SESI
CONSULTING
ENGINEERS

Supplemental Phase II Environmental Site Assessment Report

FOR

Lexington Development
85 North Lexington Avenue
White Plains, Westchester County, New York

Prepared For:

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DATE:

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1.0 INTRODUCTION

SESI Consulting Engineers (SESI) has conducted this Phase II Environmental Site Assessment (Phase II ESA) on behalf of the GS White Plains Owner, LLC for the property located at 85 North Lexington Avenue in the City of White Plains, New York (Site). The Site is an approximately 1.53-acre property and is located on the west side of North Lexington Avenue, north of Hamilton Avenue, and is identified on the Westchester County tax maps as Tax ID 125:66-5-2 (50 Hamilton Avenue), and a portion of Lot 125:66-5-1 (85 North Lexington Avenue). The Site is bounded to the north by a bus depot and parking garage, to the south by an office building across Hamilton Avenue, to the east by a church across Lexington Avenue, and to the west by a parking lot across Ferris Avenue.

This report complies with the 2015 American Society for Testing and Materials standard (ASTM E1903). **Figure 1.1** presents a Site Location Map.

This Phase II ESA report summarizes the data of soil samples and soil vapor samples collected by SESI to further investigate the Site.

1.1 SITE SETTINGS

The Site consists of an approximate 1.53-acre parcel developed as a parking lot after 1950. The Site had been previous developed with commercial and industrial buildings. Based on the United States Geological Survey (USGS) topographic map, the Site elevation is approximately 200 feet above mean sea level (ft-msl) and slopes down from the east to west. The nearest surface water body is the Bronx River located 0.11 miles west of the Site.

1.2 PREVIOUS ENVIRONMENTAL REPORTS

Phase II Environmental Site Assessment (50 Hamilton Avenue P/O 85 North Lexington Avenue (July 2019)

In June and July 2019, SESI completed a preliminary Site investigation at the Site. The investigation included the following: installation of twenty-nine (29) soil borings and analysis of fifty-two (52) soil samples; installation and sampling of eight (8) soil vapor points; and installation of three (3) temporary well points and collection of three (3) groundwater samples.

Soil analytical results in 19 of 52 samples identified concentrations of metals, pesticides, and SVOCs in exceedance of the New York State Department NYSDEC Unrestricted Use Soil Cleanup Objectives (USCO). mercury (1 sample), benzo (b) fluoranthene (3 samples), indeno (1,2,3-cd) pyrene (2 samples), benzo(a)anthracene (1 sample), benzo(a)pyrene (1 sample) chrysene (1 sample) and dibenzo(a,h)anthracene (1 sample) were detected at concentrations that exceeded the NYSDEC Restricted Residential Soil Cleanup Objective (RRSCO).

Soil vapor analytical results identified concentrations of trichloroethylene in one (1) sample and vinyl chloride in two (2) samples at concentrations that exceeded New York State Department of Health (NYSDOH) sub-slab soil gas matrix values.

Groundwater analytical results did not identify concentrations of in exceedance of the NYSDEC Ambient Water Quality Standards (AWQS).

1.3 SITE HISTORY

Prior to 1950, the Site was utilized as a lumber and storage yard, a freight house with railroad transport access, a fire department, a builder supply storage facility and a wholesale feed supply and grinding company. Railroad operations continued on Lot 1 until the mid-1960s, when the site was taken over by urban renewal agencies and the structures on the railroad portion of the lot were razed and it became a parking lot. The Lot 2 portion of the Site was occupied by two service stations from the 1930s through 1960s. The Lot 2 portion of the Site was partially redeveloped into a parking lot in 1995 and fully redeveloped into the current parking lot sometime around 2006. These historical uses are depicted on **Figure 1.2**.

2.0 SUBSURFACE INVESTIGATION

2.1 SITE GEOLOGY

Based on soil borings conducted during this investigation and during SESI's Phase II investigation completed in April 2021 and waste classification sampling conducted in June 2021, subsurface geology generally consisted of brown medium to fine sand, with traces of fine gravel and silt from 0 to 12 feet below ground surface (ft-bg). Bedrock was not encountered in the borings.

2.2 SOIL BORINGS

Prior to conducting subsurface drilling, SESI's drilling contractor contacted New York's utility mark-out system. In addition, SESI retained American Geophysics, a private utility locator, to

locate underground utilities not included in the one-call and to conduct a geophysical survey using ground penetrating radar (GPR) and electromagnetic (EM) detection. The GPR/EM surveying was performed on April 6, 2021 and on June 14, 2021 to clear soil boring locations, as well as to search for a potential underground storage tank(s) (USTs). No anomalies consistent with USTs were identified. American Geophysics' report is provided in **Appendix A**.

The Phase II Investigation consisted of eighteen (18) soil borings, two (2) temporary wells, and four (4) soil vapor points completed using direct push Geoprobe® methodologies. All borings and observations were logged to identify the presence of staining, fill materials, volatile organic vapor concentrations, and groundwater depth. Two (2) groundwater samples and four (4) soil vapor samples were collected during the Phase II Investigation. The investigation was completed on April 6 through 8, 2021.

In addition to the Phase Investigation grab samples, a total of twenty four (24) composite samples were collected for waste characterization purposes on June 14 and 15, 2021. The waste characterization samples were collected at a frequency of 1 composite per 750 cubic yards (CY) of soils based on site grid of 50 foot-wide by 50 foot-long and 7 foot deep.

Table 2.1 below presents a list of the samples collected, the dates of sampling, installation method, depth, location and sample depth rationale, sample media, sample type, and analysis completed. **Figure 2.1** presents the soil boring locations. Soil boring logs are presented in **Appendix B**. Samples were delivered under chain-of-custody and analyzed at Alpha Analytical Laboratories (Alpha), a New York certified laboratory (NY Certification #11148). Soil samples were collected based on field screening, which included screening with a Photo Ionization Detector (PID), visual and olfactory observations. The soil samples were collected as a discrete grab samples and were not composited.

As noted in the table below, the soil samples were analyzed for Target Compound List +30 TICs/Target Analyte List (TCL+30/TAL) which includes total volatile organic Compounds (VOCs), semi-VOCs (SVOCs), target analyte list (TAL) metals (23 metals + cyanide), pesticides, and polychlorinated biphenyls (PCBs).

Table 2.1 – Sample Summary Table

Location Name	Date	Installation Method	Boring Depth (ft)	Sample Depth (ft)	Sample Rationale	Sample Media	Anlayses
201	4/8/2021	Direct Push (Geoprobe®)	12	7.5-8	Observed Fill	Soil	TCL+30/TAL
202	4/6/2021	Direct Push (Geoprobe®)	12	10-10.5	Observed Fill	Soil	TCL+30/TAL
203	4/7/2021	Direct Push (Geoprobe®)	12	10-10.5	Observed Fill	Soil	TCL+30/TAL
204	4/7/2021	Direct Push (Geoprobe®)	12	5-5.5	Observed Fill	Soil	TCL+30/TAL
205	4/6/2021	Direct Push (Geoprobe®)	12	4-4.5	PID Above Background	Soil	TCL+30/TAL
206	4/6/2021	Direct Push (Geoprobe®)	12	4-4.5	Observed Fill	Soil	TCL+30/TAL
207	4/6/2021	Direct Push (Geoprobe®)	12	2-2.5	Observed Fill	Soil	TCL+30/TAL
208	4/7/2021	Direct Push (Geoprobe®)	12	2.5-3	Observed Fill	Soil	TCL+30/TAL
209	4/7/2021	Direct Push (Geoprobe®)	12	2.5-3	Observed Fill	Soil	TCL+30/TAL
210	4/7/2021	Direct Push (Geoprobe®)	12	3.5-4	Observed Fill	Soil	TCL+30/TAL
211	4/7/2021	Direct Push (Geoprobe®)	12	3.5-4	Observed Fill	Soil	TCL+30/TAL
212	4/7/2021	Direct Push (Geoprobe®)	12	3.5-4	Observed Fill	Soil	TCL+30/TAL
213	4/7/2021	Direct Push (Geoprobe®)	12	7-7.5	PID Above Background	Soil	TCL+30/TAL
214	4/7/2021	Direct Push (Geoprobe®)	12	7.8-8	Observed Fill	Soil	TCL+30/TAL
215	4/6/2021	Direct Push (Geoprobe®)	12	11.5-12.5	PID Above Background	Soil	TCL+30/TAL
216	4/6/2021	Direct Push (Geoprobe®)	12	10.5-11	PID Above Background	Soil	TCL+30/TAL
217	4/7/2021	Direct Push (Geoprobe®)	12	1-1.5	Observed Fill	Soil	TCL+30/TAL
218	4/7/2021	Direct Push (Geoprobe®)	12	3.5-4	Observed Fill	Soil	TCL+30/TAL
WC-A1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-18	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-A2	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-A3	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-A4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-B1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-B2	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-B3	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-B4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-C1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-18	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-C2	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-C3	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-C4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-D1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-18	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-D2	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-D3	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-D4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-E1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-18	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-E2	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-E3	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-E4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-F1	6/14/2021	Direct Push (Geoprobe®)	18	0-7, 7-14, 14-18	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-F2	6/14/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-F3	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
WC-F4	6/15/2021	Direct Push (Geoprobe®)	21	0-7, 7-14, 14-21	Waste Classification	Soil	TCL+30/TAL, Total EPH, RCRA Characteristics
TP-204	4/7/2021	Direct Push (Geoprobe®)	30	26.7	NA	Groundw ater	TCL+30/TAL
TP-204	6/15/2021	Direct Push (Geoprobe®)	30	27	NA	Groundw ater	PFAS
TP-213	4/7/2021	Direct Push (Geoprobe®)	25	18.5	NA	Groundw ater	TCL+30/TAL
TP-213	6/15/2021	Direct Push (Geoprobe®)	30	21	NA	Groundw ater	PFAS
TP-217	6/15/2021	Direct Push (Geoprobe®)	30	21	NA	Groundw ater	PFAS
SV-201	4/8/2021	Direct Push (Geoprobe®)	10	10	Within 2 feet of groundw ater Table	Soil Vapor	TO-15
SV-202	4/8/2021	Direct Push (Geoprobe®)	10	10		Soil Vapor	TO-15
SV-203	4/8/2021	Direct Push (Geoprobe®)	10	10		Soil Vapor	TO-15
SV-204	4/8/2021	Direct Push (Geoprobe®)	10	10		Soil Vapor	TO-15

Notes:
ft - Feet below grade surface.

2.3 GROUNDWATER INVESTIGATION

Three (3) borings were advanced into the groundwater table to install temporary monitoring wells, identified as TP-204, TP-213 and TP-17. Groundwater was observed at depths ranging between 18.5 to 26.7 ft-bg. The temporary monitoring well locations are provided in **Figure 2.1.** Groundwater samples were collected from the wells, delivered under chain-of-custody to Alpha Analytical Laboratories (Alpha), a New York certified laboratory (NY Certification #11148), and analyzed for TCL+30/TAL, and the 21 Per- and Polyfluoroalkyl Substances (PFAS). Sampling was performed using a peristaltic pumps and disposable tubing.

2.4 SOIL VAPOR INVESTIGATION

Four (4) soil vapor points were installed via direct push methodologies. The soil samples were collected with 1-L Summa Canisters with flow controllers set for a flow rate of 200 ml/min. Soil vapor point locations are depicted in **Figure 2.1**. The soil vapor samples were delivered under chain-of-custody to Alpha for EPA TO-15 analysis.

3.0 ANALYTICAL RESULTS

3.1 SOIL INVESTIGATION RESULTS

During the April 2021 Phase II Investigation, soil recovered from soil borings and temporary well points was inspected for evidence of historic fill materials, elevated volatile vapors, and staining. Soil mixed with trace brick materials was observed throughout the Site and is indicative of historic fill placement. Evidence of fill was observed from grade to depths up to 5 ft-bg. Soil analytical results summary tables are included in **Table 3.1,** which presents a summary of soil sampling data collected during the Phase II Investigation compared to the NYSDEC USCO, Restricted Use Soil Cleanup Objectives (RSCOs), and RRSCO. **Table 3.2** below and **Figure 3.1** includes a summary of the soil exceedances of the NYSDEC USCO, RSCOs, and RRSCO.

SVOCs were detected at concentrations that exceeded the USCO, RSCO, and RRSCO in three (3) samples (borings 211, 216, and 2017) at depths ranging from 1 to 11 ft-bgs. The SVOCs detected included polycyclic aromatic hydrocarbons (PAHs), which are commonly identified and associated with historic fill; therefore, the presence of PAHs in soil were attributed to the presence of historic fill.

Metals including copper, lead, mercury, nickel and zinc were detected in five (5) borings (201, 210, 211, 212, and 217) at concentrations exceeding the USCO at depths ranging from 1 to 4 ft-bgs. Iron was detected in each boring at concentration exceeding the RSCO. PCBs were detected in one boring (205) at concentrations that exceeded the USCO. The pesticide 4,4 DDT was detected in four (4) borings (201, 209, 211, and 213) at a depth of 7 to 7.5 ft-bgs that exceeded USCO. The horizontal and vertical dispersion suggests that these contaminants are associated with historic fill.

Table 3.2 – Phase II Soil Sample Exceedances

LOCATION				201		202		203		204		205	
SAMPLING DATE				4/8/2021		4/6/2021		4/7/2021		4/6/2021		4/6/2021	
LAB SAMPLE ID				L2117728-01		L2117139-05		L2117439-10		L2117139-04		L2117139-03	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL	
Analyte (mg/kg)	USCO	RSCO	RRSCO	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
4,4'-DDT	0.0033	1.7	7.9	0.00713		0.00365	U	0.00301	J	0.00318	U	0.00315	U
Aroclor 1248	0.1	1	1	0.0348	U	0.0394	U	0.0342	U	0.0342	U	0.272	
Benzo(a)anthracene	1	1	1	0.25	J	0.12	U	0.18		0.48		0.18	
Benzo(a)pyrene	1	1	1	0.73	U	0.16	U	0.18		0.42		0.21	
Benzo(b)fluoranthene	1	1	1	0.26	J	0.12	U	0.23		0.61		0.29	
Benzo(k)fluoranthene	0.8	1	3.9	0.55	U	0.12	U	0.076	J	0.16		0.093	J
Chrysene	1	1	3.9	0.23	J	0.12	U	0.16		0.43		0.19	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.55	U	0.12	U	0.026	J	0.069	J	0.034	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.73	U	0.16	U	0.12	J	0.31		0.17	
Copper, Total	50	270	270	13.2		14.1		13.3		6.22		9.41	
Iron, Total		2000		9970		13500		12300		4840		8750	
Lead, Total	63	400	400	66.6		2.89	J	6.96		8.61		26.7	
Mercury, Total	0.18	0.81	0.81	0.049	J	0.079	U	0.065	U	0.067	U	0.067	U
Nickel, Total	30	140	310	43.7		10.1		7.27		3.62		6.17	
Zinc, Total	109	2200	10000	83.5		31.2		24.6		18.2		39.7	

LOCATION				206		207		208		209		210	
SAMPLING DATE				4/6/2021		4/6/2021		4/7/2021		4/7/2021		4/7/2021	
LAB SAMPLE ID				L2117139-02		L2117139-01		L2117439-05		L2117439-07		L2117439-06	
Analyte (mg/kg)	USCO	RSCO	RRSCO	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
4,4'-DDT	0.0033	1.7	7.9	0.0031	U	0.00343	U	0.0036	U	0.00646		0.00609	U
Aroclor 1248	0.1	1	1	0.0355	U	0.038	U	0.0407	U	0.0348	U	0.0342	U
Benzo(a)anthracene	1	1	1	0.055	J	0.22		0.52		0.18		0.21	
Benzo(a)pyrene	1	1	1	0.14	U	0.19		0.63		0.22		0.23	
Benzo(b)fluoranthene	1	1	1	0.071	J	0.29		0.84		0.31		0.31	
Benzo(k)fluoranthene	0.8	1	3.9	0.11	U	0.089	J	0.28		0.1		0.088	J
Chrysene	1	1	3.9	0.066	J	0.28		0.58		0.22		0.21	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.11	U	0.033	J	0.1	J	0.039	J	0.042	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.033	J	0.14	J	0.46		0.18		0.15	
Copper, Total	50	270	270	15.8		17		7.1		25.1		112	
Iron, Total		2000		16200		13900		13200		16300		30700	
Lead, Total	63	400	400	5.18		61.7		15		54.3		98.9	
Mercury, Total	0.18	0.81	0.81	0.068	U	0.124		0.077	U	0.052	J	0.094	
Nickel, Total	30	140	310	12.2		9.64		8.69		13.8		59.9	
Zinc, Total	109	2200	10000	31.8		51.6		38.1		69.2		154	

LOCATION				211		212		213		214		215	
SAMPLING DATE				4/7/2021		4/7/2021		4/7/2021		4/7/2021		4/6/2021	
LAB SAMPLE ID				L2117439-08		L2117439-09		L2117439-12		L2117439-11		L2117139-06	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL	
Analyte (mg/kg)	USCO	RSCO	RRSCO	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
4,4'-DDT	0.0033	1.7	7.9	0.00787		0.0158	U	0.00906		0.00303	U	0.00298	U
Aroclor 1248	0.1	1	1	0.0346	U	0.0346	U	0.0342	U	0.0337	U	0.0328	U
Benzo(a)anthracene	1	1	1	2.6		0.31	J	0.27		0.1	U	0.045	J
Benzo(a)pyrene	1	1	1	2.5		1.4	U	0.28		0.14	U	0.042	J
Benzo(b)fluoranthene	1	1	1	3.4		0.4	J	0.37		0.046	J	0.055	J
Benzo(k)fluoranthene	0.8	1	3.9	1.1		1	U	0.1		0.1	U	0.1	U
Chrysene	1	1	3.9	2.6		0.31	J	0.27		0.042	J	0.043	J
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.34		1	U	0.044	J	0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	1.8		1.4	U	0.18		0.14	U	0.032	J
Copper, Total	50	270	270	39.9		14.8		15.7		11.2		12.1	
Iron, Total		2000		14600		13500		8900		9190		12200	
Lead, Total	63	400	400	274		214		21.2		14.7		19.6	
Mercury, Total	0.18	0.81	0.81	0.338		0.142		0.066	U	0.065	U	0.055	J
Nickel, Total	30	140	310	12		11.2		7.3		6.42		9.88	
Zinc, Total	109	2200	10000	150		104		37.2		38.4		33.8	

LOCATION				216		217		218	
SAMPLING DATE				4/6/2021		4/7/2021		4/7/2021	
LAB SAMPLE ID				L2117139-07		L2117439-03		L2117439-04	
SAMPLE DEPTH (ft.)									
Analyte (mg/kg)	USCO	RSCO	RRSCO	Results	Q	Results	Q	Results	Q
4,4'-DDT	0.0033	1.7	7.9	0.00312	U	0.00321	U	0.0031	U
Aroclor 1248	0.1	1	1	0.0149	J	0.0802		0.0336	U
Benzo(a)anthracene	1	1	1	4.5		1.8		0.16	
Benzo(a)pyrene	1	1	1	3.8		1.8		0.16	
Benzo(b)fluoranthene	1	1	1	5.1		2.8		0.21	
Benzo(k)fluoranthene	0.8	1	3.9	1.3		0.88		0.076	J
Chrysene	1	1	3.9	4		2.1		0.16	
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.89		0.33		0.026	J
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	3.2		1.4		0.12	J
Copper, Total	50	270	270	12.1		41.7		7.21	
Iron, Total		2000		9130		16100		11800	
Lead, Total	63	400	400	26		124		6.16	
Mercury, Total	0.18	0.81	0.81	0.067	U	0.286		0.066	U
Nickel, Total	30	140	310	7.24		10.9		8.42	
Zinc, Total	109	2200	10000	39.8		97.5		23.4	

Notes:

mg/kg – milligrams per kilogram
J – Concentration is estimated

Concentration Exceeds USCO

Concentration Exceeds the RSCO

Concentration Exceeds the RRSCO

Soil analytical results summary tables are included in **Tables 3.3**, which presents a summary of soil sampling data collected during the Waste Classification sampling compared to the NYSDEC USCO, Restricted Use Soil Cleanup Objectives (RSCOs), and RRSCO. **Table 3.4** below and **Figure 3.1** include a summary of the soil exceedances of the NYSDEC USCO, RSCOs, and RRSCO.

The SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene were detected at concentrations exceeding the RRSCOs in four (4) soil samples collected from four (4) soil borings at depths ranging from 7 to 21 ft-bgs.

Barium was detected in one soil sample at concentrations exceeding the RSRCOs at a depth of 7 ft-bgs. Iron was detected in each boring and sample collected at concentrations exceeding the RSCOs at depths ranging from 7 to 21 ft-bgs. Cadmium was detected in one soil sample at a concentration exceeding the USCO at depth of 7 ft-bgs. Lead was detected at concentrations exceeding the USCOs in seven (7) soil samples collected from seven (7) soil borings at depth ranging from 7 to 18 ft-bgs. Mercury was detected at concentrations exceeding the USCOs in three (3) soil samples collected from three (3) soil borings at depth ranging from 7 to 18 ft-bgs. Zinc at concentrations exceeding the USCOs in four (4) soil samples collected from four (4) soil borings at depth ranging from 7 to 18 ft-bgs.

Table 3.4 – Waste Classification Soil Sample Exceedances

LOCATION				WC-A1 (0-7)	WC-A1 (7-14)	WC-A1 (14-18)	WC-A2 (0-7)	WC-A2 (7-14)	WC-A2 (14-21)
SAMPLING DATE				6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021
SAMPLE DEPTH (ft.)				0-7	7-14	14-18	0-7	7-14	14-21
Analyte (mg/kg)	USCO	RSCO	RRSCO	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1	0.0507	ND (0.037)	ND (0.037)	0.235	0.221	ND (0.035)
Benzo(a)pyrene	1	1	1	0.0565	ND (0.037)	ND (0.037)	0.254	0.175	ND (0.035)
Benzo(b)fluoranthene	1	1	1	0.0696	ND (0.037)	ND (0.037)	0.319	0.28	ND (0.035)
Benzo(k)fluoranthene	0.8	1	3.9	0.0256	ND (0.037)	ND (0.037)	0.119	0.0942	ND (0.035)
Chrysene	1	1	3.9	0.0582	ND (0.037)	ND (0.037)	0.224	0.282	ND (0.035)
Dibenzo(a,h)anthracene	0.33	0.33	0.33	ND (0.036)	ND (0.037)	ND (0.037)	0.0475 [e]	0.0515 [e]	ND (0.035) [a]
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.0343	ND (0.037)	ND (0.037)	0.226	0.183	ND (0.035)
Aroclor 1242	0.1	1	1	ND (0.036)	ND (0.037)	ND (0.035)	ND (0.035)	ND (0.035)	ND (0.034)
Aroclor 1248	0.1	1	1	ND (0.036)	ND (0.037)	ND (0.035)	ND (0.035)	ND (0.035)	ND (0.034)
Aroclor 1260	0.1	1	1	ND (0.036)	ND (0.037)	ND (0.035)	ND (0.035)	ND (0.035)	ND (0.034)
4,4'-DDE	0.0033	1.8	8.9	ND (0.00071)	ND (0.00073)	ND (0.00071)	0.0019 [f]	ND (0.00070)	ND (0.00069)
4,4'-DDT	0.0033	1.7	7.9	ND (0.00071)	ND (0.00073)	ND (0.00071)	**0.0072** [i]	ND (0.00070)	ND (0.00069)
Barium, Total	350	350	400	49.4	35.8	28.3	69.6	90	77.2
Cadmium, Total	2.5	2.5	4.3	<0.56	<0.55	<0.58	<0.52	<0.54	<0.52
Copper, Total	50	270	270	15.3	12.1	6.9	24.6	19.3	14.3
Iron, Total	-	2000	-	**11200**	**8350**	**8770**	**16500**	**16400**	**13800**
Lead, Total	63	400	400	49.8	<2.2	<2.3	50.6	11.9	2.8
Mercury, Total	0.18	0.81	0.81	<0.025	<0.026	<0.026	0.066	<0.025	<0.025
Zinc, Total	109	2200	10000	53.7	21	18.8	81.7	52.3	38.5

				SAMPLING DATE	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.0939	ND (0.035)	0.231	ND (0.035)	0.21	ND (0.034)
Benzo(a)pyrene	1	1	1		0.0986	ND (0.035)	0.197	ND (0.035)	0.18	ND (0.034)
Benzo(b)fluoranthene	1	1	1		0.111	ND (0.035)	0.301	ND (0.035)	0.276	ND (0.034)
Benzo(k)fluoranthene	0.8	1	3.9		0.0384	ND (0.035)	0.105	ND (0.035)	0.0905	ND (0.034)
Chrysene	1	1	3.9		0.0756	ND (0.035)	0.299	ND (0.035)	0.265	ND (0.034)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.038)	ND (0.035)	0.0449	ND (0.035)	0.0359	ND (0.034)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		0.05	ND (0.035)	0.125	ND (0.035)	0.106	ND (0.034)
Aroclor 1242	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.033)	ND (0.032)	ND (0.034)
Aroclor 1248	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.033)	ND (0.032)	ND (0.034)
Aroclor 1260	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.033)	ND (0.032)	ND (0.034)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00071)	ND (0.00068)	ND (0.00068)	ND (0.00067)	ND (0.00064)	ND (0.00067)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00071)	ND (0.00068)	ND (0.00068)	ND (0.00067)	ND (0.00064)	ND (0.00067)
Barium, Total	350	350	400		63.1	35.9	39.9	68.9	22.9	31.3
Cadmium, Total	2.5	2.5	4.3		<0.61	<0.51	<0.52	<0.52	<0.55	<0.50
Copper, Total	50	270	270		6.8	8.2	13.2	18.3	9.6	8.5
Iron, Total	-	2000	-		**16500**	**14500**	**12800**	**15600**	**7430**	**7940**
Lead, Total	63	400	400		13.8	3.3	12.3	4.3	3.1	2.2
Mercury, Total	0.18	0.81	0.81		<0.033	<0.031	<0.030	<0.027	<0.025	<0.028
Zinc, Total	109	2200	10000		47.8	33.7	34.5	42.1	18.6	18.3

				LOCATION	WC-B1 (0-7)	WC-B1 (7-14)	WC-B1 (14-18)	WC-B2 (0-7)	WC-B2 (7-14)	WC-B2 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-18	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		ND (0.036)	0.0132	0.0138	0.249	ND (0.035)	ND (0.033)
Benzo(a)pyrene	1	1	1		ND (0.036)	ND (0.038)	ND (0.038)	0.274	ND (0.035)	ND (0.033)
Benzo(b)fluoranthene	1	1	1		ND (0.036)	ND (0.038)	ND (0.038)	0.358	ND (0.035)	ND (0.033)
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.036)	ND (0.038)	ND (0.038)	0.119	ND (0.035)	ND (0.033)
Chrysene	1	1	3.9		ND (0.036)	0.0153	0.0121	0.237	ND (0.035)	ND (0.033)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.036)	ND (0.038)	ND (0.038)	0.0617 [e]	ND (0.035) [a]	ND (0.033) [a]
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		ND (0.036)	ND (0.038)	ND (0.038)	0.26	ND (0.035)	ND (0.033)
Aroclor 1242	0.1	1	1		ND (0.036)	ND (0.035)	ND (0.036)	ND (0.036)	ND (0.033)	ND (0.033)
Aroclor 1248	0.1	1	1		ND (0.036)	ND (0.035)	ND (0.036)	ND (0.036)	ND (0.033)	ND (0.033)
Aroclor 1260	0.1	1	1		ND (0.036)	ND (0.035)	ND (0.036)	ND (0.036)	ND (0.033)	ND (0.033)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00072)	ND (0.00071)	ND (0.00071)	ND (0.00072)	ND (0.00067)	ND (0.00065)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00072)	ND (0.00071)	ND (0.00071)	ND (0.00072)	ND (0.00067)	ND (0.00065)
Barium, Total	350	350	400		<22	26.6	38	70.7	28.7	54.8
Cadmium, Total	2.5	2.5	4.3		<0.56	<0.56	<0.57	<0.53	<0.53	<0.49
Copper, Total	50	270	270		8.4	9.1	9.1	20.8	10.2	12.8
Iron, Total	-	2000	-		**8110**	**8480**	**9920**	**12100**	**8280**	**9940**
Lead, Total	63	400	400		2.5	<2.2	3	**132**	6.3	3.1
Mercury, Total	0.18	0.81	0.81		<0.025	<0.027	<0.028	**0.29**	<0.031	<0.023
Zinc, Total	109	2200	10000		15.2	17.6	37.2	91.8	22.7	26.2

				LOCATION	WC-B3 (0-7)	WC-B3 (7-14)	WC-B3 (14-21)	WC-B4 (0-7)	WC-B4 (7-14)	WC-B4 (14-21)
				SAMPLING DATE	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.0135	ND (0.034)	ND (0.033)	0.0117	0.0448	ND (0.034)
Benzo(a)pyrene	1	1	1		ND (0.035)	ND (0.034)	ND (0.033)	ND (0.033)	0.043	ND (0.034)
Benzo(b)fluoranthene	1	1	1		0.0168	ND (0.034)	ND (0.033)	ND (0.033)	0.0662	ND (0.034)
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.035)	ND (0.034)	ND (0.033)	ND (0.033)	0.0211	ND (0.034)
Chrysene	1	1	3.9		0.0117	ND (0.034)	ND (0.033)	ND (0.033)	0.0585	ND (0.034)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.035)	ND (0.034)	ND (0.033)	ND (0.033)	ND (0.035)	ND (0.034)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		ND (0.035)	ND (0.034)	ND (0.033)	ND (0.033)	0.0386	ND (0.034)
Aroclor 1242	0.1	1	1		ND (0.035)	ND (0.033)	ND (0.035)	ND (0.031)	ND (0.034)	ND (0.033)
Aroclor 1248	0.1	1	1		ND (0.035)	ND (0.033)	ND (0.035)	ND (0.031)	ND (0.034)	ND (0.033)
Aroclor 1260	0.1	1	1		ND (0.035)	ND (0.033)	ND (0.035)	ND (0.031)	ND (0.034)	ND (0.033)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00071)	ND (0.00065)	ND (0.00069)	ND (0.00063)	ND (0.00068)	ND (0.00066)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00071)	ND (0.00065)	ND (0.00069)	ND (0.00063)	ND (0.00068)	ND (0.00066)
Barium, Total	350	350	400		22.2	<22	38.2	95.9	64.8	26.2
Cadmium, Total	2.5	2.5	4.3		<0.54	<0.54	<0.55	<0.53	<0.53	<0.48
Copper, Total	50	270	270		10.9	5.4	12.4	19.9 [j]	21.9 [j]	9.8
Iron, Total	-	2000	-		**14000**	**6720**	**10400**	**22700** [j]	**20900**	**10100**
Lead, Total	63	400	400		6.6	<2.2	<2.2	8.7 [j]	6.4 [j]	2.6
Mercury, Total	0.18	0.81	0.81		<0.027	<0.024	<0.029	<0.026	<0.027	<0.024
Zinc, Total	109	2200	10000		34	19.4	19.7	47.2	51.9	22.5

				LOCATION	WC-C1 (0-7)	WC-C1 (7-14)	WC-C1 (14-18)	WC-C2 (0-7)	WC-C2 (7-14)	WC-C2 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-18	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.128	0.235	ND (0.037)	0.0693	0.227	ND (0.034)
Benzo(a)pyrene	1	1	1		0.136	0.214	ND (0.037)	0.0746	0.243	ND (0.034)
Benzo(b)fluoranthene	1	1	1		0.186	0.318	ND (0.037)	0.0999	0.281	ND (0.034)
Benzo(k)fluoranthene	0.8	1	3.9		0.0589	0.0925	ND (0.037)	0.0366	0.104	ND (0.034)
Chrysene	1	1	3.9		0.125	0.309	ND (0.037)	0.0701	0.24	ND (0.034)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		0.0311	0.0394	ND (0.037)	0.0186	0.0545	ND (0.034)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		0.0889	0.136	ND (0.037)	0.0937	0.202	ND (0.034)
Aroclor 1242	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.037)	ND (0.035)	ND (0.033)
Aroclor 1248	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.037)	ND (0.035)	ND (0.033)
Aroclor 1260	0.1	1	1		ND (0.035)	ND (0.034)	ND (0.034)	ND (0.037)	ND (0.035)	ND (0.033)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00069)	ND (0.00067)	ND (0.00068)	ND (0.00074)	ND (0.00071)	ND (0.00066)
4,4'-DDT	0.0033	1.7	7.9		0.001	ND (0.00067)	ND (0.00068)	0.0011 [i]	**0.0066** [f]	ND (0.00066)
Barium, Total	350	350	400		37.9	<21	39.3	41.6	88.8	54.6
Cadmium, Total	2.5	2.5	4.3		<0.51	<0.54	<0.56	<0.55	<0.52	<0.49
Copper, Total	50	270	270		22.9	7.3	9.5	30.3	32.6	11.9
Iron, Total	-	2000	-		**11500**	**6520**	**7920**	**11700**	**25500** [j]	**10500**
Lead, Total	63	400	400		24.7	2.3	2.4	10.5	**93.2**	3.1
Mercury, Total	0.18	0.81	0.81		0.045	0.03	<0.026	0.17	0.088	<0.029
Zinc, Total	109	2200	10000		45.8	14.6	20.6	38.6	89.7	24.4

				LOCATION	WC-C3 (0-7)	WC-C3 (7-14)	WC-C3 (14-21)	WC-C4 (0-7)	WC-C4 (7-14)	WC-C4 (14-21)
				SAMPLING DATE	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		**2.61**	0.244	0.239	**4.08**	0.0456	ND (0.035)
Benzo(a)pyrene	1	1	1		**2.45**	0.283	0.204	**3.2**	0.0444	ND (0.035)
Benzo(b)fluoranthene	1	1	1		**3.19**	0.33	0.297	**4.18**	0.0707	ND (0.035)
Benzo(k)fluoranthene	0.8	1	3.9		**0.983**	0.0986	0.106	**1.43**	0.0314	ND (0.035)
Chrysene	1	1	3.9		**2.44**	0.29	0.299	**4.27**	0.0691	ND (0.035)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		**0.442**	0.0522	0.0447	**0.484**	ND (0.034)	ND (0.035)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		**1.44**	0.143	0.14	**2.13**	0.0304	ND (0.035)
Aroclor 1242	0.1	1	1		ND (0.037)	ND (0.035)	ND (0.033)	**0.417**	ND (0.032)	ND (0.034)
Aroclor 1248	0.1	1	1		ND (0.037)	ND (0.035)	0.0383	ND (0.034)	ND (0.032)	ND (0.034)
Aroclor 1260	0.1	1	1		ND (0.037)	ND (0.035)	ND (0.033)	ND (0.034)	ND (0.032)	ND (0.034)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00074)	ND (0.00071)	0.0012 [h]	ND (0.00068)	ND (0.00065)	ND (0.00067)
4,4'-DDT	0.0033	1.7	7.9		0.0028	**0.0042** [f]	**0.0042**	0.0028 [f]	ND (0.00065)	ND (0.00067)
Barium, Total	350	350	400		129	43.8	47.6	91.2	52.5	33.4
Cadmium, Total	2.5	2.5	4.3		<0.59	<0.53	<0.53	<0.58	<0.52	<0.54
Copper, Total	50	270	270		16.5	14.8	**50.2**	33.7	13.9	10.1
Iron, Total	-	2000	-		**12900**	**11300**	**16100**	**18600**	**13100**	**10800**
Lead, Total	63	400	400		**158**	36.3	40.8	**134**	3.5	2.3
Mercury, Total	0.18	0.81	0.81		0.12	0.11	0.028	**0.25**	<0.032	<0.027
Zinc, Total	109	2200	10000		**121**	62.5	64.8	106	35.4	20.2

				LOCATION	WC-D1 (0-7)	WC-D1 (7-14)	WC-D1 (14-18)	WC-D2 (0-7)	WC-D2 (7-14)	WC-D2 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-18	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		ND (0.034)	ND (0.039)	ND (0.034)	0.16	0.461	0.0469
Benzo(a)pyrene	1	1	1		ND (0.034)	ND (0.039)	ND (0.034)	0.144	0.318	0.0807
Benzo(b)fluoranthene	1	1	1		ND (0.034)	ND (0.039)	ND (0.034)	0.201	0.606	0.151
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.034)	ND (0.039)	ND (0.034)	0.0733	0.153	0.0463
Chrysene	1	1	3.9		ND (0.034)	ND (0.039)	ND (0.034)	0.166	0.682	0.0915
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.034)	ND (0.039)	ND (0.034)	ND (0.039)	0.0744	ND (0.041)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		ND (0.034)	ND (0.039)	ND (0.034)	0.0692	0.203	0.0666
Aroclor 1242	0.1	1	1		ND (0.035)	ND (0.036)	ND (0.035)	ND (0.039)	ND (0.035)	ND (0.037)
Aroclor 1248	0.1	1	1		ND (0.035)	ND (0.036)	ND (0.035)	ND (0.039)	ND (0.035)	ND (0.037)
Aroclor 1260	0.1	1	1		ND (0.035)	ND (0.036)	ND (0.035)	ND (0.039)	ND (0.035)	ND (0.037)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00070)	ND (0.00072)	ND (0.00069)	ND (0.00079)	ND (0.00069)	ND (0.00075)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00070)	ND (0.00072)	ND (0.00069)	0.0013 [f]	0.0015	0.0017 [f]
Barium, Total	350	350	400		37.1	26.7	35.4	76.5	39.9	30.6
Cadmium, Total	2.5	2.5	4.3		<0.53	<0.58	<0.53	<0.60	<0.58	<0.62
Copper, Total	50	270	270		16.8	11.5	9.5	24.4	15	11.5
Iron, Total	-	2000	-		**12900**	**8640**	**10100**	**17100**	**10200**	**10300**
Lead, Total	63	400	400		**64**	<2.3	<2.1	**85.1**	16.1	5
Mercury, Total	0.18	0.81	0.81		<0.026	<0.028	<0.023	0.025	0.027	<0.024
Zinc, Total	109	2200	10000		36.4	20.8	26.6	83.3	36.6	32.1

				LOCATION	WC-D3 (0-7)	WC-D3 (7-14)	WC-D3 (14-21)	WC-D4 (0-7)	WC-D4 (7-14)	WC-D4 (14-21)
				SAMPLING DATE	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.0882	0.172	**2.19**	ND (0.035)	ND (0.034)	ND (0.034)
Benzo(a)pyrene	1	1	1		0.0794	0.182	**2.14**	ND (0.035)	ND (0.034)	ND (0.034)
Benzo(b)fluoranthene	1	1	1		0.104	0.234	**2.44**	ND (0.035)	ND (0.034)	ND (0.034)
Benzo(k)fluoranthene	0.8	1	3.9		0.035	0.081	**0.956**	ND (0.035)	ND (0.034)	ND (0.034)
Chrysene	1	1	3.9		0.0747	0.177	**1.98**	ND (0.035)	ND (0.034)	ND (0.034)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.040)	0.0313	0.28	ND (0.035)	ND (0.034)	ND (0.034)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		0.0515	0.113	**1.13**	ND (0.035)	ND (0.034)	ND (0.034)
Aroclor 1242	0.1	1	1		ND (0.040)	ND (0.032)	ND (0.035)	ND (0.032)	ND (0.032)	ND (0.034)
Aroclor 1248	0.1	1	1		ND (0.040)	ND (0.032)	ND (0.035)	ND (0.032)	ND (0.032)	ND (0.034)
Aroclor 1260	0.1	1	1		ND (0.040)	0.0192	ND (0.035)	ND (0.032)	ND (0.032)	ND (0.034)
4,4'-DDE	0.0033	1.8	8.9		**0.0170** [h]	ND (0.00064)	ND (0.00069)	ND (0.00064)	ND (0.00065)	ND (0.00068)
4,4'-DDT	0.0033	1.7	7.9		**0.0149**	0.0011 [f]	0.0012 [f]	ND (0.00064)	ND (0.00065)	ND (0.00068)
Barium, Total	350	350	400		106	41.3	51.8	52.7	53	26.5
Cadmium, Total	2.5	2.5	4.3		<0.57	<0.53	<0.52	<0.51	<0.54	<0.51
Copper, Total	50	270	270		22	25.4	12.5	17.9	9.7	5.7
Iron, Total	-	2000	-		**18500**	**9850**	**11700**	**16900**	**9950**	**5710**
Lead, Total	63	400	400		38.1	62.8	46.7	4.3	2.8	<2.0
Mercury, Total	0.18	0.81	0.81		0.031	**0.24**	0.049	<0.029	<0.027	<0.024
Zinc, Total	109	2200	10000		62.7	61.3	56.5	77.8	26.4	19.6

				LOCATION	WC-E1 (0-7)	WC-E1 (7-14)	WC-E1 (14-18)	WC-E2 (0-7)	WC-E2 (7-14)	WC-E2 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-18	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.0359	ND (0.033)	ND (0.037)	0.205	ND (0.034)	ND (0.036)
Benzo(a)pyrene	1	1	1		0.0355	ND (0.033)	ND (0.037)	0.194	ND (0.034)	ND (0.036)
Benzo(b)fluoranthene	1	1	1		0.0492	ND (0.033)	ND (0.037)	0.267	ND (0.034)	ND (0.036)
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.035)	ND (0.033)	ND (0.037)	0.0924	ND (0.034)	ND (0.036)
Chrysene	1	1	3.9		0.037	ND (0.033)	ND (0.037)	0.207	ND (0.034)	ND (0.036)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.035) [a]	ND (0.033) [a]	ND (0.037)	0.0430 [e]	ND (0.034)	ND (0.036) [a]
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		0.0494	ND (0.033)	ND (0.037)	0.177	ND (0.034)	ND (0.036)
Aroclor 1242	0.1	1	1		ND (0.032)	ND (0.033)	ND (0.035)	ND (0.033)	ND (0.032)	ND (0.034)
Aroclor 1248	0.1	1	1		ND (0.032)	ND (0.033)	ND (0.035)	ND (0.033)	ND (0.032)	ND (0.034)
Aroclor 1260	0.1	1	1		ND (0.032)	ND (0.033)	ND (0.035)	ND (0.033)	ND (0.032)	ND (0.034)
4,4'-DDE	0.0033	1.8	8.9		0.0028	ND (0.00066)	ND (0.00070)	ND (0.00067)	ND (0.00063)	ND (0.00067)
4,4'-DDT	0.0033	1.7	7.9		**0.0129**	ND (0.00066)	ND (0.00070)	0.00066 [i]	ND (0.00063)	ND (0.00067)
Barium, Total	350	350	400		43.8	20.4	26	51	41.5	30.4
Cadmium, Total	2.5	2.5	4.3		<0.52	<0.51	<0.58	<0.53	<0.53	<0.57
Copper, Total	50	270	270		13.9	7.6	8.6	10.7	12.4	12.2
Iron, Total	-	2000	-		**12200**	**6780**	**7480**	**11600**	**10500**	**12500**
Lead, Total	63	400	400		11.4	<2.0	<2.3	19.5	2.5	2.6
Mercury, Total	0.18	0.81	0.81		0.032	<0.023	<0.026	<0.024	<0.023	<0.025
Zinc, Total	109	2200	10000		36	16.7	21.3	43	28.3	36.9

				LOCATION	WC-E3 (0-7)	WC-E3 (7-14)	WC-E3 (14-21)	WC-E4 (0-7)	WC-E4 (7-14)	WC-E4 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		ND (0.042)	ND (0.034)	0.186	ND (0.041)	0.0512	ND (0.041)
Benzo(a)pyrene	1	1	1		ND (0.042)	ND (0.034)	0.172	ND (0.041)	0.051	ND (0.041)
Benzo(b)fluoranthene	1	1	1		ND (0.042)	ND (0.034)	0.238	ND (0.041)	0.0764	ND (0.041)
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.042)	ND (0.034)	0.0829	ND (0.041)	0.0261	ND (0.041)
Chrysene	1	1	3.9		ND (0.042)	ND (0.034)	0.291	ND (0.041)	0.0759	ND (0.041)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.042)	ND (0.034)	ND (0.070)	ND (0.041)	ND (0.043)	ND (0.041)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		ND (0.042)	ND (0.034)	0.118	ND (0.041)	0.0278	ND (0.041)
Aroclor 1242	0.1	1	1		ND (0.040)	ND (0.034)	ND (0.035)	ND (0.041)	ND (0.040)	ND (0.037)
Aroclor 1248	0.1	1	1		ND (0.040)	ND (0.034)	ND (0.035)	ND (0.041)	ND (0.040)	ND (0.037)
Aroclor 1260	0.1	1	1		ND (0.040)	ND (0.034)	ND (0.035)	ND (0.041)	ND (0.040)	ND (0.037)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00080)	ND (0.00069)	**0.0044** [g]	ND (0.00081)	ND (0.00080)	ND (0.00074)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00080)	ND (0.00069)	**0.0065**	ND (0.00081)	ND (0.00080)	ND (0.00074)
Barium, Total	350	350	400		16.4	23.6	31.5	51.2	37.1	39.2
Cadmium, Total	2.5	2.5	4.3		<0.35	<0.54	<0.52	<0.38	<0.51	<0.39
Copper, Total	50	270	270		10.6	7.3	12.4	14.9 [j]	47.5	12.7
Iron, Total	-	2000	-		**9120**	**7340**	**9480**	**15900**	**17000**	**11200**
Lead, Total	63	400	400		2.2	<2.1	7.5	4.3 [j]	5.2	3.6
Mercury, Total	0.18	0.81	0.81		<0.024	<0.031	<0.024	<0.015	<0.023	<0.020
Zinc, Total	109	2200	10000		20.9	23.4	29.3	41.7	35.3	30.8

				LOCATION	WC-F1 (0-7)	WC-F1 (7-14)	WC-F1 (14-18)	WC-F2 (0-7)	WC-F2 (7-14)	WC-F2 (14-21)
				SAMPLING DATE	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021	6/14/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-18	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.0219	ND (0.033)	0.0697	0.103	0.0612	ND (0.040)
Benzo(a)pyrene	1	1	1		0.0179	ND (0.033)	0.0533	0.102	0.0615	ND (0.040)
Benzo(b)fluoranthene	1	1	1		0.0257	ND (0.033)	0.0762	0.134	0.0831	ND (0.040)
Benzo(k)fluoranthene	0.8	1	3.9		ND (0.035)	ND (0.033)	0.0296	0.0435	0.0301	ND (0.040)
Chrysene	1	1	3.9		0.0175	ND (0.033)	0.0767	0.0935	0.0611	ND (0.040)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		ND (0.035)	ND (0.033)	ND (0.035)	0.0198 [e]	ND (0.034)	ND (0.040)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		0.0357	ND (0.033)	0.0625	0.104	0.07	ND (0.040)
Aroclor 1242	0.1	1	1		ND (0.033)	ND (0.032)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.040)
Aroclor 1248	0.1	1	1		ND (0.033)	ND (0.032)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.040)
Aroclor 1260	0.1	1	1		ND (0.033)	ND (0.032)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.040)
4,4'-DDE	0.0033	1.8	8.9		ND (0.00066)	ND (0.00064)	ND (0.00065)	ND (0.00065)	ND (0.00066)	ND (0.00079)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00066)	ND (0.00064)	ND (0.00065)	**0.0134** [i]	0.0016 [i]	ND (0.00079)
Barium, Total	350	350	400		47.5	<20	151	228	34.6	37.9
Cadmium, Total	2.5	2.5	4.3		<0.52	<0.51	<0.51	<0.51	<0.52	<0.35
Copper, Total	50	270	270		11.5	6.3	31.5	18.4	9.4	12.9 [j]
Iron, Total	-	2000	-		**13000**	**5850**	**19000**	**16100**	**8860**	**15600** [j]
Lead, Total	63	400	400		15.9	<2.0	**248**	**91.7**	37.5	3.7
Mercury, Total	0.18	0.81	0.81		<0.026	<0.023	<0.026	0.075	0.031	<0.024
Zinc, Total	109	2200	10000		42	16.5	**144**	101	35	36.5

				LOCATION	WC-F3 (0-7)	WC-F3 (7-14)	WC-F3 (14-21)	WC-F4 (0-7)	WC-F4 (7-14)	WC-F4 (14-21)
				SAMPLING DATE	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021	6/15/2021
				SAMPLE DEPTH (ft.)	0-7	7-14	14-21	0-7	7-14	14-21
	USCO	RSCO	RRSCO		Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)	Results (mg/kg)
Benzo(a)anthracene	1	1	1		0.863	0.183	ND (0.034)	0.192	0.119	ND (0.038)
Benzo(a)pyrene	1	1	1		0.907	0.201	ND (0.034)	0.195	0.125	ND (0.038)
Benzo(b)fluoranthene	1	1	1		**1.17**	0.252	ND (0.034)	0.272	0.163	ND (0.038)
Benzo(k)fluoranthene	0.8	1	3.9		0.365	0.0873	ND (0.034)	0.0898	0.0666	ND (0.038)
Chrysene	1	1	3.9		0.793	0.181	ND (0.034)	0.19	0.121	ND (0.038)
Dibenzo(a,h)anthracene	0.33	0.33	0.33		0.151	0.0428	ND (0.034)	0.0372	0.0266	ND (0.038)
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5		**0.57**	0.115	ND (0.034)	0.157	0.105	ND (0.038)
Aroclor 1242	0.1	1	1		ND (0.036)	ND (0.043)	ND (0.031)	ND (0.033)	ND (0.034)	ND (0.036)
Aroclor 1248	0.1	1	1		ND (0.036)	ND (0.043)	ND (0.031)	ND (0.033)	ND (0.034)	ND (0.036)
Aroclor 1260	0.1	1	1		**0.693** [h]	**0.698**	ND (0.031)	0.0925	ND (0.034)	0.027
4,4'-DDE	0.0033	1.8	8.9		ND (0.00072)	ND (0.00085)	ND (0.00063)	ND (0.00065)	ND (0.00067)	ND (0.00072)
4,4'-DDT	0.0033	1.7	7.9		ND (0.00072)	ND (0.00085)	ND (0.00063)	**0.0211**	**0.0054**	ND (0.00072)
Barium, Total	350	350	400		63	127	42.3	**4320**	74.7	29.8
Cadmium, Total	2.5	2.5	4.3		1.5	<0.71	<0.51	**2.7**	1.9	<0.56
Copper, Total	50	270	270		18.7	37.2	14.5	17.3	17.7	8.1
Iron, Total	-	2000	-		**17400**	**17700**	**11500**	**11900**	**12300**	**8440**
Lead, Total	63	400	400		57.1	**147**	14	**117**	55.1	3.1
Mercury, Total	0.18	0.81	0.81		0.095	0.092	<0.027	0.086	**0.29**	<0.025
Zinc, Total	109	2200	10000		73.3	**155**	50	**587**	77.1	27.4

Notes:

mg/kg – milligrams per kilogram
ND – Analyte not detected
J – Concentration is estimated

Concentration Exceeds USCO
Concentration Exceeds the RSCO
Concentration Exceeds the RRSCO

D – Indicates result is based on a dilution

3.2 GROUNDWATER INVESTIGATION RESULTS

Two (2) groundwater samples were collected from the temporary wells for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, TAL metals, PCBs by EPA Method 8082A, pesticides by EPA Method 8081, and cyanide. Groundwater analytical results summary tables are included in **Table 3.5** attached, and the laboratory deliverable reports are included in **Appendix C**. A groundwater sample location plan and summary of the results are presented in **Figure 3.2**. **Table 3.6** below presents a summary of the groundwater exceedances of the AWQS.

SVOCs and total metals were identified in groundwater samples exceeding the NYSDEC. Exceedances included iron, magnesium and sodium exceeding the AWQS in TP-204. The SVOC benzo (b) fluoranthene and the metals manganese, iron, and sodium exceeded the AWQS in TP-213. The presence of these contaminants was attributed to sample turbidity from temporary wells. Additionally, the standards for iron, magnesium, manganese, and sodium are secondary concern metals and are not health based. **Table 3.6** below presents a summary of the groundwater exceedances of the AWQS.

As presented on Table 3.6 below, the PFAS compound perfluorooctanoic acid (PFOA) was detected in well boring TP-13 (21.9 ng/L) and TP-217 (18.9 ng/L) at concentrations exceeding the NYSDEC Groundwater Screening Level of 10 ng/L. In addition the PFAS compounds perfluorooctanesulfonic acid (PFOS) was detected in well borings MW-204 (19.5 ng/L), MW-213 (25.8 ng/L), and MW-217 (24.5 ng/L) at concentrations exceeding the NYSDEC Groundwater Screening Level of 10 ng/L.

Table 3.6 – Groundwater Sample Exceedances

LOCATION		TP-204	TP-213	
SAMPLING DATE		4/7/2021	4/7/2021	
	NY-AWQS	Results (ug/l)	Results (ug/l)	
Benzo(b)fluoranthene	0.002	ND	**0.01J**	
Manganese, Total	300	**114.1**	**490.7**	
Iron, Total	300	**1050**	**16000**	
Magnesium, Total	35000	**41000**	**10500**	
Manganese, Total	300	**114.1**	**490.7**	
Sodium, Total	20000	**292000**	**95800**	
LOCATION		**TP-204**	**TP-213**	**TP-217**
SAMPLING DATE		**6/15/2021**	**6/15/2021**	**6/15/2021**
	NYSDEC-GWSL	**Results (ng/l)**	**Results (ng/l)**	**Results (ng/l)**
Perfluorooctanoic acid (PFOA)	10	**6.4**	**21.9**	**18.9**
Perfluorooctanesulfonic acid (PFOS)	10	**19.5**	**25.8**	**24.5**

Notes:
ND – compound not detected
Yellow Highlight – exceeds NYSDEC Ambient Water Quality Standards/NYDSDEC PFAS Groundwater Screening Level
Ug/l – micrograms per liter
Ng/L – nanograms per liter
NY-AWQS – NYSDEC Ambient Water Quality Standards
NYSDEC-GWSL – NYSDEC Groundwater Screening Limit

3.3 SOIL VAPOR RESULTS

Four (4) soil vapor samples were collected and analyzed for volatile vapors by U.S. EPA Method TO-15. The Soil vapor analytical results summary table is included in **Tables 3.7** attached, and the laboratory deliverable report is included in **Appendix C**. A Soil Vapor sample location plan and summary of the results are presented in **Figure 3.3**.

New York State does not have standards for VOCs in soil vapor. However, for discussion purposed SESI has compared the soil vapor concentrations detected on the Site to the New **Table 3.7** below presents a summary of the Soil Vapor exceedances of the NYSDOH Matrix A Sub-Slab Vapor Concentrations Criteria (NY-SSC-A) lower threshold. Trichloroethene (TCE) was detected in one (1) sample at concentrations in exceedance of the NY-SSC-A lower threshold. No additional exceedances were detected. Additional chlorinated VOCs (CVOCs) included tetrachloroethene (PCE) and chloroform were detected below the applicable standards. The presence of chlorinated volatile vapors suggest an on-site or nearby source of chlorinated compounds is present.

Table 3.7 – Soil Gas Sample Exceedances

	LOCATION	SV-203
	SAMPLING DATE	4/8/2021
VOCs in Air	NY-SSC-A	Results (ug/m3)
Trichloroethene	6	8.76

Notes:
NY-SSC-A – NYSDOH Matrix A Sub-slab Vapor Concentration Criteria Lower Threshold
Yellow Highlight – concentration exceeds the NYSDOG Matrix A Sub-Slab Vapor Concentrations Criteria
Ug/m3 – micrograms per cubic meter

4.0 CONCLUSIONS AND RECOMMENDATIONS

Field investigation identified the presence of brick fragments in soil, indicative of historic fill that extends to an approximate depth of five (5) feet below grade. PAHs, metals and pesticides were detected in soil sporadically across the Site at varying depths ranging from 1 to 11 ft-bgs. Pesticides were identified at concentrations exceeding their respective USCOs, and metals and PAHs identified their respective USCOs, RSCOs and/or RRSCOs. Soil contaminants were attributed to historic fill and the Sites historical uses.

Dissolved metals including iron, magnesium, manganese, and sodium were identified in the temporary wells TP-204 and TP-213 exceeding AWQS. Benzo (b) fluoranthene was detected in temporary well TP-213 exceeding the AWQS. PFAS compounds were detected in temporary wells TP-204, TP-213, and TP-217 at concentrations exceeding the NYSDEC Groundwater screening level for PFAS compounds. The source of the metal and PFAS exceedances in groundwater is attributed to the historical on-site uses.

Finally, the CVOC PCE was detected in soil vapor at a concentration exceeding its NYSDOH matrix A NYSSC-A lower threshold. The presence of CVOCs detected during this Phase II Investigation and the prior 2019 investigation indicate the potential for an on-site source.

TABLES

FIGURES

Appendix A:

GPR Report

Appendix B:

Boring Logs

Appendix C:

Laboratory Reports