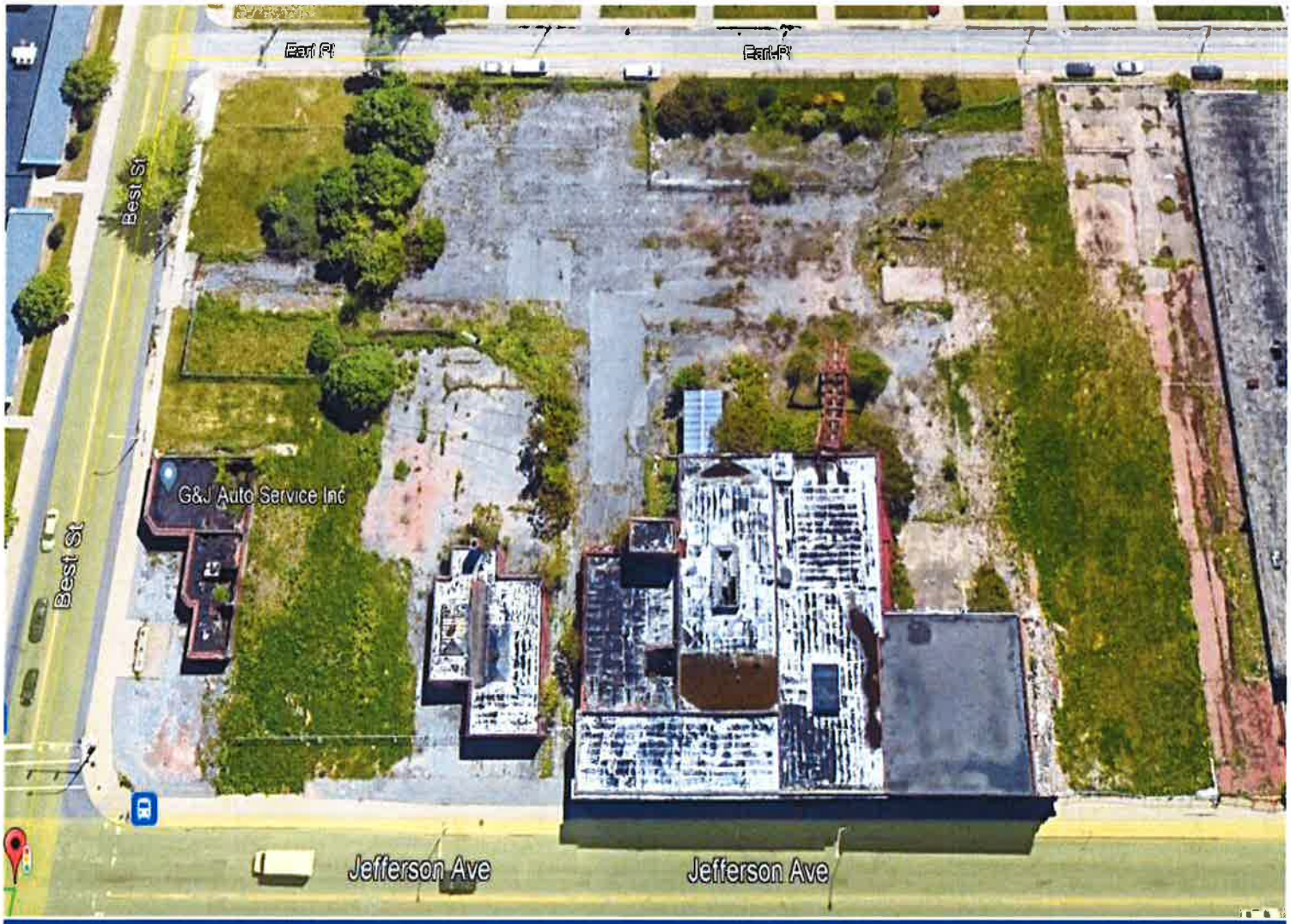

PHASE II ENVIRONMENTAL SUBSURFACE INVESTIGATION REPORT

T.O.P. ENTERPRISE PROPERTIES
Jefferson Avenue, Buffalo, New York
Tax Section, Block, & Lot Nos. 100.74-1-3, 4.1, 6, 41.111, 41.13, 41.3, 42, and 43

21-216-2865

Prepared for:

Local Initiatives Support Corporation
70 W Chippewa, Suite 604
Buffalo, New York 14202

Prepared by:

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York 14209

February 28, 2022

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1.0 INTRODUCTION

LiRo Engineers, Inc. (LiRo) completed a Phase II Environmental Subsurface Investigation (ESI) for Local Initiatives Support Corporation (LISC) for the property located along Jefferson Avenue and Best Street (Site) in Buffalo, New York (Figure 1). This report presents a summary of all work completed during the ESI, findings, and conclusions.

1.1 Site Description and Background

The Site is located along Jefferson Avenue and Best Street in Buffalo, New York and consists of tax section, lot, and block nos. 100.74-1-3, 4.1, 6, 41.112, 41.13, 41.3, 42, and 43.

1.2 Previous Site Investigations

In November 2019, CPL issued a Phase I ESA of the above-mentioned project Site for T.O.P. Based on the findings of this Phase I ESA, the following known or suspect RECs were identified.

- Records indicating uses of the Site as an automotive paint and repair shop and historical dry cleaner represent a potential for environmentally significant releases to have occurred.

Based on LiRo's review of the CPL Phase I ESA and historical records provided, it appears that in addition to the aforementioned REC, a former gas station is present adjacent to the site at the corner of Jefferson and Best Streets, a gas tank may have been present at the site and historic fill may be present. This Phase II ESI was conducted to determine if the Site was impacted by the REC and conditions noted above.

1.3 Investigation Scope and Objective

On June 18, 2021, LiRo submitted a Proposal to Provide Phase II Environmental Subsurface Investigation Services to LISC to assist in project planning. The objectives of the Phase II ESI were to identify the environmental characteristics (i.e., type of contaminants and concentrations) and physical characteristics (i.e., thickness and composition) of the fill material at the Site.

LiRo recommended the use of a Geoprobe to collect sub-surface soil samples within areas most likely to have contamination present. These included locations adjacent to the former gas station, at the former paint shop area, adjacent to the former dry cleaner building. LiRo completed 12 soil borings at the locations shown on Figure 2.

2.0 SITE FIELD INVESTIGATION ACTIVITIES

The soil borings were installed by SJB Services, Inc. (SJB) under the supervision of a LiRo geologist. The work was performed on December 10, 2021. The soil boring locations are identified on Figure 2.

2.1 Soil Boring Installation and Soil Sampling

Twelve Geoprobe soil borings (LB-01 through LB-12) were installed at the locations shown on Figure 2. Soil samples were collected using 4-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. Soil from each boring was classified and examined for visual evidence (i.e., staining, discoloration) and any olfactory indications (i.e., odors) of contamination. In addition, a photoionization detector (PID) was used to screen the soil for Volatile Organic Compounds (VOC) vapors.

Soil samples were collected from each of the soil borings and reserved for potential laboratory analysis. Samples analysis included VOCs, Polycyclic Aromatic Hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) 8 Metals as detailed in the Table below. Two composite samples were prepared using aliquots from 6-borings each and analyzed for polychlorinated biphenyls (PCBs).

Location	**Analysis**			
	VOC	PAH	RCRA Metals	PCBs
LB-01	X	X	X	
LB-02	X	X	X	
LB-03	X			
LB-04	X	X	X	
LB-05		X		
LB-06			X	
LB-07	X	X	X	
LB-08	X			
LB-09	X	X	X	
LB-10		X	X	
LB-11	X			
LB-12		X		
COMP-1 (LB-01, LB-02, LB-03, LB-04, LB-05 & LB-12)				X
COMP-2 (LB-06, LB-07, LB-08, LB-09, LB-10 & LB-11)				X

Soil samples collected for VOC analysis were placed directly into the laboratory supplied sample container. The remaining soil samples were homogenized in decontaminated stainless steel bowls prior to filling laboratory supplied sample containers. Following collection, the soil samples were labelled and placed in a cooler with ice.

Soil boring logs are presented in Appendix A.

2.2 Laboratory Analyses

The soil samples were submitted to ALS Global Inc. (ALS), a NYS Department of Health (NYSDOH) approved laboratory (No. 10145). Field derived Quality Assurance/Quality Control (QA/QC) samples were not collected during this investigation.

Soil samples were analyzed for: (1) VOCs using United States Environmental Protection Agency (USEPA) Method 8260C; (2) PAHs using USEPA Method 8270D; (3) RCRA 8 Metals using USEPA Method 6010C and 7471B; and, (4) PCBs using USEPA Method 8082A.

3.0 INVESTIGATION RESULTS

3.1 Physical Setting

According to the United States Geologic Survey (USGS), Buffalo, New York 7.5' Quadrangle (1948) map, the elevation at the Site is approximately 640 feet above mean sea level (ft. amsl) in the northwest corner to 620 ft. amsl in the southeast corner. The Site has a general slope toward the southeast. Regional groundwater flow is anticipated to be southwest toward Lake Erie, which is located approximately 2.3 miles to the southwest. Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local water usage demands, geology, underground structures, and utilities (e.g., sewers), or dewatering operations.

3.1.1 Regional Bedrock Geology and Stratigraphy

According to the Surficial Geologic Map of New York – Niagara Sheet, the surficial geology at the Site consists of lacustrine silt and clay or till moraine.

According to the Geologic Map of New York – Niagara Sheet, the geology at the Site consists of the Onondaga Limestone.

3.1.2 Site Hydrogeology

Soil boring observations indicate that the site is underlain by fill materials to depths ranging from 1 ft. below ground surface (BGS) (LB-07) to 6.6 ft. BGS (LB-10). The fill material observed consisted primarily of sands and gravels with varying admixtures of brick fragments, cinders, coal, and wood. Native soil beneath the fill materials consists predominantly red brown silt and clays. Bedrock was not encountered during this investigation. Groundwater was encountered at nine of the 12 soil boring locations at depths ranging from 4 to 8 ft. BGS.

3.2 Analytical Results

3.2.1 Guidance Values

Soil sampling results were compared to NYSDEC Part 375 Unrestricted Use and Restricted Use – Restricted Residential Soil Cleanup Objectives (SCOs). Copies of the laboratory analytical results are included in Appendix B.

3.2.2 Soil Sample Results

Results of analyses performed on soil samples collected from the twelve soil borings are presented in Tables 1 through 4. Comparison of the data to SCOs indicate the following:

Volatile Organic Compounds (VOCs)

Samples for VOC analysis were collected from eight of the twelve soil borings (LB-01, LB-02, LB-03, LB-04, LB-07, LB-08, LB-09, and LB-11). VOCs, including 1,1,1-Trichloroethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, acetone, benzene, ethylbenzene, toluene, trichloroethene, n-butylbenzene, n-propylbenzene, m-, p-, and o-xylene, and sec-butylbenzene were detected in five of the eight soil samples submitted for analysis. Concentrations of the detected VOCs were all below their respective SCOs. Refer to Table 2 for a summary of VOC detections.

Polycyclic Aromatic Hydrocarbons (PAHs)

Samples for PAH analysis were collected from eight of the twelve soil borings (LB01, LB-02, LB-04, LB-05, LB-07, LB-09, LB-10, and LB-12). SVOCs, including acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene were detected in six of the eight samples submitted for analysis. The sample from LB-04 contained benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene at concentrations exceeding their respective Restricted Use – Restricted Residential SCOs. The sample from LB-10 contained indeno(1,2,3-cd)pyrene at a concentration exceeding its respective Restricted Use – Restricted Residential SCO. Refer to Table 3 for a summary of PAH detections.

Resource Conservation and Recovery Act (RCRA) Metals

Samples for RCRA metals analysis were collected from seven of the twelve soil borings (LB-01, LB-02, LB-04, LB-06, LB-07, LB-09, and LB-10). RCRA metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury) were detected in each of the seven samples collected. No RCRA metals were detected at concentrations exceeding their Restricted Use – Restricted Residential SCOs. Four RCRA metals (arsenic, lead, chromium, and mercury) were found in exceedance of Unrestricted Use SCOs in three soil borings (LB-01, LB-02, and LB-04). The sample from LB-01 contained arsenic and lead; the sample from LB-02 contained lead and mercury; and the sample from LB-04 contained chromium, lead, and mercury. Refer to Table 4 for a summary of RCRA metals detections.

Polychlorinated Biphenyls (PCBs)

Two composite samples were collected for analysis of PCBs. One composite sample (COMP-1) utilized aliquots of fill material collected from soil borings LB-01, LB-02, LB-03, LB-04, LB-05, and LB-12 and one composite sample (COMP-2) utilized aliquots of fill material collected from soil borings LB-06, LB-07, LB-08, LB-09, LB-10, and LB-11. PCBs were not detected in either of the two composite samples. Refer to Table 5 for a summary of PCB analysis.

Figure 3 shows soil sample locations where Restricted Use – Restricted Residential SCOs are exceeded.

4.0 CONCLUSIONS

LiRo performed a Phase II ESI of the property located at Best Street and Jefferson Avenue on December 10, 2021 that consisted of soil sampling to determine the environmental characteristics (i.e., type of contaminants and concentrations) and physical characteristics (i.e., thickness and composition) of the fill material at the Site.

4.1 Conclusions

Based on the results of the Phase II ESI, the following conclusions are presented:

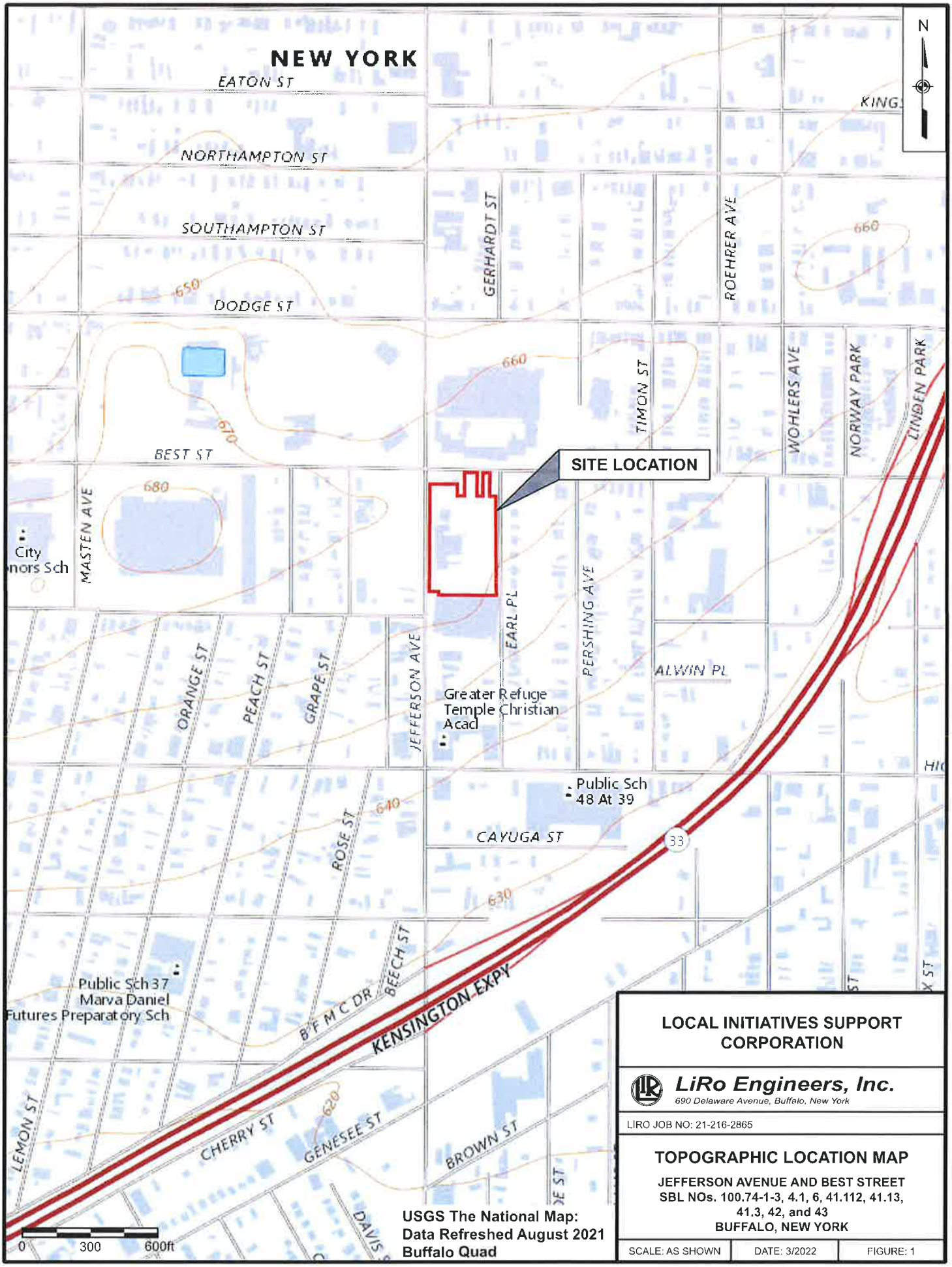
- Based on observations during the Phase II ESI, fill material appears to be present over the majority of the Site to depths ranging from 1 to 6 ft. BGS. The fill material observed consisted primarily of sands and gravels with varying admixtures of brick fragments, cinders, coal, and wood;

- Soil analytical results identified limited contamination within the fill soils. Seven (7) SVOCs, benzo(a) anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h) anthracene, and indeno(1,2,3-cd) pyrene at LB-04 and one (1) SVOC indeno(1,2,3-cd) pyrene at LB-10 were reported with concentrations exceeding their respective Restricted Use – Restricted Residential SCOs. Four RCRA metals (arsenic, lead, chromium, and mercury) were found in exceedance of Unrestricted Use SCOs in three soil borings (LB-01, LB-02, and LB-04); and,

- Although the site does not fall into any regulatory programs (i.e., spills), contaminated materials are present in the shallow subsurface and any materials excavated will require handling in accordance with NYSDEC solid waste regulations.

Based on the presence of SVOCs in fill soil at concentrations that exceed Restricted Use – Restricted Residential SCOs, it is LiRo's opinion that this site should qualify for acceptance into the NYSDEC Brownfield Cleanup Program (BCP). Contaminant concentrations in fill can be highly variable and a site remedial investigation would be required to determine the lateral and vertical extents of contaminated fill and to determine if groundwater is impacted at the site.

FIGURES



USGS The National Map:
Data Refreshed August 2021
Buffalo Quad

LOCAL INITIATIVES SUPPORT CORPORATION

LiRo Engineers, Inc.
690 Delaware Avenue, Buffalo, New York

LIRO JOB NO: 21-216-2865

TOPOGRAPHIC LOCATION MAP

JEFFERSON AVENUE AND BEST STREET
SBL NOs. 100.74-1-3, 4.1, 6, 41.112, 41.13, 41.3, 42, and 43
BUFFALO, NEW YORK

SCALE: AS SHOWN	DATE: 3/2022	FIGURE: 1

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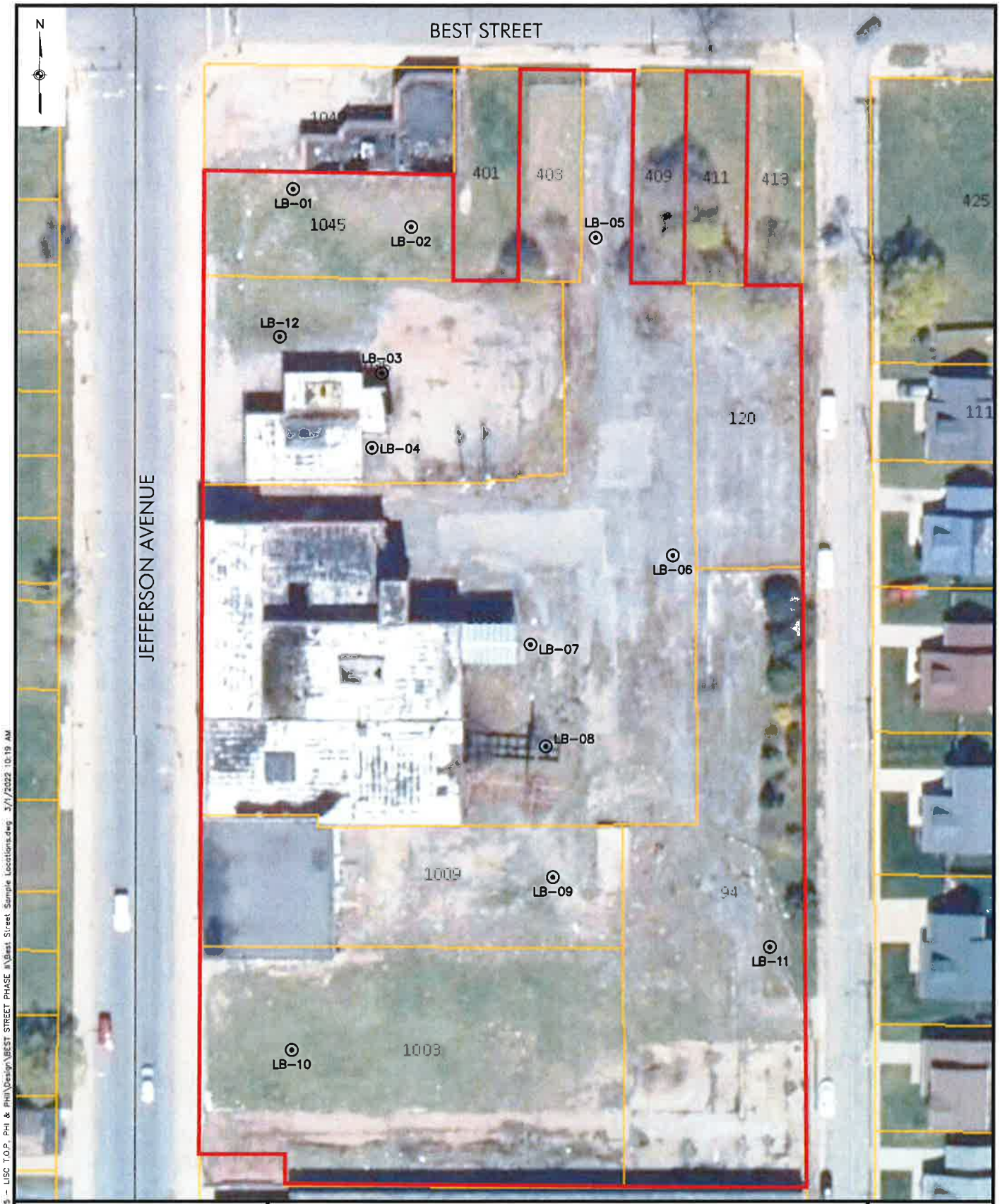

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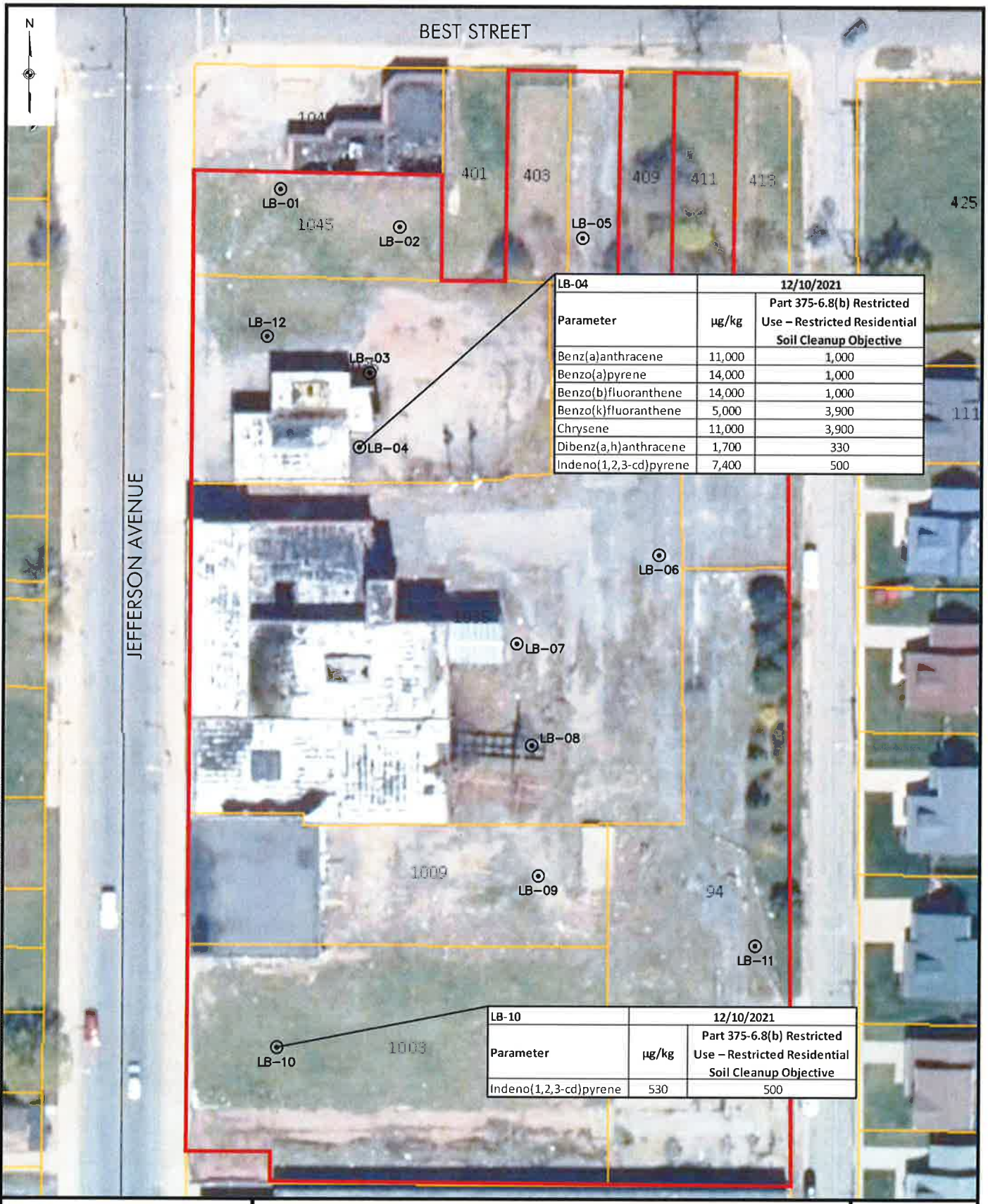
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

JEFFERSON AVENUE AND BEST STREET
SBL NOs. 100.74-1-3, 4.1, 6, 41.112, 41.13, 41.3, 42, and 43
SAMPLE LOCATION MAP

FIGURE NO.
2



LB-04	12/10/2021	
Parameter	µg/kg	Part 375-6.8(b) Restricted Use – Restricted Residential Soil Cleanup Objective
Benz(a)anthracene	11,000	1,000
Benzo(a)pyrene	14,000	1,000
Benzo(b)fluoranthene	14,000	1,000
Benzo(k)fluoranthene	5,000	3,900
Chrysene	11,000	3,900
Dibenz(a,h)anthracene	1,700	330
Indeno(1,2,3-cd)pyrene	7,400	500

LB-10	12/10/2021	
Parameter	µg/kg	Part 375-6.8(b) Restricted Use – Restricted Residential Soil Cleanup Objective
Indeno(1,2,3-cd)pyrene	530	500

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

JEFFERSON AVENUE AND BEST STREET SOIL EXCEEDANCES

FIGURE NO.

3

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TABLES

TABLE 1

Summary of VOCs Detected in Soil
L.I.S.C. Phase II
Best Street, Buffalo, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth (ftbg)							
			LB-01	LB-02	LB-03	LB-04	LB-07	LB-08	LB-09	LB-11
			12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
			0-4'	0-4'	0-4'	0-2'	0-2'	0-2'	0-2'	0-1.2'
1,1,1-Trichloroethane (TCA)	680	100,000	0.24 U	0.25 U	0.23 U	0.33 J	0.22 U	0.23 U	0.22 U	0.22 U
1,2,4-Trimethylbenzene	3,600	52,000	0.24 U	0.25 U	0.23 U	1.1 J	6	1.5 J	4.1 J	5.3 J
1,3,5-Trimethylbenzene	8,400	52,000	0.24 U	0.25 U	0.23 U	0.62 J	2.2 J	0.54 J	1.4 J	3.3 J
Acetone	50	100,000	5.6 U	5.7 U	5.4 U	5.4 U	5.8	5.3 U	5.1 U	5.0 U
Benzene	60	4,800	0.24 U	0.25 U	0.23 U	0.23 U	0.22 U	0.25 J	0.22 U	0.26 J
Ethylbenzene	1,000	41,000	0.24 U	0.25 U	0.23 U	0.23 U	1.1 J	0.23 U	0.74 J	0.73 J
Toluene	700	100,000	0.24 U	0.25 U	0.23 U	0.23 U	1.6 J	0.53 J	0.56 J	1.4 J
Trichloroethene (TCE)	470	21,000	0.27 U	0.27 U	0.26 U	4.4 J	0.24 U	0.27 J	0.27 J	0.24 U
m,p-Xylenes	260	260	0.44 U	0.45 U	0.43 U	0.47 J	7.6 J	0.67 J	4.3 J	5.3 J
n-Butylbenzene	12,000	100,000	0.24 U	0.25 U	0.23 U	0.23 U	0.34 J	0.23 U	0.22 U	0.63 J
n-Propylbenzene	3,900	100,000	0.24 U	0.25 U	0.23 U	0.23 U	0.9 J	0.23 J	0.56 J	0.92 J
o-Xylene	260	260	0.24 U	0.25 U	0.23 U	0.45 J	2.7 J	0.3 J	1.5 J	1.7 J
sec-Butylbenzene	11,000	100,000	0.24 U	0.25 U	0.23 U	0.23 U	0.26 J	0.23 U	0.22 U	0.44 J

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

U = Compound not detected above method detection limit

NS = No Standard

J = Compound detected below the quantitation limit

TABLE 2

Summary of PAHs Detected in Soil
L.I.S.C. Phase II
Best Street, Buffalo, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)							
			LB-01	LB-02	LB-04	LB-05	LB-07	LB-09	LB-10	LB-12
			12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
			0-4'	0-4'	0-2'	0-3.7'	0-2'	0-2'	0-4'	0-2'
Acenaphthylene	100,000	100,000	390 U	390 U	500 J	77 U	350 U	340 U	80 U	420 U
Anthracene	100,000	100,000	330 U	320 U	4,500	64 U	290 U	280 U	220 J	350 U
Benz(a)anthracene	1,000	1,000	590 J	420 J	**11,000**	57 U	260 U	250 U	550	600 J
Benzo(a)pyrene	1,000	1,000	690 J	510 U	**14,000**	110 U	460 U	450 U	800	770 J
Benzo(b)fluoranthene	1,000	1,000	710 J	450 J	**14,000**	64 U	290 U	280 U	790	770 J
Benzo(g,h,i)perylene	100,000	100,000	510 J	440 U	6,800	87 U	400 U	390 U	490	470 U
Benzo(k)fluoranthene	800	3,900	310 U	310 U	**5,000**	62 U	280 U	280 U	300 J	330 U
Chrysene	1,000	3,900	580 J	380 J	**11,000**	56 U	260 U	250 U	540	560 J
Dibenz(a,h)anthracene	330	330	420 U	420 U	**1,700 J**	83 U	380 U	370 U	110 J	450 U
Dibenzofuran	7,000	59,000	350 U	350 U	2,100	69 U	320 U	310 U	72 U	380 U
Fluoranthene	100,000	100,000	1100 J	570 J	22,000	95 U	440 U	420 U	1200	1200 J
Fluorene	30,000	100,000	360 U	360 U	3,000	71 U	330 U	320 U	84 J	390 U
Indeno(1,2,3-cd)pyrene	500	500	620 U	610 U	**7,400**	130 U	560 U	540 U	**530**	660 U
Naphthalene	12,000	100,000	360 U	360 U	4,400	71 U	330 U	320 U	74 U	390 U
Phenanthrene	100,000	100,000	620 J	330 J	18,000	54 U	250 U	240 U	750	1000 J
Pyrene	100,000	100,000	1100 J	570 J	20,000	75 J	290 U	280 U	1200	1100 J

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

BOLD - Concentration exceeds Restricted Residential and Unrestricted SCO

U = Compound not detected above method detection limit

NS = No Standard

J = Compound detected below the quantitation limit

TABLE 3

Summary of PCBs Detected in Soils
L.I.S.C. Phase II
Best Street, Buffalo, New York

TCL PCB	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID and Date Collected	
			Comp-1	Comp-2
			12/10/2021	12/10/2021
Aroclor 1016	NS	NS	20 U	19 U
Aroclor 1221	NS	NS	31 U	29 U
Aroclor 1232	NS	NS	23 U	21 U
Aroclor 1242	NS	NS	20 U	19 U
Aroclor 1248	NS	NS	22 U	20 U
Aroclor 1254	NS	NS	20 U	19 U
Aroclor 1260	NS	NS	20 U	19 U
Total PCBs	100	1,000	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

U = Compound not detected above method detection limit

NS = No Standard

Comp-1 includes samples from LB-01, LB-02, LB-03, LB-04, LB-05, and LB-12

Comp-2 includes samples from LB-06, LB-07, LB-08, LB-09, LB-10, and LB-11

TABLE 4

Summary of RCRA Metals Detected in Soil
L.I.S.C. Phase II
Best Street, Buffalo, New York

RCRA Metals	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth (ftbg)						
			LB-01	LB-02	LB-04	LB-06	LB-07	LB-09	LB-10
			12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
			0-4'	0-4'	0-2'	0-1'	0-2'	0-2'	0-4'
Silver	2	180	0.1 U	0.2 U	0.1 J	0.09 U	0.09 U	0.1 U	0.2 U
Arsenic	13	16	15.4	4.8	8	1.55	2.22	1.5	3.9
Barium	350	400	100	117	213	5.5	66.3	20.9	57.2
Cadmium	3	4	0.32 J	0.7	0.75	0.28 J	0.18 J	0.19 J	0.36 J
Chromium	30	180	25.4	19.7	31.4	4.37	10.4	7.1	25.9
Lead	63	400	149	178	362	16.2	16.1	9.2	28.9
Selenium	3.9	180	0.8 J	0.7 U	0.6 U	0.54 U	0.55 J	0.6 U	0.7 U
Mercury	0.18	0.81	0.057	0.448	0.455	0.013 U	0.014 J	0.013 U	0.038

Notes:

All concentrations are reported in parts per million (ppm or mg/kg)

Concentration exceeds Unrestricted use SCOs

U = Compound not detected above method detection limit

NS = No Standard

J = Compound detected below the quantitation limit

APPENDIX A

Boring Logs

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	LB-01
SHEET:	1 of 12
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	December 10, 2021
DATE FINISHED:	December 10, 2021
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Norman Yu

PROJECT: Phase II Environmental Subsurface Investigation
CLIENT: Local Initiatives Support Corporation
BORING CONTRACTOR: SJB Services, Inc.
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					88%	Brown to gray	Dense	0-4' - Fill. Silt and fine to medium Sand, little gravel, ceramic chips, red brick, and angular gravel.	FILL	0 ppm Moist
4										
					75%	Red-brown	Dense	5-6' - Fill. Black slag, red brick		
								6-7.7' - SILT, little to some clay, trace fine gravel	ML	0 ppm Moist
8								7.7-8' - fine SAND, some silt		
					100%	Red-brown	Dense	8-12' - fine SAND, little silt	SP	0 ppm wet @ 8'
12										
					100%	Brown to Red-brown	Dense	12-16' - SILT, some clay and fine sand, trace sub-angular gravel	ML	0 ppm moist to wet
16										
								End of boring at 16' 16-20' sample attempted, refusal due to heaving sand		
20										
25										
30										
35										

COMMENTS: Sample LB-01 collected from 0-4' for SVOCs and metals analyses.
Soil was classified according to the Unified Soil Classification System (USCS)
Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-01

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Phase II Environmental Subsurface Investigation
CLIENT:	Local Initiatives Support Corporation
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

BORING NO:	LB-02
SHEET:	2 of 12
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	December 10, 2021
DATE FINISHED:	December 10, 2021
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Norman Yu

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					63%	Brown	Dense	0-4.6' - Fill. Silt with some fine Sand, red brick, glass, wood, and coal.	FILL	0.1 ppm Moist
4										
8					100%	Red-brown	Stiff	4.6-8' - SILT, some clay, trace subrounded fine gravel.	ML	0 ppm Moist
12					100%	Red-brown	Stiff	8-12' - fine SAND, little silt	SP	0.1 ppm Moist
16								End of boring at 12'		
20										
25										
30										
35										

COMMENTS: Sample LB-02 collected from 0-4' for SVOCs and metals analyses.
Soil was classified according to the Unified Soil Classification System (USCS).
Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-02

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Phase II Environmental Subsurface Investigation
CLIENT:	Local Initiatives Support Corporation
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

DATE	TIME	LEVEL	TYPE
			NA

	CAS.	SAMPLER	TUBE
TYPE		4' Macros	
DIA.			
WT.			
FALL			

BORING NO:	LB-03
SHEET:	3 of 12
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	December 10, 2021
DATE FINISHED:	December 10, 2021
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Norman Yu

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					93%	Brown to gray	Dense	0-3.5' - FILL. Gravel, sand, and silt with red staining.	FILL	0 ppm Moist
4								3.5-4' - SILT, some clay, trace gravel	ML	
8					100%	Red-brown	Dense	4-8.5' - fine SAND and SILT, trace subrounded fine gravel	SM	0 ppm Moist to wet Wet at 8'
12					100%	Red-brown	Dense	8.5-12' - SILT, some clay, trace subrounded gravel	ML	0 ppm Moist
16								End of boring at 12'		
20										
25										
30										
35										

COMMENTS: Sample LB-03 collected from 0-4' for VOCs analysis.

Soil was classified according to the Unified Soil Classification System (USCS).

Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865

BORING NO.: LB-03

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Phase II Environmental Subsurface Investigation
CLIENT:	Local Initiatives Support Corporation
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

BORING NO:	LB-04
SHEET:	4 of 12
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	December 10, 2021
DATE FINISHED:	December 10, 2021
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Norman Yu

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					50%	Brown to gray	Dense	0-6' - FILL. Angular gravel with slag and red brick	FILL	0 ppm Dry
4										
					75%	Black	Dense			0 ppm Moist to wet
8						Brown		6-9.5' - fine SAND and SILT, trace subrounded gravel	SM	Wet at 8'
					100%		Dense			0 ppm Moist
12						Red brown		9.5-12' - SILT, some clay, trace subrounded fine gravel	ML	
16								End of boring at 12'		
20										
25										
30										
35										

COMMENTS: Sample LB-04 collected from 0-2' for VOCs, SVOCs, and metals analyses.
Soil was classified according to the Unified Soil Classification Sytem (USCS).
Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-04

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Phase II Environmental Subsurface Investigation
CLIENT:	Local Initiatives Support Corporation
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

					CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		4' Macros	
			NA	DIA.			
				WT.			
				FALL			

BORING NO:	LB-05
SHEET:	5 of 12
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	December 10, 2021
DATE FINISHED:	December 10, 2021
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Norman Yu

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					88%	Gray, black and brown	Dense	0-3.7' - FILL. Angular Gravel, Silt, Fine Sand with coal and slag	FILL	0 ppm Dry
4										
					100%	Red brown	Dense	3.7-8' - SILT and fine SAND, some clay, trace subrounded fine gravel	SM	0 ppm Moist
8										
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-05 collected from 0-3.7' for SVOCs analysis.

Soil was classified according to the Unified Soil Classification System (USCS).

Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865

BORING NO.: LB-05

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-06**
SHEET:	**6 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation
CLIENT: Local Initiatives Support Corporation
BORING CONTRACTOR: SJB Services, Inc.
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					100%	Red brown	Stiff	0-0.8' - FILL. Angular Gravel and Sand	FILL	0 ppm Dry to moist
								0.8-4' - SILT, some clay, trace subrounded fine gravel	ML	
4										
					100%	Red brown	Dense	4-7' - fine SAND with some Silt	SM	0 ppm Moist to wet
8								7-8' - SILT with some Clay	ML	
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-06 collected from 0-1' for metals analysis.
Soil was classified according to the Unified Soil Classification System (USCS).
Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-06

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-07**
SHEET:	**7 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation
CLIENT: Local Initiatives Support Corporation
BORING CONTRACTOR: SJB Services, Inc.
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					100%	Red brown	Stiff	0-1' - FILL. Angular Gravel and Sand	FILL	0 ppm Dry
								1-5.3' - SILT, some clay, trace subrounded fine gravel	ML	
4										
					100%	Brown	Stiff	5.3-6.8' - fine SAND and SILT	SM	0 ppm Wet at 5.3'
8								6.8-8' - CLAY with some Silt	CL	Moist
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-07 collected from 0-2' for VOCs, SVOCs, and metal analyses.
Soil was classified according to the Unified Soil Classification System (USCS).
Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-07

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-08**
SHEET:	**8 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation
CLIENT: Local Initiatives Support Corporation
BORING CONTRACTOR: SJB Services, Inc.
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	TUBE
				TYPE		4' Macros	
			NA	DIA.			
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					95%	Red brown	Stiff	0-2' - FILL. Angular Gravel and Sand	FILL	0.4 ppm Moist
4								2-4' - SILT, little Clay, trace subrounded fine Gravel	ML	
8					100%	Brown to red brown	Stiff	4-8' - fine SAND and SILT	SM	0 ppm Moist to wet
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-08 collected from 0-2' for VOCs analysis.
Soil was classified according to the Unified Soil Classification System (USCS).
Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-08

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-09**
SHEET:	**9 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation
CLIENT: Local Initiatives Support Corporation
BORING CONTRACTOR: SJB Services, Inc.
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					90%	Brown to red brown	Stiff	0-2' - FILL. Angular Gravel, Sand, and Silt	FILL	0.4 ppm Dry to moist
4								2-4' - fine SAND and SILT	SM	
8					100%	Brown to red brown	Stiff	4-8' - fine SAND with little to some Silt	SP	0 ppm Moist to wet
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-09 collected from 0-2' for VOCs, SVOCs, and metals.
analyses. Soil was classified according to the Unified Soil Classification System (USCS).
Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865
BORING NO.: LB-09

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-10**
SHEET:	**10 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation

CLIENT: Local Initiatives Support Corporation

BORING CONTRACTOR: SJB Services, Inc.

GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
1					83%	Brown and tan	Stiff	0-6' - FILL. Fine to medium Sand with angular Gravel, red brick and slag.	FILL	0 ppm Dry
4										
					80%	Gray	Stiff	5.6-6' - Concrete fragments.		0 ppm Dry
8								End of boring at 6' due to refusal		
12										
16										
20										
25										
30										
35										

COMMENTS: Sample LB-10 collected from 0-4' for SVOCs and metals analyses.

Soil was classified according to the Unified Soil Classification System (USCS).

Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865

BORING NO.: LB-10

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-11**
SHEET:	**11 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation

CLIENT: Local Initiatives Support Corporation

BORING CONTRACTOR: SJB Services, Inc.

GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
1					90%	Red brown	Stiff	0-1.2' - angular Gravel with slag	FILL	
								1.2-8' - SILT, some Clay, trace subrounded fine Gravel	ML	0.4 ppm Dry to moist
4										
					100%	Red brown	Stiff			0 ppm Moist
8								fine SAND seams between 7-8'		Wet at 7'
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-11 collected from 0-1.2' for VOCs analysis.

Soil was classified according to the Unified Soil Classification System (USCS).

Portion of sample used for COMP-2 for PCBs analysis.

PROJECT NO.: 21-216-2865

BORING NO.: LB-11

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	**LB-12**
SHEET:	**12 of 12**
JOB NO.:	**21-216-2865**
LOCATION:	**As per plan**
GROUND ELEVATION:	**NA**
DATE STARTED:	**December 10, 2021**
DATE FINISHED:	**December 10, 2021**
DRILLER:	**Art Koske**
GEOLOGIST:	**Jon Williams**
REVIEWED BY:	**Norman Yu**

PROJECT: Phase II Environmental Subsurface Investigation

CLIENT: Local Initiatives Support Corporation

BORING CONTRACTOR: SJB Services, Inc.

GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	TUBE
			NA		4' Macros	

TYPE	
DIA.	
WT.	
FALL	

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
1					88%	Brown to black	Stiff	0-2' - Sand, Silt, and Gravel with wood and slag	FILL	0 ppm Moist
4								2-6' - fine SAND and SILT	SM	
					100%	Red brown	Stiff			0 ppm Wet at 4'
								6-7' - SILT with some Clay	ML	
8								7-8' - fine SAND and SILT	SM	Moist
12								End of boring at 8'		
16										
20										
25										
30										
35										

COMMENTS: Sample LB-12 collected from 0-2' for SVOCs analysis.

Soil was classified according to the Unified Soil Classification System (USCS).

Portion of sample used for COMP-1 for PCBs analysis.

PROJECT NO.: 21-216-2865

BORING NO.: LB-12