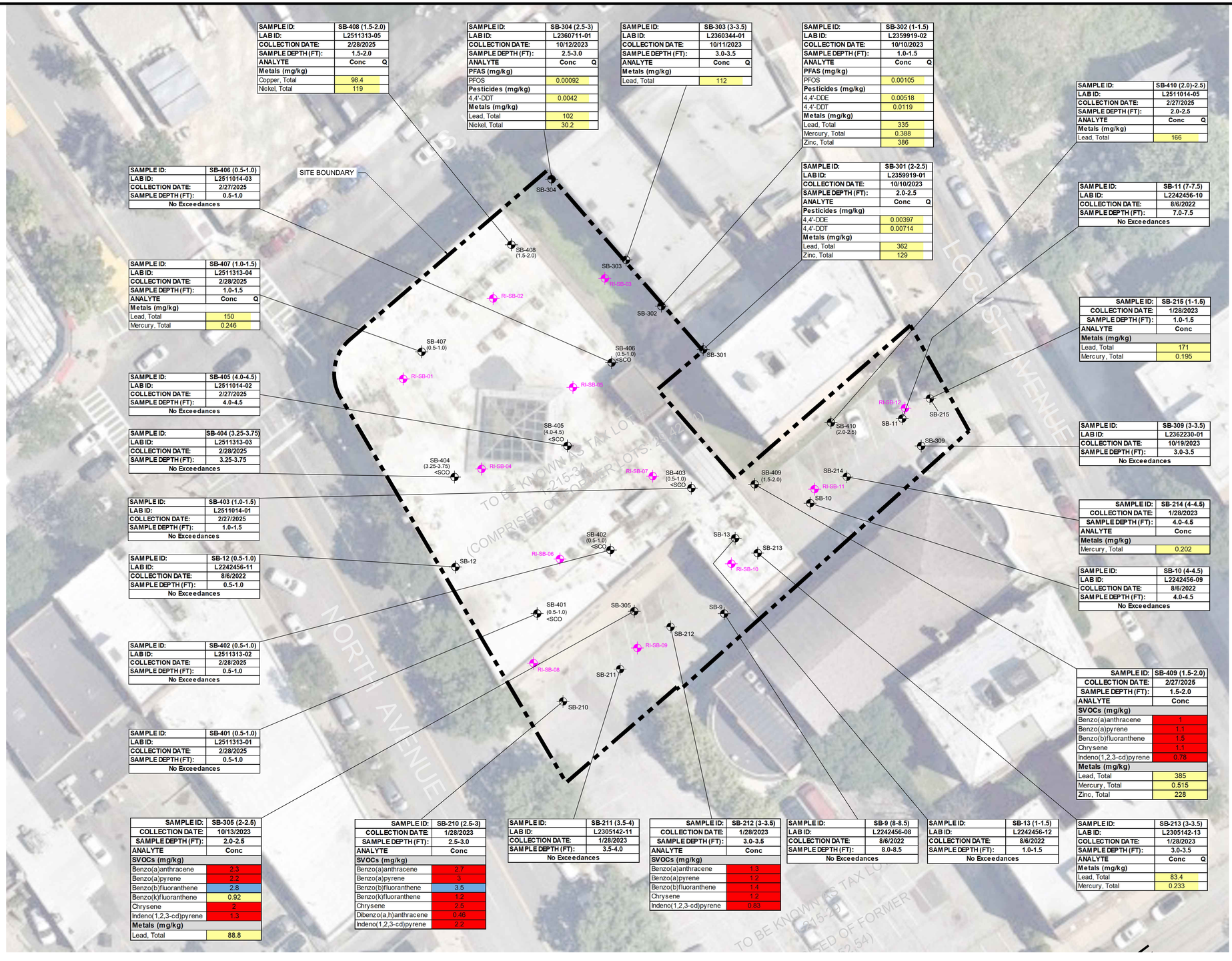
- SUBJECT PROPERTY LOCATION
- TAX PARCELS

SCALE: 1" = 40'

0 20 40 80 FEET

job no.: 12587
drawing no: FIG-2.2

Y:\GIS\Project_Numbers\12587\APRX_PROJECT\APRX_Phase1_Prj_No.aprx, 5/13/2025 3:02 PM, Kim VanderKlein, LAYOUT: FIG-2.2



SAMPLE ID:	SB-408 (1.5-2.0)
LAB ID:	L2511313-05
COLLECTION DATE:	2/28/2025
SAMPLE DEPTH (FT):	1.5-2.0
ANALYTE	Conc Q
Metals (mg/kg)	
Copper, Total	98.4
Nickel, Total	119

SAMPLE ID:	SB-304 (2.5-3)
LAB ID:	L2360711-01
COLLECTION DATE:	10/12/2023
SAMPLE DEPTH (FT):	2.5-3.0
ANALYTE	Conc Q
PFAS (mg/kg)	
PFOS	0.00092
Pesticides (mg/kg)	
4,4'-DDT	0.0042
Metals (mg/kg)	
Lead, Total	102
Nickel, Total	30.2

SAMPLE ID:	SB-303 (3-3.5)
LAB ID:	L2360344-01
COLLECTION DATE:	10/11/2023
SAMPLE DEPTH (FT):	3.0-3.5
ANALYTE	Conc Q
Metals (mg/kg)	
Lead, Total	112

SAMPLE ID:	SB-302 (1-1.5)
LAB ID:	L2359919-02
COLLECTION DATE:	10/10/2023
SAMPLE DEPTH (FT):	1.0-1.5
ANALYTE	Conc Q
PFAS (mg/kg)	
PFOS	0.00105
Pesticides (mg/kg)	
4,4'-DDE	0.00518
4,4'-DDT	0.0119
Metals (mg/kg)	
Lead, Total	335
Mercury, Total	0.388
Zinc, Total	386

SAMPLE ID:	SB-410 (2.0)-2.5)
LAB ID:	L2511014-05
COLLECTION DATE:	2/27/2025
SAMPLE DEPTH (FT):	2.0-2.5
ANALYTE	Conc Q
Metals (mg/kg)	
Lead, Total	166

SAMPLE ID:	SB-301 (2-2.5)
LAB ID:	L2359919-01
COLLECTION DATE:	10/10/2023
SAMPLE DEPTH (FT):	2.0-2.5
ANALYTE	Conc Q
Pesticides (mg/kg)	
4,4'-DDE	0.00397
4,4'-DDT	0.00714
Metals (mg/kg)	
Lead, Total	362
Zinc, Total	129

SAMPLE ID:	SB-11 (7-7.5)
LAB ID:	L2242456-10
COLLECTION DATE:	8/6/2022
SAMPLE DEPTH (FT):	7.0-7.5
No Exceedances	

SAMPLE ID:	SB-406 (0.5-1.0)
LAB ID:	L2511014-03
COLLECTION DATE:	2/27/2025
SAMPLE DEPTH (FT):	0.5-1.0
No Exceedances	

SAMPLE ID:	SB-407 (1.0-1.5)
LAB ID:	L2511313-04
COLLECTION DATE:	2/28/2025
SAMPLE DEPTH (FT):	1.0-1.5
ANALYTE	Conc Q
Metals (mg/kg)	
Lead, Total	150
Mercury, Total	0.246

SAMPLE ID:	SB-215 (1-1.5)
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	1.0-1.5
ANALYTE	Conc
Metals (mg/kg)	
Lead, Total	171
Mercury, Total	0.195

SAMPLE ID:	SB-405 (4.0-4.5)
LAB ID:	L2511014-02
COLLECTION DATE:	2/27/2025
SAMPLE DEPTH (FT):	4.0-4.5
No Exceedances	

SAMPLE ID:	SB-309 (3-3.5)
LAB ID:	L2362230-01
COLLECTION DATE:	10/19/2023
SAMPLE DEPTH (FT):	3.0-3.5
No Exceedances	

SAMPLE ID:	SB-404 (3.25-3.75)
LAB ID:	L2511313-03
COLLECTION DATE:	2/28/2025
SAMPLE DEPTH (FT):	3.25-3.75
No Exceedances	

SAMPLE ID:	SB-214 (4-4.5)
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	4.0-4.5
ANALYTE	Conc
Metals (mg/kg)	
Mercury, Total	0.202

SAMPLE ID:	SB-403 (1.0-1.5)
LAB ID:	L2511014-01
COLLECTION DATE:	2/27/2025
SAMPLE DEPTH (FT):	1.0-1.5
No Exceedances	

SAMPLE ID:	SB-10 (4-4.5)
LAB ID:	L2242456-09
COLLECTION DATE:	8/6/2022
SAMPLE DEPTH (FT):	4.0-4.5
No Exceedances	

SAMPLE ID:	SB-12 (0.5-1.0)
LAB ID:	L2242456-11
COLLECTION DATE:	8/6/2022
SAMPLE DEPTH (FT):	0.5-1.0
No Exceedances	

SAMPLE ID:	SB-402 (0.5-1.0)
LAB ID:	L2511313-02
COLLECTION DATE:	2/28/2025
SAMPLE DEPTH (FT):	0.5-1.0
No Exceedances	

SAMPLE ID:	SB-409 (1.5-2.0)
COLLECTION DATE:	2/27/2025
SAMPLE DEPTH (FT):	1.5-2.0
ANALYTE	Conc
SVOCs (mg/kg)	
Benzo(a)anthracene	1
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.5
Chrysene	1.1
Indeno(1,2,3-cd)pyrene	0.78
Metals (mg/kg)	
Lead, Total	385
Mercury, Total	0.515
Zinc, Total	228

SAMPLE ID:	SB-401 (0.5-1.0)
LAB ID:	L2511313-01
COLLECTION DATE:	2/28/2025
SAMPLE DEPTH (FT):	0.5-1.0
No Exceedances	

SAMPLE ID:	SB-305 (2-2.5)
COLLECTION DATE:	10/13/2023
SAMPLE DEPTH (FT):	2.0-2.5
ANALYTE	Conc
SVOCs (mg/kg)	
Benzo(a)anthracene	2.3
Benzo(a)pyrene	2.2
Benzo(b)fluoranthene	2.8
Benzo(k)fluoranthene	0.92
Chrysene	2
Indeno(1,2,3-cd)pyrene	1.3
Metals (mg/kg)	
Lead, Total	88.8

SAMPLE ID:	SB-210 (2.5-3)
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	2.5-3.0
ANALYTE	Conc
SVOCs (mg/kg)	
Benzo(a)anthracene	2.7
Benzo(a)pyrene	3
Benzo(b)fluoranthene	3.5
Benzo(k)fluoranthene	1.2
Chrysene	2.5
Dibenzo(a,h)anthracene	0.46
Indeno(1,2,3-cd)pyrene	2.2

SAMPLE ID:	SB-211 (3.5-4)
LAB ID:	L2305142-11
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	3.5-4.0
No Exceedances	

SAMPLE ID:	SB-212 (3-3.5)
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	3.0-3.5
ANALYTE	Conc
SVOCs (mg/kg)	
Benzo(a)anthracene	1.3
Benzo(a)pyrene	1.2
Benzo(b)fluoranthene	1.4
Chrysene	1.2
Indeno(1,2,3-cd)pyrene	0.83

SAMPLE ID:	SB-9 (8-8.5)
LAB ID:	L2242456-08
COLLECTION DATE:	8/6/2022
SAMPLE DEPTH (FT):	8.0-8.5
No Exceedances	

SAMPLE ID:	SB-13 (1-1.5)
LAB ID:	L2242456-12
COLLECTION DATE:	8/6/2022
SAMPLE DEPTH (FT):	1.0-1.5
No Exceedances	

SAMPLE ID:	SB-213 (3-3.5)
LAB ID:	L2305142-13
COLLECTION DATE:	1/28/2023
SAMPLE DEPTH (FT):	3.0-3.5
ANALYTE	Conc Q
Metals (mg/kg)	
Lead, Total	83.4
Mercury, Total	0.233

Legend

ANALYTE	RSCO	RRSCO	USCO	PGSCO
PFAS (mg/kg)				
PFOS	0.044	0.0088	0.00088	NS
SVOCs (mg/kg)				
Benzo(a)anthracene	1	1	1	1
Benzo(a)pyrene	1	1	1	22
Benzo(b)fluoranthene	1	1	1	1.7
Benzo(k)fluoranthene	1	3.9	0.8	1.7
Chrysene	1	3.9	1	1
Dibenzo(a,h)anthracene	0.33	0.33	0.33	1000
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	8.2
Pesticides (mg/kg)				
4,4'-DDD	2.6	13	0.0033	14
4,4'-DDE	1.8	8.9	0.0033	17
4,4'-DDT	1.7	7.9	0.0033	136
Dieldrin	0.039	0.2	0.005	0.1
Metals (mg/kg)				
Barium, Total	350	400	350	820
Copper, Total	270	270	50	1720
Lead, Total	400	400	63	450
Mercury, Total	0.81	0.81	0.18	0.73
Nickel, Total	140	310	30	130
Zinc, Total	2200	10000	109	2480

Notes
SCO = Soil Cleanup Objective
RRSCO = Restricted Residential SCO
RSCO = Residential SCO
USCO = Unrestricted SCO
PGSCO = Protection of Groundwater SCO
Conc = Concentration
PFAS = Per- and poly-fluoroalkyl substances
PFOS = Perfluorooctane sulfonic acid

LEGEND:

- SITE BOUNDARY
- SB-1 - SOIL SAMPLE NO. AND APPROX. LOCATION
- RI-SB-01 - PROPOSED REMEDIAL INVESTIGATION SOIL SAMPLE NO. AND APPROX. LOCATION

Scale: 1"= 20'

0 10 20 40 60 80

REFERENCE:
1. AERIAL PHOTOGRAPHY TAKEN FROM 2022 MICROSOFT/BING CORP. 2022 MAXAR, CNES (2022) DISTRIBUTION AIRBUS DS AERIAL IMAGING.

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dwg by: KBV
chk by: CM
scale: AS NOTED
date: 05/13/2025

rev	date	description	by

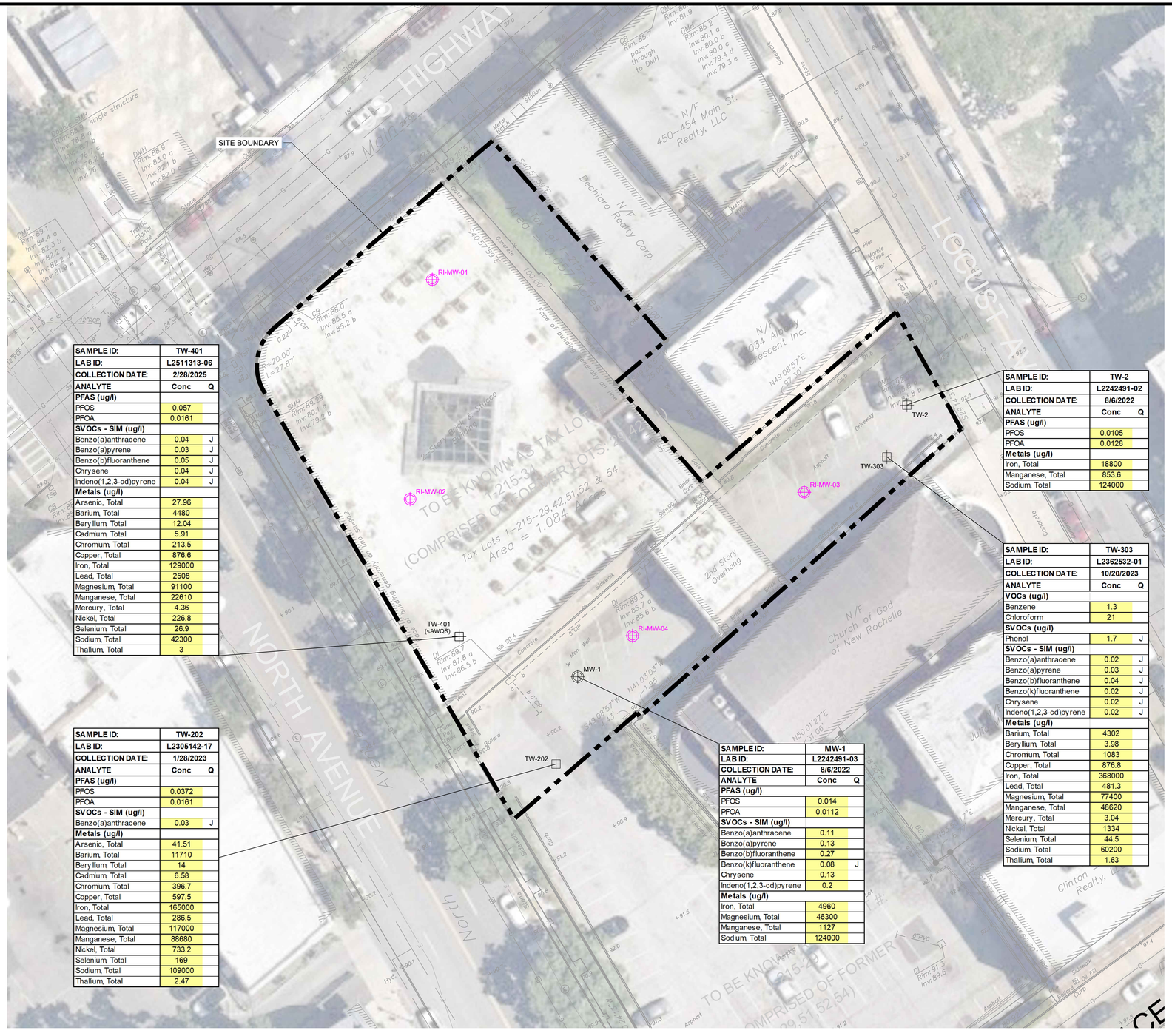
466 MAIN STREET
REMEDIAL INVESTIGATION
BLOCK 215, LOT 32
NEW ROCHELLE, NEW YORK

title: LOCATION OF PROPOSED REMEDIAL INVESTIGATION SOIL BORINGS

job no. 12587
drawing no. FIG-3.1

1 of 1

N:\NCAD\12587\CAD\ENVIRONMENTAL\PHASE I\NORTH SECTION\12587SHEETS.DWG Fri, 5/13/25 02:47:18PM, kim.vandenken, LAYOUT:FIG 1 - SOIL EXCEED



SAMPLE ID:	TW-401	
LAB ID:	L2511313-06	
COLLECTION DATE:	2/28/2025	
ANALYTE	Conc	Q
PFAS (ug/l)		
PFOS	0.057	
PFOA	0.0161	
SVOCs - SIM (ug/l)		
Benzo(a)anthracene	0.04	J
Benzo(a)pyrene	0.03	J
Benzo(b)fluoranthene	0.05	J
Chrysene	0.04	J
Indeno(1,2,3-cd)pyrene	0.04	J
Metals (ug/l)		
Arsenic, Total	27.96	
Barium, Total	4480	
Beryllium, Total	12.04	
Cadmium, Total	5.91	
Chromium, Total	213.5	
Copper, Total	876.6	
Iron, Total	129000	
Lead, Total	2508	
Magnesium, Total	91100	
Manganese, Total	22610	
Mercury, Total	4.36	
Nickel, Total	226.8	
Selenium, Total	26.9	
Sodium, Total	42300	
Thallium, Total	3	

SAMPLE ID:	TW-2	
LAB ID:	L2242491-02	
COLLECTION DATE:	8/6/2022	
ANALYTE	Conc	Q
PFAS (ug/l)		
PFOS	0.0105	
PFOA	0.0128	
Metals (ug/l)		
Iron, Total	18800	
Manganese, Total	853.6	
Sodium, Total	124000	

SAMPLE ID:	TW-303	
LAB ID:	L2362532-01	
COLLECTION DATE:	10/20/2023	
ANALYTE	Conc	Q
VOCs (ug/l)		
Benzene	1.3	
Chloroform	21	
SVOCs (ug/l)		
Phenol	1.7	J
SVOCs - SIM (ug/l)		
Benzo(a)anthracene	0.02	J
Benzo(a)pyrene	0.03	J
Benzo(b)fluoranthene	0.04	J
Benzo(k)fluoranthene	0.02	J
Chrysene	0.02	J
Indeno(1,2,3-cd)pyrene	0.02	J
Metals (ug/l)		
Barium, Total	4302	
Beryllium, Total	3.98	
Chromium, Total	1083	
Copper, Total	876.8	
Iron, Total	368000	
Lead, Total	481.3	
Magnesium, Total	77400	
Manganese, Total	48620	
Mercury, Total	3.04	
Nickel, Total	1334	
Selenium, Total	44.5	
Sodium, Total	60200	
Thallium, Total	1.63	

SAMPLE ID:	TW-202	
LAB ID:	L2305142-17	
COLLECTION DATE:	1/28/2023	
ANALYTE	Conc	Q
PFAS (ug/l)		
PFOS	0.0372	
PFOA	0.0161	
SVOCs - SIM (ug/l)		
Benzo(a)anthracene	0.03	J
Metals (ug/l)		
Arsenic, Total	41.51	
Barium, Total	11710	
Beryllium, Total	14	
Cadmium, Total	6.58	
Chromium, Total	396.7	
Copper, Total	597.5	
Iron, Total	165000	
Lead, Total	286.5	
Magnesium, Total	117000	
Manganese, Total	88680	
Nickel, Total	733.2	
Selenium, Total	169	
Sodium, Total	109000	
Thallium, Total	2.47	

SAMPLE ID:	MW-1	
LAB ID:	L2242491-03	
COLLECTION DATE:	8/6/2022	
ANALYTE	Conc	Q
PFAS (ug/l)		
PFOS	0.014	
PFOA	0.0112	
SVOCs - SIM (ug/l)		
Benzo(a)anthracene	0.11	
Benzo(a)pyrene	0.13	
Benzo(b)fluoranthene	0.27	
Benzo(k)fluoranthene	0.08	J
Chrysene	0.13	
Indeno(1,2,3-cd)pyrene	0.2	
Metals (ug/l)		
Iron, Total	4960	
Magnesium, Total	46300	
Manganese, Total	1127	
Sodium, Total	124000	

ANALYTE	NY-AWQS
VOCs (ug/l)	
Benzene	1
Chloroform	7
PFAS (ug/l)	
PFOS	0.0027
PFOA	0.0067
SVOCs (ug/l)	
Phenol	1
SVOCs - SIM (ug/l)	
Benzo(a)anthracene	0.002
Benzo(a)pyrene	0
Benzo(b)fluoranthene	0.002
Benzo(k)fluoranthene	0.002
Chrysene	0.002
Indeno(1,2,3-cd)pyrene	0.002
Metals (ug/l)	
Arsenic, Total	25
Barium, Total	1000
Beryllium, Total	3
Cadmium, Total	5
Chromium, Total	50
Copper, Total	200
Iron, Total	300
Lead, Total	25
Magnesium, Total	35000
Manganese, Total	300
Mercury, Total	0.7
Nickel, Total	100
Selenium, Total	10
Silver, Total	50
Sodium, Total	20000
Thallium, Total	0.5

Notes

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards & Guidance Values Criteria per Standards & Guidance Values including all addenda through February 2023.

Exceedance of NY-AWQS

J = Estimated

ND = Not Detected

- = Not Tested

PFOS = Perfluorooctanesulfonic Acid

PFOA = Perfluorooctanoic Acid

LEGEND:

- SITE BOUNDARY
- MW-1 - GROUNDWATER WELL SAMPLE NO. AND APPROX. LOCATION
- TW-2 - TEMPORARY WELL SAMPLE NO. AND APPROX. LOCATION
- RI-MW-01 - PROPOSED REMEDIAL INVESTIGATION GROUNDWATER WELL SAMPLE NO. AND APPROX. LOCATION

Scale: 1"= 20'

0 10 20 40 60 80

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REFERENCE:
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rev	date	description	by

dwg by: KBV
chk by: CM
scale: AS NOTED
date: 05/13/2025

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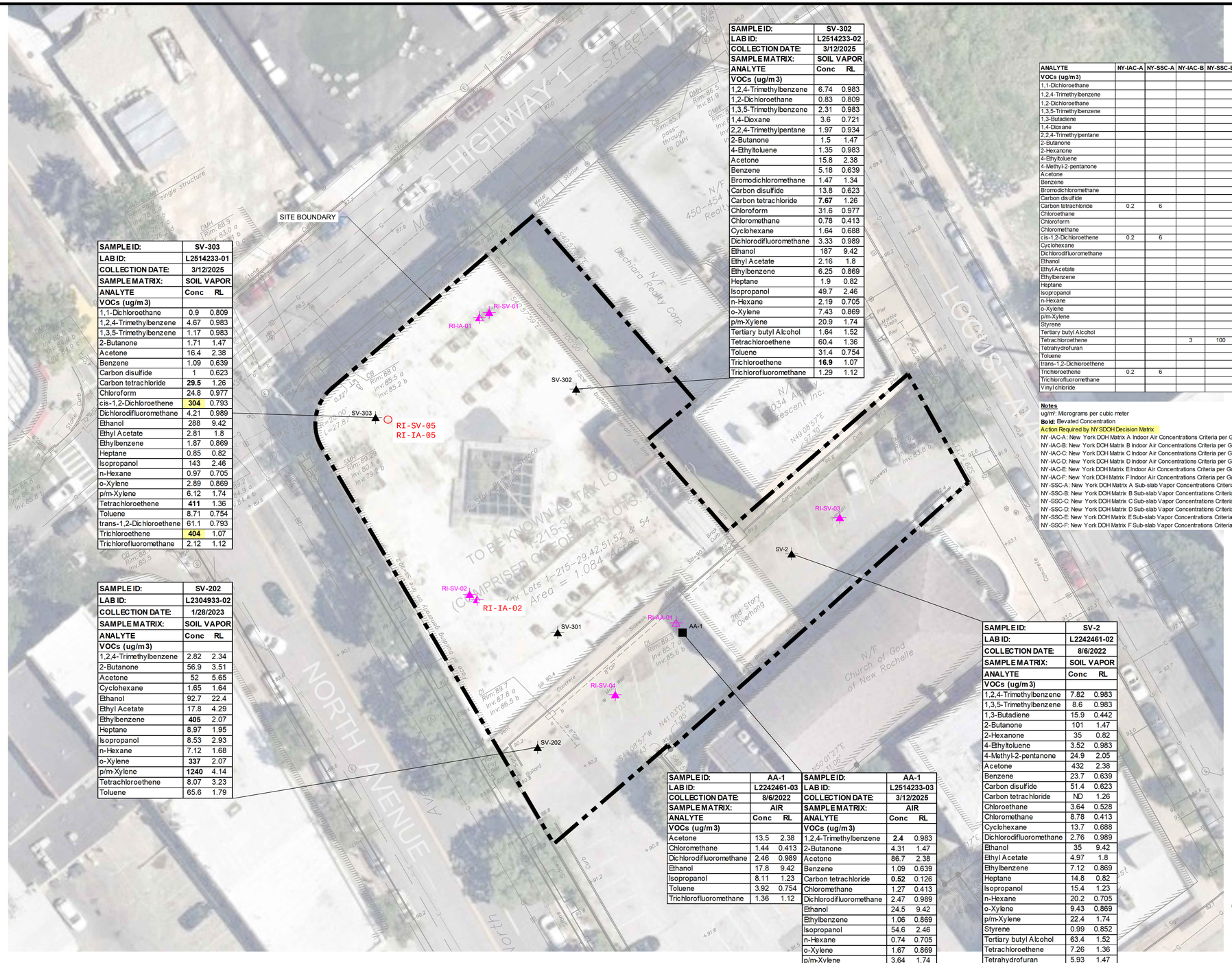
466 MAIN STREET
REMEDIAL INVESTIGATION
BLOCK 215, LOT 32
NEW ROCHELLE, NEW YORK

title: LOCATION OF PROPOSED REMEDIAL INVESTIGATION GROUNDWATER POINTS

job no. 12587
drawing no. FIG-3.2

1 of 1

N:\CAD\12587\CAD\ENVIRONMENTAL\PHASE I\WORK SECTION\12587SHEETS II SITE ASSESSMENT.dwg 05/13/25 03:05:24PM kim.vandenken LAYOUT:FIG 2.4 - GW EXCEED



SAMPLE ID:	SV-303	
LAB ID:	L2514233-01	
COLLECTION DATE:	3/12/2025	
SAMPLE MATRIX:	SOIL VAPOR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
1,1-Dichloroethane	0.9	0.809
1,2,4-Trimethylbenzene	4.67	0.983
1,3,5-Trimethylbenzene	1.17	0.983
2-Butanone	1.71	1.47
Acetone	16.4	2.38
Benzene	1.09	0.639
Carbon disulfide	1	0.623
Carbon tetrachloride	**29.5**	1.26
Chloroform	24.8	0.977
cis-1,2-Dichloroethene	**304**	0.793
Dichlorodifluoromethane	4.21	0.989
Ethanol	288	9.42
Ethyl Acetate	2.81	1.8
Ethylbenzene	1.87	0.869
Heptane	0.85	0.82
Isopropanol	143	2.46
n-Hexane	0.97	0.705
o-Xylene	2.89	0.869
p/m-Xylene	6.12	1.74
Tetrachloroethene	**411**	1.36
Toluene	8.71	0.754
trans-1,2-Dichloroethene	61.1	0.793
Trichloroethene	**404**	1.07
Trichlorofluoromethane	2.12	1.12

SAMPLE ID:	SV-202	
LAB ID:	L2304933-02	
COLLECTION DATE:	1/28/2023	
SAMPLE MATRIX:	SOIL VAPOR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
1,2,4-Trimethylbenzene	2.82	2.34
2-Butanone	56.9	3.51
Acetone	52	5.65
Cyclohexane	1.65	1.64
Ethanol	92.7	22.4
Ethyl Acetate	17.8	4.29
Ethylbenzene	**405**	2.07
Heptane	8.97	1.95
Isopropanol	8.53	2.93
n-Hexane	7.12	1.68
o-Xylene	**337**	2.07
p/m-Xylene	**1240**	4.14
Tetrachloroethene	8.07	3.23
Toluene	65.6	1.79

SAMPLE ID:	SV-302	
LAB ID:	L2514233-02	
COLLECTION DATE:	3/12/2025	
SAMPLE MATRIX:	SOIL VAPOR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
1,2,4-Trimethylbenzene	6.74	0.983
1,2-Dichloroethane	0.83	0.809
1,3,5-Trimethylbenzene	2.31	0.983
1,4-Dioxane	3.6	0.721
2,2,4-Trimethylpentane	1.97	0.934
2-Butanone	1.5	1.47
4-Ethyltoluene	1.35	0.983
Acetone	15.8	2.38
Benzene	5.18	0.639
Bromodichloromethane	1.47	1.34
Carbon disulfide	13.8	0.623
Carbon tetrachloride	**7.67**	1.26
Chloroform	31.6	0.977
Chloromethane	0.78	0.413
Cyclohexane	1.64	0.688
Dichlorodifluoromethane	3.33	0.989
Ethanol	187	9.42
Ethyl Acetate	2.16	1.8
Ethylbenzene	6.25	0.869
Heptane	1.9	0.82
Isopropanol	49.7	2.46
n-Hexane	2.19	0.705
o-Xylene	7.43	0.869
p/m-Xylene	20.9	1.74
Tertiary butyl Alcohol	1.64	1.52
Tetrachloroethene	60.4	1.36
Toluene	31.4	0.754
Trichloroethene	**16.9**	1.07
Trichlorofluoromethane	1.29	1.12

SAMPLE ID:	AA-1	
LAB ID:	L2242461-03	
COLLECTION DATE:	8/6/2022	
SAMPLE MATRIX:	AIR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
Acetone	13.5	2.38
Chloromethane	1.44	0.413
Dichlorodifluoromethane	2.46	0.989
Ethanol	17.8	9.42
Isopropanol	8.11	1.23
Toluene	3.92	0.754
Trichlorofluoromethane	1.36	1.12

SAMPLE ID:	AA-1	
LAB ID:	L2514233-03	
COLLECTION DATE:	3/12/2025	
SAMPLE MATRIX:	AIR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
1,2,4-Trimethylbenzene	**2.4**	0.983
2-Butanone	4.31	1.47
Acetone	86.7	2.38
Benzene	1.09	0.639
Carbon tetrachloride	**0.52**	0.126
Chloromethane	1.27	0.413
Dichlorodifluoromethane	2.47	0.989
Ethanol	24.5	9.42
Ethylbenzene	1.06	0.869
Isopropanol	54.6	2.46
n-Hexane	0.74	0.705
o-Xylene	1.67	0.869
p/m-Xylene	3.64	1.74
Tetrahydrofuran	5.01	1.47
Toluene	2.56	0.754
Trichlorofluoromethane	1.15	1.12

SAMPLE ID:	SV-2	
LAB ID:	L2242461-02	
COLLECTION DATE:	8/6/2022	
SAMPLE MATRIX:	SOIL VAPOR	
ANALYTE	Conc	RL
VOCs (ug/m3)		
1,2,4-Trimethylbenzene	7.82	0.983
1,3,5-Trimethylbenzene	8.6	0.983
1,3-Butadiene	15.9	0.442
2-Butanone	101	1.47
2-Hexanone	35	0.82
4-Ethyltoluene	3.52	0.983
4-Methyl-2-pentanone	24.9	2.05
Acetone	432	2.38
Benzene	23.7	0.639
Carbon disulfide	51.4	0.623
Carbon tetrachloride	ND	1.26
Chloroethane	3.64	0.528
Chloromethane	8.78	0.413
Cyclohexane	13.7	0.688
Dichlorodifluoromethane	2.76	0.989
Ethanol	35	9.42
Ethyl Acetate	4.97	1.8
Ethylbenzene	7.12	0.869
Heptane	14.8	0.82
Isopropanol	15.4	1.23
n-Hexane	20.2	0.705
o-Xylene	9.43	0.869
p/m-Xylene	22.4	1.74
Styrene	0.99	0.852
Tertiary butyl Alcohol	63.4	1.52
Tetrachloroethene	7.26	1.36
Tetrahydrofuran	5.93	1.47
Toluene	21.2	0.754
Trichlorofluoromethane	2.47	1.12
Vinyl chloride	0.66	0.511

ANALYTE	NY-IAC-A	NY-SSC-A	NY-IAC-B	NY-SSC-B	NY-IAC-C	NY-SSC-C	NY-IAC-D	NY-SSC-D	NY-IAC-E	NY-SSC-E	NY-IAC-F	NY-SSC-F
VOCs (ug/m3)												
1,1-Dichloroethane												
1,2,4-Trimethylbenzene							2	60				
1,2-Dichloroethane												
1,3,5-Trimethylbenzene							2	60				
1,3-Butadiene												
1,4-Dioxane												
2,2,4-Trimethylpentane							2	60				
2-Butanone												
2-Hexanone												
4-Ethyltoluene												
4-Methyl-2-pentanone												
Acetone												
Benzene							2	60				
Bromodichloromethane												
Carbon disulfide												
Carbon tetrachloride	0.2	6										
Chloroethane												
Chloroform												
Chloromethane												
cis-1,2-Dichloroethene	0.2	6										
Cyclohexane							2	60				
Dichlorodifluoromethane												
Ethanol												
Ethyl Acetate												
Ethylbenzene							2	60				
Heptane									6	200		
Isopropanol												
n-Hexane									6	200		
o-Xylene							2	60				
p/m-Xylene									6	200		
Styrene												
Tertiary butyl Alcohol												
Tetrachloroethene			3	100								
Tetrahydrofuran												
Toluene											10	300
trans-1,2-Dichloroethene												
Trichloroethene	0.2	6										
Trichlorofluoromethane												
Vinyl chloride					0.2	6						

Notes

ug/m³: Micrograms per cubic meter

Bold: Elevated Concentration

Action Required by NYSDOH Decision Matrix

NY-IAC-A : New York DOH Matrix A Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-B: New York DOH Matrix B Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-C: New York DOH Matrix C Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-IAC-D: New York DOH Matrix D Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-E: New York DOH Matrix E Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-IAC-F: New York DOH Matrix F Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-A: New York DOH Matrix A Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017
NY-SSC-B: New York DOH Matrix B Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-C: New York DOH Matrix C Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.
NY-SSC-D: New York DOH Matrix D Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-E: New York DOH Matrix E Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.
NY-SSC-F: New York DOH Matrix F Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, February, 2024.

LEGEND:

- SITE BOUNDARY
- SV-1 - SOIL VAPOR SAMPLE NO. AND APPROX. LOCATION
- AA-1 - AMBIENT AIR SAMPLE NO. AND APPROX. LOCATION
- RI-SV-01 - PROPOSED REMEDIAL INVESTIGATION SOIL VAPOR SAMPLE NO. AND APPROX. LOCATION
- RI-IA-01 - PROPOSED REMEDIAL INVESTIGATION INDOOR AIR SAMPLE NO. AND APPROX. LOCATION
- RI-AA-01 - PROPOSED REMEDIAL INVESTIGATION AMBIENT AIR SAMPLE NO. AND APPROX. LOCATION

Scale: 1"= 20'

0 10 20 40 60 80

REFERENCE:
1. AERIAL PHOTOGRAPHY TAKEN FROM 2022 MICROSOFT/BING CORP. 2022 MAXAR, CNES (2022) DISTRIBUTION AIRBUS DS AERIAL IMAGING.

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chk by: CM
scale: AS NOTED
date: 05/13/2025

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466 MAIN STREET
REMEDIAL INVESTIGATION
BLOCK 215, LOT 32
NEW ROCHELLE, NEW YORK

title:
LOCATION OF PROPOSED REMEDIAL INVESTIGATION SOIL VAPOR POINTS

job no. 12587
drawing no.

FIG-3.3

1 of 1

Appendix A:

Previous Environmental Reports

(Electronic)

Appendix B:

Quality Assurance Project Plan

SESI
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Geotechnical
Environmental
Site Civil

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QUALITY ASSURANCE PROJECT PLAN
For

Description
466 Main Street
New Rochelle, Westchester County, NY

Prepared for:

BRP 466 Main Street, LLC

SESI Project No:
12587

Date:
June 2025

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LIST OF ACRONYMS

Acronym	Definition
AAS	Absorption Spectroscopy
ASP	Analytical Service Protocol
BCP	Brownfield Cleanup Program
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Accreditation Program
GC/MS	Gas Chromatography/Mass Spectrometry
HAS	Hollow-stem Auger
HDPE	High-Density Polyethylene
LDPE	Low-density Polyethylene
LFPS	Low Flow Purging Sampling
MDL	Method Detection Limit
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	Polychlorinated Biphenyls
PFAS	Per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PPE	Personal Protective Equipment
PTFE	Polytetrafluoroethylene
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RIWP	Remedial Investigation Work Plan
SESI	SESI Consulting Engineers, Inc.
TIC	Tentatively Identified Compound
TCL	Target Compound List
VOC	Volatile Organic Compound
USEPA	United States Environmental Protection Agency

1.0 PROJECT DESCRIPTION

This document presents the quality assurance project plan (QAPP) for the Remedial Investigation Workplan (RIWP) for the proposed development of the property located at 466 Main Street, New Rochelle, Westchester County, New York (the Site). The Site consists of a 0.708-acre area parcel and is identified as proposed Block 215, Lot 32 on the Westchester County tax map. The Site is located in a residential and commercial area and is bounded by Main Street (US Highway 1) to the north, a parking lot to the south, Locust Avenue and apartment buildings to the east, and North Avenue to the west.

The Site is improved with a commercial space, asphalt parking lot and vegetated areas. The site building operations include several commercial spaces. The Site has been developed since at least 1951 and historically has been residences and other commercial uses including most notably a plumber shop (circa 1903), the New Rochelle Theatre (circa 1903-1911), a repair shop (circa 1911) and a hardware and paints shop (circa 1911).

2.0 PROJECT ORGANIZATION

The RIWP will be conducted by Soils Engineering Services, Inc. (SESI), on behalf of BRP 466 Main Street, LLC. The organization of SESI's key project management and field staff, and respective areas of responsibility, is presented below.

2.1 PROJECT PRINCIPAL

James Vander Vliet, PE

Provide technical and administrative oversight and guidance throughout the project, assist in securing company resources, participate in technical review of deliverables, and attend key meetings as needed.

2.2 PRINCIPAL ENGINEER

James Vander Vliet, PE

Provide technical guidance and review of reports, analytical data. Will have key involvement in screening and development of remedial alternatives.

2.3 PROJECT MANAGER

Chris Malvicini

Responsible for maintaining the day-to-day schedule for completing the fieldwork and deliverables according to BCP program requirements and client expectations.

2.4 REMEDIAL INVESTIGATION PROGRAM MANAGER

Chris Malvicini

Responsible for coordinating and directing field efforts of SESI staff and subcontractors, and for maintaining that work is done according to QAPP specifications.

2.5 FIELD TEAM LEADER

Ronnie Reynoso

Responsible for overseeing field work during the RI, including observing subcontractors, maintaining field notes, and collecting samples of various environmental media, in accordance with the NYSDEC-approved Work Plan.

2.6 QUALITY ASSURANCE OFFICER

Chris Malvicini

Responsible for reviewing sampling procedures and certify that the data was collected and analyzed using the appropriate procedures.

3.0 QA/QC OBJECTIVES FOR MEASUREMENT OF DATA

In cases where NYSDOH ELAP Certification exists for a specific group or category of parameters, the laboratories performing analysis in connection with this project will have appropriate NYSDOH ELAP Certification. Analytical Service Protocol (ASP, January 2005) Category B deliverables are required for all samples.

Detection limits set by NYSDEC-ASP (January 2005) will be used for all sample analyses unless otherwise noted. If NYSDEC-ASP-dictated detection limits prove insufficient to assess project goals (i.e., comparison to drinking water standards or attainment of ARARs), then ASP Special Analytical Services (SAS) or other appropriate methods will be utilized.

The quality assurance/quality control objectives for all measurement data include completeness, representativeness, comparability, precision and accuracy.

3.1 COMPLETENESS

The analyses performed must be appropriate and inclusive. The parameters selected for analysis are chosen to meet the objectives of the study.

Completeness of the analyses will be assessed by comparing the number of parameters intended to be analyzed with the number of parameters successfully determined and validated. Data must meet QC acceptance criteria for 100 percent or more of requested determinations.

3.2 REPRESENTATIVENESS

Samples must be taken of the population and, where appropriate, the population will be characterized statistically to express the degree to which the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process, or environmental condition.

Non-dedicated sampling devices will be cleaned between sampling points by washing and rinsing with Alconox® detergent, followed by a thorough rinse with distilled water. Specific cleaning techniques are described in the Field Sampling Procedure. Two types of blank samples will accompany each sample set where Target Compound List (TCL) volatiles are to be analyzed (water matrix only). A trip blank, consisting of a 40 ml VOA vial of organic-free water prepared by the laboratory, will accompany each set of sample bottles from the laboratory to the field and back. This bottle will remain sealed throughout the shipment and sampling process. This blank will be analyzed for TCL volatile organic compounds along with the groundwater samples to ensure that contamination with TCL volatile compounds has not occurred during the bottle preparation, shipment and sampling phase of the project. In order to check for contaminant carryover when non-dedicated sampling equipment is used, a rinsate blank will be submitted to the laboratory. This blank will also be analyzed for TCL volatile organic compounds. The TCL compounds are identified in the United States

Environmental Protection Agency (USEPA) Contract Laboratory Program dated October 2016.

The analysis results obtained from the determination of identical parameters in field duplicate samples can be used to further assess the representativeness of the sample data.

3.3 COMPARABILITY

Consistency in the acquisition, preparation, handling and analysis of samples is necessary in order for the results to be compared where appropriate. Additionally, the results obtained from analyses of the samples will be compared with the results obtained in previous studies, if available.

To ensure the comparability of analytical results with those obtained in previous or future testing, all samples will be analyzed by NYSDEC-approved methods. The NYSDEC-ASP mandated holding times for various analyses will be strictly adhered to.

3.4 PRECISION AND ACCURACY

The validity of the data produced will be assessed for precision and accuracy. Analytical methods which will be used include gas chromatography/mass spectrometry (GC/MS), gas chromatography (GC), colorimetry, atomic spectroscopy, gravimetric and titrimetric techniques. The following outlines the procedures for evaluating precision and accuracy, routine monitoring procedures, and corrective actions to maintain analytical quality control. All data evaluations will be consistent with NYSDEC-ASP procedures (June 2000). Data will be 100 percent compliant with NYSDEC-ASP requirements.

The number of duplicate, spiked and blank samples analyzed will a minimum of 1 duplicate for every 20 samples per each medium of groundwater and soil. The inclusion and frequency of analysis of field blanks will be on the order of one per every 20 samples (soil) but not more than one per day. For the aqueous matrix field blanks will be collected at a frequency of one per day. Samples to be analyzed for volatile organic compounds will be accompanied by a trip blank for each shipment and field blanks (water matrix) or field blanks (soil).

Quality assurance audit samples will be prepared and submitted by the laboratory QA manager for each analytical procedure used. The degree of accuracy and the recovery

of analyte to be expected for the analysis of QA samples and spiked samples depend upon the matrix, method of analysis, and compound or element being determined. The concentration of the analyte relative to the detection limit is also a major factor in determining the accuracy of the measurement. The lower end of the analytical range for most analyses is generally accepted to be five times the detection limit. At or above this level, the determination and spike recoveries for metals in water samples will be expected to range from 75 to 125 percent. The recovery of organic surrogate compounds and matrix spiking compounds determined by GC/MS will be compared to the guidelines for recovery of individual compounds as established by the United States Environmental Protection Agency Contract Laboratory Program dated 7/85 or as periodically updated.

The quality of results obtained for inorganic ion and demand parameters will be assessed by comparison of QC data with laboratory control charts for each test.

4.0 SAMPLING PROCEDURES

4.1 SAMPLING PROGRAM

The sampling program for this project will include soil, groundwater and soil vapor. Soil samples will be collected from split spoon sampling or macrocore devices retrieved from soil borings. Groundwater samples will be collected from groundwater monitoring wells using low flow purging techniques. Soil vapor samples will be collected from vapor points screened in the vadose zone using Summa Canisters.

4.1.1 DRILLING/SAMPLING PROCEDURES

Soil and groundwater samples will be collected by means of a soil boring program. Soil borings shall be completed using the hollow stem auger drilling methods, direct push methods, or rotary drilling methods, whichever methods are determined to be best suited to site conditions by the SESI project manager and SESI field team leader.

Soil samples will be collected from soil borings and analyzed in accordance with the NYSDEC-approved Work Plan. Monitoring wells for groundwater sample collection will be installed in select completed soil borings. Either hollow stem auger (HSA) or direct push drilling methods may be utilized for monitoring well completion.

Samples of the encountered overburden materials shall be collected continuously during drilling so that a complete soil profile is examined and described by the SESI field geologist. The sampling method employed shall be ASTM D-1586/Split Barrel Sampling

using a standard 2-foot long, 2-inch outside diameter split- spoon sampler with a 140-pound hammer, in cases where HSA methods are used. Upon retrieval of the sampling barrel, the collected sample shall be placed in glass jars and labeled, stored on site (on ice in a cooler if necessary), and transmitted to the appropriate testing laboratory or storage facility. Chain-of-custody procedures will be practiced following Section 15, EPA-600/4-82-029, Handbook for Sampling and Sample Preservation of Water and Waste Waters.

A geologist or engineer will be on site during the drilling operations to fully describe each soil sample, following the New York State Soil Description Procedure, and to retain representative portions of each sample.

The drilling contractor will be responsible for obtaining accurate and representative samples, informing the geologist of changes in drilling pressure, keeping a separate general log of soils encountered including blow counts [i.e., the number of blows from a soil sampling drive weight (140 pounds)] required to drive the split-spoon sampler in 6-inch increments and installing monitoring wells to levels directed by the supervising geologist following specifications further outlined in this protocol.

4.1.2 MONITORING WELL COMPLETION

Monitoring wells will be constructed of 0.010-inch slot size PVC well screen and riser casing. Other materials utilized for completion will be washed silica sand (Q-Rock No. 4 or approved equivalent) bentonite grout, Portland cement, and a protective steel locking well casing and cap with locks. The depth of the wells will be determined based on the depth to water, type of contaminant and field conditions encountered.

The monitoring well installation method for wells installed within unconsolidated sediments shall be to place the screen and riser assembly into the casing once the screen interval has been selected. At that time, a washed silica sand pack will be placed around the well screen if required to prevent screen plugging. If a sand pack is not warranted, the auger string will be pulled back to allow the native aquifer material to collapse 2 to 3 feet above the top of the screen. Bentonite pellets will then be added to the annulus between the casing and the inside auger to ensure proper sealing. Cement/bentonite grout will continue to be added during the extraction of the augers until the entire aquifer thickness has been sufficiently sealed off from horizontal and/or vertical flow above the screened interval. During placement of sand and bentonite pellets, frequent measurements will be made to check the height of the sand pack and thickness of bentonite layers by a weighted drop tape measure.

A bolt-down protective curb box will be installed, flush with the ground, or steel “stick-up” protective casing and secured by a Portland cement seal. The cement seal shall extend laterally at least 1 foot in all directions from the protective casing and shall slope gently away to drain water away from the well.

4.1.3 WELL DEVELOPMENT

All monitoring wells will be developed or cleared of all fine-grained materials and sediments that have settled in or around the well during installation so that the screen is transmitting representative portions of the groundwater. The development will be by one of two methods, pumping or bailing groundwater from the well until it yields relatively sediment-free water.

A decontaminated pump or bailer will be used and subsequently decontaminated after each use following procedures outlined in the Decontamination Protocol. Pumping or bailing will cease when the turbidity falls below 50 NTUs or until specific conductivity, pH, and temperature are stable (i.e., consecutive readings are within 10 percent with no overall upward or downward trends in measurements). Well development water will be contained in drums and properly disposed off-site.

4.1.4 DECONTAMINATION

All drilling equipment and associated tools including augers, drill rods, sampling equipment, wrenches and any other equipment or tools that have come in contact with contaminated materials will be decontaminated before any drilling on site begins, between each well, and prior to removing any equipment from the site. The preferred decontamination procedure will be to scrape the equipment from any residual soils and then rinse with water and Alconox®. Every effort will be made to minimize the generation of contaminated water, which will be drummed, to extent possible, for disposal.

4.1.5 PFAS SAMPLING CONSIDERATIONS

This section contains the materials limitations for Per- and polyfluoroalkyl substances sampling in accordance with the Draft NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (April 2023).

The groundwater samples will be analyzed for PFAS using USEPA Method 1633. Reporting limits for PFOA and PFOS will not exceed 2 nanograms per liter (ng/L). Category B deliverables and an electronic data deliverable will be completed.

PFAS are very persistent in the environment and in the human body. Due to their presence in a variety of products, persistence in the environment and very low drinking water standards, care must be used when groundwater sampling for PFAS to avoid cross contamination from the sampling equipment and personal protective equipment (PPE).

No fabric softener will be used on clothing to be worn in field. Cosmetics, moisturizers, hand cream, unauthorized sunscreen, insect repellent or other related products will not be used the morning of sampling. The field samplers will wear powder-free nitrile gloves while filling and sealing the sample bottles. The sampling equipment components and sample containers will not come in contact with material that may potentially contain PFAS such as aluminum foil, low density polyethylene (LDPE), glass or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials will be avoided. Food and drink packaging materials will be avoided, as well.

Sampling will be performed using certified PFAS-free sampling materials such as stainless steel, high density polyethylene (HDPE), PVC, silicone, acetate or polypropylene pump and tubing. Rinse water must be laboratory-provided certified PFAS-free distilled or de-ionized water. Standard two step decontamination using Alconox® detergent and clean certified PFAS-free water rinse will be performed for equipment that does come in contact with PFAS materials.

No waterproof field books, plastic clipboards, binders, or spiral hard cover will be used for PFAS containers. No adhesives (i.e. Post-It® Notes), sharpies, or permanent markers will be used for PFAS containers. The PFAS containers will be labeled with ballpoint pens. PFAS samples will be stored in separate cooler filled with regular ice only with no chemical (blue) ice packs.

Pre-cleaned sample bottles with closures, coolers, sample labels and a chain of custody form will be provided by the laboratory.

4.2 GROUNDWATER SAMPLING PROGRAM.

4.2.1 WELL EVACUATION

Prior to sampling a monitoring well, the static water level will be recorded. All well data will be recorded on a field sampling record. The wells will be sampled in accordance with the USEPA guidelines for the Low Flow Purging Sampling (LFPS). The purpose of LFPS is to collect groundwater samples from monitoring wells that are representative of ambient groundwater conditions in the aquifer. The LFPS method reduces turbidity which is needed particularly when sampling for metals.

4.2.2 SAMPLING PROCEDURE

The wells will be sampled using the LFPS technique. A flow rate of 100 ml to 250 ml per minute is used to purge the wells. Drawdown should not exceed 0.3 feet. QED bladder pumps or peristaltic pumps are used for this method. The pump intake is lowered to the mid-point of the water column or as subsurface features such as bedrock fractures or more permeable zones warrant. At the initiation of low flow purging a water level is recorded as well as field parameters. Field parameters are then monitored every five minutes during low flow purging using a flow through cell. When three consecutive measurements of pH differ by 0.1 units or less, with ORP within 10 mv or less, turbidity varies 10 percent or less, conductivity differs by 3 percent or less and dissolved oxygen by 10 percent or less, sampling may begin. Flow through cells are used so continuous real time readings are made. When the parameters stabilize the flow through cell is disconnected and sample bottles are filled directly from the tubing.

4.3 SOIL VAPOR SAMPLING

Soil vapor sampling will be conducted in accordance with NYSDOH Guidance for Evaluating Soil Vapor Intrusion in New York State (October 2006, amended in May 2017 and February 2024). Soil vapor samples will be collected in the vadose zone from shallow (5 feet) well points. Each vapor point will be installed in a shallow boring drilled either by hand-operated equipment (e.g. hand auger or percussion hammer drill), or by a small truck-mounted drill rig. Drilling equipment used shall be based on soil conditions, and the method that provides the most practical approach.

Each vapor point will consist of an inert sampling tube (polyethylene, stainless steel, or Teflon®) with a 6-inch screened section at the bottom through which soil vapors can be sampled. The screen slot size will be 0.0075 inches. A sampling zone will be created around the screened section by backfilling with 1 to 2 feet of porous coarse sand or glass beads, and at least three feet of bentonite will be placed above the porous sampling zone to form a seal from the surface. Native clean soil will be packed around the remaining annulus to the ground surface.

Each designated soil vapor sampling location will be purged of a minimum of three volumes using a low volume pump, and then attached to a regulator, and secured with a clamp. The regulator will then be attached to a 1-liter summa canister.

The regulator will be set to collect a soil vapor sample at a flow rate of less than 0.2 liters per minute. After the summa canister is filled, the valve will be closed.

Each canister will be listed according to a specific sample I.D. on a chain of custody form. Sample canisters will be delivered to the laboratory within 24 hours and analyzed for VOCs by method TO-15. The detection limit for VOCs will be 1 µg/m^3 or less.

The soil vapor sampling effort will include the use of inert helium tracer gas to verify that the soil vapor samples are not diluted by ambient air. The atmosphere around the sampling tube will be enriched with the tracer gas, and the soil vapor sample will be collected in the presence of the enriched tracer atmosphere. This will be accomplished by placing an inverted plastic pail over the sampling point and filling the pail with the tracer gas via a small tube penetrating the site of the pail. Refer to NYSDOH Guidance for Evaluating Soil Vapor Intrusion in New York State (October 2006 amended in May 2017 and February 2024).

Weather conditions in the 48 hours prior to the test, and during the test, will be noted, including average wind speed, precipitation, temperature, and barometric pressure.

4.4 SAMPLE PRESERVATION AND SHIPMENT

Since all bottles will contain the necessary preservatives as shown in Table 4.1, they need only be filled. The 40 ml VOA vials must be filled brim full with no air bubbles. The other bottles should be filled to within about 1 inch from the top.

The bottles will be sent from the laboratory in coolers which will be organized on a per site basis. Following sample collection, the bottles should be placed on ice in the shipping cooler. The samples will be cooled to 4°C, but not frozen.

Final packing and shipment of coolers will be performed in accordance with guidelines outlined in the ASP.

5.0 SAMPLE CUSTODY

The program for sample custody and sample transfer is in compliance with the NYSDEC-ASP, as periodically updated. If samples may be needed for legal purposes, chain-of-custody procedures, as defined by NEIC Policies and Procedures (USEPA-330/9-78-001-R, Revised June 1988) will be used. Sample chain-of-custody is initiated by the laboratory with selection and preparation of the sample containers. To reduce the chance for error, the number of personnel handling the samples should be minimized.

5.1 FIELD SAMPLE CUSTODY

A chain-of-custody record accompanies the samples from initial sample container selection and preparation at the laboratory, shipment to the field for sample containment and preservation, and return to the laboratory. Two copies of this record follow the samples to the laboratory. The laboratory maintains one file copy and the completed

original is returned to the site inspection team. Individual sample containers provided by the laboratory are used for shipping samples. The shipping containers are insulated and ice is used to maintain samples at approximately 4°C until samples are returned and in the custody of the laboratory. All sample bottles within each shipping container are individually labeled and controlled. Samples are to be shipped to the laboratory within 24-48 hours of the day of collection depending on parameter holding times.

Each sample shipping container is assigned a unique identification number by the laboratory. This number is recorded on the chain-of-custody record and is marked with indelible ink on the outside of the shipping container. The field sampler will indicate the sample designation/location number in the space provided on the appropriate chain-of-custody form for each sample collected. The shipping container is closed and a seal provided by the laboratory is affixed to the latch. This seal must be broken to open the container, and this indicates possible tampering if the seal is broken before receipt at the laboratory. The laboratory will contact the site investigation team leader and the sample will not be analyzed if tampering is apparent.

5.2 LABORATORY SAMPLE CUSTODY

The site investigation team leader or Project Quality Assurance Officer notifies the laboratory of upcoming field sampling activities and the subsequent transfer of samples to the laboratory. This notification will include information concerning the number and type of samples to be shipped as well as the anticipated date of arrival.

The laboratory sample program meets the following criteria:

- The laboratory has designated a sample custodian who is responsible for maintaining custody of the samples and for maintaining all associated records documenting that custody.
- Upon receipt of the samples, the custodian will check the original chain-of-custody documents and compare them with the labeled contents of each sample container for correctness and traceability. The sample custodian signs the chain-of-custody record and records the date and time received.
- Care is exercised to annotate any labeling or descriptive errors. In the event of discrepant documentation, the laboratory will immediately contact the site investigation team leader as part of the corrective action process. A qualitative assessment of each sample container is performed to note any anomalies, such as broken or leaking bottles. This assessment is recorded as part of the incoming chain-of-custody procedure.
- The samples are stored in a secured area at a temperature of approximately 4°C until analyses are to commence.
- A laboratory chain-of-custody record accompanies the sample or sample fraction through final analysis for control.

- A copy of the chain-of-custody form will accompany the laboratory report and will become a permanent part of the project records.

5.3 FINAL EVIDENCE FILES

Final evidence files include all originals of laboratory reports and are maintained under documented control in a secure area.

A sample or an evidence file is under custody if:

- It is in your possession; it is in your view, after being in your possession.
- It was in your possession and you placed it in a secure area.
- It is in a designated secure area.

6.0 CALIBRATION PROCEDURES

Instruments and equipment used to gather, generate or measure environmental data will be calibrated with sufficient frequency and in such a manner that accuracy and reproducibility of results are consistent with the appropriate manufacturer's specifications or project specific requirements. The procedures for instrument calibration, calibration verification, and the frequency of calibrations are described in the ASP. The calibration of instruments used for the determination of metals will be as described in the appropriate CLP standard operating procedures.

Calibration of other instruments required for measurements associated with these analyses will be in accordance with the manufacturer's recommendations and the standard operating procedures of the laboratory.

7.0 ANALYTICAL PROCEDURES

Analytical procedures shall conform to the most recent revision of the NYSDEC-ASP (June 2005) and are summarized on Table 7.1. In the absence of USEPA or NYSDEC guidelines, appropriate procedures shall be submitted for approval by NYSDEC prior to use.

The procedures for the sample preparation and analysis for organic compounds are as specified in the NYSDEC-ASP. Analytical cleanups are mandatory where matrix interferences are noted. No sample shall be diluted any more than 1 to 5 times. The sample shall be either re-extracted, re-sonicated, re-stream distilled, etc. or be subjected to any one analytical cleanup noted in SW846 or a combination thereof. The analytical laboratory shall expend such effort and discretion to demonstrate good laboratory practice and demonstrate an attempt to best achieve the method detection limit.

7.1 VOLATILE ORGANICS (VOA)

For the analysis of water samples for Target Compound List (TCL), volatile organic compounds (VOCs), no sample preparation is required. The analytical procedure for volatiles is detailed in NYSDEC-ASP (Volume I, Section D-I). A measured portion of the sample is placed in the purge and trap apparatus and the sample analysis is performed by gas chromatography/mass spectrometry for the first round. USEPA Method 8260C will be used, plus tentatively identified compounds (TICs). USEPA Methods 8010 or 8020 (gas chromatography with different detectors) will be used if subsequent rounds with lower limits of detection are warranted.

7.2 SEMI-VOLATILE ORGANIC COMPOUNDS

The extraction and analytical procedures used for preparation of water, soil and sediment samples for the analysis of the TCL semi-volatile organic compounds are described in NYSDEC-ASP Volume I, Section D-III. USEPA Method 8270D will be used, plus tentatively identified compounds (TICs).

Instrument calibration, compound identification, and quantitation are performed as described in Section 6 of this document and in the NYSDEC-ASP.

7.3 PESTICIDE AND PCB COMPOUNDS

The sample preservation procedures for gas chromatography for pesticides and PCB's will be as described in the NYSDEC-ASP methods (Section D-IV). The analysis of standard mixes, blanks and spiked samples will be performed at the prescribed frequency with adherence to the 72-hour requirement described in the method.

7.4 METALS

Water, soil and waste samples will be analyzed for the metals listed in Table 7.1. The detection limits for these metals are as specified in the NYSDEC-ASP, Section D-V. The instrument detection limits will be determined using calibration standards and procedures specified in the NYSDEC-ASP. The detection limits for individual samples may be higher due to the sample matrix. The procedures for these analyses will be as described in the NYSDEC-ASP.

The analyses for metals will be performed by atomic absorption spectroscopy (AAS) or inductively-coupled plasma emission spectroscopy (ICPES), as specified in the ASP with regard to AAS flame analysis.

7.5 PER- AND POLYFLUOROALKYL SUBSTANCES

The NYSDEC has developed a list of 40 PFAS Analytes List on Table 7.1 for remedial programs. These are:

- Perfluorobutanesulfonic acid

- Perfluoropentanesulfonic acid
- Perfluorohexanesulfonic acid
- Perfluoroheptanesulfonic acid
- Perfluorooctanesulfonic acid
- Perfluorononanesulfonic acid
- Perfluorodecanesulfonic acid
- Perfluorododecanesulfonic acid
- Perfluorobutanoic acid
- Perfluoropentanoic acid
- Perfluorohexanoic acid
- Perfluoroheptanoic acid
- Perfluorooctanoic acid
- Perfluorononanoic acid
- Perfluorodecanoic acid
- Perfluoroundecanoic acid
- Perfluorododecanoic acid
- Perfluorotridecanoic acid
- Perfluorotetradecanoic acid
- Perfluorohexadecanoic acid
- Hexafluoropropylene oxide dimer acid
- 4,8-Dioxa-3H-perfluorononanoic acid
- Perfluoro-3-methoxypropanoic acid
- Perfluoro-4-methoxybutanoic acid
- Nonafluoro-3,6-dioxaheptanoic acid
- 4:2 Fluorotelomer sulfonic acid
- 6:2 Fluorotelomer sulfonate
- 8:2 Fluorotelomer sulfonate
- 3:3 Fluorotelomer carboxylic acid
- 5:3 Fluorotelomer carboxylic acid
- 7:3 Fluorotelomer carboxylic acid
- Perfluroroctane sulfonamide
- N-methylperfluorooctane sulfonamide

- N-ethylperfluorooctane sulfonamide
- N-methyl perfluorooctanesulfonamidoacetic acid
- N-ethyl perfluorooctanesulfonamidoacetic acid
- N-methylperfluorooctane sulfonamidoethanol
- N-ethylperfluorooctane sulfonamidoethanol
- 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)
- 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)
- Perfluoro(2-ethoxyethane) sulfonic acid

Currently, ELAP does not offer certification for PFAS compounds in matrices other than finished drinking water. Per the NYSDEC July 2023 guidance on emergent contaminant sampling, the analytical procedure for soil and groundwater sampling of PFAS is Modified EPA Method 1633. The reporting limit for PFAS in soil samples is 0.5 ug/kg. Reporting limits for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) in groundwater should not exceed 2 ng/L.

7.6 SITE SPECIFICITY OF ANALYSES

Work plans prepared for remedial investigation waste sites contain recommendations for the chemical parameters to be determined for each site. Thus, some or all of the referenced methods will apply to the analysis of samples collected at the individual waste sites. Analyses of Target Compound List (TCL) analytes will be performed on all samples.

TABLE 4.1 – SAMPLE CONTAINERIZATION

PARAMETER & ANALYTICAL METHOD	NO.	BOTTLE TYPE	PRESERVATIVE(1)	HOLDING TIME
Aqueous Samples				
SVOCs (BNAs) – USEPA 8270D or E	2	1-liter amber glass bottle	Ice to 4°C	7 days (until extraction) 40 days (extracted)
Pesticides – USEPA 8081B	2	1-liter amber glass bottle	Ice to 4°C	7 days (until extraction) 40 days (extracted)
PCBs – USEPA 8082A	2	1-liter amber glass bottle	Ice to 4°C	7 days (until extraction) 40 days (extracted)
VOCs – USEPA 8260C or D	2	40 mL, glass vial with septum cap	Hydrochloric Acid to pH <2 Ice to 4°C	14 days

PARAMETER & ANALYTICAL METHOD	NO.	BOTTLE TYPE	PRESERVATIVE(1)	HOLDING TIME
Metals(2) – 6010C or D, Mercury 7470A	1	1-liter, plastic bottle	Nitric acid to pH <2 NaOH for cyanide Ice to 4°C	180 days Mercury: 28 days
Cyanide – SM 4500-CN-E	1	1-liter, plastic	Sodium Hydroxide to pH >12 Ice to 4°C	14 days
PFAS Compounds – USEPA Method 1633	2	500 ml HDPE or Polypropylene with non-Teflon lid	Chilled to 0 - 6 °C	14 days
Soil, Sediment, Solid Waste Samples				
VOCs – USEPA 8260C or D	3	15-gram EnCore samplers	Chilled to 0 - 6°C	14 days
SVOCs (BNAs) and 1,4-Dioxane – USEPA 8270D SIM if RL cannot be reached	1	4-oz. glass jar with Teflon lid	Chilled to 0 - 6°C	14 days (until extraction, 40 days extracted)
Pesticides – USEPA 8081B	1	4-oz. glass jar with Teflon lid	Chilled to 0 - 6°C	14 days (until extraction) 40 days (extracted)
PCBs – USEPA 8082A	1	4-oz. glass jar with Teflon lid	Chilled to 0 - 6°C	none
Metals(2) – 6010C or D, Mercury 7471B	1	4-oz. glass jar with Teflon lid	Chilled to 0 - 6°C	180 days Cyanide: 14 days Mercury: 28 days
PFAS Compounds – USEPA Method 1633	2	500 ml HDPE or Polypropylene with non-Teflon lid	Chilled to 0 - 6°C	28 days
Soil Vapor / Indoor Air Samples				
VOCs – USEPA TO-15	1	Summa Canister	None	30 days

(1) All samples will be preserved with ice during collection and shipment to 0-6 degrees C.
(2) From verified time of sample receipt by the analytical laboratory (within 24 to 48 hours of collection).
(3) A complete list of compounds is provided on Table 7.1.

TABLE 4.2 – SAMPLING PROCEDURE FOR MONITORING WELLS USING VOLUME AVERAGED PURGING

1. Initial static water level recorded with an electric contact probe accurate to the nearest 0.1 foot.

2. Sampling device and electric contact probe decontaminated.
    a. Sampling device and probe are rinsed with pesticide-grade methanol and distilled water.
    b. Methanol is collected into a large funnel which empties into a five- gallon container.

3. Sampling device lowered into well.
    a. Bailer lowered by dedicated PVC or polypropylene line.

4. Sample taken.
    a. Sample is poured slowly from the open end of the bailer with the sample bottle tilted so that aeration and turbulence are minimized.
    b. Duplicate sample is collected when appropriate.

5. Samples are capped, labeled and placed in laboratory coolers with ice packs or bagged ice.

6. All equipment is cleaned with successive rinses of pesticide-grade methanol and distilled water.
    a. Dedicated line is disposed of or left at well site.

7. Equipment/wash blanks are collected when non-dedicated sampling equipment is used.

8. Chain-of-custody forms are completed in triplicate.
    a. The original and one carbon copy are put into a zip-lock bag and placed into the cooler.

9. The original will be returned following sample analysis.
    a. A second carbon copy is kept on file.

10. Cooler is sealed with strapping tape and chain-of-custody seals to assure integrity and to prevent tampering of sample.

TABLE 4.3 – SAMPLING PROCEDURE FOR MONITORING WELLS USING LOW-STESS (LOW-FLOW) METHODS

1. Initial static water level recorded with an electric contact probe accurate to the nearest 0.1 foot.

2. Sampling device is lowered into well. Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified for that well. Pump intake must be no less than 2 feet from the bottom of the well to prevent disturbance and resuspension of sediments which may be at the bottom of the well.

3. Measure water level again: Before starting the pump, measure the water level again with the pump in the well. Leave the water level measuring device in the well.

4. Purge Well: Start pumping the well at 200 to 500 milliliters per minute (ml/min). The water level should be monitored approximately every five minutes. Ideally, a steady flow rate should be maintained that results in a stabilized water level (drawdown of 0.3 ft or less). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. As noted above, care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment.

5. Monitor Indicator Parameters: During purging of the well, monitor and record the field indicator parameters (turbidity, temperature, specific conductance, pH, Eh, and DO) approximately every five minutes. The well is considered stabilized and ready for sample collection when the indicator parameters have stabilized for three consecutive readings as follows (Puls and Barcelona, 1996):

    a. 0.1 for pH
    b. 3% for specific conductance (conductivity)
    c. 10 mv for redox potential
    d. 10% for DO and turbidity

6. Dissolved oxygen and turbidity usually require the longest time to achieve stabilization. The pump must not be removed from the well between purging and sampling.

7. Collect Samples: Collect samples at a flow rate between 100 and 250 ml/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft. VOC samples must be collected first and directly into sample containers. All sample containers should be filled with minimal turbulence by allowing the ground water to flow from the tubing gently down the inside of the container.

8. Ground water samples to be analyzed for volatile organic compounds (VOCs) require pH adjustment. The appropriate EPA Program Guidance should be consulted to determine whether pH adjustment is necessary. If pH adjustment is necessary for VOC sample preservation, the amount of acid to be added to each sample vial prior to sampling should be determined, drop by drop, on a separate and

equal volume of water (e.g., 40 ml). Groundwater purged from the well prior to sampling can be used for this purpose.

9. Remove Pump and Tubing: After collection of the samples, the tubing, unless permanently installed, must be properly discarded or dedicated to the well for resampling by hanging the tubing inside the well.

10. Measure and record well depth.

11. Close and lock the well.

12. Samples are capped, labeled and placed in laboratory coolers with ice packs or bagged ice.

13. All equipment is cleaned with successive rinses of pesticide-grade methanol and distilled water.

    a. Dedicated line is disposed of or left at well site.

14. Equipment/wash blanks are collected when non-dedicated sampling equipment is used.

15. Chain-of-custody forms are completed in triplicate.

    a. The original and one carbon copy are put into a zip-lock bag and placed into the cooler. The original will be returned following sample analysis.
    b. A second carbon copy is kept on file.

16. Cooler is sealed with strapping tape and chain-of-custody seals to assure integrity and to prevent tampering of sample.

Table 7-1 – PFAS Compound List and Reporting and Method Detection Limits for Soil and Groundwater

	PFAS	Reporting Limit — Groundwater (ng/l)
1	Perfluorobutanesulfonic acid (PFBS)	1.6
2	Perfluoropentanesulfonic acid (PFPeS)	1.6
3	Perfluorohexanesulfonic acid (PFHxS)	1.6
4	Perfluoroheptanesulfonic acid (PFHpS)	1.6
5	Perfluorooctanesulfonic acid (PFOS)	1.6
6	Perfluorononanesulfonic acid (PFNS)	1.6
7	Perfluorodecanesulfonic acid (PFDS)	1.6
8	Perfluorododecanesulfonic acid (PFDoS)	1.6
9	Perfluorobutanoic acid (PFBA)	6.4
10	Perfluoropentanoic acid (PFPeA)	3.2
11	Perfluorohexanoic acid (PFHxA)	1.6
12	Perfluoroheptanoic acid (PFHpA)	1.6
13	Perfluorooctanoic acid (PFOA)	1.6
14	Perfluorononanoic acid (PFNA)	1.6
15	Perfluorodecanoic acid (PFDA)	1.6
16	Perfluoroundecanoic acid (PFUnA)	1.6
17	Perfluorododecanoic acid (PFDoA)	1.6
18	Perfluorotridecanoic acid (PFTrDA)	1.6
19	Perfluorotetradecanoic acid (PFTeDA)	1.6
20	Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.4
21	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.4
22	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.2
23	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.2
24	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.2
25	4:2 Fluorotelomer sulfonic acid (4:2-FTS)	6.4
26	6:2 Fluorotelomer sulfonic acid (6:2-FTS)	6.4
27	8:2 Fluorotelomer sulfonic acid (8:2-FTS)	6.4
28	3:3 Fluorotelomer carboxylic acid (3:3 FTCA)	8.0
29	5:3 Fluorotelomer carboxylic acid (5:3 FTCA)	40
30	7:3 Fluorotelomer carboxylic acid (7:3 FTCA)	40
31	Perfluorooctane sulfonamide (PFOSA)	1.6
32	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.6
33	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.6
34	N-methylperfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	1.6
35	N-ethylperfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	1.6
36	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	16
37	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	16
38	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major) (9CL-PF3ONS)	6.4
39	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor) (11CL-PF3OUDS)	6.4
40	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	3.2

	PFAS	Reporting Limit — Groundwater (ng/l)
41	Perfluorohexadecanoic acid (PFHxDA)[1]	~
	1,4-dioxane	5

	PFAS	Reporting Limit — Soil (ng/g)
1	Perfluorobutanesulfonic acid (PFBS)	0.2
2	Perfluoropentanesulfonic acid (PFPeS)	0.2
3	Perfluorohexanesulfonic acid (PFHxS)	0.2
4	Perfluoroheptanesulfonic acid (PFHpS)	0.2
5	Perfluorooctanesulfonic acid (PFOS)	0.2
6	Perfluorononanesulfonic acid (PFNS)	0.2
7	Perfluorodecanesulfonic acid (PFDS)	0.2
8	Perfluorododecanesulfonic acid (PFDoS)	0.2
9	Perfluorobutanoic acid (PFBA)	0.8
10	Perfluoropentanoic acid (PFPeA)	0.4
11	Perfluorohexanoic acid (PFHxA)	0.2
12	Perfluoroheptanoic acid (PFHpA)	0.2
13	Perfluorooctanoic acid (PFOA)	0.2
14	Perfluorononanoic acid (PFNA)	0.2
15	Perfluorodecanoic acid (PFDA)	0.2
16	Perfluoroundecanoic acid (PFUnA)	0.2
17	Perfluorododecanoic acid (PFDoA)	0.2
18	Perfluorotridecanoic acid (PFTrDA)	0.2
19	Perfluorotetradecanoic acid (PFTeDA)	0.2
20	Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.8
21	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.8
22	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.4
23	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.4
24	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.4
25	4:2 Fluorotelomer sulfonic acid (4:2-FTS)	0.8
26	6:2 Fluorotelomer sulfonic acid (6:2-FTS)	0.8
27	8:2 Fluorotelomer sulfonic acid (8:2-FTS)	0.8
28	3:3 Fluorotelomer carboxylic acid (3:3 FTCA)	1.0
29	5:3 Fluorotelomer carboxylic acid (5:3 FTCA)	5.0
30	7:3 Fluorotelomer carboxylic acid (7:3 FTCA)	5.0
31	Perfluorooctane sulfonamide (PFOSA)	0.2
32	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.2
33	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.2
34	N-methylperfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	0.2
35	N-ethylperfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	0.2
36	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.0

	PFAS	Reporting Limit — Soil (ng/g)
37	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.0
38	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major) (9CL-PF3ONS)	0.8
39	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor) (11CL-PF3OUdS)	0.8
40	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	0.4
41	Perfluorohexadecanoic acid (PFHxDA)[1]	~

Source: EPA Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS, Second Draft Method 1633, November 2022

Data for this table are derived from the single-laboratory validation study and are only provided as examples for this draft method. The data will be updated to reflect the interlaboratory study results in a subsequent revision. Therefore, these criteria will change after interlaboratory validation.

[1] This compound was not listed in the EPA Method 1633 2nd draft and currently no known values exist

Appendix C:

Emerging Contaminant Sampling Plan

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Geotechnical
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Soil and Groundwater Sampling Plan for Emerging Contaminants
For

Proposed Mixed-Use Development
466 Main Street
New Rochelle, Westchester County, NY

Prepared for:

BRP 466 Main Street, LLC

June 2025

SESI Project No:
12587

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TABLES

TABLE 2.1 PFAS COMPOUNDS LIST

LIST OF ACRONYMS

Acronym	Definition
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Accreditation Program
HDPE	High-Density Polyethylene
LDPE	Low-density Polyethylene
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
ng/L	Nanogram per liter
NYSDEC	New York State Department of Environmental Conservation
PFAS	Per and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PTFE	Polytetrafluoroethylene
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
TAL	Target Analyte List
TCL	Target Compound List
ug/kg	micrograms pers kilogram
USEPA	United States Environmental Protection Agency

1.0 PROJECT DESCRIPTION

This document presents the Soil and Groundwater Plan for Emerging Contaminants for the Remedial Investigation Work Plan for the proposed development at 466 Main Street, New Rochelle, Westchester County, New York (the "Site"). The Site is identified as a parcel to be consolidated as Block 215, Lot 32 on the Westchester County tax map and totals approximately 0.708-acres in size. The Site is improved with a commercial space, asphalt parking lot and vegetated areas.

The Site is located in a residential and commercial area and is bounded by Main Street (US Highway 1) to the north, a parking lot to the south, Locust Avenue and apartment buildings to the east, and North Avenue to the west. The closest notable surface water body is the Long Island Sound located approximately 0.49 miles east of the Subject Property.

2.0 SOIL SAMPLING PLAN

The sampling will be performed in accordance with the New York State Department of Environmental Conservation (NYSDEC) Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs, dated April 2023. The soil samples will be sent via chain of custody to an ELAP-certified laboratory and analyzed for TCL/TAL+30, 1,4-dioxane and the per and polyfluoroalkyl substances (PFAS) compounds listed in Table 2.1. The soil samples will be analyzed for PFAS using Draft Method 1633. Reporting limits for each PFAS compound will not exceed 0.5 micrograms per kilogram (ug/kg). NYSDEC will be informed if detection limits on certain PFAS compounds cannot be met by the laboratory. Category B deliverables and an electronic data deliverable will be completed. A data usability summary report (DUSR) will be prepared by a data validator for all the analyses including PFAS and 1,4-dioxane. The method detection limit (MDL) for 1,4-dioxane will be no higher than 0.1 mg/kg (ppm).

Because PFAS compounds must be analyzed at concentrations in the ng/kg range, precautions must be taken to prevent cross-contamination during sampling events. Field sampling equipment that is used at multiple sites or sampling locations could become highly contaminated with PFAS. Soil sampling at this Site will involve the use of non-dedicated equipment, such as a Geoprobe direct push drill rig, which could be a source of cross-contamination. Decontamination procedures outlined in this document will be followed to avoid cross contamination and equipment will be verified as PFAS-free. Special care and consideration will be given to the field sampling equipment when stored and handled outside the Site boundaries or between different sample locations.

Items that may be directly in contact with the soil, including spoons, bowls, and direct push equipment, including any split spoon or sampling barrels, have a high likelihood of cross-contamination occurring if the proper decontamination procedures are not followed. These items should be known to be PFAS free. Items that will not directly contact the soil, including field books, Post-It® Notes, aluminum foil, recycled paper towels, binders, or spiral hard cover notebook, can be a source of PFAS contamination. Every effort will be made to ensure these items are PFAS-free.

For the sampling equipment, the following items, materials, and procedures will be used for decontamination:

- Municipal drinking water may be used for decontamination if it is known to be PFAS-free. Commercially available deionized water in a high-density polyethylene (HDPE) container may also be used for decontamination.
- Standard two step decontamination using Alconox® detergent and PFAS-free triple water rinse will be performed for the sampling equipment.
- Sampling equipment may be scrubbed with polyethylene or a polyvinyl chloride (PVC) brush to remove particulates.
- The sampling equipment components will not come in contact with material that may potentially contain PFAS such as aluminum foil, low density polyethylene (LDPE), polytetrafluoroethylene (PTFE, Teflon®) or other fluoropolymers.
- Soil sampling equipment will be decontaminated between each sampling point and at the conclusion of the workday. This is to ensure sampling equipment is decontaminated ahead of time for the next sampling event.

Equipment rinsate blanks will be collected daily for the equipment that comes in contact with the soil samples and is decontaminated and reused. If all the sampling materials are disposable, no field blanks will be collected. Field duplicates will be collected on a frequency of one (1) per 20 samples. One matrix spike and matrix spike duplicate (MS/MSD) will also be collected on a frequency of one (1) per 20 samples. A trip blank will accompany each laboratory shipment which includes analysis for volatile organic compounds.

3.0 GROUNDWATER SAMPLING PLAN

The sampling will be performed in accordance with the NYSDEC Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs, dated April 2023, the NYSDEC July 2018 letter on Groundwater Sampling for Emerging Contaminants, and the PFAS Groundwater Samples from Monitoring Well Sample Protocols Revision 1.2 August 9, 2019. The groundwater samples will be sent via chain of custody in a cooler at 4 degrees C to an ELAP-certified laboratory and analyzed for TCL/TAL+30, 1,4-dioxane and the PFAS compounds listed in Table 2.1. The groundwater samples will be analyzed for PFAS using Modified USEPA Draft Method 1633. Reporting limits for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) will not exceed 2 nanogram per liter (ng/L). Category B deliverables and an electronic data deliverable will be completed. A DUSR will be prepared by a data validator for all the analyses including PFAS and 1,4-dioxane. The MDL for 1,4-dioxane will be no higher than 0.35 µg/l (ppb). In order to get the appropriate detection limit, the lab will run EPA Method 8270 in "selective ion monitoring" (SIM) mode for 1,4-dioxane.

PFAS are very persistent in the environment and in the human body. There is evidence that exposure to PFAS can lead to adverse human health effects. EPA established the health advisory levels for PFAS in drinking water at 4 parts per trillion. Due to their presence in a variety of products, persistence in the environment and very low drinking water standards, care must be used when groundwater sampling for PFAS to avoid cross contamination from the sampling equipment and personal protective equipment (PPE).

4.0 SOIL SAMPLE COLLECTION AND HANDLING

The following considerations will be observed:

- No fabric softener will be used on clothing to be worn by the sampling personnel in the field. Clothing that contains PTFE material (including GORE-TEX®) or that has been waterproofed with PFAS-containing materials will be avoided.
- Cosmetics, moisturizers, hand cream, unauthorized sunscreen, insect repellant or other related products will not be used by the sampling staff on sampling days.
- Food and drink packaging materials such as pre-wrapped food or snacks (i.e. candy bars, microwave popcorn, etc.) will not be used in the sampling and staging areas.
- Sampling will be conducted with powderless nitrile gloves. The gloves will be changed frequently any time there is an opportunity for cross-contamination during sampling, including, but not limited to:
    a. Immediately prior to sample collection
    b. Each time sampling equipment is placed in and then removed from soil at a new location
    c. Handling of any sample, including quality assurance/quality control (QA/QC) samples
    d. After the handling of any non-dedicated sampling equipment
    e. After contact with non-decontaminated surfaces
    f. After decontamination of sampling equipment
    g. When judged necessary by field personnel

- HDPE or polypropylene sample bottles with Teflon®-free caps, provided by the laboratory will be used. Sample containers will not come in contact with material that may potentially contain PFAS.
- Bottles will only be opened immediately prior to sampling.
- Dust and fibers will be kept out of sample bottles.

- The sample caps will never be placed directly on the ground during sampling. If the sampling staff must set the sample bottle cap down during sample collection and a second member of the sampling crew (wearing a fresh pair of powderless nitrile gloves) is not available, the cap will be set on a clean surface (cotton sheeting, HDPE sheeting, triple rinsed cooler lid, etc.).
- Regular size Sharpie® and thicker markers will be avoided. Fine and Ultra-Fine point Sharpie® markers may be used. Ballpoint pens may be used when labeling sample containers. If ballpoint pens do not write on the sample container labels, preprinted labels from the laboratory may be used.
- Sample bottles, coolers, sample labels and a chain of custody form will be provided by the analytical laboratory.

PFAS samples will be collected prior to collecting non-PFAS samples.

5.0 SAMPLE SHIPMENT

In the absence of a formal USEPA guidance for PFAS sample storage, the documentation in USEPA Draft Method 1633 will be used as a guide for thermal preservation and holding times for soil or other samples. Samples will be chilled during storage and shipment and will not exceed 50°F (10º C) during the first 48 hours after collection.

The following procedures will be used by SESI for sample shipment:

- Regular ice will be used to cool and maintain the samples at or below 42.8°F (6°C). Chemical or blue ice may be used if it is known to be PFAS-free and the samples can be cooled and maintained at or below 42.8°F (6°C) during collection and through transit to the laboratory.
- The coolers will be periodically checked to ensure samples are well iced and at the proper temperature. Refresh with regular ice if needed. The ice may be double bagged in LDPE resealable storage bags. LDPE may be used if an equipment blank demonstrates the LDPE is PFAS-free.
- Chain of Custody and other forms will be single bagged in LDPE (e.g. Ziploc®) storage bags and taped to the inside of the cooler lid. LDPE may be used if an equipment blank demonstrates the LDPE is PFAS-free.
- The cooler(s) will be taped closed with a custody seal and picked up by the laboratory within 24 hrs.

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

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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 D:

Typical Boring/Well Construction Log

SESI CONSULTING ENGINEERS	PROJECT NAME:	90-02 168th St	MONITORING WELL NO.	
	PROJECT LOCATION:	Queens, NY	JOB NO.	
			GROUND ELEVATION:	NA

BORING BY:	DATE STARTED		DEVELOPMENT PERIOD		INSIDE CASING DIAMETER (in)	
INSPECTOR:	DATE COMPLETED		DEVELOPMENT METHOD		BOREHOLE DIAMETER (in)	
NJ DEP PERMIT NO.:	DATE DEVELOPED		DEVELOPMENT RATE	NA	INITIAL WATER LEVEL (ft):	

WELL CONSTRUCTION	DEPTH (ft)	Sample	Blows on Spoon 0/6	6/12	12/18	18/24	REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D.
	0								
Top of Sand Pack									0
Top of Screen									0
Sand									0
Pack Size: #2									0
	45								0
Screen Size: 0.010									0
									0
									0
									0
	49.5								
Bottom of Screen	50								0
Bottom of Boring									
Sand									
Pack Size:									

SESI CONSULTING ENGINEERS

PROJECT NAME:		GEOPROBE NO.	
LOCATION:		JOB NO.	
METHOD:		GROUND ELEVATION:	
GEOPROBE BY:	DATE STARTED:		GROUNDWATER TABLE DEPTH:
INSPECTOR:	DATE COMPLETED:	0 Hr.	24 Hr. / Date

DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH FROM (ft)	DEPTH TO (ft)	ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID
0							
5							
10							
15							
20							
25							
30							
35							
40							

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1⅜ in

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: _____ Inferred Change in Strata: _ _ _ _ _ _ _ _ _ _ _ _

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #

Appendix E:

Health and Safety Plan (HASP)

SESI
CONSULTING ENGINEERS

Geotechnical
Environmental
Site Civil

959 Route 46E, Fl 3, Ste 300
Parsippany, NJ 07054
973.808.9050
www.sesi.org

HEALTH AND SAFETY PLAN
For

Proposed Mixed-Use Development
466 Main Street
New Rochelle, Westchester County, NY

Prepared for:

BRP 466 Main Street, LLC
June 2025

SESI Project No:
12587

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Disclaimer: This Health and Safety Plan (HASP) is based upon information provided [and, if applicable, conditions discovered during a site visit], and is limited by the project scope.

The HASP should be periodically reviewed and updated based on a number of factors, including but not limited to: (1) changes in applicable governmental requirements; (2) changes in procedures at the site; and (3) site conditions which were unknown to SESI Consulting Engineers (SESI) as of the time the HASP was prepared.

This HASP has been prepared for the sole and exclusive use of Client listed above, and may not be relied upon by any other person without the express written consent and authorization of SESI.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

For

BRP 466 Main Street, LLC
466 Main Street
New Rochelle, NY
SESI Project NO.: 12587

Prepared by:

_____

Chris Malvicini
SESI - Asst Project Manager

Approved by:

_____

James Vander Vliet, PE
SESI - Senior Project Manager

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LIST OF ACRONYMS

Acronym	Definition
ACGIH	American Conference of Governmental Industrial Hygienists
COC	Contaminants(s) of Concern
CRZ	Contamination Reduction Zone
EMS	Emergency Medical Services
EZ	Exclusion Zone
FS	Field Supervisor
GFCI	Ground Fault Circuit Interrupter
HASP	Health and Safety Plan
HSM	Health and Safety Manager
LEL	Lower Explosive Limit
MSDS	Material Safety Data Sheet
NIOSH	National Institute for Occupational Safety and Health
NRR	Noise Reduction Rating
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
PEL	Permissible Exposure Limit
PFD	Personal Flotation Device
PID	Photoionization Detector
PM	Project Manager
PO	Project Officer
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
SESI	SESI Consulting Engineers
SSO	Site Safety Officer
SVOC	Semi-Volatile Organic Compound
SZ	Support Zone
TLV	Threshold Limit Value
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

HEALTH AND SAFETY PLAN SUMMARY

The chemical hazards associated with site operations are related to inhalation, ingestion, and skin exposure to site Chemicals of Concern (COCs). COCs at the site include Metals and Pesticides. Concentrations of airborne COCs during site tasks may be measurable and will require air monitoring during certain operations.

The potential for inhalation of site COCs is low. The potential for dermal contact with soils containing site COCs during remedial operations is moderate.

The following table summarizes airborne contaminant action levels that will be used to determine the procedures and protective equipment necessary based on conditions as measured at the site.

Parameter	Reading	Action
Dust	0 to .5 mg/m3	Normal operations
	0.5 to 1 mg/m3	Begin soil wetting procedure (Level C protection would be needed beyond this point)
	> 1 mg/m3	Stop work, fully implement dust control plan
Oxygen	≤ 19.5%	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area
	> 19.5% to < 23.5%	Normal operations
	≥ 23.5%	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area
Carbon Monoxide	0 ppm to ≤ 20 ppm	Normal operations
	> 20 ppm	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area

The level of personal protection selected will be based on air monitoring of the work environment and an assessment by the Field Supervisor and Site Safety Officer. The following table presents a selection matrix to determine appropriate Personal Protective Equipment.

Task	Anticipated Level of Protection
Mobilization	Level D
Subsurface Intrusive Activities (Mass Excavation, Drilling, Soil Grouting)	Modified Level D/Level C
Earthwork/Grading	Level D
Additional Chemical Sampling / Delineation	Modified Level D/Level C
Decontamination	Modified Level D
Demobilization	Level D

1.0 INTRODUCTION

1.1 OBJECTIVE

The objective of this Health and Safety Plan (HASP) is to provide a mechanism for establishing safe working conditions during remedial action activities. The safety organization, procedures, and protective equipment have been established based on an analysis of potential physical, chemical, and biological hazards. Specific hazard control methodologies have been evaluated and selected to minimize the potential of injury, illness, or other hazardous incident.

The HASP was written to meet the requirements of all applicable Federal, State, and local health and safety regulations, including 29 CFR 1910.120. The HASP is based on current knowledge regarding the specific chemical and physical hazards that are known or anticipated at the Site. This HASP is a dynamic document, for which changes and/or revisions may be realized as changes in scope and/or site conditions are encountered. Should revised documents be produced, said revised documents will refer to the specific changes and why they were made.

1.2 SITE AND FACILITY DESCRIPTION

This document presents the health and safety plan (HASP) for the Remedial Investigation Work Plan (RIWP) for the proposed development of the property located at 466 Main Street, New Rochelle, Westchester County, New York (the Site). The Site consists of a portion of a 0.708-acre area parcel and is identified as proposed Block 215 Lot 32 on the Westchester County tax map. The Site is located in a residential and commercial area and is bounded by Main Street (US Highway 1) to the north, a parking lot to the south, Locust Avenue and apartment buildings to the east, and North Avenue to the west.

The Site is improved with a commercial space, asphalt parking lot and vegetated areas. The site building operations include several commercial spaces. The Site has been developed since at least 1951 and historically has been residences and other commercial uses including most notably a plumber shop (circa 1903), the New Rochelle Theatre (circa 1903-1911), a repair shop (circa 1911) and a hardware and paints shop (circa 1911).

1.3 POLICY STATEMENT

The policy of SESI Consulting Engineers (SESI) is to provide a safe and healthful work environment. No aspect of operations is of greater importance than injury and illness prevention. A fundamental principle of safety management is that all injuries, illnesses, and incidents are preventable. SESI will take every reasonable step to eliminate or control hazards in order to minimize the possibility of injury, illness, or incident.

This HASP prescribes the procedures that must be followed by SESI personnel during activities at the site. Operational changes that could affect the health and safety of personnel, the community, or the environment will not be made without the prior approval of the Project Manager (PM) and the Health and Safety Manager (HSM). This document will be reviewed periodically by the HSM to ensure that it is current and technically correct. Any changes in site conditions and/or the scope of work will require a review and modification to this HASP. Such changes will be completed in the form of an addendum or a revision to the plan.

The provisions of this plan are mandatory for all SESI personnel and are advisory for all contractors, and subcontractors assigned to the project. ***Subcontractors will be responsible for preparing their own site-specific HASPs that meet the basic requirements outlined in this HASP.*** All visitors to SESI work areas at the site must abide by the requirements of this plan.

1.4 REFERENCES

This HASP complies with applicable Occupational Safety and Health Administration (OSHA) regulations, United States Environmental Protection Agency (USEPA) regulations, and SESI health and safety policies and procedures. This plan follows the guidelines established in the following:

- *Standard Operating Safety Guides*, USEPA (Publication 9285.1-03, June 1992).
- *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, NIOSH, OSHA, USCG, USEPA (86116, October 1985).
- *Title 29 of the Code of Federal Regulations* (CFR), Part 1910.
- *Title 29 of the Code of Federal Regulations* (CFR), Part 1926.
- *Pocket Guide to Chemical Hazards*, DHHS, PHS, CDC, NIOSH (2004).
- *Threshold Limit Values*, ACGIH (2005).
- *Guide to Occupational Exposure Values*, ACGIH (2005).
- *Quick Selection Guide to Chemical Protective Clothing*, Forsberg, K. and S.Z. Mansdorf, 2nd Ed. (1993).

1.5 DEFINITIONS

The following definitions (listed alphabetically) are applicable to this HASP:

- *Contamination Reduction Zone (CRZ)* - Area between the exclusion zone and support zone that provides a transition between contaminated and clean areas. Decontamination stations are located in this zone.
- *Exclusion Zone (EZ)* - Any portions of the site where hazardous substances are, or are reasonably suspected to be present, and pose an exposure hazard to on-site personnel.
- *Incident* - All losses, including first aid cases, injuries, illnesses, spills/leaks, equipment and property damage, motor vehicle accidents, regulatory violations, fires, and business interruptions.
- *On-Site Personnel* - All SESI and subcontractors involved with the project.
- *Project* - All on-site work performed under the scope of work.
- *Site* - The area described in Section 1.2, Site and Facility Description, where the work is to be performed by SESI personnel and subcontractors.
- *Support Zone (SZ)* - All areas of the site except the EZ and CRZ. The SZ surrounds the CRZ and EZ. Support equipment and break areas are located in this zone.
- *Subcontractor* - Includes contractor personnel hired by SESI.
- *Visitor* - All other personnel, except the on-site personnel.
- *Work Area* - The portion of the site where work activities are actively being performed. This area may change daily as work progresses and includes the SZ, CRZ, and EZ. If the work area is located in an area on the site that is not contaminated, or suspected of being contaminated, the entire work area may be a SZ.

2.0 PROJECT SCOPE OF WORK

This HASP contains information for the following tasks that SESI is anticipated to conduct at the Site. Should additional and/or different tasks be identified, amendments to this HASP will be required to address these changed items.

- Mobilization/Sample location stakeout;
- Soil Borings and Monitoring Well Installation;
- Excavation of contaminated soil "hot spots";
- Earthwork and grading;
- Chemical sampling of soil and groundwater; and
- Decontamination and demobilization/site restoration.

3.0 ROLES AND RESPONSIBILITIES

3.1 ALL PERSONNEL

All SESI project personnel must adhere to the procedures outlined in this HASP during the performance of their work. Each person is responsible for completing tasks safely and reporting any unsafe acts or conditions to their supervisor. No person may work in a manner that conflicts with these procedures. After due warnings, the PM will dismiss from the site any SESI employee or subcontractor who violates safety procedures.

All SESI project personnel will receive training in accordance with applicable regulations and be familiar with the requirements and procedures contained in this HASP prior to initiating site activities. In addition, all SESI personnel will attend an initial hazard briefing prior to beginning work at the site.

The roles of key safety personnel and subcontractors are outlined in the following sections. Key project personnel and contacts are summarized in **Table 1** on page 7.

3.2 KEY SAFETY PERSONNEL

3.2.1 PROJECT OFFICER (PO)

The PO is responsible for providing resources to assure project activities are completed in accordance with this HASP, and for meeting all regulatory and contractual requirements.

3.2.2 PROJECT MANAGER (PM)

The PM is responsible for verifying that project activities are completed in accordance with the requirements of this HASP. The PM is responsible for confirming that the Field Supervisor (FS) has the equipment, materials, and qualified personnel to fully implement the safety requirements of this HASP, and/or that subcontractors assigned to this project meet the requirements established by SESI. It is also the responsibility of the PM to:

- Consult with the HSM on site health and safety issues;
- Verify that subcontractors meet health and safety requirements prior to commencing work;
- Verify that all incidents are thoroughly investigated;
- Approve, in writing, addenda or modifications of this HASP; and

- Suspend work or modify work practices, as necessary, for personal safety, protection of property, and regulatory compliance.

3.2.3 HEALTH AND SAFETY MANAGER (HSM)

The HSM or his designee, the health and safety manager (HSM), has overall responsibility for the technical health and safety aspects of the project, including review and approval of this HASP. Inquiries regarding health and safety procedures, project procedures, and other technical or regulatory issues should be addressed to this individual. The HSM or his designee must approve changes or addenda to this HASP.

3.2.4 SITE SAFETY OFFICER (SSO)

The SSO is responsible for field health and safety issues, including the execution of this HASP. Questions in the field regarding health and safety procedures, project procedures, and other technical or regulatory issues should be addressed to this individual. The SSO will advise the PM on health and safety issues and will establish and coordinate the project air-monitoring program if one is deemed necessary (see Section 5.1, Air Monitoring). The SSO is the primary site contact on health and safety matters. It is the responsibility of the SSO to:

- Provide on-site technical assistance, if necessary;
- Participate in all accident/incident reports and ensure that they are reported to the HSM, client, and PM within 24 hours;
- Coordinate site and personal air monitoring as required, including equipment maintenance and calibration;
- Conduct site safety orientation training and safety meetings;
- Verify that project personnel have received the required physical examinations and medical certifications;
- Review site activities with respect to compliance with this HASP;
- Maintain required health and safety documents and records; and
- Assist the FS in instructing field personnel on project hazards and protective procedures.

3.2.5 FIELD SUPERVISOR (FS)

The FS is responsible for implementing this HASP, including communicating requirements to on-site personnel and subcontractors. The FS will be responsible for informing the PM of changes in the work plan, procedures, or site conditions so that those changes may be addressed in this HASP. Other responsibilities are to:

- Consult with the SSO on site health and safety issues;
- Stop work, as necessary, for personal safety, protection of property, and regulatory compliance;
- Obtain a site map and determine and post routes to medical facilities and emergency telephone numbers;
- Notify local public emergency representatives (as appropriate) of the nature of the site operations, and post their telephone numbers (i.e., local fire department personnel who would respond for a confined space rescue);
- Observe on-site project personnel for signs of ill health effects;
- Investigate and report any incidents to the SSO;
- Verify that all on-site personnel have had applicable training;

- Verify that on-site personnel are informed of the physical, chemical, and biological hazards associated with the site activities, and the procedures and protective equipment necessary to control the hazards; and
- Issue/obtain any required work permits (hot work, confined space, etc.).

3.2.6 FIELD PERSONNEL (FP)

All SESI field personnel are responsible for following the Health and Safety procedures specified in this HASP and work practices specified in applicable operation procedures. Some specific responsibilities include, but are not limited to:

- Reading and understanding the HASP;
- Reporting all accidents, incidents, injuries, or illnesses to the FS;
- Complying with the requests of the SSO;
- Immediately communicating newly identified hazards or noncompliance issues to the FS or SSO; and
- Stopping work in cases of immediate danger.

3.3 SUBCONTRACTORS

Subcontractors and their personnel must understand and comply with applicable regulations and site requirements established in this HASP. Subcontractors will prepare their own site-specific HASP that must be consistent with the requirements of this HASP.

All subcontractor personnel will receive training in accordance with applicable regulations and be familiar with the requirements and procedures contained in this HASP prior to initiating site activities. All subcontractor personnel will attend an initial hazard briefing prior to beginning work at the site. Additionally, on-site subcontractor personnel must conduct daily site safety meetings.

Subcontractors must designate individuals to function as the PM, HSM, SSO, and FS. In some firms the HSM to be carried out by the PM. This is acceptable provided the PM has the required knowledge, training, and experience to properly address all hazards associated with the work, and to prepare, approve, and oversee the execution of the site-specific HASP. A subcontractor may designate the same person to perform the duties of both the SSO and the FS. However, depending on the level of complexity of a contractor's scope of work, it may be infeasible for one person to perform both functions satisfactorily.

3.4 STOP WORK AUTHORITY

Every SESI employee and subcontractor is empowered, expected, and has the responsibility to stop the work of another co-worker if the working conditions or behaviors are considered unsafe.

3.5 ALL ON-SITE PERSONNEL

All on-site SESI personnel (including SESI subcontractors) must read and acknowledge their understanding of their respective HASPs before commencing work and abide by the requirements of the plans. All on-site SESI personnel shall sign their HASP Acknowledgement Form following their review of their HASP.

All SESI project personnel will receive training in accordance with applicable regulations and be familiar with the requirements and procedures contained in this HASP prior to initiating site activities. In addition, all on-site personnel will attend an initial hazard briefing provided by the SSO prior to beginning work at the site and conduct daily safety meetings thereafter.

On-site personnel will immediately report the following to the FS or SSO:

- Personal injuries and illnesses no matter how minor;
- Unexpected or uncontrolled release of chemical substances;
- Symptoms of chemical exposure;
- Unsafe or hazardous situations;
- Unsafe or malfunctioning equipment;
- Changes in site conditions that may affect the health and safety of project personnel;
- Damage to equipment or property; and
- Situations or activities for which they are not properly trained.

3.6 VISITORS

All SESI personnel and subcontractors visiting the Site must check in with the FS. Visitors will be cautioned to avoid skin contact with surfaces, soils, groundwater, or other materials that may impacted or be suspected to be impacted by constituents of concern (COCs).

Visitors requesting to observe work at the site must don appropriate personal protective equipment (PPE) prior to entry to the work area and must have the appropriate training and medical clearances to do so. If respiratory protective devices are necessary, visitors who wish to enter the work area must have been respirator-trained and fit tested for a respirator within the past 12 months.

Table 1 – Key Safety Personnel

SESI Personnel		
Role	**Name**	**Address/Telephone No.**
Project Officer (PO)	James Vander Vliet	Parsippany, NJ/973-808-9050
Project Manager (PM)	James Vander Vliet	Parsippany, NJ/973-808-9050
Senior Project Engineer (SPE)	James Vander Vliet	Parsippany, NJ/973-808-9050
Health and Safety Manager (HSM)	Justin Protasiewicz	Parsippany, NJ/973-808-9050
Site Safety Officer (SSO)	Chris Malvicini	Parsippany, NJ/973-808-9050
Field Supervisor (FS)	Chris Malvicini	Parsippany, NJ/973-808-9050
Field Personnel	TBD	
Subcontractors		
Company/Role	**Name**	**Address/Telephone No.**
Drilling Subcontractor - TBD	TBD	TBD
Analytical Lab - TBD	TBD	TBD

4.0 PERSONAL PROTECTIVE EQUIPMENT

4.1 LEVELS OF PROTECTION

PPE is required to safeguard site personnel from various hazards. Varying levels of protection may be required depending on the levels of COCs and the degree of physical hazard. This section presents the various levels of protection and defines the conditions of use for each level. A summary of the levels is presented in **Table 2** on page 11.

4.1.1 LEVEL D PROTECTION

The minimum level of protection that will be required of project personnel at the site will be Level D, which will be worn when site conditions or air monitoring indicates no inhalation hazard exists. The following equipment will be used:

- Work clothing as prescribed by weather;
- Steel toe work boots, meeting American National Standards Institute (ANSI) Z41;
- Safety glasses or goggles, meeting ANSI Z87;
- Leather work gloves and/or nitrile surgical gloves;
- Hard hat, meeting ANSI Z89, when falling object hazards are present;
- Hearing protection (if noise levels exceed 85 dBA, then hearing protection with a USEPA NRR of at least 20 dBA must be used); and
- PFD if working on or near the water.

4.1.2 MODIFIED LEVEL D PROTECTION

Modified Level D will be used when airborne contaminants are not present at levels of concern, but site activities present an increased potential for skin contact with contaminated materials. Modified Level D consists of:

- Nitrile gloves worn over nitrile surgical gloves;
- Latex/polyvinyl chloride (PVC) overboots when contact with COC-impacted media is anticipated;
- Steel toe work boots, meeting ANSI Z41;
- Safety glasses or goggles, meeting ANSI Z87;
- Face shield in addition to safety glasses or goggles when projectiles or splash hazards exist (e.g. during Power Washing activities);
- Hard hat, meeting ANSI Z89, when falling object hazards are present;
- Hearing protection (if noise levels exceed 85 dBA, then hearing protection with a USEPA NRR of at least 20 dBA must be used);
- Tyvek® suit (polyethylene coated Tyvek® suits for handling liquids) when body contact with COC-impacted media is anticipated; and
- PFD if working on or near the water.

4.1.3 LEVEL C PROTECTION

Level C protection will be required when the airborne concentration of COC reaches one-half of the OSHA Permissible Exposure Limit or ACGIH TLV. The following equipment will be used for Level C protection:

- Full-face, air-purifying respirator with combination organic vapor/HEPA cartridges;
- Polyethylene-coated Tyvek® suit, with ankles and cuffs taped to boots and gloves;

- Nitrile gloves worn over nitrile surgical gloves;
- Steel toe work boots, meeting ANSI Z41;
- Chemical-resistant boots with steel toes or latex/PVC overboots over steel toe boots;
- Hard hat, meeting ANSI Z89;
- Hearing protection (if noise levels exceed 85 dBA, then hearing protection with a USEPA NRR of at least 20 dBA must be used); and
- PFD if working on or near the water.

4.2 SELECTION OF PPE

Equipment for personal protection will be selected based on the potential for contact, site conditions, ambient air quality, and the judgment of supervising site personnel and health and safety professionals. The PPE used will be chosen to be effective against the COCs present on the site.

4.3 SITE RESPIRATORY PROTECTION PROGRAM

Respiratory protection is an integral part of employee health and safety at the site due to potentially hazardous concentrations of airborne COCs. The site respiratory protection program will consist of the following (as a minimum):

- All on-site personnel who may use respiratory protection will have an assigned respirator.
- All on-site personnel who may use respiratory protection will have been fit tested and trained in the use of a full-face air-purifying respirator within the past 12 months. Documentation of the fit test must be provided to the SSO prior to commencement of work.
- All on-site personnel who may use respiratory protection must within the past year have been medically certified as being capable of wearing a respirator. Documentation of the medical certification must be provided to the SSO, prior to commencement of site work.
- Only cleaned, maintained, NIOSH-approved respirators will be used.
- If respirators are used, the respirator cartridge is to be properly disposed of at the end of each work shift, or when load-up or breakthrough occurs.
- Contact lenses are not to be worn when a respirator is worn.
- All on-site personnel who may use respiratory protection must be clean-shaven. Mustaches and sideburns are permitted, but they must not touch the sealing surface of the respirator.
- Respirators will be inspected, and a negative pressure test performed prior to each use.
- After each use, the respirator will be wiped with a disinfectant, cleansing wipe. When used, the respirator will be thoroughly cleaned at the end of the work shift. The respirator will be stored in a clean plastic bag, away from direct sunlight in a clean, dry location, in a manner that will not distort the face piece.

4.4 USING PPE

Depending upon the level of protection selected, specific donning and doffing procedures may be required. The procedures presented in this section are mandatory if Modified Level D or Level C PPE is used. All personnel entering the EZ must put on the required PPE in

accordance with the requirements of this HASP. When leaving the EZ, PPE will be removed in accordance with the procedures listed, to minimize the spread of COCs.

4.4.1 DONNING PROCEDURES

These procedures are mandatory only if Modified Level D or Level C PPE is used on the site:

- Remove bulky outerwear. Remove street clothes and store in clean location;
- Put on work clothes or coveralls;
- Put on the required chemical protective coveralls;
- Put on the required chemical protective boots or boot covers;
- Tape the legs of the coveralls to the boots with duct tape;
- Put on the required chemical protective gloves;
- Tape the wrists of the protective coveralls to the gloves;
- Don the required respirator and perform appropriate fit check (Level C);
- Put hood or head covering over-head and respirator straps and tape hood to facepiece (Level C); and
- Don remaining PPE, such as safety glasses or goggles and hard hat.

When these procedures are instituted, one person must remain outside the work area to ensure that each person entering has the proper protective equipment.

4.4.2 DOFFING PROCEDURES

The following procedures are only mandatory if Modified Level D or Level C PPE is required for the site. Whenever a person leaves the work area, the following decontamination sequence will be followed:

- Upon entering the CRZ, rinse contaminated materials from the boots or remove contaminated boot covers;
- Clean reusable protective equipment;
- Remove protective garments, equipment, and respirator (Level C). All disposable clothing should be placed in plastic bags, which are labeled with contaminated waste labels;
- Wash hands, face, and neck (or shower if necessary);
- Proceed to clean area and dress in clean clothing; and
- Clean and disinfect respirator for next use.

All disposable equipment, garments, and PPE must be bagged in plastic bags, labeled for disposal. See Section 7, Decontamination, for detailed information on decontamination stations.

4.5 SELECTION MATRIX

The level of personal protection selected will be based on air monitoring of the work environment and an assessment by the FS and SSO of the potential for skin contact with COCs. The PPE selection matrix is presented in **Table 2** below. This matrix is based on information available at the time this plan was written. The Airborne Contaminant Action Levels in **Table 3** on page 12, Airborne Contaminant Action Levels, should be used to verify that the PPE prescribed in these matrices is appropriate.

Table 2 – PPE Selection Matrix

Task	Anticipated Level of Protection
Mobilization	Level D
Subsurface Intrusive Activities (Excavation, Drilling)	Modified Level D/Level C
Earthwork/Grading	Level D
Chemical Sampling / Delineation	Modified Level D/Level C
Decontamination	Modified Level D
Demobilization	Level D

5.0 AIR AND NOISE MONITORING

5.1 AIR MONITORING

Air monitoring, sampling, and testing will be conducted to determine employee exposure to airborne constituents. The monitoring results will dictate work procedures and the selection of PPE. The SESI SSO will be responsible for defining appropriate air monitoring procedures and for utilizing the air monitoring results to determine appropriate procedures and PPE for project personnel. Air monitoring results should be recorded in field notebooks or on an air monitoring log (see Attachment 1 for a copy of the Air Monitoring Log). Any deviations from the procedures listed here should be documented and explained in the Air Monitoring Log.

The monitoring devices to be used are a PDR1000 particulate monitor (or equivalent) and a Rae Systems MultiRAE detector (PID with a 11.7 eV lamp/oxygen/LEL/hydrogen sulfide sensors). Colorimetric detector tubes may be utilized to estimate airborne concentrations of benzene and should be onsite during any activities that may result in elevated PID readings including drilling, excavating, and groundwater sampling.

Air monitoring will be conducted continuously with the LEL/Oxygen meter during drilling in areas where flammable vapors or gases are suspect. All work activity must stop where tests indicate the concentration of flammable vapors exceeds 10% of the LEL at a location with a potential ignition source. Such an area must be ventilated to reduce the concentration to an acceptable level.

5.2 NOISE MONITORING

Noise monitoring may be conducted as required. Hearing protection is mandatory for all employees in noise hazardous areas, such as around heavy equipment. As a general rule, sound levels that cause speech interference at normal conversation distance should require the use of hearing protection.

5.3 MONITORING EQUIPMENT MAINTENANCE AND CALIBRATION

All direct-reading instrumentation calibrations should be conducted under the approximate environmental conditions the instrument will be used. Instruments must be calibrated before and after use, noting the reading(s) and any adjustments that are necessary. All air monitoring equipment calibrations, including the standard used for calibration, must be documented on a calibration log or in the field notebook. All completed health and safety documentation/forms must be reviewed by the SSO and maintained by the FS.

All air monitoring equipment will be maintained and calibrated in accordance with the specific manufacturer's procedures. Preventive maintenance and repairs will be conducted in accordance with the respective manufacturer's procedures. When applicable, only manufacturer-trained and/or authorized personnel will be allowed to perform instrument repairs or preventive maintenance.

If an instrument is found to be inoperative or suspected of giving erroneous readings, the SSO must be responsible for immediately removing the instrument from service and obtaining a replacement unit. If the instrument is essential for safe operation during a specific activity, that activity must cease until an appropriate replacement unit is obtained. The SSO will be responsible for ensuring a replacement unit is obtained and/or repairs are initiated on the defective equipment.

5.4 ACTION LEVELS

Table 3 below presents airborne contaminant action levels that will be used to determine the procedures and protective equipment necessary based on conditions as measured at the site.

Table 3 – Airborne Contaminant Action Levels

Parameter	Reading	Action
Total Hydrocarbons	0 ppm to ≤ 1 ppm	Normal operations; continue hourly breathing zone monitoring
	> 1 ppm to 5 ppm	Increase monitoring frequency to every 15 minutes and use benzene detector tube to screen for the presence of benzene
	≥ 5 ppm to ≤ 50 ppm	Upgrade to Level C PPE; continue screening for benzene
	> 50 ppm	Stop work; investigate cause of reading
	At any reading > 5 ppm	Monitor perimeter per CAMP
Benzene	≥ 1 ppm to 5 ppm	Upgrade to Level C PPE
	> 5 ppm	Stop work; investigate cause of reading
Dust	0 to .05 mg/m3	Normal operations
	0.05 to 0.1 mg/m3	Begin soil wetting procedure (Level C protection would be needed beyond this point)
	> 0.15 mg/m3	Stop work, fully implement dust control plan
Oxygen	≤ 19.5%	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area
	> 19.5% to < 23.5%	Normal operations
	≥ 23.5%	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area
Carbon Monoxide	0 ppm to ≤ 20 ppm	Normal operations
	> 20 ppm	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area
Hydrogen Sulfide	0 ppm to ≤ 5 ppm	Normal operations
	> 5 ppm	Stop work, evacuate confined spaces/work area, investigate cause of reading, and ventilate area

Parameter	Reading	Action
Flammable Vapors (LEL)	< 10% LEL	Normal operations
	≥ 10% LEL	Stop work, ventilate area, investigate source of vapors

6.0 WORK ZONES AND DECONTAMINATION

6.1 WORK ZONES

6.1.1 AUTHORIZATION TO ENTER

Only personnel with the appropriate training and medical certifications (if respirators are required) will be allowed to work at the project site. The FS will maintain a list of authorized persons; only personnel on the authorized persons list will be allowed to enter the site work areas.

6.1.2 SITE ORIENTATION AND HAZARD BRIEFING

No person will be allowed in the work area during site operations without first being given a site orientation and hazard briefing. This orientation will be presented by the FS or SSO and will consist of a review of this HASP. This review must cover the chemical, physical, and biological hazards, protective equipment, safe work procedures, and emergency procedures for the project. Following this initial meeting, daily safety meetings will be held each day before work begins.

All people entering the site work areas, including visitors, must document their attendance at this briefing, as well as the daily safety meetings on the forms included with this plan.

6.1.3 CERTIFICATION DOCUMENTS

A training and medical file may be established for the project and kept on site during all site operations. Specialty training, such as first aid/cardiopulmonary resuscitation (CPR) certificates, as well as current medical clearances for all project field personnel required to wear respirators, will be maintained within that file. All project personnel must provide their training and medical documentation to the SSO prior to starting work.

6.1.4 ENTRY LOG

A log-in/log-out sheet will be maintained at the site by the FS. Personnel must sign in and out on a log sheet as they enter and leave the work area, and the FS may document entry and exit in the field notebook.

6.1.5 ENTRY REQUIREMENTS

In addition to the authorization, hazard briefing, and certification requirements listed above, no person will be allowed in any SESI work area unless they are wearing the minimum PPE as described in Section 4.0.

6.1.6 EMERGENCY ENTRY AND EXIT

People who must enter the work area on an emergency basis will be briefed of the hazards by the FS or SSO. All activities will cease in the event of an emergency. People exiting the work area because of an emergency will gather in a designated safe area for a head count. The FS is responsible for ensuring that all people who entered the work area have exited in the event of an emergency.

6.1.7 CONTAMINATION CONTROL ZONES

Contamination control zones are maintained to prevent the spread of contamination and to prevent unauthorized people from entering hazardous areas.

6.1.8 EXCLUSION ZONE (EZ)

An EZ may consist of a specific work area or may be the entire area of potential contamination. All employees entering an EZ must use the required PPE and must have the appropriate training and medical clearance for hazardous waste work. The EZ is the defined area where there is a possible respiratory and/or contact health hazard. Cones, caution tape, or a posted site diagram will identify the location of each EZ.

6.1.9 CONTAMINATION REDUCTION ZONE

The CRZ or transition area will be established, if necessary, to perform decontamination of personnel and equipment. All personnel entering or leaving the EZ will pass through this area to prevent any cross-contamination. Tools, equipment, and machinery will be decontaminated in a specific location. The decontamination of all personnel will be performed on site adjacent to the EZ. Personal protective outer garments and respiratory protection will be removed in the CRZ and prepared for cleaning or disposal. This zone is the only appropriate corridor between the EZ and the support zone (SZ) discussed below.

6.1.10 SUPPORT ZONE (SZ)

The SZ is a clean area outside the CRZ located to prevent employee exposure to hazardous substances. Eating and drinking will be permitted in the support area only after proper decontamination. Smoking may be permitted in the SZ, subject to site requirements.

6.1.11 POSTING

Work areas will be prominently marked and delineated using cones, caution tape, or a posted site diagram.

6.1.12 SITE INSPECTIONS

The FS will conduct a daily inspection of site activities, equipment, and procedures to verify that the required elements are in place.

6.2 DECONTAMINATION

6.2.1 PERSONNEL DECONTAMINATION

All personnel wearing Modified Level D or Level C protective equipment in the EZ must undergo personal decontamination prior to entering the SZ. The personnel decontamination area will consist of the following stations at a minimum:

- *Station 1*: Personnel leaving the contaminated zone will remove the gross contamination from their outer clothing and boots.
- *Station 2*: Personnel will remove their outer garment and gloves and dispose of it in properly labeled containers. Personnel will then decontaminate their hard hats, and boots with an aqueous solution of detergent or other appropriate cleaning solution. These items are then hand carried to the next station.
- *Station 3*: Personnel will thoroughly wash their hands and face before leaving the CRZ. Respirators will be sanitized and then placed in a clean plastic bag.

6.2.2 EQUIPMENT DECONTAMINATION

All vehicles that have entered the EZ will be decontaminated at the decontamination pad prior to leaving the zone. If the level of vehicle contamination is low, decontamination may be limited to rinsing of tires and wheel wells with water. If the vehicle is significantly contaminated, steam cleaning or pressure washing of vehicles and equipment may be required.

6.2.3 PERSONAL PROTECTIVE EQUIPMENT DECONTAMINATION

Where and whenever possible, single-use, external protective clothing must be used for work within the EZ or CRZ. This protective clothing must be disposed of in properly labeled containers. Reusable protective clothing will be rinsed at the site with detergent and water. The rinsate will be collected for disposal.

When removed from the CRZ, the respirator will be thoroughly cleaned with soap and water. The respirator face piece, straps, valves, and covers must be thoroughly cleaned at the end of each work shift, and ready for use prior to the next shift. Respirator parts may be disinfected with a solution of bleach and water (mixed at 2% bleach by volume), or by using a spray disinfectant

7.0 TRAINING AND MEDICAL SURVEILLANCE

7.1 TRAINING

7.1.1 GENERAL

All on-site project personnel who work in areas where they may be exposed to site contaminants must be trained as required by OSHA Regulation 29 CFR 1910.120 (HAZWOPER). Field employees also must receive a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. Personnel who completed their initial training more than 12 months prior to the start of the project must have completed an eight-hour refresher course within the past 12 months. The FS must have completed an additional eight hours of supervisory training and must have a current first-aid/CPR certificate (See Attachment 2).

7.1.2 BASIC 40-HOUR COURSE

The following is a list of the topics typically covered in a 40-hour HAZWOPER training course:

- General safety procedures;
- Physical hazards (fall protection, noise, heat stress, cold stress);
- Names and job descriptions of key personnel responsible for site health and safety;
- Safety, health, and other hazards typically present at hazardous waste sites;
- Use, application, and limitations of PPE;
- Work practices by which employees can minimize risks from hazards;
- Safe use of engineering controls and equipment on site;
- Medical surveillance requirements;
- Recognition of symptoms and signs which might indicate overexposure to hazards;
- Worker right-to-know (Hazard Communication OSHA 1910.1200);
- Routes of exposure to contaminants;
- Engineering controls and safe work practices;

- Components of a health and safety program and a site-specific HASP;
- Decontamination practices for personnel and equipment;
- Confined-space entry procedures; and
- General emergency response procedures.

7.1.3 SUPERVISOR COURSE

Management and supervisors must receive an additional eight hours of training, which typically includes:

- General site safety and health procedures;
- PPE programs; and
- Air monitoring techniques.

7.1.4 SITE-SPECIFIC TRAINING

Site-specific training will be accomplished by on-site personnel reading this HASP, and through a thorough site briefing by the PM, FS, or SSO on the contents of this HASP before work begins. The review must include a discussion of the chemical, physical, and biological hazards; the protective equipment and safety procedures; and emergency procedures.

7.1.5 DAILY SAFETY MEETINGS

Daily safety meetings will be held to cover the work to be accomplished, the hazards anticipated, the PPE and procedures required to minimize site hazards, and emergency procedures. The FS or SSO should present these meetings prior to beginning the day's fieldwork. No work will be performed in an EZ before a daily safety meeting has been held. An additional safety meeting must also be held prior to new tasks, or if new hazards are encountered. The daily safety meetings will be logged in the field notebook.

7.1.6 FIRST AID AND CPR

At least one employee current in first aid/CPR will be assigned to the work crew and will be on the site during operations. Site records will document the presence of this individual. Refresher training in first aid (triennially) and CPR (annually) is required to keep the certificate current. These individuals must also receive training regarding the precautions and protective equipment necessary to protect against exposure to blood-borne pathogens.

7.2 MEDICAL SURVEILLANCE

7.2.1 MEDICAL EXAMINATION

All personnel who are potentially exposed to site contaminants must participate in a medical surveillance program as defined by OSHA at 29 CFR 1910.120 (f).

7.2.2 PRE-PLACEMENT MEDICAL EXAMINATION

All potentially exposed personnel must have completed a comprehensive medical examination prior to assignment, and periodically thereafter as defined by applicable regulations. The pre-placement and periodic medical examinations typically include the following elements:

- Medical and occupational history questionnaire;
- Physical examination;

- Complete blood count, with differential;
- Liver enzyme profile;
- Chest X-ray, at a frequency determined by the physician;
- Pulmonary function test;
- Audiogram;
- Electrocardiogram for persons older than 45 years of age, or if indicated during the physical examination;
- Drug and alcohol screening, as required by job assignment;
- Visual acuity; and
- Follow-up examinations, at the discretion of the examining physician or the corporate medical director.

The examining physician provides the employee with a letter summarizing his findings and recommendations, confirming the worker's fitness for work and ability to wear a respirator. Documentation of medical clearance will be available for each employee during all project site work.

Subcontractors will certify that all their employees have successfully completed a physical examination by a qualified physician. The physical examinations must meet the requirements of 29 CFR 1910.120 and 29 CFR 1910.134. Subcontractors will supply copies of the medical examination certificate for each on-site employee.

7.2.3 OTHER MEDICAL EXAMINATIONS

In addition to pre-employment, annual, and exit physicals, personnel may be examined:

- At employee request after known or suspected exposure to toxic or hazardous materials; and
- At the discretion of the SSO, HSM, or occupational physician in anticipation of, or after known or suspected exposure to toxic or hazardous materials.

7.2.4 PERIODIC EXAM

Following the placement examination, all employees must undergo a periodic examination, similar in scope to the placement examination. For employees potentially exposed over 30 days per year, the frequency of periodic examinations will be annual. For employees potentially exposed less than 30 days per year, the frequency for periodic examinations will be 24 months.

7.2.5 MEDICAL RESTRICTION

When the examining physician identifies a need to restrict work activity, the employee's supervisor must communicate the restriction to the employee and the SSO. The terms of the restriction will be discussed with the employee and the supervisor.

8.0 GENERAL SAFETY PRACTICES

8.1 GENERAL SAFETY RULES

General safety rules for site activities include, but are not limited to, the following:

- At least one copy of this HASP must be in a location at the site that is readily available to personnel, and all project personnel shall review the plan prior to starting work.
- Consume or use food, beverages, chewing gum, and tobacco products only in the SZ or other designated area outside the EZ and CRZ. Cosmetics shall not be applied in the EZ or CRZ.
- Wash hands before eating, drinking, smoking, or using toilet facilities.
- Wear all PPE as required and stop work and replace damaged PPE immediately.
- Secure disposable coveralls, boots, and gloves at the wrists and legs and ensure closure of the suit around the neck.
- Upon skin contact with materials that may be impacted by COCs, remove contaminated clothing and wash the affected area immediately. Contaminated clothing must be changed. Any skin contact with materials potentially impacted by COCs must be reported to the FS or SSO immediately. If needed, medical attention should be sought.
- Practice contamination avoidance. Avoid contact with surfaces either suspected or known to be impacted by COCs, such as standing water, mud, or discolored soil. Equipment must be stored on elevated or protected surfaces to reduce the potential for incidental contamination.
- Remove PPE as required in the CRZ to limit the spread of COC-containing materials.
- At the end of each shift or as required, dispose of all single-use coveralls, soiled gloves, and respirator cartridges in designated receptacles designated for this purpose.
- Removing soil containing site COCs from protective clothing or equipment with compressed air, shaking, or any other means that disperses contaminants into the air is prohibited.
- Inspect all non-disposable PPE for contamination in the CRZ. Any PPE found to be contaminated must be decontaminated or disposed of appropriately.
- Recognize emergency signals used for evacuation, injury, fire, etc.
- Report all injuries, illnesses, and unsafe conditions or work practices to the FS or SSO.
- Use the “buddy system” during all operations requiring Level C PPE, and when appropriate, during Modified Level D operations.
- Obey all warning signs, tags, and barriers. Do not remove any warnings unless authorized to do so.
- Use, adjust, alter, and repair equipment only if trained and authorized to do so, and in accordance with the manufacturer’s directions.
- Personnel are to perform only tasks for which they have been properly trained and will advise their supervisor if they have been assigned a task for which they are not trained.
- The presence or consumption of alcoholic beverages or illicit drugs during the workday, including breaks, is strictly prohibited. Notify your supervisor if you must take prescription or over-the-counter drugs that indicate they may cause drowsiness or, that you should not operate heavy equipment.
- Remain upwind during site activities whenever possible.

8.2 BUDDY SYSTEM

On-site personnel must use the buddy system as required by operations. Use of the "buddy system" is required during all operations requiring Level C to Level A PPE, and when appropriate, during Level D operations. Crewmembers must observe each other for signs of chemical exposure, and heat or cold stress. Indications of adverse effects include, but are not limited to:

- Changes in complexion and skin coloration;
- Changes in coordination;
- Changes in demeanor;
- Excessive salivation and pupillary response; and
- Changes in speech pattern.

Crewmembers must also be aware of the potential exposure to possible safety hazards, unsafe acts, or non-compliance with safety procedures.

Field personnel must inform their partners or fellow crewmembers of non-visible effects of exposure to toxic materials that they may be experiencing. The symptoms of such exposure may include, but are not limited to:

- Headaches;
- Dizziness;
- Nausea;
- Blurred vision;
- Cramps; and
- Irritation of eyes, skin, or respiratory tract.

If protective equipment or noise levels impair communications, prearranged hand signals must be used for communication. Personnel must stay within line of sight of another team member.

8.3 HEAT STRESS

Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, etc., as well as the physical and conditioning characteristics of the individual. Since heat stress is one of the most common illnesses associated with heavy outdoor work conducted with direct solar load and, in particular, because wearing PPE can increase the risk of developing heat stress, workers must be capable of recognizing the signs and symptoms of heat-related illnesses. Personnel must be aware of the types and causes of heat-related illnesses and be able to recognize the signs and symptoms of these illnesses in both themselves and their co-workers.

Heat rashes are one of the most common problems in hot work environments. Commonly known as prickly heat, a heat rash is manifested as red papules and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

Heat cramps are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused both by too much or too little salt.

Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution (plus or minus 0.3% NaCl), excess salt can build up in the body if the water lost through sweating is not replaced. Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments.

Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Drinking commercially available carbohydrate electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

Heat exhaustion occurs from increased stress on various body organs due to inadequate blood circulation, cardiovascular insufficiency, or dehydration. Signs and symptoms include pale, cool, moist skin; heavy sweating; dizziness; nausea; headache, vertigo, weakness, thirst, and giddiness. Fortunately, this condition responds readily to prompt treatment.

Heat exhaustion should not be dismissed lightly, however, for several reasons. One is that the fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, which is a medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment, be given fluid replacement, and be encouraged to get adequate rest.

Heat stroke is the most serious form of heat stress. Heat stroke occurs when the body's system of temperature regulation fails and the body's temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of 41°C (105.8°F). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of workload and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.

If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment.

Regardless of the worker's protestations, no employee suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or exhaustion, that person may be predisposed to additional heat injuries.

8.4 HEAT STRESS SAFETY PRECAUTIONS

Heat stress monitoring and work rest cycle implementation should commence when the ambient adjusted temperature exceeds 72°F. A minimum work rest regimen and procedures for calculating ambient adjusted temperature are described in **Table 4** below.

Table 4 – Work/Rest Schedule

Adjusted Temperature[b]	Work/Rest Regimen Normal Work Ensemble[c]	Work/Rest Regimen Impermeable Ensemble
90ºF (32.2ºC) or above	After each 45 minutes of work	After each 15 minutes of work
87.5º - 90ºF (30.8º-32.2ºC)	After each 60 minutes of work	After each 30 minutes of work
82.5º - 87.5ºF (28.1º - 30.8ºC)	After each 90 minutes of work	After each 60 minutes of work
77.5º - 82.5ºF (25.3º - 28.1ºC)	After each 120 minutes of work	After each 90 minutes of work
72.5º - 77.5ºF (30.8º - 32.2ºC)	After each 150 minutes of work	After each 120 minutes of work

a. For work levels of 250 kilocalories/hour (Light-Moderate Type of Work)
b. Calculate the adjusted air temperature (ta adj) by using this equation: ta adj °F = ta °F + (13 x % sunshine). Measure air temperature (ta) with a standard mercury-in-glass thermometer, with the bulb shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow. (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows.)
c. A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.
d. The information presented above was generated using the information provided in the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) Handbook.

In order to determine if the work rest cycles are adequate for the personnel and specific site conditions, additional monitoring of individual heart rates will be conducted during the rest cycle. To check the heart rate, count the radial pulse for 30 seconds at the beginning of the rest period. If the heart rate exceeds 110 beats per minute, shorten the next work period by one third and maintain the same rest period.
Additionally, one or more of the following control measures can be used to help control heat stress and are mandatory if any site worker has a heart rate (measure immediately prior to rest period) exceeding 115 beats per minute:

- Site workers will be encouraged to drink plenty of water and electrolyte replacement fluids throughout the day.
- On-site drinking water will be kept cool (50 to 60°F).
- A work regimen that will provide adequate rest periods for cooling down will be established, as required.
- All personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion, and heat cramps.
- Cooling devices, such as vortex tubes or cooling vests, should be used when personnel must wear impermeable clothing in conditions of extreme heat.
- Employees should be instructed to monitor themselves and co-workers for signs of heat stress and to take additional breaks as necessary.
- A shaded rest area must be provided. All breaks should take place in the shaded rest area.

- Employees must not be assigned to other tasks during breaks.
- Employees must remove impermeable garments during rest periods. This includes white Tyvek-type garments.

All employees must be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress disorders.

8.5 COLD STRESS

Cold stress normally occurs in temperatures at or below freezing, or under certain circumstances, in temperatures of 40°F. Extreme cold for a short time may cause severe injury to exposed body surfaces or result in profound generalized cooling, causing death. Areas of the body that have high surface area-to-volume ratio, such as fingers, toes, and ears, are the most susceptible. Two factors influence the development of a cold weather injury: ambient temperature and the velocity of the wind. For instance, 10°F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at 18°F. An equivalent chill temperature chart relating the actual dry bulb temperature and wind velocity is presented in **Table 5** below.

Table 5 – Wind Chill Temperature Chart

Estimated Wind Speed (in mph)	**Actual Temperature Reading (ºF)**											
	50	**40**	**30**	**20**	**10**	**0**	**-10**	**-20**	**-30**	**-40**	**-50**	**-60**
	Equivalent Chill Temperature (ºF)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect.)	**LITTLE DANGER Maximum danger of false sense of security.**				**INCREASING DANGER Danger from freezing of exposed flesh within one minute.**			**GREAT DANGER Flesh may freeze within 30 seconds.**				
	Trench foot and immersion foot may occur at any point on this chart.											

[This chart was developed by the U.S. Army Research Institute of Environmental Medicine, Natick, MA (Source: ACGIH Threshold Limit Values for Chemical Substances and Physical Agents)].

Local injury resulting from cold is included in the generic term frostbite. There are several degrees of tissue damage associated with frostbite. Frostbite of the extremities can be categorized into:

- *Frost Nip or Incipient Frostbite* - characterized by sudden blanching or whitening of skin.
- *Superficial Frostbite* - skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- *Deep Frostbite* - tissues are cold, pale, and solid; extremely serious injury.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature. It can be fatal. Its symptoms are usually exhibited in five stages: 1) shivering; 2) apathy,

listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95°F; 3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; 4) freezing of the extremities; and 5) death. Trauma sustained in freezing or sub-zero conditions requires special attention because an injured worker is predisposed to secondary cold injury. Special provisions must be made to prevent hypothermia and secondary freezing of damaged tissues in addition to providing for first aid treatment. To avoid cold stress, site personnel must wear protective clothing appropriate for the level of cold and physical activity. In addition to protective clothing, preventive safe work practices, additional training, and warming regimens may be utilized to prevent cold stress.

8.6 SAFETY PRECAUTIONS FOR COLD STRESS PREVENTION

For air temperature of 0°F or less, mittens should be used to protect the hands. For exposed skin, continuous exposure should not be permitted when air speed and temperature results in a wind chill temperature of -25°F.

At air temperatures of 36°F or less, field personnel who become immersed in water or whose clothing becomes wet must be immediately provided with a change of clothing and be treated for hypothermia.

If work is done at normal temperature or in a hot environment before entering the cold, the field personnel must ensure that their clothing is not wet as a consequence of sweating. Wet field personnel must change into dry clothes prior to entering the cold area.

If the available clothing does not give adequate protection to prevent hypothermia or frostbite, work must be modified or suspended until adequate clothing is made available or until weather conditions improve.

Field personnel handling evaporative liquid (e.g., gasoline, alcohol, or cleaning fluids) at air temperatures below 40°F must take special precaution to avoid soaking of clothing or gloves with the liquids because of the added danger of cold injury due to evaporative cooling.

8.7 SAFE WORK PRACTICES

Direct contact between bare skin and cold surfaces (< 20°F) should be avoided. Metal tool handles and/or equipment controls should be covered by thermal insulating material.

For work performed in a wind chill temperature at or below 10°F, workers should be under constant protective observation (buddy system). The work rate should be established to prevent heavy sweating that will result in wet clothing. For heavy work, rest periods must be taken in heated shelters and workers should be provided with an opportunity to change into dry clothing if needed.

Field personnel should be provided the opportunity to become accustomed to cold-weather working conditions and required protective clothing. Work should be arranged in such a way that sitting or standing still for long periods is minimized.

During the warming regimen (rest period), field personnel should be encouraged to remove outer clothing to permit sweat evaporation or to change into dry work clothing. Dehydration, or loss of body fluids, occurs insidiously in the cold environment and may increase susceptibility to cold injury due to a significant change in blood flow to the extremities. Fluid

replacement with warm, sweet drinks and soups is recommended. The intake of coffee should be limited because of diuretic and circulatory effects.

8.8 BIOLOGICAL HAZARDS

Biological hazards may include poison ivy, snakes, thorny bushes and trees, ticks, mosquitoes, spiders, and other pests.

8.8.1 TICK BORNE DISEASES

Lyme Disease - The disease commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, New Jersey, Pennsylvania, Massachusetts, Connecticut, Rhode Island, Minnesota, and Wisconsin.

Erlichiosis - The disease also commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, Massachusetts, Connecticut, Rhode Island, Minnesota, and Wisconsin.

These diseases are transmitted primarily by the deer tick, which is smaller and redder than the common wood tick. The disease may be transmitted by immature ticks, which are small and hard to see. The tick may be as small as a period on this page.

Symptoms of Lyme disease include a rash or a peculiar red spot, like a bull's eye, which expands outward in a circular manner. The victim may have headache, weakness, fever, a stiff neck, and swelling and pain in the joints, and eventually, arthritis. Symptoms of erlichiosis include muscle and joint aches, flu-like symptoms, but there is typically no skin rash.

Rocky Mountain Spotted Fever (RMSF) - This disease is transmitted via the bite of an infected tick. The tick must be attached 4 to 6 hours before the disease-causing organism (Rickettsia rickettsii) becomes reactivated and can infect humans. The primary symptom of RMSF is the sudden appearance of a moderate-to-high fever. The fever may persist for two to three weeks. The victim may also have a headache, deep muscle pain, and chills. A rash appears on the hands and feet on about the third day and eventually spreads to all parts of the body. For this reason, RMSF may be confused with measles or meningitis. The disease may cause death, if untreated, but if identified and treated promptly, death is uncommon.

Control - Tick repellant containing diethyltoluamide (DEET) should be used when working in tick-infested areas, and pant legs should be tucked into boots. In addition, workers should search the entire body every three or four hours for attached ticks. Ticks should be removed promptly and carefully without crushing, since crushing can squeeze the disease-causing organism into the skin. A gentle and steady pulling action should be used to avoid leaving the head or mouth parts in the skin. Hands should be protected with surgical gloves when removing ticks.

8.8.2 POISONOUS PLANTS

Poisonous plants may be present in the work area. Personnel should be alerted to its presence and instructed on methods to prevent exposure.

Control - The main control is to avoid contact with the plant, cover arms and hands, and frequently wash potentially exposed skin. Particular attention must be given to avoiding

skin contact with objects or protective clothing that have touched the plants. Treat every surface that may have touched the plant as contaminated, and practice contamination avoidance. If skin contact is made, the area should be washed immediately with soap and water and observed for signs of reddening.

8.8.3 SNAKES

The possibility of encountering snakes exists, specifically for personnel working in wooded/vegetated areas. Snake venoms are complex and include proteins, some of which have enzymatic activity. The effects produced by venoms include neurotoxic effects with sensory, motor, cardiac, and respiratory difficulties; cytotoxic effects on red blood cells, blood vessels, heart muscle, kidneys, and lungs; defects in coagulation; and effects from local release of substances by enzymatic actions. Other noticeable effects of venomous snakebites include swelling, edema, and pain around the bite, and the development of ecchymosis (the escape of blood into tissues from ruptured blood vessels).

Control - To minimize the threat of snakebites, all personnel walking through vegetated areas must be aware of the potential for encountering snakes, and the need to avoid actions potentiating encounters, such as turning over logs, etc. If a snakebite occurs, an attempt should be made to safely identify the snake via size and markings. The victim must be transported to the nearest hospital within 30 minutes; first aid consists of applying a constriction band and washing the area around the wound to remove any unabsorbed venom.

8.8.4 SPIDERS

Personnel may encounter spiders during work activities.
Two spiders are of concern, the black widow and the brown recluse. Both prefer dark sheltered areas such as basements, equipment sheds and enclosures, and around woodpiles or other scattered debris. The black widow is shiny black, approximately one inch long, and found throughout the United States. There is a distinctive red hourglass marking on the underside of the black widows body. The bite of a black widow is seldom fatal to healthy adults, but effects include respiratory distress, nausea, vomiting, and muscle spasms. The brown recluse is smaller than the black widow and gets its name from its brown coloring and behavior. The brown recluse is more prevalent in the southern United States. The brown recluse has a distinctive violin shape on the top of its body. The bite of the brown recluse is painful and the bite site ulcerates and takes many weeks to heal completely.

Control - To minimize the threat of spider bites, all personnel walking through vegetated areas must be aware of the potential for encountering these arachnids. Personnel need to avoid actions that may result in encounters, such as turning over logs, and placing hands in dark places such as behind equipment or in corners of equipment sheds or enclosures. If a spider bite occurs, the victim must be transported to the nearest hospital as soon as possible; first aid consists of applying ice packs and washing the area around the wound to remove any unabsorbed venom.

8.9 NOISE

Exposure to noise over the OSHA action level can cause temporary impairment of hearing; prolonged and repeated exposure can cause permanent damage to hearing. The risk and severity of hearing loss increases with the intensity and duration of exposure to noise. In

addition to damaging hearing, noise can impair voice communication, thereby increasing the risk of accidents on site.

Control - All personnel must wear hearing protection, with a Noise Reduction Rating (NRR) of at least 20, when noise levels exceed 85 dBA. When it is difficult to hear a co-worker at normal conversation distance, the noise level is approaching or exceeding 85 dBA, and hearing protection is necessary. All site personnel who may be exposed to noise must also receive baseline and annual audiograms and training as to the causes and prevention of hearing loss. Noise monitoring is discussed in Section 5.2, Noise Monitoring.

Whenever possible, equipment that does not generate excessive noise levels will be selected for this project. If the use of noisy equipment is unavoidable, barriers or increased distance will be used to minimize worker exposure to noise, if feasible.

8.10 SPILL CONTROL

All personnel must take every precaution to minimize the potential for spills during site operations. All on-site personnel shall immediately report any discharge, no matter how small, to the FS.

Spill control equipment and materials will be located on the site at locations that present the potential for discharge. All sorbent materials used for the cleanup of spills will be containerized and labeled appropriately. In the event of a spill, the FS will follow the provisions in Section 10.0, Emergency Procedures, to contain and control released materials and to prevent their spread to off-site areas.

8.11 SANITATION

Site sanitation will be maintained according to OSHA requirements.

8.11.1 BREAK AREA

Breaks must be taken in the SZ, away from the active work area after site personnel go through decontamination procedures. There will be no smoking, eating, drinking, or chewing gum or tobacco in any area other than the SZ.

8.11.2 POTABLE WATER

The following rules apply to all field operations:

- An adequate supply of potable water will be provided at each project site. Potable water must be kept away from hazardous materials or media, and contaminated clothing or equipment.
- Portable containers used to dispense drinking water must be capable of being tightly closed and must be equipped with a tap dispenser. Water must not be consumed directly from the container (drinking from the tap is prohibited) nor may it be removed from the container by dipping.
- Containers used for drinking water must be clearly marked and shall not be used for any other purpose.
- Disposable drinking cups must be provided. A sanitary container for dispensing cups and a receptacle for disposing of used cups is required.

8.11.3 SANITARY FACILITIES

Access to facilities for washing before eating, drinking, or smoking, or alternate methods such as waterless hand-cleaner and paper towels will be provided.

8.11.4 LAVATORY

If permanent toilet facilities are not available, an appropriate number of portable chemical toilets will be provided. This requirement does not apply to mobile crews or to normally unattended site locations so long as employees at these locations have transportation immediately available to nearby toilet facilities.

8.12 EMERGENCY EQUIPMENT

Adequate emergency equipment for the activities being conducted on site and as required by applicable sections of 29 CFR 1910 and 29 CFR 1926 will be on site prior to the commencement of project activities. Personnel will be provided with access to emergency equipment, including, but not limited to, the following:

- Fire extinguishers of adequate size, class, number, and location as required by applicable sections of 29 CFR 1910 and 1926;
- Industrial first aid kits of adequate size for the number of personnel on site; and
- Emergency eyewash and/or shower if required by operations being conducted on site.

8.13 LOCKOUT/TAGOUT PROCEDURES

Only fully qualified and trained personnel will perform maintenance procedures. Before maintenance begins, lockout/tagout procedures per OSHA 29 CFR 1910.147 will be followed.

Lockout is the placement of a device that uses a positive means, such as lock, to hold an energy or material-isolating device such that the equipment cannot be operated until the lockout device is removed. If a device cannot be locked out, a tagout system shall be used. Tagout is the placement of a warning tag on an energy or material isolating device indicating that the equipment controls may not be operated until the personnel who attached the tag remove the tag.

8.14 ELECTRICAL SAFETY

Electricity may pose a particular hazard to site workers due to the use of portable electrical equipment. If wiring or other electrical work is needed, a qualified electrician must perform it.

General electrical safety requirements include:

- All electrical wiring and equipment must be a type listed by Underwriters Laboratories (UL), Factory Mutual Engineering Corporation (FM), or other recognized testing or listing agency.
- All installations must comply with the National Electrical Safety Code (NESC), the National Electrical Code (NEC), or USCG regulations.
- Portable and semi-portable tools and equipment must be grounded by a multi-conductor cord having an identified grounding conductor and a multi-contact polarized plug-in receptacle.

- Tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Double insulated tools must be distinctly marked and listed by UL or FM.
- Live parts of wiring or equipment must be guarded to prevent persons or objects from touching them.
- Electric wire or flexible cord passing through work areas must be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching.
- All circuits must be protected from overload.
- Temporary power lines, switchboxes, receptacle boxes, metal cabinets, and enclosures around equipment must be marked to indicate the maximum operating voltage.
- Plugs and receptacles must be kept out of water unless of an approved submersible construction.
- All extension cord outlets must be equipped with ground fault circuit interrupters (GFCI).
- Attachment plugs or other connectors must be equipped with a cord grip and be constructed to endure rough treatment.
- Extension cords or cables must be inspected prior to each use and replaced if worn or damaged. Cords and cables must not be fastened with staples, hung from nails, or suspended by bare wire.
- Flexible cords must be used only in continuous lengths without splice, with the exception of molded or vulcanized splices made by a qualified electrician.

8.15 LIFTING SAFETY

Using proper lifting techniques may prevent back strain or injury. The fundamentals of proper lifting include:

- Consider the size, shape, and weight of the object to be lifted. A mechanical lifting device or additional persons must be used to lift an object if it cannot be lifted safely alone.
- The hands and the object should be free of dirt or grease that could prevent a firm grip.
- Gloves must be used, and the object inspected for metal slivers, jagged edges, burrs, or rough or slippery surfaces.
- Fingers must be kept away from points that could crush or pinch them, especially when putting an object down.
- Feet must be placed far enough apart for balance. The footing should be solid and the intended pathway should be clear.
- The load should be kept as low as possible, close to the body with the knees bent.
- To lift the load, grip firmly and lift with the legs, keeping the back as straight as possible.
- A worker should not carry a load that he or she cannot see around or over.
- When putting an object down, the stance and position are identical to that for lifting; the legs are bent at the knees, and the back is straight as the object is lowered.

8.16 LADDER SAFETY

When portable ladders are used for access to an upper landing surface, the ladder side rails shall extend at least 3 feet (9 m) above the upper landing surface to which the ladder is

used to gain access; or, when such an extension is not possible because of the ladder's length, then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grabrail, shall be provided to assist employees in mounting and dismounting the ladder. In no case shall the extension be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support.

- Ladders shall be maintained free of oil, grease, and other slipping hazards.
- Ladders shall not be loaded beyond the maximum intended load for which they were built, or beyond their manufacturer's rated capacity.
- Ladders shall be used only for the purpose for which they were designed.
- Non-self-supporting ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).
- Wood job-made ladders with spliced side rails shall be used at an angle such that the horizontal distance is one-eighth the working length of the ladder.
- Fixed ladders shall be used at a pitch no greater than 90 degrees from the horizontal, as measured to the back side of the ladder.
- Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement.
- Ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement. Slip-resistant feet shall not be used as a substitute for care in placing, lashing, or holding a ladder that is used upon slippery surfaces, including, but not limited to, flat metal or concrete surfaces that are constructed so they cannot be prevented from becoming slippery.
- Ladders placed in any location where they can be displaced by workplace activities or traffic, such as in passageways, doorways, or driveways, shall be secured to prevent accidental displacement, or a barricade shall be used to keep the activities or traffic away from the ladder.
- The area around the top and bottom of ladders shall be kept clear.
- The top of a non-self-supporting ladder shall be placed with the two rails supported equally unless it is equipped with a single support attachment.
- Ladders shall not be moved, shifted, or extended while occupied.
- Ladders shall have non-conductive side rails if they are used where the employee or the ladder could contact exposed energized electrical equipment.
- The top, top step, or the step labeled that it or any step above it should not be used as a step.
- Cross-bracing on the rear section of stepladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.
- Ladders shall be inspected by the HSM for visible defects on a daily basis and after any occurrence that could affect their safe use.
- Portable ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps; broken or split rails; corroded components; or other faulty or defective components shall either be immediately marked in a manner that readily identifies them as defective or be tagged with "Do Not Use" or similar language and shall be withdrawn from service.

- Fixed ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps; broken or split rails; or corroded components; shall be withdrawn from service.
- Ladder repairs shall restore the ladder to a condition meeting its original design criteria, before the ladder is returned to use.
- Single-rail ladders shall not be used.
- When ascending or descending a ladder, the user shall face the ladder.
- Each employee shall use at least one hand to grasp the ladder when progressing up and/or down the ladder.
- An employee shall not carry any object or load that could cause the employee to lose balance and fall.

8.17 TRAFFIC SAFETY

The project site may be located adjacent to a public roadway where exposure to vehicular traffic is likely. Traffic may also be encountered as vehicles enter and exit the area. To minimize the likelihood of project personnel and activities being affected by traffic, the following procedures will be implemented.

Cones must be placed along the shoulder of the roadway starting 100 feet from the work area to alert passing motorists to the presence of personnel and equipment. A “Slow” or “Men Working” sign must be placed at the first cone. Barricades with flashing lights should be placed between the roadway and the work area.
During activities along a roadway, equipment will be aligned parallel to the roadway to the extent feasible, facing into the oncoming traffic so as to place a barrier between the work crew and the oncoming traffic. All crewmembers must remain behind the equipment and the traffic barrier.

All site personnel who are potentially exposed to vehicular traffic must wear an outer layer of orange warning garments, such as vests, jackets, or shirts. If work is performed in hours of dusk or darkness, workers will be outfitted with reflective garments either orange, white (including silver-coated reflective coatings or elements that reflect white light), yellow, fluorescent red-orange, or fluorescent yellow-orange.

The flow of traffic into and out of the adjacent business must be assessed, and precautions taken to warn motorists of the presence of workers and equipment. Where possible, vehicles should be aligned to provide physical protection of people and equipment.

9.0 SITE-SPECIFIC HAZARDS AND CONTROL MEASURES

9.1 EVALUATION OF HAZARDS

The evaluation of hazards is provided as a quick reference as to the known conditions for the Site, wherein the level of detail for each of the subsections is identified.

9.1.1 HAZARD CHARACTERISTICS

Existing information for Site:
__X__ Detailed _____ Preliminary _____ None

Hazardous/Contaminated Material Form(s):

__X__ Solid __X__ Liquid _____Sludge ___Gas X Vapor

Containment Type(s):
_____ Drum __X__ Tank _____ Pit _____ Debris
_____ Pond _____Lagoon Other:

Hazardous Material Characteristics:
__X__ Volatile _____ Corrosive _____ Reactive _____ Radioactive
_____ Ignitable __X__ Toxic _____ Unknown

Routes of Exposure:
__X__ Oral __X__ Dermal __X__ Eye __X__ Respiratory

9.1.2 POTENTIAL HEALTH AND SAFETY HAZARDS

__X__ Heat
__X__ Cold
_____ Confined space entry
_____ Oxygen depletion
_____ Asphyxiation
__X__ Excavation
__X__ Cave-ins
__X__ Falls, slippage
__X__ Heavy equipment
_____ Other: Potential Ignition Hazard.

_____Congested areas
__X__ General Construction
__X__ Physical injury
__X__ Electrical hazards
__X__ Handling and product transfer
__X__ Fire
__X__ Explosion
__X__ Biological Hazards
__X__ Plants – Poison Ivy, Poison Oak
__X__ Insects – Ticks
__X__ Insects – Mosquitoes
__X__ Insects – Bees and Wasps
__X__ Rats and Mice
_____ Non-ionizing Radiation (i.e. UV, IR, etc.)

9.2 FIELD ACTIVITIES, HAZARDS, AND CONTROL PROCEDURES

The following task-specific safety analyses identify potential health, safety, and environmental hazards associated with each type of field activity. Because of the complex and changing nature of field projects, supervisors must continually inspect the site to identify hazards that may affect on-site personnel, the community, or the environment. The FS must be aware of these changing conditions and discuss them with the PM whenever these changes impact employee health, safety, the environment, or performance of the project. The FS will keep on-site personnel informed of the changing conditions, and the PM will write and/or approve addenda or revisions to this HASP as necessary.

9.2.1 MOBILIZATION/CONSTRUCTION STAKEOUT

Description of Tasks

Site mobilization will include establishing excavation locations, determining the location of utilities and other installations, and establishing work areas. Mobilization will also include setting up equipment and establishing a temporary site office. A break area will be set up outside of regulated work areas. Mobilization may involve clearing areas for the SZ and CRZ. During this initial phase, project personnel will walk the site to confirm the existence

of anticipated hazards and identify safety and health issues that may have arisen since the writing of this plan.

Hazard Identification
The hazards of this phase of activity are associated with heavy equipment operation, manual materials handling, installation of temporary on-site facilities, and manual site preparation.

Manual materials handling and manual site preparation may cause blisters, sore muscles, and joint and skeletal injuries; and may present eye, contusion, and laceration hazards. Installation of temporary field office and support facilities may expose personnel to electrical hazards, underground and overhead utilities, and physical injury due to the manual lifting and moving of materials. The work area presents slip, trip, and fall hazards from scattered debris and irregular walking surfaces. Rainy weather may cause wet, muddy, slick walking surfaces, and unstable soil. Freezing weather hazards include frozen, slick, and irregular walking surfaces.

Environmental hazards include plants, such as poison ivy and poison oak; aggressive fauna, such as ticks, fleas, mosquitoes, wasps, spiders, and snakes; weather, such as sunburn, lightning, rain, and heat- or cold-related illnesses; and pathogens, such as rabies, Lyme disease, and blood-borne pathogens.

Controls
Control procedures for these hazards are discussed in Section 8.0, General Safety Practices.

9.2.2 DEMOLITION/SITE CLEARING

Description of Tasks
Site clearance will involve manual or mechanical removal of objects impeding access to the construction footprint. These obstructions are both natural and man-made items and will include, but not be limited to, fabricated metal and concrete structures, trees, vegetation, rubble, and miscellaneous trash/debris.

Hazard Identification
Hazards associated with demolition and site clearance include personnel working in and around potentially unstable structures, or locations of potential contact with hazardous chemicals, utilities, and/or falling objects. This task will involve manual, as well as mechanical demolition/clearance efforts so exertion and equipment hazards exist.

Controls
PPE – Personnel shall be protected from hazards of irritant and toxic plants and suitably instructed in the first aid treatment available.

Preparatory Operations – Prior to permitting employees to start demolition operations, an engineering survey shall be made, by a licensed Professional Engineer, of the structure to determine the stability of the structure. Any adjacent structure shall where personnel may be exposed shall also be similarly checked. The PO shall have in writing evidence that such a survey has been performed. All structural instabilities shall be shored or braced, under the supervision of a licensed Professional Engineer, prior to access by an FP.

Utilities – All electric, gas, water, steam, sewer, and other service lines shall be shut off, caped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company that is involved shall be notified in advance. If it is necessary to maintain any power, water or other utilities during demolition, such lines shall be temporarily relocated, as necessary.

Hazardous Substances – It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.

Falling Debris/Objects – No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effective protected. Access to the area where falling objects/debris may be encountered must be gated and controlled.

Structural Collapse – Structural or load supporting members on any floor shall not be cut or removed until all stories above such a floor have been demolished and removed. Walls, which are to serve as retaining walls against which debris will be piled, shall not be so used unless capable of safely supporting the imposed load. Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are not of sufficient strength to support the imposed load.

Rollover Guards – All equipment used in site clearing operations shall be equipped with rollover guards meeting the applicable requirements. In addition, rider-operated equipment shall be equipped with an overhead and rear canopy guard meeting the applicable requirements.

Inspections – During demolition, continuing inspections by a licensed Professional Engineer shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, walls, or loosened material. No FP shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

9.2.3 EXCAVATION AND CUT/FILL OPERATIONS

9.2.3.1 EXCAVATION/TRENCHING

Description of Tasks

This task includes the excavation of contaminated soils and superficial debris. Excavation depths vary across the site.

Hazard Identification

The hazards of this activity are associated with heavy equipment operation, subsurface intrusion, manual materials handling, stockpiling, and disposal. Subsurface intrusion presents hazards associated with negotiating buried utilities, cave-ins of the excavated areas, and regress methods for personnel working inside the excavated areas. Disruption of contaminated soil also presents a health hazard.

Controls

Underground Utilities – The estimated locations of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably

may be expected to be encountered during the excavation work, shall be determined prior to opening an excavation. Utility companies or owners shall be contacted ("Call Before You Dig") within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation.

When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by save and acceptable means. While the excavation is open, underground installations shall be protected, supported, or removed, as necessary, to safeguard site personnel.

Cave-Ins – Project personnel in an excavation shall be protected from cave-ins by an adequate protective system, except when:

- Excavations are made entirely in stable rock or excavations are less than five feet in depth and examination of the ground by the SSO provides no indication of a potential cave-in.
- Protective systems shall have the capacity to resist, without failure, all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

Project personnel shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least two feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Daily inspections of excavations, the adjacent areas, and protective systems shall be made by the SSO for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the SSO prior to the start of work and as needed throughout operations. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when project personnel exposure can be reasonably anticipated.

Where the SSO finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed personnel shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

Excavation Egress – A stairway, ladder, ramp, or other safe means of egress shall be located in trench excavations that are four feet or more in depth so as to require no more than 25 feet or lateral travel for project personnel.

9.2.3.2 HEAVY EQUIPMENT OPERATION

Description of Tasks

Heavy equipment to be used for this task include, but are not limited to, excavators, dozers, dump trucks, and water sprayers (if required).

Hazard Identification

The most common type of accident that occurs in material handling operations is the "caught between" situation when a load is being handled and an object gets caught between two moving parts of the equipment. Operation of the heavy construction equipment may produce harmful noise.

Controls

Equipment Inspection – All vehicles in use shall be checked prior to operation to ensure that all parts, equipment, and accessories that affect safe operations are in proper operating condition and free from defects. All defects shall be corrected before the vehicle is placed in service.

Ground Guides – No personnel shall use any motor vehicle, earthmoving, or compacting equipment having an obstructed view to the rear, unless:

- The vehicle has a reverse signal alarm distinguishable from the surrounding noise level; or
- The vehicle is backed up only when an observer signals that it is safe to do so.

Blocking – Heavy machinery, equipment, or parts thereof that are suspended or held aloft shall be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

Noise – Control measures for noise are addressed in Section 4.9.

Traffic – Control measures for traffic are addressed in Section 8.17.

9.2.3.3 DISTURBANCE/HANDLING OF CONTAMINATED MATERIAL

Description of Tasks

After the contaminated soil is excavated from below the Site's surface, the material will be stockpiled, dried, and either transported offsite or relocated and backfilled on site.

Hazard Identification

The hazards associated with materials handling include contact of the contaminated material with project personnel, or cross contamination with other site soil.

Controls

Cross Contamination – Following excavation, contaminated soil stockpiles will be placed on a structure constructed to separate the material from the site soil and collect any groundwater leachate. The material shall be covered to prevent storm water erosion or migration of contaminants through storm water.

Air Monitoring – Air and particulate monitoring will be conducted during soil excavation activities to assess the potential for exposure to airborne COCs. If the results of air monitoring indicate the presence of organic vapors or particulates in a concentration causing concern, personnel will upgrade to Level C protection. Refer to Section 5.1, Air Monitoring, for a description of air monitoring requirements and action levels. A description of each level of personal protection is included in Section 4.0, Personal Protective Equipment.

Traffic – Control measures for traffic are addressed in Section 8.17.

9.2.4 DRILLING/SUBSURFACE INTRUSION ACTIVITIES

Description of Tasks

Site mobilization will include establishing excavation locations, determining the location of utilities and other installations, and establishing work areas. Mobilization will also include setting up equipment and establishing a temporary site office. A break area will be set up outside of regulated work areas. Mobilization may involve clearing areas for the SZ and CRZ. During this initial phase, project personnel will walk the site to confirm the existence of anticipated hazards and identify safety and health issues that may have arisen since the writing of this plan.

Hazard Identification

The primary physical hazards for this activity are associated with the use of soil boring and grouting equipment. The equipment is hydraulically powered and uses static force and dynamic percussion force to advance sampling and penetrating tubes.

Accidents can occur as a result of improperly placing the equipment on uneven or unstable terrain or failing to adequately secure the equipment prior to the start of operations. Overhead utility lines can create hazardous conditions if contacted by the equipment. Underground installations such as electrical lines, conduit, and product lines pose a significant hazard if contacted.

Controls

Geoprobe and Drill Rig Safety Procedures - The operator of the equipment must possess required state or local licenses to perform such work. All members of the crew shall receive site-specific training prior to beginning work.

The operator is responsible for the safe operation of the rig, as well as the crew's adherence to the requirements of this HASP. The operator must ensure that all safety equipment is in proper condition and is properly used. The members of the crew must follow all instructions of the operator, wear all personal protective equipment, and be aware of all hazards and control procedures. The operator and crew must participate in the Daily Safety Meetings and be aware of all emergency procedures.

Equipment Inspection - Each day, prior to the start of work, the rig and associated equipment must be inspected by the operator. The following items must be inspected:

- Vehicle condition;
- Proper storage of equipment;
- Condition of all hydraulic lines;
- Fire extinguisher; and
- First aid kit.

Equipment Set Up - The drill rig must be properly blocked and leveled prior to raising the derrick. The wheels which remain on the ground must be chocked. The leveling jacks shall not be raised until the derrick is lowered. The rig shall be moved only after the derrick has been lowered.

All well sites will be inspected by the driller prior to the location of the rig to verify a stable surface exists. This is especially important in areas where soft, unstable terrain is common.

The drill rig must be properly blocked and leveled prior to raising the derrick. Blocking provides a more stable drilling structure by evenly distributing the weight of the rig. Proper blocking ensures that differential settling of the rig does not occur.

When the ground surface is soft or otherwise unstable, wooden blocks, at least 24" by 24" and 4" to 8" thick shall be placed between the jack swivels and the ground. The emergency brake shall be engaged, and the wheels that are on the ground shall be chocked.

Rules for Intrusive Activity - Before beginning any intrusive activity, the existence and location of underground pipe, conduit, electrical equipment, and other installations will be determined. This will be done, if possible, by contacting the appropriate client representative to mark the location of the lines. "Call Before You Dig" will verify the potential for encountering subsurface utilities. If the client's knowledge of the area is incomplete, an appropriate device, such as a magnetometer, will be used to locate the line.

Combustible gas readings of the general work area will be made regularly in areas where and/or during operations when the presence of flammable vapors or gases is suspected, such as during intrusive activities (see Section 5.1). Operations must be suspended and corrective action taken if the airborne flammable concentration reaches 10% of the LEL in the immediate area (a one-foot radius) of the point of drilling, or near any other ignition sources.

Overhead Electrical Clearances - If equipment is operated in the vicinity of overhead power lines, the power to the lines must be shut off or the equipment must be positioned and blocked such that no part, including cables, can come within the minimum clearances as follows:

Nominal System Voltage	Minimum Required Clearance
0-50kV	10 feet
51-100kV	12 feet
101-200kV	15 feet
201-300kV	20 feet
301-500kV	25 feet
501-750kV	35 feet
751-1,000kV	45 feet

When the drill rig is in transit, with the boom lowered and no load, the equipment clearance must be at least 4 feet for voltages less than 50kV, 10 feet for voltages of 50 kV to 345 kV, and 16 feet for voltages above 345 kV.

Hoisting Operations - Drillers should never engage the rotary clutch without watching the rotary table, and ensuring it is clear of personnel and equipment.

Unless the drawworks is equipped with an automatic feed control, the brake should not be left unattended without first being tied down.

Drill pipe, auger strings or casing should be picked up slowly. Drill pipe should not be hoisted until the driller is sure that the pipe is latched in the elevator, or the derrickman has signaled that he may safely hoist the pipe.

During instances of unusual loading of the derrick or mast, such as when making an unusually hard pull, only the driller should be on the rig floor; no one else should be on the rig or derrick.

The brakes on the drawworks of the drill rig should be tested by the driller each day. The brakes should be thoroughly inspected by a competent individual each week.

A hoisting line with a load imposed should not be permitted to be in direct contact with any derrick member or stationary equipment, unless it has been specifically designed for line contact.

Workers should never stand near the borehole whenever any wire line device is being run.

Hoisting control stations should be kept clean and controls labeled as to their functions.

Catline Operations - Only experienced workers will be allowed to operate the cathead controls. The kill switch must be clearly labeled and operational prior to operation of the catline. The cathead area must be kept free of obstructions and entanglements.

The operator should not use more wraps than necessary to pick up the load. More than one layer of wrapping is not permitted.

Personnel should not stand near, step over, or go under a cable or catline which is under tension.

Employees rigging loads on catlines shall:

- Keep out from under the load;
- Keep fingers and feet where they will not be crushed;
- Be sure to signal clearly when the load is being picked;
- Use standard visual signals only and not depend on shouting to coworkers; and
- Make sure the load is properly rigged, since a sudden jerk in the catline will shift or drop the load.

Wire Rope - When two wires are broken or rust or corrosion is found adjacent to a socket or end fitting, the wire rope shall be removed from service or re-socketed. Special attention shall be given to the inspection of end fittings on boom support, pendants, and guy ropes.

Wire rope removed from service due to defects shall be cut up or plainly marked as being unfit for further use as rigging.

Wire rope clips attached with U-bolts shall have the U-bolts on the dead or short end of the rope; the clip nuts shall be re-tightened immediately after initial load carrying use and at frequent intervals thereafter.

When a wedge socket fastening is used, the dead or short end of the wire rope shall have a clip attached to it or looped back and secured to itself by a clip; the clip shall not be attached directly to the live end.

Protruding ends of strands in splices on slings and bridles shall be covered or blunted.

Except for eye splices in the ends of wires and for endless wire rope slings, wire rope used in hoisting, lowering, or pulling loads, shall consist of one continuous piece without knot or splice.

An eye splice made in any wire rope shall have not less that five full tucks.

Wire rope shall not be secured by knots. Wire rope clips shall not be used to splice rope.

Eyes in wire rope bridles, slings, or bull wires shall not be formed by wire clips or knots.

Pipe/Auger Handling - Pipe and auger sections shall be transported by cart or carried by two persons. Individuals should not carry auger or pipe sections without assistance.

Workers should not be permitted on top of the load during loading, unloading, or transferring of pipe or rolling stock.

Employees should be instructed never to try to stop rolling pipe or casing; they should be instructed to stand clear of rolling pipe.

Slip handles should be used to lift and move slips. Employees are not permitted to kick slips into position.

When pipe is being hoisted, personnel should not stand where the bottom end of the pipe could whip and strike them.

Pipe and augers stored in racks, catwalks or on flatbed trucks should be secured to prevent rolling.

9.2.5 SUBSURFACE CHEMICAL SAMPLE COLLECTION/ANALYSIS

Description of Tasks

This sub-task consists of the collection of soil samples for subsequent field and laboratory analysis. The physical hazards of soil sampling are primarily associated with the sample collection methods, procedures utilized, and the environment itself.

Hazard Identification

Incidental contact with COCs is the primary hazard associated with sampling the stabilized material. This contact may occur through the manipulation of sample media and equipment, manual transfer of media into sample containers, and proximity of operations to the breathing zone. The primary hazards associated with these sampling procedures are not potentially serious; however, other operations in the area, or the conditions under which

samples must be collected, may present chemical and physical hazards. The hazards directly associated with sampling procedures are generally limited to strains/sprains and potential eye hazards. Potential chemical hazards may include contact with media containing site COCs and potential contact with chemicals used for equipment decontamination.

Controls
PPE – To control dermal exposure during sampling activities, a minimum of Level D protection will be worn. If necessary, based on field observations and site conditions, air monitoring may be conducted during sediment sampling activities. If the results of air monitoring indicate the presence of airborne contaminants in a concentration causing concern, personnel will upgrade to Level C protection. Refer to Section 5.1, Air Monitoring, for a description of air monitoring requirements and action levels. A description of each level of personal protection is included in Section 4.0, Personal Protective Equipment.

9.2.6 UST CLOSURE

9.2.6.1 WORKING IN CONFINED SPACES

Description of Tasks
Working in confined spaces in not anticipated for this project.

Hazard Identification
Hazard identification such as the entrance into confined spaces will be evaluated if necessary.

Controls
All personnel required to enter into confined or enclosed spaces must be instructed as to the nature of the hazards involved, the necessary precautions to be taken, and in the use of required protective and emergency equipment. The PO shall comply with all specific regulations that apply to work in dangerous or potentially dangerous areas.

9.2.6.2 WORKING WITH COMPRESSED AIR

Description of Tasks
The proposed method of purging the USTs includes the injection of compressed gas into the tank and attached piping network.

Hazard Identification
Uncontrolled release of the highly pressured air can cause injury to FP during this task. Cylinders must also be properly managed to ensure they are not compromised during storage and/or use.

Controls
Pressure Regulation – Compressed air used for cleaning purposes shall be reduced to less than 30 pounds per square inch and then only with effective chip guarding and personal protective equipment.

Cylinder Storage – Valve protection caps shall be in place and secured when compressed gas cylinders are transported, moved, or stored. Cylinder valves shall be closed when work is finished and when cylinders are empty or are moved. Compressed gas cylinders shall be secured in an upright position at all times, except if necessary for short periods of time

when cylinders are actually being hoisted or carried. Cylinders shall be placed in a location where they cannot become part of an electrical circuit.

9.2.7 DECONTAMINATION

All equipment will be decontaminated before leaving the site. Personnel involved in decontamination activities may be inadvertently exposed to skin contact with contaminated materials and chemicals brought from the EZ. Personnel involved in decontamination activities must wear PPE that is, at a minimum, one level below the level worn by personnel working in the EZ.

9.2.8 DEMOBILIZATION

Demobilization involves the removal of all tools, equipment, supplies, and vehicles brought to the site. The hazards of this phase of activity are associated with heavy equipment operation and manual materials handling.

Manual materials handling may cause blisters, sore muscles, and joint and skeletal injuries; and may present eye, contusion, and laceration hazards. Heavy equipment operation presents noise and vibration hazards, and hot surfaces, to operators. Personnel in the vicinity of heavy equipment operation may be exposed to physical hazards resulting in fractures, contusions, and lacerations and may be exposed to high noise levels. The work area presents slip, trip, and fall hazards from scattered debris and irregular walking surfaces. Rainy weather may cause wet, muddy, slick walking surfaces, and unstable soil. Freezing weather hazards include frozen, slick, and irregular walking surfaces.

Environmental hazards include plants, such as poison ivy and poison oak; aggressive fauna, such as ticks, fleas, mosquitoes, wasps, spiders, and snakes; weather, such as sunburn, lightning, rain, and heat-or cold-related illnesses; and pathogens, such as rabies, Lyme disease, and blood-borne pathogens.

Control procedures for these hazards are discussed in Section 8.0, General Safety Practices.

9.3 CHEMICAL HAZARDS

The chemical hazards associated with site operations are related to inhalation, ingestion, and skin exposure to site COCs. Concentrations of airborne COCs during site tasks may be measurable and will require air monitoring during certain operations. Air monitoring requirements for site tasks are outlined in Section 5.1. COCs at the site include VOCs, SVOCs, metals, PCBs, pesticides, and PFAS.

The potential for inhalation of site COCs is low. The potential for dermal contact with soils containing site COCs during remedial operations is moderate. Table 6 lists the primary contaminants that have been identified at the Site and the media in which they are present.

Table 6 – List of Primary Contaminants

Media: Soil		
	Maximum	**Applicable**

SVOCs	Concentration (mg/kg)	Monitoring Instrument
benzo(a)anthracene	2.7	Not Applicable
benzo(a)pyrene	3	Not Applicable
benzo(b)fluoranthene	3.5	Not Applicable
benzo(k)fluoranthene	1.2	Not Applicable
chrysene	2.5	Not Applicable
dibenzo(a,h)anthracene	0.46	Not Applicable
indeno(1,2,3-cd)pyrene	2.2	Not Applicable
Media: Soil Vapor		
VOCs	**Maximum Concentration (ug/m^3)**	**Applicable Monitoring Instrument**
Cis-1,2-DCE	304	PID
TCE	404	PID

10.0 EMERGENCY PROCEDURES

10.1 GENERAL

Prior to the start of operations, the work area will be evaluated for the potential for fire, contaminant release, or other catastrophic event. Unusual conditions or events, activities, chemicals, and conditions will be reported to the FS/SSO immediately.

The FS/SSO will establish evacuation routes and assembly areas for the site. All personnel entering the site will be informed of this route and the assembly area.

10.2 EMERGENCY RESPONSE

If an incident occurs, the following steps will be taken:

- The FS/SSO will evaluate the incident and assess the need for assistance and/or evacuation;
- The FS/SSO will call for outside assistance as needed;
- The FS/SSO will ensure the PM is notified promptly of the incident; and
- The FS/SSO will take appropriate measures to stabilize the incident scene.

10.2.1 FIRE

In the case of a fire at the site, the FS/SSO will assess the situation and direct fire-fighting activities. The FS/SSO will ensure that the PM is immediately notified of any fires. Site personnel will attempt to extinguish the fire with available extinguishers, if safe to do so. In the event of a fire that site personnel are unable to safely extinguish with one fire extinguisher, the local fire department will be summoned.

10.2.2 CONTAMINANT RELEASE

In the event of a contaminant release, the following steps will be taken:

- Notify FS/SSO immediately;

- Evacuate immediate area of release;
- Conduct air monitoring to determine needed level of PPE; and
- Don required level of PPE and prepare to implement control procedures.

The FS/SSO has the authority to commit resources as needed to contain and control released material and to prevent its spread to off-site areas.

10.3 MEDICAL EMERGENCY

All employee injuries must be promptly reported to the SSO/FS, who will:

- Ensure that the injured employee receives prompt first aid and medical attention;
- In emergency situations, the worker is to be transported by appropriate means to the nearest urgent care facility (normally a hospital emergency room); and
- If the injured person is a SESI employee, notify SESI at 973-808-9050.

10.3.1 EMERGENCY CARE STEPS

Survey the scene. Determine if it is safe to proceed. Try to determine if the conditions that caused the incident are still a threat. Protect yourself from exposure before attempting to rescue the victim.

- Do a primary survey of the victim. Check for airway obstruction, breathing, and pulse. Assess likely routes of chemical exposure by examining the eyes, mouth, nose, and skin of the victim for symptoms.
- Phone Emergency Medical Services (EMS). Give the location, telephone number used, caller's name, what happened, number of victims, victim's condition, and help being given.
- Maintain airway and perform rescue breathing as necessary.
- Perform CPR as necessary.
- Do a secondary survey of the victim. Check vital signs and do a head-to-toe exam.

Treat other conditions as necessary. If the victim can be moved, take him/her to a location away from the work area where EMS can gain access.

10.4 FIRST AID - GENERAL

All persons must report any injury or illness to their immediate supervisor or the FS. Trained personnel will provide first aid. Injuries and illnesses requiring medical treatment must be documented. The FS and SSO must fill out an accident/incident report as soon as emergency conditions no longer exist and first aid and/or medical treatment has been ensured. The report must be completed and submitted to the PM within 24 hours after the incident.

If first-aid treatment is required, first aid kits are kept at the CRZ. If treatment beyond first aid is required, the injured person(s) should be transported to the medical facility. If the injured person is not ambulatory or shows any sign of not being in a comfortable and stable condition for transport, then an ambulance/paramedics should be summoned. If there is any doubt as to the injured worker's condition, it is best to let the local paramedic or ambulance service examine and transport the worker.

10.4.1 FIRST AID - INHALATION

Any employee complaining of symptoms of chemical overexposure as described in Section 4, General Site Safety Procedures, will be removed from the work area and transported to the designated medical facility for examination and treatment.

10.4.2 FIRST AID - INGESTION

Call EMS and consult a poison control center for advice. If available, refer to the MSDS for treatment information. If the victim is unconscious, keep them on their side and clear the airway if vomiting occurs.

10.4.3 FIRST AID - SKIN CONTACT

Project personnel who have had skin contact with contaminants will, unless the contact is severe, proceed through the CRZ, to the wash area. Personnel will remove any contaminated clothing, and then flush the affected area with water for at least 15 minutes. The worker should be transported to the medical facility if he/she shows any sign of skin reddening, irritation, or if he/she requests a medical examination.

10.4.4 FIRST AID - EYE CONTACT

Project personnel who have had contaminants splashed in their eyes or who have experienced eye irritation while in the EZ, must immediately proceed to the eyewash station in the CRZ. Do not decontaminate prior to using the eyewash. Remove whatever protective clothing is necessary to use the eyewash. Flush the eye with clean running water for at least 15 minutes. Arrange prompt transport to the designated medical facility.

10.5 REPORTING INJURIES, ILLNESSES, AND SAFETY INCIDENTS

Injuries and illnesses, however minor, will be reported to the FS immediately. The FS will complete an injury report and submit it to the HSM, and the PM by end of shift.

10.6 EMERGENCY INFORMATION

The means to summon local public response agencies such as police, fire, and ambulance will be reviewed in the daily safety meeting. These agencies are identified in **Table 7** below.

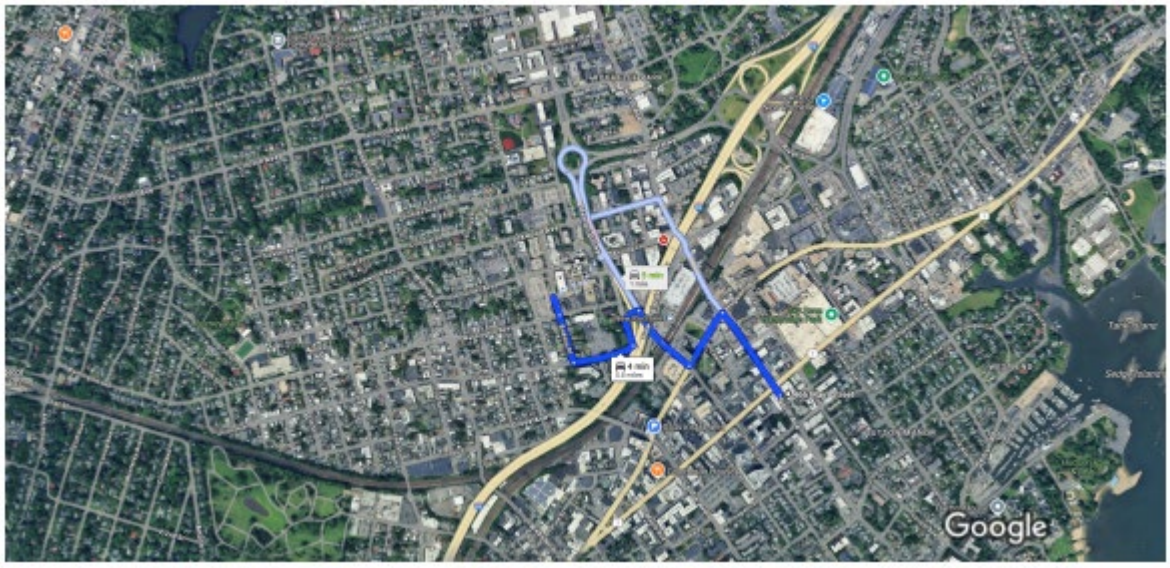
Table 7 – Emergency Contacts

Local Emergency Contacts	**Telephone No.**
EMERGENCY	911
Montefiore New Rochelle Hospital	(914) 632-5000
Police Emergency	911
Fire Emergency	911
Rescue Squad	911
Ambulance	911
Miscellaneous Contacts	**Telephone No.**
N.Y. Poison Control Center	(800) 222-1222
National Response Center and Terrorist Hotline	(800) 424-8802
Center for Disease Control	(800) 311-3435
Utility Mark-Out	(800) 962-7962

10.6.1 Directions to Hospital

Montefiore New Rochelle Hospital
16 Guion Pl, New Rochelle, NY 10801
(914) 632-5000

Fig-1: Direction to Hospital



Imagery ©2025 Google, Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025 Google 500 ft

via North Ave Fastest route now, avoids road closure on Burling Ln.	4 min 0.8 mile
via North Ave and Lockwood Ave	4 min 0.7 mile
via Memorial Hwy	5 min 1.0 mile

Explore nearby Montefiore New Rochelle Hospital

11.0 LOGS, REPORTS, AND RECORD KEEPING

The following is a summary of required health and safety logs, reports, and record keeping for the operations at the subject site.

11.1 HASP FIELD CHANGE REQUEST

To be completed for initiating a change to the HASP. PM approval is required. The original will be kept in the project file (See Attachment 3).

11.2 MEDICAL AND TRAINING RECORDS

The HSM must obtain and keep a log of personnel meeting appropriate training and medical qualifications for the site work. The log will be kept in the project file. Each company's Human Resources Department will maintain medical records, in accordance with 29 CFR 1910.1020.

11.3 EXPOSURE RECORDS

Any personnel monitoring results, laboratory reports, calculations, and air sampling data sheets are part of an employee exposure record. These records will be kept in accordance with 29 CFR 1910.1020. For SESI employees, the originals will be sent to the Human Resources Manager. For subcontractor employees, the original file will be sent to the subcontractor employer with a copy maintained in the SESI project file.

11.4 ACCIDENT/INCIDENT REPORT

Any accident/incident reports must be completed following procedures given in Section 10.5 of this HASP. The originals will be sent to the HSM for maintenance. A copy of the forms will be kept in the project file. (See Attachment 4)

11.5 OSHA FORM 200

An OSHA Form 200 (Log of Occupational Injuries and Illnesses) will be kept at the project site. All recordable injuries or illnesses will be recorded on this form. At the end of the project, the original will be sent to the Human Resources Manager for maintenance. Subcontractor employees must also meet the requirements of maintaining an OSHA 200 Form. The accident/incident report meets the requirements of the OSHA Form 101 (Supplemental Record), which must be maintained with the OSHA Form 200 for all recordable injuries or illnesses.

11.6 ON-SITE HEALTH AND SAFETY FIELD LOGBOOKS

The HSM or designee will maintain an on-site health and safety log book in which daily Site conditions, activities, personnel, and significant events will be recorded. Calibration records and personnel monitoring results, if available, will also be recorded in the field logbook. The original logbook will be kept in the project file.

Whenever any personnel monitoring is conducted onsite, the monitoring results will be noted in the filed logbook. These will become part of the exposure records file and will be maintained by the HSM.

A signatory page is included (See Attachment 5) and is to be signed by those working on and/or visiting the site.

11.7 SAFETY DATA SHEETS

Safety Data Sheets (SDS) will be obtained and kept on file at the project site for each hazardous chemical brought to, use, or stored at the Site (See Attachment 6).

12.0 COVID-19 RESPONSE ACTION PLAN

SESI is concerned with the safety and well-being of its employees, vendors, subcontractors, and others with access to its offices and job sites, with particular emphasis on the unique challenges posed by COVID-19.

SESI has established the following protocols in keeping with the recommendations of the CDC and other sources including State Governor Executive Orders for work taking place on construction sites.

We request that all SESI employees, vendors, and subcontractors help with our prevention efforts while at work.

In order to minimize the spread of COVID-19, we must all cooperate in doing the following:

- Frequently wash your hands with soap and water for at least 20 seconds. When soap and running water are unavailable, use an alcohol-based hand rub with at least 60% alcohol. Always wash hands that are visibly soiled.
- Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow.
- Discourage handshaking, avoid touching your eyes, nose, or mouth with unwashed hands.
- Limit the sharing of tools, machinery, equipment, phones, desks, and computers.
- Wear cloth face coverings on all construction sites.
- Avoid close contact with people who are sick.
- Employees who have symptoms (i.e., fever, cough, or shortness of breath) should notify their supervisor and stay home—DO NOT GO TO WORK.
- Sick employees should follow CDC-recommended steps. Employees should not return to work until the criteria to discontinue home isolation are met, in consultation with healthcare providers and state and local health departments.

The following are the specific jobsite protocols and response actions to be taken in the event someone on site has been in contact with, or has themselves, the COVID-19 virus:

OFFICE/JOBSITE PROTOCOL

- If an employee/worker exhibits COVID-19 symptoms, the employee/worker must remain at home until he or she is symptom free for 72 hours (3 full days) without the use of fever-reducing or other symptom-altering medicines (e.g. acetaminophen, cough suppressants). SESI will similarly require an employee or worker that reports to work with symptoms to return home until they are symptom free for 72 hours (3 full days).
- Limit person to person contact, and when unavoidable, maintain CDC distancing guidelines.
- Avoid eating lunch in groups.
- Avoid in-person meetings if possible. If an in-person meeting is necessary, conduct it in a well-ventilated area with enough space for attendees to distance themselves from one another. Field jobsite meetings should be conducted in smaller group meetings (no more than 5 persons when possible) versus one large meeting.
- Only workers necessary to the execution of the work should be at the jobsites. No non-essential visitors should be permitted at the worksite.

RESPONSE ACTION TRIGGER EVENTS:

- an employee/worker at work has tested positive for COVID-19
- an employee/worker at work has suspected, but unconfirmed, case of COVID-19
- an employee/worker self-reported that they came in contact with someone who had a presumptive positive case of COVID-19
- an employee/worker has been exposed to the virus but only found out after they have interacted with others

RESPONSE ACTIONS:

- Upon occurrence of any of the Trigger Events above, employees/subcontractors shall notify SESI Management about the suspected employee/worker infected with, or exposed to, COVID-19.
- SESI Management will investigate the incident to confirm the report is valid.
- Employees/Subcontractors shall investigate their respective infected employee(s) and report the following to SESI Management and HR:
    - Identify all individuals who worked in proximity (six feet) of the infected employee/worker,
    - Employee(s)/Worker(s) infected with the COVID-19 virus, and employee(s)/worker(s) that came in contact with the infected employee/worker shall be sent home for a period of 14 days,
    - Do not identify the infected employee/worker by name to avoid violation of privacy/confidentiality laws, and,
    - Keep SESI Management informed of progress and updates.

- If an infected person was in the office, SESI will clean and disinfect common areas and surfaces, in accordance with CDC recommendations.
- SESI Management will notify affected employees/workers of the Trigger Event and instruct them to take the response actions above.

- SESI Management policy requires written documentation from a health care professional, that confirmed infected employees can return to work.

Except for circumstances in which SESI is legally required to report workplace occurrences of communicable disease, the confidentiality of all medical conditions will be maintained in accordance with applicable law and to the extent practical under the circumstances. When required, the number of persons who will be informed of an employee's/worker's condition will be kept at the minimum needed to appropriately notify other potentially affected employees/workers of Trigger Events and to attempt to minimize the potential for transmission of the virus.

Attachment 1:
Air Monitor Log

Air Monitoring: Sample Collection and Analysis

Date & Time of Monitoring	Task / Operation Being	Substance(s)/ Hazard(s) Being	Monitoring Location	Type/Method of Monitoring	Monitoring Results	Exposure Limits	Required Action

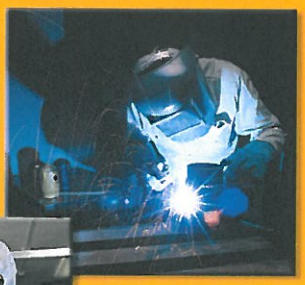
Attachment 2:
OSHA Poster

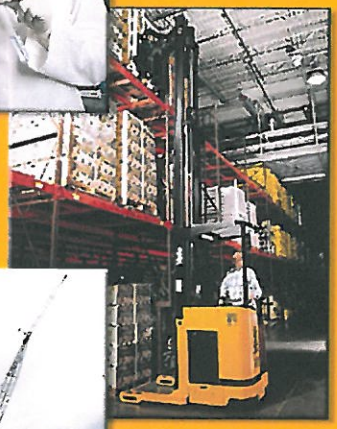
Job Safety and Health

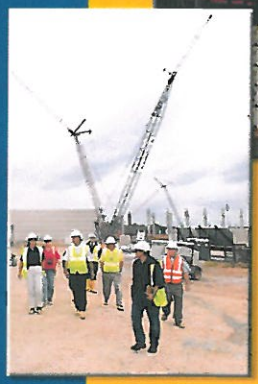
It's the law!

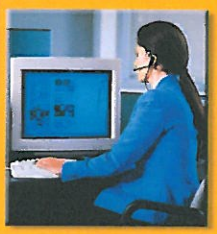
OSHA®

Occupational Safety and Health Administration
U.S. Department of Labor









EMPLOYEES:

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in that inspection.
- You can file a complaint with OSHA within 30 days of retaliation or discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have the right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violations.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records and records of your exposures to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.
- You must comply with all occupational safety and health standards issued under the *OSH Act* that apply to your own actions and conduct on the job.

EMPLOYERS:

- You must furnish your employees a place of employment free from recognized hazards.
- You must comply with the occupational safety and health standards issued under the *OSH Act*.

This free poster available from OSHA –
The Best Resource for Safety and Health

Free assistance in identifying and correcting hazards or complying with standards is available to employers, without citation or penalty, through OSHA-supported consultation programs in each state.

1-800-321-OSHA (6742)
www.osha.gov

OSHA 3165-02 2012R

Attachment 3:
Field Change Request Form

HEALTH & SAFETY PLAN
CHANGE NOTICE

Pages _____ of _____

Project: H&S-CN

1) HASP VERSION: _____ SECTION: _____ PAGE (s): _____

RE: --- Change to existing HASP Anticipated Revision Date: _____
--- Addition to existing HASP
--- Other: _____
_____CONT._____

2) PROPOSED CHANGE: _____
_____
_____
_____

3) REASON FOR PROPOSED CHANGE(s):
--- Required by SPEC or Change Order --- Other: _____
--- Disposition of Deficiency _____CONT._____
--- Change in Regulatory or Other Requirements
--- Operational Experience

4) EXHIBITS ATTACHED ____ NO ____ YES (If YES, describe) _____
_____CONT._____

5) PMK APPROVALS PROJECT MANAGER: _____ Date: _____
SITE MANAGER: _____ Date: _____
H&S MANAGER: _____ Date: _____

Client Approval Required: ____ NO ____ YES (If YES, date submitted) _____

6) CLIENT APPROVAL _____ APPROVED _____ REMANDED _____ REJECTED

Comments: _____
_____
_____ CONT._____

Client Representative: _____Date: _____

7) DISTRIBUTION AFTER APPROVAL

X HASP UPDATE LIST --- OTHER: _____
X CLIENT _____
X PROJECT FILES _____

8) PREPARED BY: _____Date: _____
Title: _____

Attachment A:
Injury Report Form

OSHA's Form 301
Injury and Illness Incident Report

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

This *Injury and Illness Incident Report* is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the *Log of Work-Related Injuries and Illnesses* and the accompanying *Summary*, these forms help the employer and OSHA develop a picture of the extent and severity of work-related incidents.

Within 7 calendar days after you receive information that a recordable work-related injury or illness has occurred, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-596 and 29 CFR 1904, OSHA's recordkeeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy and use as many as you need.

Completed by _____

Title _____

Phone (_____)_____-_____ Date ____/ ____/ ____

Information about the employee

1) Full name _____

2) Street _____

City _____ State _____ ZIP _____

3) Date of birth ____/ ____/ ____

4) Date hired ____/ ____/ ____

5) ☐ Male
☐ Female

Information about the physician or other health care professional

6) Name of physician or other health care professional _____

_____

7) If treatment was given away from the worksite, where was it given?

Facility _____

Street _____

City _____ State _____ ZIP _____

8) Was employee treated in an emergency room?
☐ Yes
☐ No

9) Was employee hospitalized overnight as an in-patient?
☐ Yes
☐ No

Information about the case

10) Case number from the *Log* _____ *(Transfer the case number from the Log after you record the case.)*

11) Date of injury or illness ____/ ____/ ____

12) Time employee began work _____ AM / PM

13) Time of event _____ AM / PM ☐ Check if time cannot be determined

14) ***What was the employee doing just before the incident occurred?*** Describe the activity, as well as the tools, equipment, or material the employee was using. Be specific. *Examples:* "climbing a ladder while carrying roofing materials"; "spraying chlorine from hand sprayer"; "daily computer key-entry."

15) ***What happened?*** Tell us how the injury occurred. *Examples:* "When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."

16) ***What was the injury or illness?*** Tell us the part of the body that was affected and how it was affected; be more specific than "hurt," "pain," or sore." *Examples:* "strained back"; "chemical burn, hand"; "carpal tunnel syndrome."

17) ***What object or substance directly harmed the employee?*** *Examples:* "concrete floor"; "chlorine"; "radial arm saw." *If this question does not apply to the incident, leave it blank.*

18) ***If the employee died, when did death occur?*** Date of death ____/ ____/ ____

Public reporting burden for this collection of information is estimated to average 22 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Persons are not required to respond to the collection of information unless it displays a current valid OMB control number. If you have any comments about this estimate or any other aspects of this data collection, including suggestions for reducing this burden, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name _____

City _____ State _____

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case:)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
								Remained at Work				(M)					
(A) Case no.	(B) Employee's name	(C) Job title (*e.g., Welder*)	(D) Date of injury or onset of illness	(E) Where the event occurred (*e.g., Loading dock north end*)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (*e.g., Second degree burns on right forearm from acetylene torch*)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
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____			__/__ month/day			☐	☐	☐	☐	____ days	____ days	☐	☐	☐	☐	☐	☐
Page totals ➤						____	____	____	____	____	____	____	____	____	____	____	____

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Injury (1) Skin disorder (2) Respiratory condition (3) Poisoning (4) Hearing loss (5) All other illnesses (6)

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
_____	_____	_____	_____
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
_____	_____
(K)	(L)

Injury and Illness Types

Total number of . . .	(M)		
(1) Injuries	_____	(4) Poisonings	_____
		(5) Hearing loss	_____
(2) Skin disorders	_____	(6) All other illnesses	_____
(3) Respiratory conditions	_____		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name _____

Street _____

City _____ State _____ ZIP _____

Industry description (*e.g., Manufacture of motor truck trailers*)

_____

Standard Industrial Classification (SIC), if known (*e.g., 3715*)

__ __ __ __

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

__ __ __ __ __ __

Employment information *(If you don't have these figures, see the Worksheet on the back of this page to estimate.)*

Annual average number of employees _____

Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

_____ _____
Company executive Title

( ) - / /
Phone Date

Attachment 5:
Signatory Page

Attachment 5 – Site-Specific Health and Safety Orientation Signatory Page
HEALTH AND SAFETY PLAN

Title	Name	Signature
Project Manager:	TBD	
Health and Safety Manager:	TBD	

I have read the attached Health and Safety Plan (HASP) and have received site-specific information and orientation regarding the identified physical, chemical, and biological hazards anticipated at this site. My signature certifies that I understand the procedures, equipment, and restrictions applicable to this project site and agree to abide by them.

Signature	Printed Name	Company	Date

Attachment 5– Health and Safety Orientation Signatory Page (continued)

Signature	Printed Name	Company	Date

Attachment 6:

Material Safety Data Sheets

SAFETY DATA SHEET

Version 5.8
Revision Date 02/02/2018
Print Date 10/19/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Benzo[*a*]pyrene

Product Number : 48564
Brand : Supelco
Index-No. : 601-032-00-3

CAS-No. : 50-32-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin sensitisation (Category 1), H317
Germ cell mutagenicity (Category 1B), H340
Carcinogenicity (Category 1B), H350
Reproductive toxicity (Category 1B), H360
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and

understood.

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : 3,4-Benzpyrene
3,4-Benzopyrene
Benzo[def]chrysene
benzo[pqr]tetraphene

Formula : $C_{20}H_{12}$
Molecular weight : 252.31 g/mol
CAS-No. : 50-32-8
EC-No. : 200-028-5
Index-No. : 601-032-00-3

Hazardous components

Component	Classification	Concentration
Benzo[a]pyrene		
	Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H317, H340, H350, H360, H410	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Store at room temperature.
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
	Remarks	Cancer Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Polycyclic Aromatic Hydrocarbons (PAHs) Exposure by all routes should be carefully controlled to levels as low		

		as possible. Suspected human carcinogen		
		Cancer Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Polycyclic Aromatic Hydrocarbons (PAHs) Exposure by all routes should be carefully controlled to levels as low as possible. Suspected human carcinogen		
Benzo[a]pyrene	50-32-8	TWA	0.200000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.200000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen		
		TWA	0.100000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products. cyclohexane-extractable fraction See Appendix C See Appendix A		
		TWA	0.2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen		
		TWA	0.1 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products. cyclohexane-extractable fraction See Appendix C See Appendix A		
		TWA	0.2 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		PEL	0.2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		PEL	0.2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological	Basis

				specimen	
	-	1-Hydroxypyrene		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			
		1-Hydroxypyrene		Urine	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance — Form: solid

b) Odour — No data available

c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 177 - 180 °C (351 - 356 °F)
f)	Initial boiling point and boiling range	495 °C (923 °F)
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	1.35 g/cm3
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	log Pow: 5.97
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available

Inhalation: No data available

Dermal: No data available

LD50 Subcutaneous - Rat - 50 mg/kg

Skin corrosion/irritation
Skin - Mouse
Result: Mild skin irritation

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
Chronic exposure may cause dermatitis.

Germ cell mutagenicity
May alter genetic material.
In vivo tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC:	1 - Group 1: Carcinogenic to humans (Benzo[a]pyrene)
NTP:	RAHC - Reasonably anticipated to be a human carcinogen (Benzo[a]pyrene)
OSHA:	OSHA specifically regulated carcinogen (Benzo[a]pyrene)

Reproductive toxicity
May cause congenital malformation in the fetus.
Presumed human reproductive toxicant

May cause reproductive disorders.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.25 mg/l - 48 h
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - 0.02 mg/l - 72 h

12.2 Persistence and degradability

12.3 Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus (Bluegill) - 48 h - 0.0005 mg/l
	Bioconcentration factor (BCF): 3,208

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Benzo[a]pyrene)
Reportable Quantity (RQ): 1 lbs
Poison Inhalation Hazard: No

IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzo[a]pyrene)
Marine pollutant:yes

IATA

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benzo[a]pyrene)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Benzo[a]pyrene	50-32-8	2007-03-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Benzo[a]pyrene	50-32-8	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Benzo[a]pyrene	50-32-8	2007-03-01

	CAS-No.	Revision Date
Benzo[a]pyrene	50-32-8	2007-03-01

New Jersey Right To Know Components

	CAS-No.	Revision Date

Benzo[a]pyrene	50-32-8	2007-03-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Benzo[a]pyrene	50-32-8	1990-01-01

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H317	May cause an allergic skin reaction.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Muta.	Germ cell mutagenicity

HMIS Rating

Health hazard:	3
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	3
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.8 Revision Date: 02/02/2018 Print Date: 10/19/2018

SAFETY DATA SHEET

Version 6.1
Revision Date 07/17/2018
Print Date 01/21/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	Benzo[<I>b</>]fluoranthene
Product Number	:	48490
Brand	:	Supelco
Index-No.	:	601-034-00-4
CAS-No.	:	205-99-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone	:	+1 314 771-5765
Fax	:	+1 800 325-5052

1.4 Emergency telephone number

Emergency Phone #	:	(314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 1B), H350

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H350	May cause cancer.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	3,4-Benzofluoranthene
Formula	:	C<SB>20</>H<SB>12</>
Molecular weight	:	252.31 g/mol
CAS-No.	:	205-99-2
EC-No.	:	205-911-9
Index-No.	:	601-034-00-4

Hazardous components

Component	Classification	Concentration
Benz[e]acephenanthrylene		
	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

	Remarks	Cancer Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Polycyclic Aromatic Hydrocarbons (PAHs) Exposure by all routes should be carefully controlled to levels as low as possible. Suspected human carcinogen

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Benz[e]acephenanthrylene	205-99-2	1-Hydroxypyrene		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 163 - 165 °C (325 - 329 °F) - lit.
f)	Initial boiling point and boiling range	No data available
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available

j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
TDLo Oral - Mouse - 7.57 mg/kg
Remarks: Liver:Changes in liver weight. Endocrine:Changes in thymus weight.
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Possible human carcinogen

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Benz[e]acephenanthrylene)
NTP:	RAHC - Reasonably anticipated to be a human carcinogen (Benz[e]acephenanthrylene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - > 1.024 mg/l - 24 h(Benz[e]acephenanthrylene)

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Benz[e]acephenanthrylene)

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benz[e]acephenanthrylene)
Marine pollutant : yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benz[e]acephenanthrylene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Benz[e]acephenanthrylene	205-99-2	2007-03-01

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Benz[e]acephenanthrylene	205-99-2	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Benz[e]acephenanthrylene	205-99-2	2007-03-01

California Prop. 65 Components

, which is/are known to the State of California to cause cancer.	CAS-No.	Revision Date
For more information go to www.P65Warnings.ca.gov.	205-99-2	2007-09-28
Benz[e]acephenanthrylene		

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H350 May cause cancer.

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956
Version: 6.1 Revision Date: 07/17/2018 Print Date: 01/21/2019

SAFETY DATA SHEET

Version 6.1
Revision Date 07/16/2018
Print Date 01/21/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	Benzo[<I>k</>]fluoranthene
Product Number	:	48492
Brand	:	Supelco
Index-No.	:	601-036-00-5
CAS-No.	:	207-08-9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone	:	+1 314 771-5765
Fax	:	+1 800 325-5052

1.4 Emergency telephone number

Emergency Phone #	:	(314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 1B), H350

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H350	May cause cancer.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	C<SB>20</>H<SB>12</>
Molecular weight	:	252.31 g/mol
CAS-No.	:	207-08-9
EC-No.	:	205-916-6
Index-No.	:	601-036-00-5

Hazardous components

Component	Classification	Concentration
Benzo[k]fluoranthene		
	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Benzo[k]fluoranthene	207-08-9	1-Hydroxypyrene		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: crystalline Colour: yellow
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 215 - 217 °C (419 - 423 °F) - lit.
f)	Initial boiling point and boiling range	No data available
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available

m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
Carcinogenicity- Rat- Implant

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Possible human carcinogen

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benzo[k]fluoranthene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benzo[k]fluoranthene)

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: DF6350000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Benzo[k]fluoranthene)

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benzo[k]fluoranthene)

Reportable Quantity (RQ) : 5000 lbs

no
Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzo[k]fluoranthene)
Marine pollutant : yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benzo[k]fluoranthene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	1994-04-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Benzo[k]fluoranthene	207-08-9	1994-04-01

California Prop. 65 Components

, which is/are known to the State of California to cause cancer.	CAS-No.	Revision Date
For more information go to www.P65Warnings.ca.gov.	207-08-9	2007-09-28
Benzo[k]fluoranthene		

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956
Version: 6.1 Revision Date: 07/16/2018 Print Date: 01/21/2019

SAFETY DATA SHEET

Version 6.1
Revision Date 07/17/2018
Print Date 01/21/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	Benz[*a*]anthracene
Product Number	:	48563
Brand	:	Supelco
Index-No.	:	601-033-00-9
CAS-No.	:	56-55-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone	:	+1 314 771-5765
Fax	:	+1 800 325-5052

1.4 Emergency telephone number

Emergency Phone #	:	(314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 1B), H350

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H350 May cause cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	1,2-Benzanthracene Tetraphene
Formula	:	C<SB>18</>H<SB>12</>
Molecular weight	:	228.29 g/mol
CAS-No.	:	56-55-3
EC-No.	:	200-280-6
Index-No.	:	601-033-00-9

Hazardous components

Component	Classification	Concentration
Benz[a]anthracene		
	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Store at room temperature.
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 157 - 159 °C (315 - 318 °F)
f)	Initial boiling point and boiling range	437.6 °C (819.7 °F)
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available

n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
LD50 Intravenous - Rat - > 200 mg/kg

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Possible human carcinogen

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benz[a]anthracene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Benz[a]anthracene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benz[a]anthracene)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Benz[a]anthracene)

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Benz[a]anthracene)

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benz[a]anthracene)
Marine pollutant : yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benz[a]anthracene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Benz[a]anthracene	56-55-3	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Benz[a]anthracene	56-55-3	1993-04-24

	CAS-No.	Revision Date
Benz[a]anthracene	56-55-3	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Benz[a]anthracene	56-55-3	1993-04-24

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer. Benz[a]anthracene	CAS-No. 56-55-3	Revision Date 2007-09-28
WARNING! This product contains a chemical known to the State of California to cause cancer. Benz[a]anthracene	CAS-No. 56-55-3	Revision Date 2007-09-28

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H350	May cause cancer.
H400	Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956
Version: 6.1 Revision Date: 07/17/2018 Print Date: 01/21/2019

SAFETY DATA SHEET

Version 5.10
Revision Date 01/10/2018
Print Date 06/22/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : CHRYSENE, 98%

Product Number : 245186
Brand : Aldrich

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H341	Suspected of causing genetic defects.
H350	May cause cancer.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : $C_{18}H_{12}$

Molecular weight : 228.29 g/mol

Hazardous components

Component	Classification	Concentration
Chrysene		
	Muta. 2; Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H341, H350, H410	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
	Remarks	Cancer Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Polycyclic Aromatic Hydrocarbons (PAHs) Exposure by all routes should be carefully controlled to levels as low as possible. Confirmed animal carcinogen with unknown relevance to humans		
Chrysene	218-01-9	TWA	0.200000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.200000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen		
		TWA	0.100000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products. cyclohexane-extractable fraction See Appendix C		

		See Appendix A		
		PEL	0.2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
	-	1-Hydroxypyrene		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: solid

		Colour: white, light yellow
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	253.0 °C (487.4 °F)
f)	Initial boiling point and boiling range	448.0 °C (838.4 °F)
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	insoluble
o)	Partition coefficient: n-octanol/water	log Pow: 5.73
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available

Inhalation: No data available

Dermal: No data available

LD50 Intraperitoneal - Mouse - > 320 mg/kg

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.
In vitro tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Chrysene)
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	OSHA specifically regulated carcinogen (Chrysene)

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1.90 mg/l - 2 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Chrysene)
Reportable Quantity (RQ): 100 lbs
Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Chrysene)
Marine pollutant:yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Chrysene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Chrysene	218-01-9	1994-04-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Chrysene	218-01-9	1994-04-01

	CAS-No.	Revision Date
Chrysene	218-01-9	1994-04-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Chrysene	218-01-9	1994-04-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Chrysene	218-01-9	2007-09-28

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.10 Revision Date: 01/10/2018 Print Date: 06/22/2019

SAFETY DATA SHEET

Version 4.4
Revision Date 12/01/2015
Print Date 06/28/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : cis-Dichloroethylene

Product Number : 48597
Brand : Supelco
Index-No. : 602-026-00-3

CAS-No. : 156-59-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Acute toxicity, Inhalation (Category 4), H332
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.

P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	C2H2Cl2
Molecular weight	:	96.94 g/mol
CAS-No.	:	156-59-2
EC-No.	:	205-859-7
Index-No.	:	602-026-00-3

Hazardous components

Component	Classification	Concentration
cis-Dichloroethylene		
	Flam. Liq. 2; Acute Tox. 4; Aquatic Acute 3; Aquatic Chronic 3; H225, H332, H412	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

Handle and store under inert gas. Air and moisture sensitive. Light sensitive.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
cis-Dichloroethylene	156-59-2	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Eye irritation		

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid Colour: light yellow
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	-80.0 °C (-112.0 °F)
f)	Initial boiling point and boiling range	60.0 - 61.0 °C (140.0 - 141.8 °F)
g)	Flash point	6.0 °C (42.8 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	1.28 g/cm3
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available

p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LC50 Inhalation - Rat - 13700 ppm
Remarks: Behavioral:Somnolence (general depressed activity). Liver:Fatty liver degeneration.

Dermal: No data available

No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: KV9420000

narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene

Poison Inhalation Hazard: No

IMDG
UN number: 1150 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: 1,2-DICHLOROETHYLENE

IATA
UN number: 1150 Class: 3 Packing group: II
Proper shipping name: 1,2-Dichloroethylene

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
cis-Dichloroethylene	156-59-2	1993-04-24

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H402	Harmful to aquatic life.

HMIS Rating

Health hazard:	1
Chronic Health Hazard:	*
Flammability:	3
Physical Hazard	1

NFPA Rating

Health hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.4 Revision Date: 12/01/2015 Print Date: 06/28/2019

MATERIAL SAFETY DATA SHEET

Date Printed: 20.10.2018
Date Updated: 07.05.2009
Version 1.4

Section 1 - Product and Company Information

Product Name	1,2:5,6-DIBENZANTHRACENE, 97% (NO BULK ORDERS ALLOWED)
Product Number	D31400
Brand	ALDRICH
Company	Sigma-Aldrich
Address	3050 Spruce Street SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Fax:	800-325-5052
Emergency Phone:	314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
1,2:5,6-DIBENZANTHRACENE	53-70-3	Yes

Formula	C22H14
Synonyms	1,2:5,6-Benzanthracene * DB(a,h)A * 1,2,5,6-Dba * 1,2,5,6-Dibenzanthraceen (Dutch) * 1,2:5,6-Dibenzanthracene * 1,2:5,6-Dibenz(a)anthracene * Dibenzo(a,h)anthracene * 1,2:5,6-Dibenzoanthracene * RCRA waste number U063
RTECS Number:	HN2625000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Toxic. Dangerous for the environment.
May cause cancer. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Target organ(s): Lungs. Liver. Calif. Prop. 65 carcinogen.

HMIS RATING

HEALTH: 2*
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	0.004 MG/M3
Poland		NDSCh	-
Poland		NDSP	-

Section 9 - Physical/Chemical Properties

Appearance: Physical State: Solid

Property	Value	At Temperature or Pressure
Molecular Weight	278,3500 AMU	
pH	N/A	
BP/BP Range	524,000 °C	760,000 mmHg
MP/MP Range	262,000 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	

Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)
Lungs. Liver.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Species: Rat
Route of Application: Intratracheal
Dose: 100 MG/KG
Result: Tumorigenic:Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration:Tumors.

Species: Mouse
Route of Application: Oral
Dose: 4160 MG/KG
Exposure Time: 26W
Frequency: I
Result: Lungs, Thorax, or Respiration:Tumors. Tumorigenic:Carcinogenic by RTECS criteria.

Species: Mouse
Route of Application: Skin
Dose: 1200 MG/KG
Exposure Time: 50W
Frequency: I
Result: Tumorigenic:Tumors at site or application. Tumorigenic:Carcinogenic by RTECS criteria. Skin and Appendages: Other: Tumors.

Species: Mouse
Route of Application: Subcutaneous
Dose: 445 UG/KG
Result: Skin and Appendages: Other: Tumors.
Tumorigenic:Carcinogenic by RTECS criteria. Tumorigenic:Tumors
at site or application.

Species: Mouse
Route of Application: Intravenous
Dose: 40 MG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax,
or Respiration:Tumors. Liver:Tumors.

Species: Mouse
Route of Application: Implant
Dose: 80 MG/KG
Result: Kidney, Ureter, Bladder:Tumors. Tumorigenic:Carcinogenic
by RTECS criteria.

Species: Mouse
Route of Application: Multiple
Dose: 40 MG/KG
Exposure Time: 12D
Frequency: I
Result: Tumorigenic:Tumors at site or application. Lungs,
Thorax, or Respiration:Tumors. Tumorigenic:Equivocal tumorigenic
agent by RTECS criteria.

Species: Guinea pig
Route of Application: Subcutaneous
Dose: 250 MG/KG
Exposure Time: 24D
Frequency: I
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS
criteria. Tumorigenic:Tumors at site or application. Lungs,
Thorax, or Respiration:Tumors.

Species: Guinea pig
Route of Application: Intravenous
Dose: 30 MG/KG
Result: Tumorigenic:Tumors at site or application. Lungs,
Thorax, or Respiration:Tumors. Tumorigenic:Equivocal tumorigenic
agent by RTECS criteria.

Species: Pigeon
Route of Application: Intramuscular
Dose: 6 MG/KG
Result: Tumorigenic:Carcinogenic by RTECS criteria.
Liver:Tumors. Tumorigenic:Tumors at site or application.

Species: Frog
Route of Application: Intrarenal
Dose: 12 MG/KG
Result: Kidney, Ureter, Bladder:Kidney tumors. Lungs, Thorax, or
Respiration:Tumors. Tumorigenic:Neoplastic by RTECS criteria.

Species: Mouse
Route of Application: Implant
Dose: 14 MG/KG

Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

Species: Mouse
Route of Application: Subcutaneous
Dose: 78 UG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

Species: Mouse
Route of Application: Oral
Dose: 4520 MG/KG
Exposure Time: 36W
Frequency: C
Result: Tumorigenic:Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. Gastrointestinal:Tumors.

Species: Mouse
Route of Application: Implant
Dose: 200 MG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration:Bronchiogenic carcinoma. Tumorigenic:Tumors at site or application.

Species: Mouse
Route of Application: Skin
Dose: 6 UG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors.

Species: Mouse
Route of Application: Subcutaneous
Dose: 6 MG/KG
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Tumorigenic:Tumors at site or application.

Species: Mouse
Route of Application: Skin
Dose: 400 MG/KG
Exposure Time: 40W
Frequency: I
Result: Tumorigenic:Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors.

Species: Mouse
Route of Application: Implant
Dose: 100 MG/KG
Result: Tumorigenic:Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder:Tumors. Tumorigenic:Tumors at site or application.

Species: Rat
Route of Application: Subcutaneous
Dose: 135 MG/KG
Exposure Time: 9W
Frequency: I
Result: Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. Tumorigenic:Tumors at site or application.

Species: Mouse

Route of Application: Subcutaneous
Dose: 400 MG/KG
Exposure Time: 10W
Frequency: I
Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

IARC CARCINOGEN LIST

Rating: Group 2A

NTP CARCINOGEN LIST

Rating: Anticipated to be a carcinogen.

CHRONIC EXPOSURE - MUTAGEN
Result: Laboratory experiments have shown mutagenic effects.

Species: Human
Dose: 360 NMOL/L
Cell Type: Embryo
Mutation test: DNA

Species: Human
Dose: 100 UMOL/L
Cell Type: fibroblast
Mutation test: Unscheduled DNA synthesis

Species: Human
Dose: 10 MG/L
Cell Type: Other cell types
Mutation test: Unscheduled DNA synthesis

Species: Human
Dose: 100 NMOL/L
Cell Type: HeLa cell
Mutation test: Unscheduled DNA synthesis

Species: Human
Dose: 54 UG/L
Cell Type: lymphocyte
Mutation test: Mutation in mammalian somatic cells.

Species: Rat
Route: Intratracheal
Dose: 25500 UG/KG
Exposure Time: 16H
Mutation test: Micronucleus test

Species: Rat
Route: Oral
Dose: 200 MG/KG
Mutation test: Morphological transformation.

Species: Rat
Dose: 100 UG/L
Cell Type: Embryo
Mutation test: Morphological transformation.

Species: Rat

Route: Intratracheal
Dose: 25560 UG/KG
Mutation test: DNA

Species: Rat
Route: Intratracheal
Dose: 51150 UG/KG
Mutation test: Sister chromatid exchange

Species: Mouse
Route: Intraperitoneal
Dose: 500 MG/KG
Mutation test: Micronucleus test

Species: Mouse
Dose: 4250 UG/L (+S9)
Cell Type: lymphocyte
Mutation test: Mutation in microorganisms

Species: Mouse
Dose: 500 UG/L
Cell Type: fibroblast
Mutation test: Morphological transformation.

Species: Mouse
Dose: 100 UG/L
Cell Type: Embryo
Mutation test: Morphological transformation.

Species: Mouse
Dose: 6 UMOL/L
Cell Type: liver
Mutation test: DNA

Species: Mouse
Route: Skin
Dose: 40 UMOL/KG
Mutation test: DNA

Species: Mouse
Dose: 1 MG/L
Cell Type: Other cell types
Mutation test: DNA

Species: Mouse
Dose: 1 MG/L
Cell Type: Other cell types
Mutation test: Other mutation test systems

Species: Mouse
Dose: 510 NMOL/L
Cell Type: Embryo
Mutation test: DNA

Species: Mouse
Dose: 510 NMOL/L
Cell Type: Embryo
Mutation test: Other mutation test systems

Species: Hamster

Dose: 56400 NMOL/L (+S9)
Cell Type: lung
Mutation test: Mutation in microorganisms

Species: Hamster
Dose: 2500 UG/L
Cell Type: Embryo
Mutation test: Morphological transformation.

Species: Hamster
Dose: 25 UG/L
Cell Type: kidney
Mutation test: Morphological transformation.

Species: Hamster
Dose: 5 MG/L
Exposure Time: 24H
Cell Type: fibroblast
Mutation test: DNA damage

Species: Hamster
Dose: 360 NMOL/L
Cell Type: Embryo
Mutation test: DNA

Species: Hamster
Dose: 5 MG/L
Cell Type: kidney
Mutation test: DNA damage

Species: Hamster
Dose: 1 MG/L
Cell Type: lung
Mutation test: DNA

Species: Hamster
Dose: 1 MG/L
Cell Type: lung
Mutation test: Other mutation test systems

Species: Hamster
Dose: 1 MMOL/L
Cell Type: fibroblast
Mutation test: Cytogenetic analysis

Species: Hamster
Route: Intraperitoneal
Dose: 900 MG/KG
Exposure Time: 24H
Mutation test: Sister chromatid exchange

Species: Hamster
Dose: 500 UG/L
Cell Type: lung
Mutation test: Mutation in mammalian somatic cells.

Species: Mammal
Dose: 2 NMOL/L
Cell Type: lymphocyte
Mutation test: DNA damage

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. (DN)Requires special label: "Contains a substance which is regulated by Dannish work environmental law due to the risk of carcinogenic properties."

Section 14 - Transport Information

DOT
Proper Shipping Name: Environmentally hazardous substances, solid, n.o.s.
UN#: 3077
Class: 9
Packing Group: Packing Group III
Hazard Label: Class 9
PIH: Not PIH

IATA
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s
IATA UN Number: 3077
Hazard Class: 9
Packing Group: III

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION
Symbol of Danger: T-N
Indication of Danger: Toxic. Dangerous for the environment.
R: 45-50/53
Risk Statements: May cause cancer. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S: 53-45-60-61
Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

US CLASSIFICATION AND LABEL TEXT
Indication of Danger: Toxic. Dangerous for the environment.
Risk Statements: May cause cancer. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wear suitable protective clothing, gloves, and eye/face protection. This

material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.
US Statements: Target organ(s): Lungs. Liver. Calif. Prop. 65 carcinogen.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: Yes
NOTES: This product is subject to SARA section 313 reporting requirements.
TSCA INVENTORY ITEM: Yes

UNITED STATES - STATE REGULATORY INFORMATION

CALIFORNIA PROP - 65
California Prop - 65: This product is or contains chemical(s) known to the state of California to cause cancer. This product is or contains chemical(s) known to the state of California to cause cancer.

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: Yes

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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SAFETY DATA SHEET

Version 5.6
Revision Date 12/11/2017
Print Date 11/10/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Indeno[1,2,3-*cd*]pyrene

Product Number : 48499
Brand : Supelco

CAS-No. : 193-39-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 2), H351

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

Hazard statement(s)
H351 Suspected of causing cancer.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	$C_{22}H_{12}$
Molecular weight	:	276.33 g/mol
CAS-No.	:	193-39-5
EC-No.	:	205-893-2

Hazardous components

Component	Classification	Concentration
Indeno[1,2,3-cd]pyrene		
	Carc. 2; H351	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Store at room temperature.
Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.
Hazardous components without workplace control parameters

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Indeno[1,2,3-cd]pyrene	193-39-5	1-Hydroxypyrene (1-HP)		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the

sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	163.6 °C (326.5 °F)
f)	Initial boiling point and boiling range	536.0 °C (996.8 °F)
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Indeno[1,2,3-cd]pyrene)
NTP:	RAHC - Reasonably anticipated to be a human carcinogen (Indeno[1,2,3-cd]pyrene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Indeno[1,2,3-cd]pyrene	193-39-5	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Indeno[1,2,3-cd]pyrene	193-39-5	1993-04-24

	CAS-No.	Revision Date
Indeno[1,2,3-cd]pyrene	193-39-5	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Indeno[1,2,3-cd]pyrene	193-39-5	1993-04-24

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer. Indeno[1,2,3-cd]pyrene	CAS-No. 193-39-5	Revision Date 2007-09-28

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Carc.	Carcinogenicity
H351	Suspected of causing cancer.

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	1
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.6 Revision Date: 12/11/2017 Print Date: 11/10/2018

SAFETY DATA SHEET

Version 4.10
Revision Date 01/04/2018
Print Date 06/28/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Trichloroethylene

Product Number : 251402
Brand : Sigma-Aldrich
Index-No. : 602-027-00-9

CAS-No. : 79-01-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear eye protection/ face protection.
P280	Wear protective gloves.
P281	Use personal protective equipment as required.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	TCE Trichloroethene
Formula	:	C_2HCl_3
Molecular weight	:	131.39 g/mol
CAS-No.	:	79-01-6
EC-No.	:	201-167-4
Index-No.	:	602-027-00-9

Hazardous components

Component	Classification	Concentration
Trichloroethylene		
	Skin Irrit. 2; Eye Irrit. 2A; Muta. 2; Carc. 1B; STOT SE 3; Aquatic Acute 3; Aquatic Chronic 3; H315, H319, H336, H341, H350, H412	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Handle and store under inert gas.
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Trichloroethylene	79-01-6	TWA	10.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		STEL	25.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		Potential Occupational Carcinogen See Appendix C See Appendix A		
		See Table Z-2		
		TWA	100.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		CEIL	200.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		Peak	300.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		TWA	100 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		CEIL	200 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		Peak	300 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		

		STEL	100 ppm 537 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		C	300 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		PEL	25 ppm 135 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
	-	Trichloroacetic acid	15.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			
		Trichloroethanol	0.5000 mg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In end-exhaled air	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -84.8 °C (-120.6 °F) - lit.
f)	Initial boiling point and boiling range	86.7 °C (188.1 °F) - lit.
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 10.5 %(V) Lower explosion limit: 8 %(V)
k)	Vapour pressure	81.3 hPa (61.0 mmHg) at 20.0 °C (68.0 °F)
l)	Vapour density	No data available
m)	Relative density	1.463 g/mL at 25 °C (77 °F)
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	log Pow: 2.29log Pow: 5
p)	Auto-ignition temperature	410.0 °C (770.0 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Oxidizing agents, Strong bases, Magnesium

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 4,920 mg/kg

LC50 Inhalation - Mouse - 4 h - 8450 ppm

LD50 Dermal - Rabbit - > 20,000 mg/kg

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Severe skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Eye irritation - 24 h

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.
In vitro tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC:	1 - Group 1: Carcinogenic to humans (Trichloroethylene)
NTP:	RAHC - Reasonably anticipated to be a human carcinogen (Trichloroethylene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: KX4550000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Exposure to and/or consumption of alcohol may increase toxic effects., Gastrointestinal disturbance, Kidney injury may occur., narcosis
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 41 mg/l - 96.0 h
	LOEC - other fish - 11 mg/l - 10.0 d
	NOEC - Oryzias latipes - 40 mg/l - 10.0 d
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 18.00 mg/l - 48 h
Toxicity to algae	IC50 - Pseudokirchneriella subcapitata (green algae) - 175.00 mg/l - 96 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1710 Class: 6.1 Packing group: III
Proper shipping name: Trichloroethylene
Reportable Quantity (RQ): 100 lbs
Poison Inhalation Hazard: No

IMDG
UN number: 1710 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TRICHLOROETHYLENE

IATA
UN number: 1710 Class: 6.1 Packing group: III

Proper shipping name: Trichloroethylene

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Trichloroethylene	79-01-6	2011-09-01
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Trichloroethylene	79-01-6	2011-09-01

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H402	Harmful to aquatic life.

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.10 Revision Date: 01/04/2018 Print Date: 06/28/2019

Appendix F:

Community Air Monitoring Plan (CAMP)

SESI
CONSULTING ENGINEERS

Geotechnical
Environmental
Site Civil

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Community Air Monitoring Plan
For

Proposed Mixed-Use Development
466 Main Street
New Rochelle, Westchester County, NY

Prepared for:

BRP 466 Main Street, LLC
June 2025

SESI Project No:
12587

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LIST OF ACRONYMS

Acronym	Definition
CAMP	Community Air Monitoring Plan
mcg/m^3	micrograms per cubic meter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PID	Photoionization Detector
PM-10	Less than 10 micrometers
ppm	Parts Per Million
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
VOC	Volatile Organic Compound

1.0 INTRODUCTION

This document presents a Community Air Monitoring Plan (CAMP) for the Remedial Investigation Workplan (RIWP) for the proposed development of the property located at 466 Main Street, New Rochelle, Westchester County, New York (the Site). The Site consists of a 0.708-acre area parcel and is identified as proposed Block 215, Lot 32 on the Westchester County tax map. The Site is located in a residential and commercial area and is bounded by Main Street (US Highway 1) to the north, a parking lot to the south, Locust Avenue and apartment buildings to the east, and North Avenue to the west.

The Site is improved with a commercial space, asphalt parking lot and vegetated areas. The site building operations include several commercial spaces. The Site has been developed since at least 1951 and historically has been residences and other commercial uses including most notably a plumber shop (circa 1903), the New Rochelle Theatre (circa 1903-1911), a repair shop (circa 1911) and a hardware and paints shop (circa 1911).

2.0 OBJECTIVES

The objective of the CAMP is to provide a measure of protection for the downwind community from potential airborne contaminant releases that may arise during all ground intrusive activities, and potentially contaminated soil and material handling and staging. In addition, the CAMP is intended to ensure that dust and contaminants are not leaving the work zone.

3.0 METHODS

The CAMP will include continuous monitoring for particulate matter (e.g., airborne “dust”) and volatile organic compounds (VOCs) during the planned demolition and remediation activities. Any CAMP exceedances will be reported to the NYSDEC and NYSDOH on the same business day and as soon as possible. Notification of the exceedance will be sent via email along with the reason for the exceedance, the measure(s) taken to address the exceedance, and if the exceedance was resolved. In addition, the following NYSDEC and NYSDOH personnel will be provided weekly CAMP data summaries for review.

Name	Contact Information
NYSDEC Project Manager	TBD
NYSDOH Project Manager	TBD

3.1 CONTINUOUS MONITORNG

Continuous monitoring for particulates and VOCs will be conducted during all ground intrusive activities including soil borings, monitoring well installations, and soil vapor probe installations.

3.2 PERIODIC MONITORING

Periodic monitoring for VOCs will be conducted 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 consists 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.

4.0 VOC MONITORNG, RESPONSE LEVELS, AND ACTIONS

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. The monitoring work will be performed using a photoionization detector (PID) equipped with a 10.6 ev lamp. The equipment will 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.

- 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.
- 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.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (NYSDEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

3.3 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.

- 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/m3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 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.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

4.0 SPECIAL REQUIREMENTS FOR WORK WITHIN 20 FEET OF POTENTIALLY EXPOSED INDIVIDUAL 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). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). 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/m3 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.

Appendix G:

Citizen Participation Plan