Limited Phase II Environmental Investigation Report

301 Ohio Street Site
Buffalo, New York

November 2013 0136-013-004

Prepared For:

Ellicott Development Company

Prepared By:

TurnKey Environmental Restoration, LLC

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LIMITED PHASE II ENVIRONMENTAL INVESTIGATION REPORT

301 Ohio Street Site
Buffalo, New York

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301 Ohio Street Site
Buffalo, New York
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1.0 INTRODUCTION

1.1 Background and Site Description

TurnKey Environmental Restoration, LLC (TurnKey) performed a Limited Phase II Environmental Investigation on behalf of Ellicott Development Company at 301 Ohio Street, City of Buffalo, Erie County, New York (Site; see Figure 1). This investigation was performed to assess the condition of subsurface soil at the Site.

The subject property is located in a highly developed commercial area of Buffalo, New York. The subject Site, addressed at 301 Ohio Street, is also identified as Tax ID No. 122.10-2-7.21. The Site, totaling approximately 7.26-acres, is bordered by vacant commercial property and River Fest Park to the north; Dead Creek to the south, commercial properties and Conway Park across Ohio Street to the east; and the Buffalo River to the west. The Site is improved with two structures one metal clad building and one hoop frame building toward the south end of the property.

This Limited Phase II investigation included completion of a soil investigation to assess potential environmental impacts from chemical constituents of concern, including volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) metals.

2.0 SUBSURFACE SOIL/FILL INVESTIGATION

2.1 Test Pits

On October 15th, 2013, TurnKey mobilized a track-mounted excavator to the site and excavated eight test pits, identified as TP-1 through TP-8, at various locations across the Site. Test pit locations are shown on Figure 2. Soil samples were collected for laboratory analytical analysis from TP-2 through TP-7. Test pit logs are presented in Appendix A. Soil descriptions were completed in the field via visual characterization of excavated soils and test pit excavation faces using the Unified Soil Classification System (USCS), and scanned for total volatile organic vapors with a calibrated MiniRae 2000 PID equipped with a 10.6 eV lamp.

2.2 Soil Characterization

The subsurface soil/fill for the 301 Ohio Street parcel of the Site observed in TP-1 through TP-8 was typically characterized as asphalt in TP-2, TP-4, and TP-7, or topsoil in TP-3, TP-5, TP-6, and TP-8 from 0-0.5 fbgs overlying a soil/fill layer with varying depth and amounts of material (i.e. ash, brick, and sand) overlying native clay. Test pit logs are presented in Appendix A. Groundwater was encountered in native clay material at TP-4, TP6, and TP-8 at approximately 4-6 fbgs during the test pit excavations.

2.3 Laboratory Analysis

Soil samples collected from test pits were placed in pre-cleaned, laboratory provided sample bottles using dedicated stainless steel sampling tools, and cooled to 4º C in the field. The samples were transported under chain-of-custody command to Alpha Analytical of Westborough, MA for analysis. Soil samples from TP-2 through TP-7 were analyzed for polycyclic aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) metals while TP-2 and TP-5 were also analyzed for Target Compound List (TCL) volatile organic compounds (VOCs).

3.0 INVESTIGATION FINDINGS

Eight test pits (TP-1 through TP-8) were completed and six soil/fill samples were collected for analysis. Table 1 presents a summary of the soil sample results. Each compound that was analyzed and detected above the laboratory reporting limit is listed on the table with its associated result to provide a complete data summary. For comparison purposes, Table 1 presents soil cleanup objectives (SCOs) for each of the detected parameters as published in 6 NYCRR Part 375 Soil Cleanup Objectives dated May 2010. Appendix B contains a copy of the laboratory analytical data package.

3.1 Qualitative Soil Screening

Soil samples were screened via headspace for VOCs using a MiniRae 2000 PID. PID measurements ranged from 0 ppm to approximately 161 ppm (TP-2). Fill material was noted at varying thickness in TP-1 through TP-8 consisting of ash, brick, and sand. Refer to the test pit logs Appendix A for a summary of soil classification for each sample interval, field observations, and PID measurements.

3.2 Site Hydrogeology

The property is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief, except in the immediate vicinity of major drainage ways. Surface soils are generally characterized as urban land with level to gently sloping land in which 80 percent or more of the soil surface is covered by asphalt, concrete, buildings, or other impervious structures typical of an urban environment. In addition, the presence of overburden fill material is widespread and common throughout the City of Buffalo.

Groundwater flow direction likely follows regional topography in the vicinity of the subject property and is to the west toward the Buffalo River. Local groundwater flows, however, may be influenced by subsurface features, such as excavations, utilities, and localized fill-conditions. Groundwater was encountered in native clay material in test pits on the western side of the Site, nearest the Buffalo River, from 4-6 fbgs during the test pit excavations.

3.2 Soil Analytical Results

Soil samples from TP-2 through TP-7 were analyzed for PAHs and RCRA metals. Soil samples from soil borings TP-2 and TP-5 were also analyzed for TCL VOCs. As indicated on Table 2, the analytical data results indicate several PAHs were detected above their respective Unrestricted, Restricted-Residential and/or Commercial Use SCOs in TP-2 and TP-5; including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. Several RCRA metals were detected above their respective Unrestricted, Restricted-Residential and/or Commercial Use SCOs in TP-2, TP-3 and TP-5. Of note, arsenic, cadmium and lead were detected above Commercial Use SCOs on-Site.

4.0 PREVIOUS INVESTIGATION

TurnKey reviewed "Preliminary Subsurface Exploration Report for 282-301 Ohio Street, Buffalo, New York", dated June 15, 1995, completed by Buffalo Drilling Company, Inc. (see Appendix C). The report was an attachment to "Site Inspection Report" also completed by Buffalo Drilling Company, Inc, and dated June 15, 1995. Four subsurface soil borings, designated B-3 through B-6, were completed on-Site (B-1 and B-2 were completed on an adjacent site). Based on that report, elevated levels of VOCs were detected in soil samples screened with a photoionization detector (PID) in each of the borings, with highest VOC concentrations noted in borings B-3 and B-4. Soil boring B-3 also had evidence of petroleum-like sheen and petroleum-like odors from four to eight fbgs.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the soil investigation at the Site, TurnKey offers the following conclusions and recommendations:

- Elevated PID readings were noted in current test pits (TP-2, TP-5) and historical soil borings (B-3, B-4);
- Petroleum-like odors and petroleum-like sheen were noted in historical soil boring B-3;
- Numerous PAHs were detected in on-Site soil above their respective Unrestricted, Restricted-Residential and/or Commercial Use SCOs;
- Several RCRA metals (arsenic, cadmium, chromium, lead, silver and mercury) were detected above their respective Unrestricted, Restricted-Residential and/or Commercial Use SCOs.
- Based on the findings of this investigation, additional Site investigation and remediation appears warranted. We understand that Ellicott Development Company is considering redeveloping the property; based on environmental impacts noted during the 2013 and historic 1995 investigation, the Site may be eligible for the New York Brownfield Cleanup Program.

6.0 LIMITATIONS

This report has been prepared for the exclusive use of Ellicott Development Company. The contents of this report are limited to information available at the time of the site investigation activities and to data referenced herein, and assume all referenced historic information sources to be true and accurate. The findings herein may be relied upon only at the discretion of Ellicott Development Company. Use of or reliance on this report or its findings by any other person or entity is prohibited without written permission of TurnKey Environmental Restoration, LLC.

TABLES

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 1

SUMMARY OF SOIL ANALYTICAL RESULTS

301 OHIO STREET SITE

BUFFALO, NEW YORK

Parameter[1]	Unrestricted Use SCOs[2]	Restricted Residential Use SCOs[2]	Commercial Use SCOs[2]	Sample Locations (Depth)					
				TP-2 (1-3)	TP-3 (1-3)	TP-4 (1-3)	TP-5 (2-4)	TP-6 (0-2)	TP-7 (2-4)
				10/15/13	10/15/13	10/15/13	10/15/13	10/15/13	10/15/13
Volatile Organic Compounds (VOCs) - mg/Kg [3]									
Methylene chloride	**0.05**	**100**	**500**	0.0039 J	--	--	ND	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]									
2-Methylnaphthalene	--	**--**	--	ND	0.52	0.072 J	ND	ND	ND
Acenaphthene	**20**	**100**	**500**	ND	0.078 J	ND	ND	ND	ND
Acenaphthylene	**100**	**100**	**500**	1.9	ND	0.039 J	0.93 J	0.085 J	ND
Anthracene	**100**	**100**	**500**	1 J	ND	0.067 J	1.8	0.14 J	ND
Benzo(a)anthracene	**1**	**1**	**5.6**	**2.7**	0.13 J	0.29	**7.8**	0.38	ND
Benzo(a)pyrene	**1**	**1**	**1**	**2.8**	0.092 J	0.26	**7.4**	0.5	ND
Benzo(b)fluoranthene	**1**	**1**	**5.6**	**4.7**	0.24	0.38	**9.9**	0.54	ND
Benzo(g,h,i)perylene	**100**	**100**	**500**	2.8	0.099 J	0.19	4.7	0.54	ND
Benzo(k)fluoranthene	**0.8**	**3.9**	**56**	**1.8**	0.069 J	0.12	**4.1**	0.19 J	ND
Chrysene	**1**	**3.9**	**56**	**3**	0.24	0.35	**7.9**	0.41	ND
Dibenzo(a,h)anthracene	**0.33**	**0.33**	**0.56**	**0.72 J**	ND	0.049 J	**1.1**	0.12 J	ND
Fluoranthene	**100**	**100**	**500**	4.5	0.29	0.54	19	0.61	ND
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	**5.6**	**3.2**	0.091 J	0.19	**5.3**	0.44	ND
Naphthalene	**12**	**100**	**500**	1.5 J	0.57	0.064 J	ND	ND	ND
Phenanthrene	**100**	**100**	**500**	2.4	0.7	0.38	7.5	0.41	ND
Pyrene	**100**	**100**	**500**	3.4	0.22	0.45	16	0.59	ND
Total Metals - mg/Kg									
Arsenic	**13**	**16**	**16**	**89**	7.3	1.9	3.9	3.7	2.4
Barium	**350**	**400**	**400**	68	110	27	73	37	140
Cadmium	**2.5**	**4.3**	**9.3**	**19**	**32**	0.14 J	**4.8**	0.42 J	0.29 J
Chromium	**30**	**180**	**1500**	**170**	**110**	2.7	27	5.9	7
Lead	**63**	**400**	**1000**	**1200**	**1300**	16	**230**	16	10
Selenium	**3.9**	**180**	**1500**	0.26 J	ND	0.17 J	0.13 J	0.14 J	1.8
Silver	**2**	**180**	**1500**	1.4	**7.3**	ND	0.82	0.11 J	0.12 J
Mercury	**0.18**	**0.81**	**2.8**	0.14	**0.39**	ND	**0.22**	0.02 J	ND

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006)
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparison to SCOs.

Definitions:

ND = Parameter not detected above laboratory detection limit.

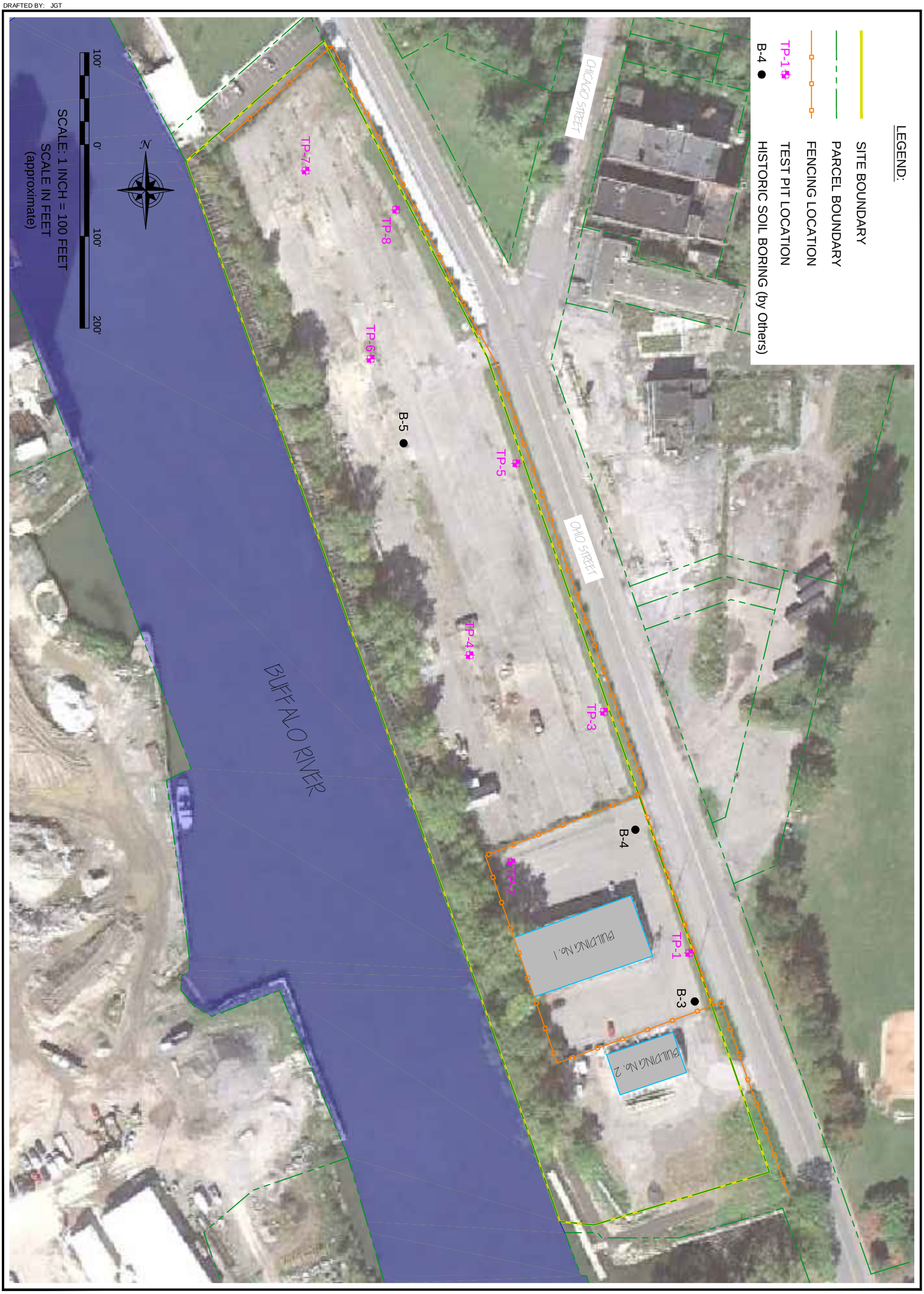
"--" = Sample not analyzed for parameter or no SCO available for the parameter.

J = Estimated value; result is less than the sample quantitation limit but greater than zero.

BOLD	= Result exceeds Part 375 Unrestricted Use SCOs.
BOLD	= Result exceeds Part 375 Restricted Residential Use SCOs.
BOLD	= Result exceeds Part 375 Commercial Use SCOs.

FIGURES

DATE: OCTOBER 2013
DRAFTED BY: JGT



SITE PLAN (AERIAL)

PHASE II SITE INVESTIGATION

301 OHIO STREET SITE

BUFFALO, NEW YORK

PREPARED FOR

ELLICOTT DEVELOPMENT COMPANY

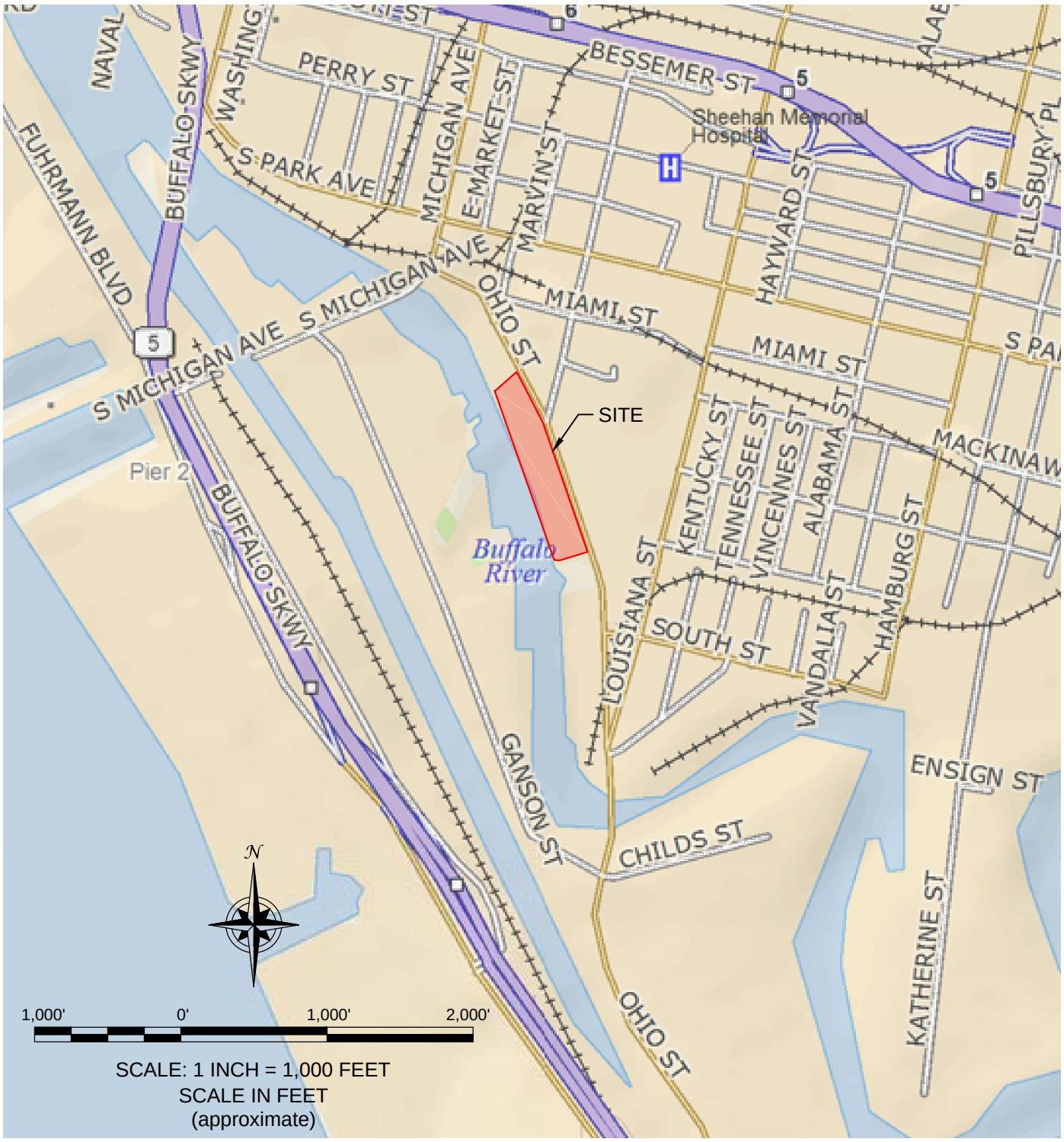
FIGURE 2

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0136-013-004

FIGURE 1



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

SITE LOCATION AND VICINITY MAP

PHASE II SITE INVESTIGATION

301 OHIO STREET SITE

BUFFALO, NEW YORK

PREPARED FOR

ELLICOTT DEVELOPMENT COMPANY

PROJECT NO.:	013-013-004
DATE:	OCTOBER 2013
DRAFTED BY:	JGT

APPENDIX A

SOIL BORING AND TEST PIT LOGS

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-01

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Topsoil***		0.0		
	-0.5					
	0.5	***Fill*** Black, moist, ash fill with fine sand, loose when disturbed, massive		0.0	Sampled (1-3)	
	-3.0			0.0		
	3.0	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive		0.0		
5.0				0.0		
	-9.0			0.0		
	9.0	End of Test Pit				
10.0						

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-02

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Ashphalt***				
	-0.5					
	0.5	***Fill*** Reddish brown, moist, mostly slag fill, little fine sand, trace non-plastic fines, loose when disturbed, no odor				
	-1.5					
	1.5	***Fill*** yellow, moist, mostly fine sand with brick, loose when disturbed, no odor			Sampled (1-3)	
	-3.5					
	3.5	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive				
5.0						
	-9.0					
	9.0	End of Test Pit				
10.0						

PID VOCs (ppm): 0 | 100 | 300 | 500

20.0 · 150.0 · 161.0 · 26.0 · 20.0 · 4.2 · 0.0

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none; although elevated PID

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-03

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Topsoil***		0.0		
	-0.5					
	0.5	***Fill*** Black, moist, ash fill with fine sand, loose when disturbed, massive		0.0	Sampled (1-3)	
				0.0		
	-3.0					
	3.0	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive		0.0		
5.0				0.0		
				0.0		
	-9.0					
	9.0	End of Test Pit				
10.0						

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-04

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Ashphalt***		0.0		
	-0.5					
	0.5	***Fill*** Reddish brown, moist, mostly slag fill, little fine sand, trace non-plastic fines, loose when disturbed		0.0		
	-1.5					
	1.5	***Fill*** yellow, moist, mostly fine sand with brick, loose when disturbed		0.0	Sampled (1-3)	
	-3.5			0.0		
	3.5	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive				
5.0				0.0		
				0.0		
	-9.0			0.0		
	9.0	End of Test Pit				
10.0						

PID VOCs scale: 0 25 50 75 100 ppm

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-05

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Topsoil***		0.0		
	-0.5 / 0.5	***Fill*** Black, moist, ash fill with fine sand, loose when disturbed, massive		0.0		
	-2.0 / 2.0	***Fill*** Reddish brown, moist, mostly brick fill with fine sand, wood debris, slight petroleum-like odor, massive,		15.2	Sampled (1-3)	
				20.6		
	-4.0 / 4.0	refusal on suspected concrete @ 4 fbgs		19.3		
		End of Test Pit				
5.0						

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 4.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: slight petroleum-like odor

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-06

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Topsoil***		0.0		
	-0.5					
	0.5	***Fill*** Reddish brown, moist, mostly brick fill with fine sand, wood debris, refusal on concrete floor @ 4', massive, slight petroleum-like odor		0.0	Sampled (0.5-2')	
	-2.0			0.0		
	2.0	***Lean Clay*** Brown, moist to wet (7'), mostly medium plasticity fines, little fine sand, stiff, massive		0.0		
5.0				0.0		
				0.0		DTW = 7 fbgs
	-9.0			0.0		
	9.0	End of Test Pit				
10.0						

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: 7.0 fbgs
Visual Impacts: none
Olfactory Observations: slightly petroleum-like odor

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-07

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Ashphalt***		0.0		
	-0.5					
	0.5	***Fill*** Reddish brown, moist, mostly slag fill, little fine sand, trace non-plastic fines, loose when disturbed		0.0		
	-2.0			0.0		
	2.0	***Fill*** yellow, moist, mostly fine sand with brick, loose when disturbed		0.0	Sampled (2-4)	
	-4.0					
	4.0	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive		0.0		
5.0						
				0.0		
				0.0		
	-9.0					
	9.0	End of Test Pit				
10.0						

PID VOCs scale: 0 25 50 75 100 ppm

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none

TEST PIT EXCAVATION LOG

Project No: 0136-013-004

Project: 301 Ohio Street

Client: Ellicott Development Company

Site Location: 301 Ohio Strret

Test Pit I.D.: TP-08

Logged By: PWW

Checked By: BCH

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Topsoil***		0.0		
	-0.5 0.5	***Fill*** Black, moist to wet (6'), ash-like material with fine sand, loose when disturbed, massive		0.0	Sampled (1-4)	
				0.0		
				0.0		
5.0				0.0		
	-6.5 6.5	***Lean Clay*** Brown, moist, mostly medium plasticity fines, little non-plastic fines, trace fine sand, stiff, massive		0.0		
	-9.0 9.0	End of Test Pit		0.0		
10.0						

Excavated By: Turnkey Environmental Restoration
Excavator Type: Bobcat Excavator ZHS
Excavation Date(s): 10-15-13
Comments:

Length: 6.0'
Width: 2.5'
Depth: 9.0 fbgs

Depth to Water: none
Visual Impacts: none
Olfactory Observations: none

APPENDIX B

LABORATORY ANALYTICAL DATA SUMMARY PACKAGE

ANALYTICAL REPORT

Lab Number:	L1320788
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Mike Lesakowski
Phone:	(716) 856-0599
Project Name:	301 OHIO ST
Project Number:	0136-013-004
Report Date:	10/23/13

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1320788-01	TP-02 (1-3)	301 OHIO ST	10/15/13 11:45
L1320788-02	TP-03 (1-3)	301 OHIO ST	10/15/13 14:15
L1320788-03	TP-04 (1-3)	301 OHIO ST	10/15/13 14:30
L1320788-04	TP-05 (2-4)	301 OHIO ST	10/15/13 14:45
L1320788-05	TP-06 (0-2)	301 OHIO ST	10/15/13 15:10
L1320788-06	TP-07 (2-4)	301 OHIO ST	10/15/13 15:35

Project Name: 301 OHIO ST
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Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: 301 OHIO ST
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Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Semivolatile Organics

L1320788-01, -04, -05 and -06 have elevated detection limits due to the dilutions required by the sample matrices.

Metals

The CCV recovery associated with WG645024-1 was above the acceptance criteria for silver. Any associated samples with positive detections were re-analyzed under a passing CCV. The samples that were non-detect for this element are reporting results from the original analyses.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 10/23/13

ORGANICS

VOLATILES

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-01
Client ID: TP-02 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/22/13 05:48
Analyst: PP
Percent Solids: 83%

Date Collected: 10/15/13 11:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.9	J	ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.94	1
Bromomethane	ND		ug/kg	2.4	0.41	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1

Project Name: 301 OHIO ST **Lab Number:** L1320788

Project Number: 0136-013-004 **Report Date:** 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-01 Date Collected: 10/15/13 11:45

Client ID: TP-02 (1-3) Date Received: 10/16/13

Sample Location: 301 OHIO ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.21	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.68	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.95	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Naphthalene	ND		ug/kg	6.0	0.93	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.95	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.69	1
Methyl Acetate	ND		ug/kg	24	0.92	1
Cyclohexane	ND		ug/kg	24	1.3	1
1,4-Dioxane	ND		ug/kg	120	21.	1
Freon-113	ND		ug/kg	24	0.33	1
Methyl cyclohexane	ND		ug/kg	4.8	1.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	101		70-130

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-04
Client ID: TP-05 (2-4)
Sample Location: 301 OHIO ST
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/22/13 06:16
Analyst: PP
Percent Solids: 87%

Date Collected: 10/15/13 14:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.20	1
Chloroform	ND		ug/kg	1.7	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
1,2-Dichloropropane	ND		ug/kg	4.0	0.26	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.35	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.40	1
Trichlorofluoromethane	ND		ug/kg	5.8	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.26	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
Bromoform	ND		ug/kg	4.6	0.48	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.7	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	5.8	0.90	1
Bromomethane	ND		ug/kg	2.3	0.39	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.28	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1

Project Name: 301 OHIO ST **Lab Number:** L1320788

Project Number: 0136-013-004 **Report Date:** 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-04 Date Collected: 10/15/13 14:45

Client ID: TP-05 (2-4) Date Received: 10/16/13

Sample Location: 301 OHIO ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
p/m-Xylene	ND		ug/kg	2.3	0.37	1
o-Xylene	ND		ug/kg	2.3	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Styrene	ND		ug/kg	2.3	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.25	1
Acetone	ND		ug/kg	12	3.6	1
Carbon disulfide	ND		ug/kg	12	2.3	1
2-Butanone	ND		ug/kg	12	0.41	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.28	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.8	0.23	1
1,2-Dibromoethane	ND		ug/kg	4.6	0.20	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.8	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.8	0.91	1
Isopropylbenzene	ND		ug/kg	1.2	0.19	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Naphthalene	ND		ug/kg	5.8	0.89	1
n-Propylbenzene	ND		ug/kg	1.2	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.8	0.19	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.8	0.91	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.66	1
Methyl Acetate	ND		ug/kg	23	0.88	1
Cyclohexane	ND		ug/kg	23	1.2	1
1,4-Dioxane	ND		ug/kg	120	20.	1
Freon-113	ND		ug/kg	23	0.32	1
Methyl cyclohexane	ND		ug/kg	4.6	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Project Name: 301 OHIO ST
Project Number: 0136-013-004
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/13 21:51
Analyst: PP

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG645907-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10

Project Name: 301 OHIO ST
Project Number: 0136-013-004
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Report Date: 10/23/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/13 21:51
Analyst: PP

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG645907-3					
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
Freon-113	ND		ug/kg	20	0.27
Methyl cyclohexane	ND		ug/kg	4.0	1.3

Project Name: 301 OHIO ST
Project Number: 0136-013-004

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/13 21:51
Analyst: PP

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG645907-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST

Project Number: 0136-013-004

Lab Number: L1320788

Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG645907-1 WG645907-2								
Methylene chloride	110		106		70-130	4		30
1,1-Dichloroethane	111		108		70-130	3		30
Chloroform	116		113		70-130	3		30
Carbon tetrachloride	127		123		70-130	3		30
1,2-Dichloropropane	107		105		70-130	2		30
Dibromochloromethane	107		104		70-130	3		30
1,1,2-Trichloroethane	102		100		70-130	2		30
Tetrachloroethene	108		106		70-130	2		30
Chlorobenzene	104		102		70-130	2		30
Trichlorofluoromethane	122		121		70-139	1		30
1,2-Dichloroethane	117		114		70-130	3		30
1,1,1-Trichloroethane	121		118		70-130	3		30
Bromodichloromethane	113		110		70-130	3		30
trans-1,3-Dichloropropene	106		103		70-130	3		30
cis-1,3-Dichloropropene	108		107		70-130	1		30
1,1-Dichloropropene	111		110		70-130	1		30
Bromoform	102		100		70-130	2		30
1,1,2,2-Tetrachloroethane	95		92		70-130	3		30
Benzene	109		106		70-130	3		30
Toluene	100		98		70-130	2		30
Ethylbenzene	105		102		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST

Project Number: 0136-013-004

Lab Number: L1320788

Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG645907-1 WG645907-2								
Chloromethane	**134**	Q	**132**	Q	52-130	2		30
Bromomethane	133		115		57-147	15		30
Vinyl chloride	126		128		67-130	2		30
Chloroethane	122		120		50-151	2		30
1,1-Dichloroethene	111		109		65-135	2		30
trans-1,2-Dichloroethene	111		108		70-130	3		30
Trichloroethene	115		110		70-130	4		30
1,2-Dichlorobenzene	103		100		70-130	3		30
1,3-Dichlorobenzene	102		101		70-130	1		30
1,4-Dichlorobenzene	102		101		70-130	1		30
Methyl tert butyl ether	109		108		66-130	1		30
p/m-Xylene	108		105		70-130	3		30
o-Xylene	108		106		70-130	2		30
cis-1,2-Dichloroethene	110		108		70-130	2		30
Dibromomethane	114		111		70-130	3		30
Styrene	110		107		70-130	3		30
Dichlorodifluoromethane	126		115		30-146	9		30
Acetone	106		83		54-140	24		30
Carbon disulfide	103		100		59-130	3		30
2-Butanone	101		90		70-130	12		30
Vinyl acetate	106		105		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG645907-1 WG645907-2								
4-Methyl-2-pentanone	102		100		70-130	2		30
1,2,3-Trichloropropane	100		91		68-130	9		30
2-Hexanone	89		83		70-130	7		30
Bromochloromethane	115		112		70-130	3		30
2,2-Dichloropropane	121		117		70-130	3		30
1,2-Dibromoethane	103		101		70-130	2		30
1,3-Dichloropropane	100		98		69-130	2		30
1,1,1,2-Tetrachloroethane	108		106		70-130	2		30
Bromobenzene	98		98		70-130	0		30
n-Butylbenzene	105		102		70-130	3		30
sec-Butylbenzene	103		102		70-130	1		30
tert-Butylbenzene	104		102		70-130	2		30
o-Chlorotoluene	101		91		70-130	10		30
p-Chlorotoluene	101		100		70-130	1		30
1,2-Dibromo-3-chloropropane	109		103		68-130	6		30
Hexachlorobutadiene	106		103		67-130	3		30
Isopropylbenzene	101		100		70-130	1		30
p-Isopropyltoluene	106		104		70-130	2		30
Naphthalene	97		96		70-130	1		30
Acrylonitrile	109		100		70-130	9		30
Isopropyl Ether	103		103		66-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG645907-1 WG645907-2								
tert-Butyl Alcohol	106		98		70-130	8		30
n-Propylbenzene	100		98		70-130	2		30
1,2,3-Trichlorobenzene	100		98		70-130	2		30
1,2,4-Trichlorobenzene	103		99		70-130	4		30
1,3,5-Trimethylbenzene	105		103		70-130	2		30
1,2,4-Trimethylbenzene	106		104		70-130	2		30
Methyl Acetate	103		98		51-146	5		30
Ethyl Acetate	102		98		70-130	4		30
Acrolein	104		101		70-130	3		30
Cyclohexane	107		106		59-142	1		30
1,4-Dioxane	90		82		65-136	9		30
Freon-113	114		111		50-139	3		30
1,4-Diethylbenzene	106		104		70-130	2		30
4-Ethyltoluene	102		101		70-130	1		30
1,2,4,5-Tetramethylbenzene	107		105		70-130	2		30
Tetrahydrofuran	96		94		66-130	2		30
Ethyl ether	**132**	Q	**134**	Q	67-130	2		30
trans-1,4-Dichloro-2-butene	106		101		70-130	5		30
Methyl cyclohexane	108		105		70-130	3		30
Ethyl-Tert-Butyl-Ether	109		109		70-130	0		30
Tertiary-Amyl Methyl Ether	109		107		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG645907-1 WG645907-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		107		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	95		96		70-130
Dibromofluoromethane	107		105		70-130

SEMIVOLATILES

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-01	D	Date Collected:	10/15/13 11:45
Client ID:	TP-02 (1-3)		Date Received:	10/16/13
Sample Location:	301 OHIO ST		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 09:38			
Analyst:	RC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1600	410	10
2-Chloronaphthalene	ND		ug/kg	2000	650	10
Fluoranthene	4500		ug/kg	1200	370	10
Naphthalene	1500	J	ug/kg	2000	660	10
Benzo(a)anthracene	2700		ug/kg	1200	390	10
Benzo(a)pyrene	2800		ug/kg	1600	490	10
Benzo(b)fluoranthene	4700		ug/kg	1200	400	10
Benzo(k)fluoranthene	1800		ug/kg	1200	380	10
Chrysene	3000		ug/kg	1200	390	10
Acenaphthylene	1900		ug/kg	1600	370	10
Anthracene	1000	J	ug/kg	1200	330	10
Benzo(ghi)perylene	2800		ug/kg	1600	410	10
Fluorene	ND		ug/kg	2000	570	10
Phenanthrene	2400		ug/kg	1200	390	10
Dibenzo(a,h)anthracene	720	J	ug/kg	1200	390	10
Indeno(1,2,3-cd)pyrene	3200		ug/kg	1600	440	10
Pyrene	3400		ug/kg	1200	390	10
2-Methylnaphthalene	ND		ug/kg	2400	640	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	91		30-120
4-Terphenyl-d14	81		18-120

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-02	Date Collected:	10/15/13 14:15
Client ID:	TP-03 (1-3)	Date Received:	10/16/13
Sample Location:	301 OHIO ST	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 10:06		
Analyst:	RC		
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	190	48.	1
2-Chloronaphthalene	ND		ug/kg	230	76.	1
Fluoranthene	290		ug/kg	140	43.	1
Naphthalene	570		ug/kg	230	78.	1
Benzo(a)anthracene	130	J	ug/kg	140	46.	1
Benzo(a)pyrene	92	J	ug/kg	190	57.	1
Benzo(b)fluoranthene	240		ug/kg	140	47.	1
Benzo(k)fluoranthene	69	J	ug/kg	140	45.	1
Chrysene	240		ug/kg	140	46.	1
Acenaphthylene	ND		ug/kg	190	44.	1
Anthracene	78	J	ug/kg	140	39.	1
Benzo(ghi)perylene	99	J	ug/kg	190	49.	1
Fluorene	ND		ug/kg	230	67.	1
Phenanthrene	700		ug/kg	140	46.	1
Dibenzo(a,h)anthracene	ND		ug/kg	140	45.	1
Indeno(1,2,3-cd)pyrene	91	J	ug/kg	190	52.	1
Pyrene	220		ug/kg	140	46.	1
2-Methylnaphthalene	520		ug/kg	280	75.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	73		30-120
4-Terphenyl-d14	65		18-120

Project Name: 301 OHIO ST
Lab Number: L1320788
Project Number: 0136-013-004
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-03	Date Collected:	10/15/13 14:30
Client ID:	TP-04 (1-3)	Date Received:	10/16/13
Sample Location:	301 OHIO ST	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 10:34		
Analyst:	RC		
Percent Solids:	90%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	38.	1
2-Chloronaphthalene	ND		ug/kg	180	60.	1
Fluoranthene	540		ug/kg	110	34.	1
Naphthalene	64	J	ug/kg	180	61.	1
Benzo(a)anthracene	290		ug/kg	110	36.	1
Benzo(a)pyrene	260		ug/kg	150	45.	1
Benzo(b)fluoranthene	380		ug/kg	110	37.	1
Benzo(k)fluoranthene	120		ug/kg	110	35.	1
Chrysene	350		ug/kg	110	36.	1
Acenaphthylene	39	J	ug/kg	150	34.	1
Anthracene	67	J	ug/kg	110	30.	1
Benzo(ghi)perylene	190		ug/kg	150	38.	1
Fluorene	ND		ug/kg	180	52.	1
Phenanthrene	380		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	49	J	ug/kg	110	35.	1
Indeno(1,2,3-cd)pyrene	190		ug/kg	150	41.	1
Pyrene	450		ug/kg	110	36.	1
2-Methylnaphthalene	72	J	ug/kg	220	58.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	89		30-120
4-Terphenyl-d14	91		18-120

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-04	D	Date Collected:	10/15/13 14:45
Client ID:	TP-05 (2-4)		Date Received:	10/16/13
Sample Location:	301 OHIO ST		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 11:03			
Analyst:	RC			
Percent Solids:	87%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1500	390	10
2-Chloronaphthalene	ND		ug/kg	1900	620	10
Fluoranthene	19000		ug/kg	1100	350	10
Naphthalene	ND		ug/kg	1900	630	10
Benzo(a)anthracene	7800		ug/kg	1100	370	10
Benzo(a)pyrene	7400		ug/kg	1500	470	10
Benzo(b)fluoranthene	9900		ug/kg	1100	380	10
Benzo(k)fluoranthene	4100		ug/kg	1100	360	10
Chrysene	7900		ug/kg	1100	380	10
Acenaphthylene	930	J	ug/kg	1500	360	10
Anthracene	1800		ug/kg	1100	320	10
Benzo(ghi)perylene	4700		ug/kg	1500	400	10
Fluorene	ND		ug/kg	1900	550	10
Phenanthrene	7500		ug/kg	1100	370	10
Dibenzo(a,h)anthracene	1100		ug/kg	1100	370	10
Indeno(1,2,3-cd)pyrene	5300		ug/kg	1500	420	10
Pyrene	16000		ug/kg	1100	370	10
2-Methylnaphthalene	ND		ug/kg	2300	610	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	80		30-120
4-Terphenyl-d14	77		18-120

Project Name: 301 OHIO ST **Lab Number:** L1320788

Project Number: 0136-013-004 **Report Date:** 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-05	D	Date Collected:	10/15/13 15:10
Client ID:	TP-06 (0-2)		Date Received:	10/16/13
Sample Location:	301 OHIO ST		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 11:31			
Analyst:	RC			
Percent Solids:	89%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	300	77.	2
2-Chloronaphthalene	ND		ug/kg	370	120	2
Fluoranthene	610		ug/kg	220	68.	2
Naphthalene	ND		ug/kg	370	120	2
Benzo(a)anthracene	380		ug/kg	220	73.	2
Benzo(a)pyrene	500		ug/kg	300	91.	2
Benzo(b)fluoranthene	540		ug/kg	220	75.	2
Benzo(k)fluoranthene	190	J	ug/kg	220	71.	2
Chrysene	410		ug/kg	220	73.	2
Acenaphthylene	85	J	ug/kg	300	70.	2
Anthracene	140	J	ug/kg	220	62.	2
Benzo(ghi)perylene	540		ug/kg	300	78.	2
Fluorene	ND		ug/kg	370	110	2
Phenanthrene	410		ug/kg	220	73.	2
Dibenzo(a,h)anthracene	120	J	ug/kg	220	72.	2
Indeno(1,2,3-cd)pyrene	440		ug/kg	300	83.	2
Pyrene	590		ug/kg	220	72.	2
2-Methylnaphthalene	ND		ug/kg	450	120	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	70		30-120
4-Terphenyl-d14	68		18-120

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID:	L1320788-06	D	Date Collected:	10/15/13 15:35
Client ID:	TP-07 (2-4)		Date Received:	10/16/13
Sample Location:	301 OHIO ST		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	10/17/13 17:34
Analytical Date:	10/23/13 11:59			
Analyst:	RC			
Percent Solids:	87%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1500	390	10
2-Chloronaphthalene	ND		ug/kg	1900	620	10
Fluoranthene	ND		ug/kg	1100	350	10
Naphthalene	ND		ug/kg	1900	630	10
Benzo(a)anthracene	ND		ug/kg	1100	370	10
Benzo(a)pyrene	ND		ug/kg	1500	470	10
Benzo(b)fluoranthene	ND		ug/kg	1100	380	10
Benzo(k)fluoranthene	ND		ug/kg	1100	360	10
Chrysene	ND		ug/kg	1100	380	10
Acenaphthylene	ND		ug/kg	1500	360	10
Anthracene	ND		ug/kg	1100	320	10
Benzo(ghi)perylene	ND		ug/kg	1500	400	10
Fluorene	ND		ug/kg	1900	550	10
Phenanthrene	ND		ug/kg	1100	370	10
Dibenzo(a,h)anthracene	ND		ug/kg	1100	370	10
Indeno(1,2,3-cd)pyrene	ND		ug/kg	1500	420	10
Pyrene	ND		ug/kg	1100	370	10
2-Methylnaphthalene	ND		ug/kg	2300	610	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	93		30-120
4-Terphenyl-d14	81		18-120

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/23/13 09:37
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 10/17/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG644882-1					
Acenaphthene	ND		ug/kg	130	34.
Hexachlorobenzene	ND		ug/kg	98	30.
Bis(2-chloroethyl)ether	ND		ug/kg	150	46.
2-Chloronaphthalene	ND		ug/kg	160	53.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	35.
2,6-Dinitrotoluene	ND		ug/kg	160	42.
Fluoranthene	ND		ug/kg	98	30.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	50.
4-Bromophenyl phenyl ether	ND		ug/kg	160	38.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	58.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	49.
Hexachlorobutadiene	ND		ug/kg	160	46.
Hexachlorocyclopentadiene	ND		ug/kg	470	100
Hexachloroethane	ND		ug/kg	130	30.
Isophorone	ND		ug/kg	150	43.
Naphthalene	ND		ug/kg	160	54.
Nitrobenzene	ND		ug/kg	150	39.
NDPA/DPA	ND		ug/kg	130	34.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	49.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	43.
Butyl benzyl phthalate	ND		ug/kg	160	32.
Di-n-butylphthalate	ND		ug/kg	160	32.
Di-n-octylphthalate	ND		ug/kg	160	40.
Diethyl phthalate	ND		ug/kg	160	34.
Dimethyl phthalate	ND		ug/kg	160	42.
Benzo(a)anthracene	ND		ug/kg	98	32.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	33.
Benzo(k)fluoranthene	ND		ug/kg	98	31.
Chrysene	ND		ug/kg	98	32.

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/23/13 09:37
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 10/17/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG644882-1					
Acenaphthylene	ND		ug/kg	130	30.
Anthracene	ND		ug/kg	98	27.
Benzo(ghi)perylene	ND		ug/kg	130	34.
Fluorene	ND		ug/kg	160	47.
Phenanthrene	ND		ug/kg	98	32.
Dibenzo(a,h)anthracene	ND		ug/kg	98	32.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	36.
Pyrene	ND		ug/kg	98	32.
Biphenyl	ND		ug/kg	370	54.
4-Chloroaniline	ND		ug/kg	160	43.
2-Nitroaniline	ND		ug/kg	160	46.
3-Nitroaniline	ND		ug/kg	160	45.
4-Nitroaniline	ND		ug/kg	160	44.
Dibenzofuran	ND		ug/kg	160	54.
2-Methylnaphthalene	ND		ug/kg	200	52.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	51.
Acetophenone	ND		ug/kg	160	51.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	47.
2-Chlorophenol	ND		ug/kg	160	49.
2,4-Dichlorophenol	ND		ug/kg	150	53.
2,4-Dimethylphenol	ND		ug/kg	160	49.
2-Nitrophenol	ND		ug/kg	350	51.
4-Nitrophenol	ND		ug/kg	230	53.
2,4-Dinitrophenol	ND		ug/kg	780	220
4,6-Dinitro-o-cresol	ND		ug/kg	420	60.
Pentachlorophenol	ND		ug/kg	130	35.
Phenol	ND		ug/kg	160	48.
2-Methylphenol	ND		ug/kg	160	53.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	54.
2,4,5-Trichlorophenol	ND		ug/kg	160	53.

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/23/13 09:37
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 10/17/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG644882-1					
Carbazole	ND		ug/kg	160	35.
Benzaldehyde	ND		ug/kg	220	66.
Caprolactam	ND		ug/kg	160	45.
Atrazine	ND		ug/kg	130	37.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	28.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	73		30-120
2,4,6-Tribromophenol	70		0-136
4-Terphenyl-d14	79		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG644882-2 WG644882-3								
Acenaphthene	86		87		31-137	1		50
1,2,4-Trichlorobenzene	71		73		38-107	3		50
Hexachlorobenzene	83		81		40-140	2		50
Bis(2-chloroethyl)ether	78		78		40-140	0		50
2-Chloronaphthalene	84		87		40-140	4		50
1,2-Dichlorobenzene	75		75		40-140	0		50
1,3-Dichlorobenzene	74		74		40-140	0		50
1,4-Dichlorobenzene	74		74		28-104	0		50
3,3'-Dichlorobenzidine	66		68		40-140	3		50
2,4-Dinitrotoluene	**96**	Q	**97**	Q	28-89	1		50
2,6-Dinitrotoluene	93		96		40-140	3		50
Fluoranthene	95		95		40-140	0		50
4-Chlorophenyl phenyl ether	88		87		40-140	1		50
4-Bromophenyl phenyl ether	84		84		40-140	0		50
Bis(2-chloroisopropyl)ether	80		82		40-140	2		50
Bis(2-chloroethoxy)methane	82		86		40-117	5		50
Hexachlorobutadiene	67		68		40-140	1		50
Hexachlorocyclopentadiene	74		75		40-140	1		50
Hexachloroethane	72		72		40-140	0		50
Isophorone	84		87		40-140	4		50
Naphthalene	78		79		40-140	1		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG644882-2 WG644882-3								
Nitrobenzene	80		83		40-140	4		50
NDPA/DPA	94		94			0		50
n-Nitrosodi-n-propylamine	81		85		32-121	5		50
Bis(2-ethylhexyl)phthalate	93		91		40-140	2		50
Butyl benzyl phthalate	92		96		40-140	4		50
Di-n-butylphthalate	94		93		40-140	1		50
Di-n-octylphthalate	91		91		40-140	0		50
Diethyl phthalate	92		92		40-140	0		50
Dimethyl phthalate	89		90		40-140	1		50
Benzo(a)anthracene	89		89		40-140	0		50
Benzo(a)pyrene	88		88		40-140	0		50
Benzo(b)fluoranthene	88		86		40-140	2		50
Benzo(k)fluoranthene	94		92		40-140	2		50
Chrysene	92		91		40-140	1		50
Acenaphthylene	89		92		40-140	3		50
Anthracene	95		93		40-140	2		50
Benzo(ghi)perylene	74		80		40-140	8		50
Fluorene	91		90		40-140	1		50
Phenanthrene	91		90		40-140	1		50
Dibenzo(a,h)anthracene	79		83		40-140	5		50
Indeno(1,2,3-cd)pyrene	76		80		40-140	5		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST

Project Number: 0136-013-004

Lab Number: L1320788

Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG644882-2 WG644882-3								
Pyrene	94		95		35-142	1		50
Biphenyl	78		79			1		50
4-Chloroaniline	74		76		40-140	3		50
2-Nitroaniline	96		99		47-134	3		50
3-Nitroaniline	75		80		26-129	6		50
4-Nitroaniline	89		92		41-125	3		50
Dibenzofuran	88		88		40-140	0		50
2-Methylnaphthalene	78		80		40-140	3		50
1,2,4,5-Tetrachlorobenzene	70		71		40-117	1		50
Acetophenone	79		80		14-144	1		50
2,4,6-Trichlorophenol	92		96		30-130	4		50
p-Chloro-m-cresol	98		102		26-103	4		50
2-Chlorophenol	84		88		25-102	5		50
2,4-Dichlorophenol	88		90		30-130	2		50
2,4-Dimethylphenol	102		107		30-130	5		50
2-Nitrophenol	82		84		30-130	2		50
4-Nitrophenol	**118**	Q	**122**	Q	11-114	3		50
2,4-Dinitrophenol	88		94		4-130	7		50
4,6-Dinitro-o-cresol	92		95		10-130	3		50
Pentachlorophenol	81		80		17-109	1		50
Phenol	88		**93**	Q	26-90	6		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST

Project Number: 0136-013-004

Lab Number: L1320788

Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG644882-2 WG644882-3								
2-Methylphenol	90		94		30-130.	4		50
3-Methylphenol/4-Methylphenol	95		100		30-130	5		50
2,4,5-Trichlorophenol	92		94		30-130	2		50
Benzoic Acid	80		84			5		50
Benzyl Alcohol	83		88		40-140	6		50
Carbazole	94		93		54-128	1		50
Benzaldehyde	83		84			1		50
Caprolactam	108		111			3		50
Atrazine	113		114			1		50
2,3,4,6-Tetrachlorophenol	85		86			1		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	88		91		25-120
Phenol-d6	90		96		10-120
Nitrobenzene-d5	84		87		23-120
2-Fluorobiphenyl	87		90		30-120
2,4,6-Tribromophenol	86		84		0-136
4-Terphenyl-d14	85		86		18-120

METALS

Project Name: 301 OHIO ST
Lab Number: L1320788
Project Number: 0136-013-004
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-01
Client ID: TP-02 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 83%

Date Collected: 10/15/13 11:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	89		mg/kg	0.46	0.09	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Barium, Total	68		mg/kg	0.46	0.14	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Cadmium, Total	19		mg/kg	0.46	0.03	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Chromium, Total	170		mg/kg	0.46	0.09	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Lead, Total	1200		mg/kg	2.3	0.09	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Mercury, Total	0.14		mg/kg	0.10	0.02	1	10/23/13 10:31	10/23/13 13:58	EPA 7471B	1,7471B	MC
Selenium, Total	0.26	J	mg/kg	0.92	0.14	1	10/18/13 10:30	10/19/13 16:40	EPA 3050B	1,6010C	MG
Silver, Total	1.4		mg/kg	0.46	0.09	1	10/18/13 10:30	10/22/13 02:07	EPA 3050B	1,6010C	TT

Project Name: 301 OHIO ST
Lab Number: L1320788
Project Number: 0136-013-004
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-02
Client ID: TP-03 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 70%

Date Collected: 10/15/13 14:15
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	7.3		mg/kg	0.54	0.11	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Barium, Total	110		mg/kg	0.54	0.16	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Cadmium, Total	32		mg/kg	0.54	0.04	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Chromium, Total	110		mg/kg	0.54	0.11	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Lead, Total	1300		mg/kg	2.7	0.11	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Mercury, Total	0.39		mg/kg	0.11	0.02	1	10/23/13 10:31	10/23/13 14:00	EPA 7471B	1,7471B	MC
Selenium, Total	ND		mg/kg	1.1	0.16	1	10/18/13 10:30	10/19/13 16:44	EPA 3050B	1,6010C	MG
Silver, Total	7.3		mg/kg	0.54	0.11	1	10/18/13 10:30	10/22/13 02:12	EPA 3050B	1,6010C	TT

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-03
Client ID: TP-04 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 90%

Date Collected: 10/15/13 14:30
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	1.9		mg/kg	0.44	0.09	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Barium, Total	27		mg/kg	0.44	0.13	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Cadmium, Total	0.14	J	mg/kg	0.44	0.03	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Chromium, Total	2.7		mg/kg	0.44	0.09	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Lead, Total	16		mg/kg	2.2	0.09	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Mercury, Total	ND		mg/kg	0.09	0.02	1	10/23/13 10:31	10/23/13 14:02	EPA 7471B	1,7471B	MC
Selenium, Total	0.17	J	mg/kg	0.87	0.13	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.44	0.09	1	10/18/13 10:30	10/19/13 16:47	EPA 3050B	1,6010C	MG

Project Name: 301 OHIO ST
Lab Number: L1320788
Project Number: 0136-013-004
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-04
Client ID: TP-05 (2-4)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 87%

Date Collected: 10/15/13 14:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	3.9		mg/kg	0.44	0.09	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Barium, Total	73		mg/kg	0.44	0.13	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Cadmium, Total	4.8		mg/kg	0.44	0.03	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Chromium, Total	27		mg/kg	0.44	0.09	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Lead, Total	230		mg/kg	2.2	0.09	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Mercury, Total	0.22		mg/kg	0.08	0.02	1	10/23/13 10:31	10/23/13 14:04	EPA 7471B	1,7471B	MC
Selenium, Total	0.13	J	mg/kg	0.87	0.13	1	10/18/13 10:30	10/19/13 17:09	EPA 3050B	1,6010C	MG
Silver, Total	0.82		mg/kg	0.44	0.09	1	10/18/13 10:30	10/22/13 02:15	EPA 3050B	1,6010C	TT

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-05
Client ID: TP-06 (0-2)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 89%

Date Collected: 10/15/13 15:10
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	3.7		mg/kg	0.43	0.09	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Barium, Total	37		mg/kg	0.43	0.13	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Cadmium, Total	0.42	J	mg/kg	0.43	0.03	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Chromium, Total	5.9		mg/kg	0.43	0.09	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Lead, Total	16		mg/kg	2.1	0.09	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Mercury, Total	0.02	J	mg/kg	0.09	0.02	1	10/23/13 10:31	10/23/13 14:06	EPA 7471B	1,7471B	MC
Selenium, Total	0.14	J	mg/kg	0.85	0.13	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG
Silver, Total	0.11	J	mg/kg	0.43	0.09	1	10/18/13 10:30	10/19/13 17:12	EPA 3050B	1,6010C	MG

Project Name: 301 OHIO ST
Lab Number: L1320788
Project Number: 0136-013-004
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-06
Client ID: TP-07 (2-4)
Sample Location: 301 OHIO ST
Matrix: Soil
Percent Solids: 87%

Date Collected: 10/15/13 15:35
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	2.4		mg/kg	0.45	0.09	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Barium, Total	140		mg/kg	0.45	0.13	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Cadmium, Total	0.29	J	mg/kg	0.45	0.03	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Chromium, Total	7.0		mg/kg	0.45	0.09	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Lead, Total	10		mg/kg	2.2	0.09	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Mercury, Total	ND		mg/kg	0.09	0.02	1	10/23/13 10:31	10/23/13 14:07	EPA 7471B	1,7471B	MC
Selenium, Total	1.8		mg/kg	0.89	0.13	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG
Silver, Total	0.12	J	mg/kg	0.45	0.09	1	10/18/13 10:30	10/19/13 17:16	EPA 3050B	1,6010C	MG

Project Name: 301 OHIO ST
Project Number: 0136-013-004
Lab Number: L1320788
Report Date: 10/23/13

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-06 Batch: WG645024-1										
Arsenic, Total	ND		mg/kg	0.50	0.10	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Barium, Total	ND		mg/kg	0.50	0.15	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.50	0.04	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Chromium, Total	ND		mg/kg	0.50	0.10	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Lead, Total	ND		mg/kg	2.5	0.10	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Selenium, Total	ND		mg/kg	1.0	0.15	1	10/18/13 10:30	10/19/13 15:07	1,6010C	MG
Silver, Total	ND		mg/kg	0.50	0.10	1	10/18/13 10:30	10/22/13 00:47	1,6010C	TT

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-06 Batch: WG645987-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	10/23/13 10:31	10/23/13 13:42	1,7471B	MC

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 301 OHIO ST

Project Number: 0136-013-004

Lab Number: L1320788

Report Date: 10/23/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-06 Batch: WG645024-2 SRM Lot Number: 0518-10-02								
Arsenic, Total	100		-		81-119	-		
Barium, Total	96		-		83-118	-		
Cadmium, Total	94		-		82-117	-		
Chromium, Total	101		-		80-119	-		
Lead, Total	95		-		80-120	-		
Selenium, Total	106		-		80-120	-		
Silver, Total	101		-		66-134	-		
Total Metals - Westborough Lab Associated sample(s): 01-06 Batch: WG645987-2 SRM Lot Number: 0518-10-02								
Mercury, Total	114		-		67-133	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG645024-4 QC Sample: L1320926-01 Client ID: MS Sample												
Arsenic, Total	20.	11.8	38	**153**	Q	-	-		75-125	-		35
Barium, Total	90.	196	300	107		-	-		75-125	-		35
Cadmium, Total	4.4	5	10	112		-	-		75-125	-		35
Chromium, Total	4200	19.6	7000	**14300**	Q	-	-		75-125	-		35
Lead, Total	160	50	180	**40**	Q	-	-		75-125	-		35
Selenium, Total	0.92J	11.8	13	110		-	-		75-125	-		35
Silver, Total	7.3	29.4	32	84		-	-		75-125	-		35
Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG645987-4 QC Sample: L1320782-04 Client ID: MS Sample												
Mercury, Total	ND	0.225	0.28	124		-	-		70-130	-		35

Lab Duplicate Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG645024-3 QC Sample: L1320926-01 Client ID: DUP Sample						
Arsenic, Total	20.	18	mg/kg	11		35
Barium, Total	90.	69	mg/kg	26		35
Cadmium, Total	4.4	4.1	mg/kg	7		35
Chromium, Total	4200	4600	mg/kg	9		35
Lead, Total	160	120	mg/kg	29		35
Selenium, Total	0.92J	0.78J	mg/kg	NC		35
Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG645024-3 QC Sample: L1320926-01 Client ID: DUP Sample						
Silver, Total	7.3	2.5	mg/kg	**98**	Q	35
Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG645987-3 QC Sample: L1320782-04 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/kg	NC		35

INORGANICS
&
MISCELLANEOUS

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-01
Client ID: TP-02 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 11:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.0		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-02
Client ID: TP-03 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 14:15
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.2		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-03
Client ID: TP-04 (1-3)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 14:30
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.0		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-04
Client ID: TP-05 (2-4)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 14:45
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.7		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-05
Client ID: TP-06 (0-2)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 15:10
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.1		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

SAMPLE RESULTS

Lab ID: L1320788-06
Client ID: TP-07 (2-4)
Sample Location: 301 OHIO ST
Matrix: Soil

Date Collected: 10/15/13 15:35
Date Received: 10/16/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.9		%	0.100	NA	1	-	10/18/13 02:59	30,2540G	RT

Lab Duplicate Analysis
Batch Quality Control

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG644956-1 QC Sample: L1320747-01 Client ID: DUP Sample						
Solids, Total	81.3	78.0	%	4		20

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1320788-01A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1320788-01B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-01C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-02A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-02B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-02C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-03A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-03B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-03C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-04A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 301 OHIO ST
Project Number: 0136-013-004

Lab Number: L1320788
Report Date: 10/23/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1320788-04B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-04C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-05A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-05B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-05C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-06A	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-06B	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L1320788-06C	Amber 120ml unpreserved	A	N/A	2.5	Y	Absent	NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TS(7),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)

*Values in parentheses indicate holding time in days

Project Name:	301 OHIO ST	**Lab Number:**	L1320788
Project Number:	0136-013-004	**Report Date:**	10/23/13

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

Report Format: DU Report with "J" Qualifiers

Project Name:	301 OHIO ST	**Lab Number:**	L1320788
Project Number:	0136-013-004	**Report Date:**	10/23/13

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with "J" Qualifiers

Project Name:	301 OHIO ST	**Lab Number:**	L1320788
Project Number:	0136-013-004	**Report Date:**	10/23/13

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised October 1, 2013 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

State of Illinois Certificate/Lab ID: 003155. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM2120B, 2320B, 2510B, 2540C, SM4500CN-CE, 4500F-C, 4500H-B, 4500NO3-F, 5310C, EPA 200.7, 200.8, 245.1, 300.0. Organic Parameters: EPA 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: SM2120B, 2310B, 2320B, 2340B, 2510B, 2540B, 2540C, 2540D, SM4500CL-E, 4500CN-E, 4500F-C, 4500H-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-E, 4500S-D, 4500SO3-B, 5210B, 5220D, 5310C, 5540C, EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1. Organic Parameters: EPA 608, 624, 625.)

Hazardous and Solid Waste (Inorganic Parameters: EPA 1010A, 1030, 1311, 1312, 6010C, 6020A, 7196A, 7470A, 7471B, 9012B, 9014, 9038, 9040C, 9045D, 9050A, 9065, 9251. Organic Parameters: 8011 (NPW only), 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8315A, 8330.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2120B, 2130B, 2320B, 2510C, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, 5310C, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 8315A, 9010C, SM2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-C, 4500NH3-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-B, 4500P-E, 4500S2-D, 4500SO3-B, 5540C, 5210B, 5220D, 5310C, 9010B, 9030B, 9040C, 7470A, 7196A, 2340B, EPA 200.7, 6010C, 200.8, 6020A, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8011, 8081B, 8082A, 8330, 8151A, 8260C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9040B, 9045C, 6010C, 6020A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B, 9038, 9251. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260C, 8270D, 8330, 8151A, 8081B, 8082A, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
*Drinking Water (*Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water (*Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2064. ***NELAP Accredited.***
Drinking Water (Organic Parameters: **EPA 524.2:** Di-isopropyl ether (DIPE), Ethyl-t-butyl ether (ETBE), Tert-amyl methyl ether (TAME)).

Non-Potable Water (Organic Parameters: **EPA 8260C:** 1,3,5-Trichlorobenzene. **EPA 8015C(M):** TPH.)

Solid & Chemical Materials (Organic Parameters: **EPA 8260C:** 1,3,5-Trichlorobenzene.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310C, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, 4500SO4-E, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 5030C, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D,

9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5030C, 5035L, 5035H, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.1, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2340B, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010C, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 8315A, 3005A, 9010C, 9030B. Organic Parameters: EPA 624, 8260C, 8270D, 8270D-SIM, 625, 608, 8081B, 8151A, 8330A, 8082A, EPA 3510C, 5030B, 5030C, 8015C, 8011.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010C, 6020A, 7196A, 7471B, 8315A, 9012B, 9014, 9065, 9050A, 9038, 9251, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260C, 8270D, 8270D-SIM, 8015C, 8081B, 8151A, 8330A, 8082A, 3540C, 3546, 3580A, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9012B, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NJ-DEP.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.1, 2320B, 4500F-C, 4500NO3-F, 4500H+B, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 351.2, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 2340B, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C,

4500NH3-H, 4500NO2-B, 4500NO3-F, 4500 SO3-B, 4500H-B, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C, 9010Cm 9030B, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9010C, 9012B, 9030B, 9014, 9038, 9040C, 9045D, 9251, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 3550B, 3580A, 3620C, 3630C, 6020A, 8260B, 8260C, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010C, 6020A, 245.1, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 351.1, 353.2, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500Norg-C, 4500NO3-F, 5310C, 2130B, 2320B, 2340B, 2540C, 5540C, 3005A, 3015, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A, 8082A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010C, 6020A, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9040B, 9045C, 9010C, 9012B, 9251, SM3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A/B-prep, 8082A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether. **EPA 8260B:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8260 Non-potable water matrix:** Iodomethane (methyl iodide), Methyl methacrylate. **EPA 8260 Soil matrix:** Tert-amyl methyl ether (TAME), Diisopropyl ether (DIPE), Azobenzene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine. **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 10/16/13

ALPHA Job #: L1320788

Client Information

Client: Turnkey
Address: 2558 Hamburg Turnpike Buffalo NY 14218
Phone: 716-856-0599
Fax: 716-856-0595
Email:

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 301 Ohio St
Project Location: 301 Ohio
Project #: 0136-013-004
Project Manager: Mike Lesakowski
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 10/23/13 Time:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: TCL VOC + STARS	TAL Metals	RCRA Metals	SAMPLE HANDLING	TOTAL # BOTTLES
20788-01	TP-02 (1-3)	10-15-13	1145	Soil	PWW	X	X	X		3
-02	TP-03 (1-3)		1415				X	X		3
-03	TP-04 (1-3)		1430				X	X		3
-04	TP-05 (2-4)		~~1540~~ 1445			X	X	X		3
-05	TP-06 (0-2)		1510				X	X		3
-06	TP-07 (2-4)		1535				X	X		3

Filtration ☐ Done ☐ Not needed ☐ Lab to do
Preservation ☐ Lab to do (Please specify below)

Sample Specific Comments

Container Type														
Preservative														

Relinquished By:	Date/Time	Received By:	Date/Time
	10-15-13 1700	James Rudkin	10-16-13 1125
James Rudkin	10-16-13 1900	Robert Glaire	10-16-13 1900
Robert Glaire	10-16-13 2115		10/16/13 2115
	10/16/13 23:59		10/16/13 23:59

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

APPENDIX C

PREVIOUS INVESTIGATION

RECEIVED

JUN 2 1 1995

P. V. M.

cc-P.G.-1
J.C.-2

Buffalo Drilling Company, Inc.
10440 Main Street, Clarence, NY 14031

Job No.: 95-198
Date: June 15, 1995

SITE INSPECTION REPORT

An environmental site inspection has been performed and this report has been prepared for the exclusive use of Magnano-Paladino, c/o 10 Ellicott Square Court Corporation and/or its designated agents. The purpose of this environmental site inspection was to identify and evaluate any actual and potential environmental concerns associated with the inspected properties. This report does not constitute a complete Phase I Environmental Site Assessment. The findings and recommendations presented in this report are exclusive to the client and the assessed properties, and are based solely on a visual inspection of the site. Written permission must be obtained from Buffalo Drilling Company, Inc., for use of this report, its findings, and recommendations by other parties, persons or firms.

REPORT PREPARED FOR:

- Name:	Magnano-Paladino c/o 10 Ellicott Square Court Corp.
- Street:	210 Ellicott Square Building
- Municipality, State, Zip Code:	Buffalo, New York 14203
- Client Contact:	Paul Moretta
- Telephone Number:	(716) 854-0060
- P.O. No:	8432MP

INSPECTED PROPERTY INFORMATION:

- Address:	282-301 Ohio Street
- Municipality:	Buffalo
- County, State, Zip State:	Erie, New York, 14204
- Tax Account No.:	N/A
- Parcel Size (acres):	N/A
- Site Location Map:	Refer to Attachment #1

PRELIMINARY SITE INSPECTION SUMMARY:

ENVIRONMENTAL CONCERN(S): [X] Identified [ ] Not Identified

FURTHER INVESTIGATION(S): [X] Identified [ ] Not Recommended

CONCERNS LISTED BASED ON SITE INSPECTION:

[X] ASBESTOS [ ] RADON [ ] LEAD [ ] WETLANDS

[ ] FLOODPLAINS [ ] ARCHAEOLOGICAL/HISTORICAL SITES

Buffalo Drilling Company, Inc.
10440 Main Street, Clarence, NY 14031

Job No.: 95-198
Date: June 15, 1995

STATEMENT OF PERFORMANCE

Buffalo Drilling Company, Inc. has performed a preliminary site inspection and subsurface investigation program on the properties. The listed environmental concerns are based solely on the results of the site inspection and include an examination of the properties for the presence/absence of suspected asbestos containing material, radon, lead based paint, lead in drinking water, and structural condition of the building(s).

In addition, a limited subsurface investigation was also undertaken by BDC and included the advancement of six preliminary test borings on the properties (refer to Attachment #3). In general, subsurface conditions were found to consist of random fill layers that ranged in thickness from three to fifteen feet (i.e., boring B-2 and B-4, respectively). The fill consists of loose to very dense sands, gravels, brick fragments, cinders, slag, concrete, and silt materials. Below the fill materials, a stiff natural layer of clay and silt was encountered in all borings, except B-4, to completion depths. A silty sand layer was encountered in all borings, except B-4, interbedded in the silt and clay layer. This silty sand layer may be associated with the former meandering of the Buffalo River floodplain at these boring locations.

Groundwater was encountered during or at completion of drilling operations in all of the borings, except at boring B-6. The water level measurement at these boring locations was approximately 9.6 to 10.0 feet below ground surface.

Photoionization screening (PID) of the soil samples collected from the soil borings generally indicated that elevated levels of total ionizable compounds were recorded in the soils from borings B-1, B-2, and B-4 (refer to Attachment #3, Figure #2, and Table 1). Elevated PID readings were also recorded on the soil samples collected from boring B-3 (see below). A slight organic (i.e., topsoil or humus) odor was sensed in the soil samples from borings B-2 and B-4. No visual or olfactory evidence was sensed in the remaining soil samples from the above listed borings, except B-3, which would be considered to be environmentally significant.

THE FOLLOWING ENVIRONMENTAL CONCERN(S) AND RECOMMENDATION(S) ARE IDENTIFIED BASED ON THE SITE INSPECTION OF THE PROPERTIES:

1) <u>Potential Residual Contamination:</u> A soil boring advanced on the 301 Ohio Street property, boring B-3, encountered olfactory evidence on the soil samples that are characterized as a petroleum hydrocarbon-type (i.e., gasoline) odor. An

oily sheen was also observed on the soil samples from this boring location. Photoionization screening (PID) of the soil samples collected from boring B-3 generally indicated that elevated levels of total ionizable compounds were recorded. Based on the aforementioned results, petroleum hydrocarbon contamination is suspected at this boring location.

Recommendations: It is recommended that an additional investigation be conducted in the area of boring B-3 to determine the characteristics and extent of the potential contaminants.

2) Suspected Asbestos Containing Materials (SACM): SACM that were observed in poor condition, included the following:

282 Ohio Street:

- vinyl floor tiles, 12" x 12", gray, white, beige, black, and red, located in the first floor tavern, kitchen, and restaurant, and the second and third floor apartments (approximately five to ten percent of the inspected tiles are damaged).

- rolled linoleum floor covering, located in the second and third floor apartments (approximately five percent damaged).

- thermal pipe insulation (i.e., lagging) located in the basement (approximately five to ten percent damaged).

No representations are made for the presence/absence of SACM in the uninspected building at 301 Ohio Street (i.e., Bulkmatic Transport Company).

Recommendations: It is the understanding of BDC that this building is scheduled for demolition. Thus, it is recommended that the SACM be sampled and analyzed for the presence/absence of asbestos prior to the scheduled demolition. If these materials contain asbestos, it is recommended that they be abated (i.e., removed, encapsulated, renovated, etc.) to limit the release of asbestos fibers. It is also recommended that a trained and licensed contractor, familiar with New York State Department of Labor Industrial Code Rule 56, be retained to complete the abatement, if any.

3) **Material Storage:** Six pails of suspected waste oil/grease were observed on the northern side of the Bulkmatic Transport Company building. Minor staining was also observed on the concrete surface in the vicinity of the pails.

Recommendations: It is recommended that the pails be characterized (i.e., sampled and analyzed) and properly disposed. It is also recommended that the staining be cleaned-up.

4) **Past Usage:** Based solely on a review of historic topographic maps available to BDC, the vacant parking lot appears to have previously been occupied by a large building and several railroad spur lines. The Bulkmatic site also appears to have been occupied by a former building (not the currently existing building) and a railroad spur line. No representations are made with respect to the past usage of the properties or potential environmental concerns associated with the former structures.

1.0 HISTORICAL RECORDS/DATA REVIEW

At the request of the owner, this section was not completed for this site inspection report. This section of a complete Phase I Environmental Site Assessment includes the property history and available site information such as building department records, aerial photographs, fire insurance maps, directories, abstract of title, wetland and floodplain data, and site geology.

2.0 PUBLIC DOMAIN INFORMATION SOURCES

At the request of the owner, this section was not completed for this site inspection report. This section of a complete Phase I Environmental Site Assessment includes data base searches and information provided by such agencies as the USEPA, the NYSDEC, county, and local government regulatory agencies.

3.0 SUMMARY OF SITE INSPECTION

Date of Inspection:	May 18, 1995
Inspector(s):	Andrew J. Kucserik
Ground Cover:	None
Weather Conditions:	Sunny 45°F
Photographs:	N/A

3.1 CURRENT USES OF PROPERTY: [ ] Yes [X] No Observed Concern

The inspected properties currently consist of a restaurant/apartment complex known as the Harbor Inn located at 282 Ohio Street, a bulk flour transport service, tractor trailer repair facility (i.e., Bulkmatic Transport Company) located at 301 Ohio Street, and a vacant parking lot leased by Buffalo Structural Steel. The Harbor Inn has been located on this site for the past forty years. This building consists of eight apartments located on the second and third floors, presently unoccupied, and a first floor kitchen, restaurant, and tavern. As per the client's request, the interior of this building was inspected.

The Bulkmatic facility has reportedly occupied this site for the past three years and is used for the repair of tractor trailer trucks. An UST was reportedly recently removed from this site in May 1995. As per the client's request, the building on this property was not inspected.

The vacant parking lot was reportedly used by Marine Midland Bank as an employee parking lot. Currently, Buffalo Structural Steel used the lot for temporary parking of its tractor trailers.

3.2 PAST USES OF PROPERTY: [ ] Yes [X] No Observed Concern

Refer to Section 2.0. Based solely on a review of historic topographic maps available to BDC, the vacant parking lot appears to have previously been occupied by a large building and several railroad spur lines. The Bulkmatic site also appears to have been occupied by a former building (not the currently existing building) and a railroad spur line. No representations are made with respect to the past usage of the properties or potential environmental concerns associated with the former structures.

3.3 EXTERIOR CONDITIONS:

3.3.1 Topography: [ ] Yes [X] No Observed Concern

The inspected properties are relatively level with respect to the adjacent roadways. According to the owner of the Harbor Inn site, the western portion of this site was previously occupied by residential buildings that have been demolished. The local topography on this site is slightly hummocky due to the presence of the fill materials associated with the former buildings.

The Bulkmatic site is also relatively level, and is located adjacent to the Buffalo River. The southeastern portion of the site is slightly elevated with respect to the main parking lot area of the site and is grass covered. The vacant parking lot is level, and is also located adjacent to the Buffalo River.

3.3.2 Roads, Streets, Parking: [ ] Yes [X] No Observed Concern

Roadways and streets to the inspected properties and parking on the inspected properties were confirmed by a visual inspection of the properties.

3.3.3 Solid Waste Containers: [ ] Yes [X] No Observed Concern

3.3.4 Fill: [X] Yes [ ] No Observed Concern

In addition, a limited subsurface investigation was also undertaken by BDC and included the advancement of six preliminary test borings on the properties. In general, subsurface conditions were found to consist of random fill layers that ranged in thickness from three to fifteen feet (i.e., boring B-2 and B-4, respectively). The fill consists of loose to very dense sands, gravels, brick fragments, cinders, slag, concrete, and silt materials. Below the fill materials, a stiff natural layer of clay and silt was encountered in all borings, except B-4, to completion depths. A silty sand layer was encountered in all borings, except B-4, interbedded in the silt and clay layer. This silty sand layer may be associated with the former meandering of the Buffalo River floodplain at these boring locations.

Groundwater was encountered during or at completion of drilling operations in all of the borings, except at boring B-6. The water level measurement at these boring locations was approximately 9.6 to 10.0 feet below ground surface.

Photoionization screening (PID) of the subsurface samples generally indicated that elevated levels of organic vapors were recorded in the soils from borings B-1, B-2, B-3, and B-4 (refer to Attachment #3, Figure #3, and Table 1). Olfactory evidence was sensed in the soil samples from boring B-3 that are characterized as a petroleum hydrocarbon-type (i.e., gasoline) odor. An oily sheen was also observed on the soil samples from the boring B-3 location. Based on the PID results, and the visual and olfactory evidence from boring location B-3, petroleum hydrocarbon contamination is suspected at this boring location.

A slight organic (i.e., topsoil or humus) odor was sensed in the soil samples from borings B-2 and B-4. No visual or olfactory evidence was sensed in the remaining soil samples from the borings which would be considered to be environmentally significant.

3.3.5 **Debris/Dumping/Mounds:** [ ] Yes [X] No Observed Concern

A mound of demolition debris was observed at the property located at 282 Ohio Street, presumably associated with the previous demolition of the former residential buildings. No staining, spillage, or discoloration were observed on the ground surface due to this mound.

3.3.6 **Spillage/Pools:** [ ] Yes [X] No Observed Concern

3.3.7 **Stained Soil/Pavement:** [ ] Yes [X] No Observed Concern

3.3.8 **Stressed Vegetation:** [ ] Yes [X] No Observed Concern

3.3.9 **Pits/Ponds/Lagoons:** [ ] Yes [X] No Observed Concern

There are no surface water bodies on the inspected properties. Pits, ponds, and lagoons were not observed on the adjoining properties.

3.3.10 **Septic Systems:** [ ] Yes [X] No Observed Concern

According to the current owner of the structure located at 282 Ohio Street, the on-site building has been serviced by the municipal sewer and storm water system for at least the past 40 years.

3.3.11 Wells: [ ] Yes [X] No Observed Concern

Potable, domestic, irrigation, dry, injection, monitoring, and/or abandoned wells for water or other uses were not observed.

3.4 INSPECTED BUILDING CONDITION:

3.4.1 Number:	One
Description:	Masonry and wood frame
Stories:	Three
Approximate Age:	60 years
Ancillary Structures:	None

The building at 301 Ohio Street was not inspected.

3.4.2 Structural: [ ] Yes [X] No Observed Concern

3.4.3 Suspected Asbestos: [X] Yes [ ] No Observed Concern

Suspected Asbestos Containing Materials (SACM) that were observed in poor condition, included the following:

282 Ohio Street:

- vinyl floor tiles, 12" x 12", gray, white, beige, black, and red, located in the first floor tavern, kitchen, and restaurant, and the second and third floor apartments (approximately five to ten percent of the inspected tiles are damaged).

- rolled linoleum floor covering, located in the second and third floor apartments (approximately five percent damaged).

- thermal pipe insulation (i.e., lagging) located in the basement (approximately five to ten percent damaged).

No representations are made for the presence/absence of SACM in the uninspected building at 301 Ohio Street (i.e., Bulkmatic).

Recommendations: It is the understanding of BDC that this building is scheduled for demolition. Thus, it is recommended that the SACM be sampled and analyzed for the presence/absence of asbestos prior to the scheduled demolition. If these materials contain asbestos, it is recommended that they be abated (i.e., removed, encapsulated, renovated, etc.) to limit the release of asbestos fibers. It is also recommended that a

trained and licensed contractor, familiar with New York State Department of Labor Industrial Code Rule 56, be retained to complete the abatement, if any.

3.4.4 Lead-Based Paint: [ ] Yes [X] No Observed Concern

The building located at 282 Ohio Street is reportedly scheduled for demolition.

3.4.5 Lead in Drinking Water: [ ] Yes [X] No Observed Concern

The building located at 282 Ohio Street is reportedly scheduled for demolition.

3.4.6 Radon Accumulation Spaces: [ ] Yes [X] No Observed Concern

The building located at 282 Ohio Street is reportedly scheduled for demolition.

3.5 UTILITIES:

3.5.1 Transformers/PCB's: [ ] Yes [X] No Observed Concern

A utility pole with three pole-mounted electrical transformers was observed on the eastern side of the building located at 301 Ohio Street. No staining, spillage, discoloration or markings/labels were observed on the transformer units or the ground surface beneath the units during the site inspection.

3.5.2 Floor Drains/Sump Pits: [ ] Yes [X] No Observed Concern

A floor drain was observed in the basement of the building located at 282 Ohio Street. No staining, spillage, or discoloration were observed on the concrete or water surface of the floor drain.

3.5.3 Services: [ ] Yes [X] No Observed Concern

a. Potable Water:	City of Buffalo
b. Sanitary Sewer and Date Installed:	City of Buffalo
c. Storm Sewer:	City of Buffalo
d. Building Cooling:	N/A
- Type of Unit(s):	No
- Fueled by:	N/A
e. Building Heating:	Yes
- Type of Unit(s):	Furnace / forced air
- Fueled by:	Natural gas

3.5.4 Wastewater Discharges: None

3.5.6 Air Emissions: None

3.6 OPERATIONS/EQUIPMENT:

3.6.1 Storage Tanks: [ ] Yes [X] No Observed Concern

No USTs/ASTs were observed on the inspected properties. As previously stated, a UST was recently removed from the parking lot located at 301 Ohio Street. A soil boring advanced at this location be BDC indicated that at least fifteen feet of granular fill was encountered. Elevated readings were recorded during the PID scanning of the soil samples from this boring; however, no visual or olfactory evidence was sensed in association with the PID readings. No evidence of tanks was observed on the properties located at 282 Ohio Street or the vacant parking lot.

3.6.2 Materials Storage/Drums: [X] Yes [ ] No Observed Concern

a. Substance: Waste grease/oil
b. Type/No. of Containers: 6 @ 5-gallon plastic pails
c. Storage Conditions: On ground surface

Six pails were observed on the northern side of the Bulkmatic building. Minor staining was also observed on the concrete surface in the vicinity of the pails. It is recommended that the pails be characterized (i.e., sampled and analyzed) and properly disposed. It is also recommended that the staining be cleaned-up.

3.6.3 Materials Use: [ ] Yes [X] No Observed Concern

No concerns were observed for the property located at 282 Ohio Street.

3.6.4 Spillage/Staining/Pools: [X] Yes [ ] No Observed Concern

Refer to Section 3.6.2.

3.6.5 Facility Equipment: [ ] Yes [X] No Observed Concern

No concerns were observed for the property located at 282 Ohio Street.

END OF SECTION

4.0 INTERVIEWS

4.1 Name: Edward Malloy
Title: None
Relationship to Property: [X] Owner [ ] User [ ] Occupant
Property: 282 Ohio Street
Date of Interview: May 18, 1995

ENVIRONMENTAL CONCERNS(S): [ ] Identified [X] Not Identified

Mr. Malloy indicated that he has no knowledge of past or current environmental concerns associated with the inspected property. Mr. Malloy provided access to the building located on this property.

According to Mr. Malloy, he has been the owner of this property for the past forty years. Furthermore, the adjacent residential buildings were demolished at an unknown date. According to Mr. Malloy, the demolition debris was placed into the former basements of these buildings.

Mr. Malloy stated that no USTs or ASTs existed or currently exist on the property.

END OF SECTION

CERTIFICATION and SIGNATURES of ENVIRONMENTAL PROFESSIONALS

This Environmental Site Inspection Report is certified to be prepared in accordance with sound environmental investigatory practices.

Report Preparer:

Andrew J. Kucserik, C.P.G.
Senior Geologist

Report Reviewer:

James S. Barron, P.E.
President

END OF SECTION

ACRONYMS/ABBREVIATIONS

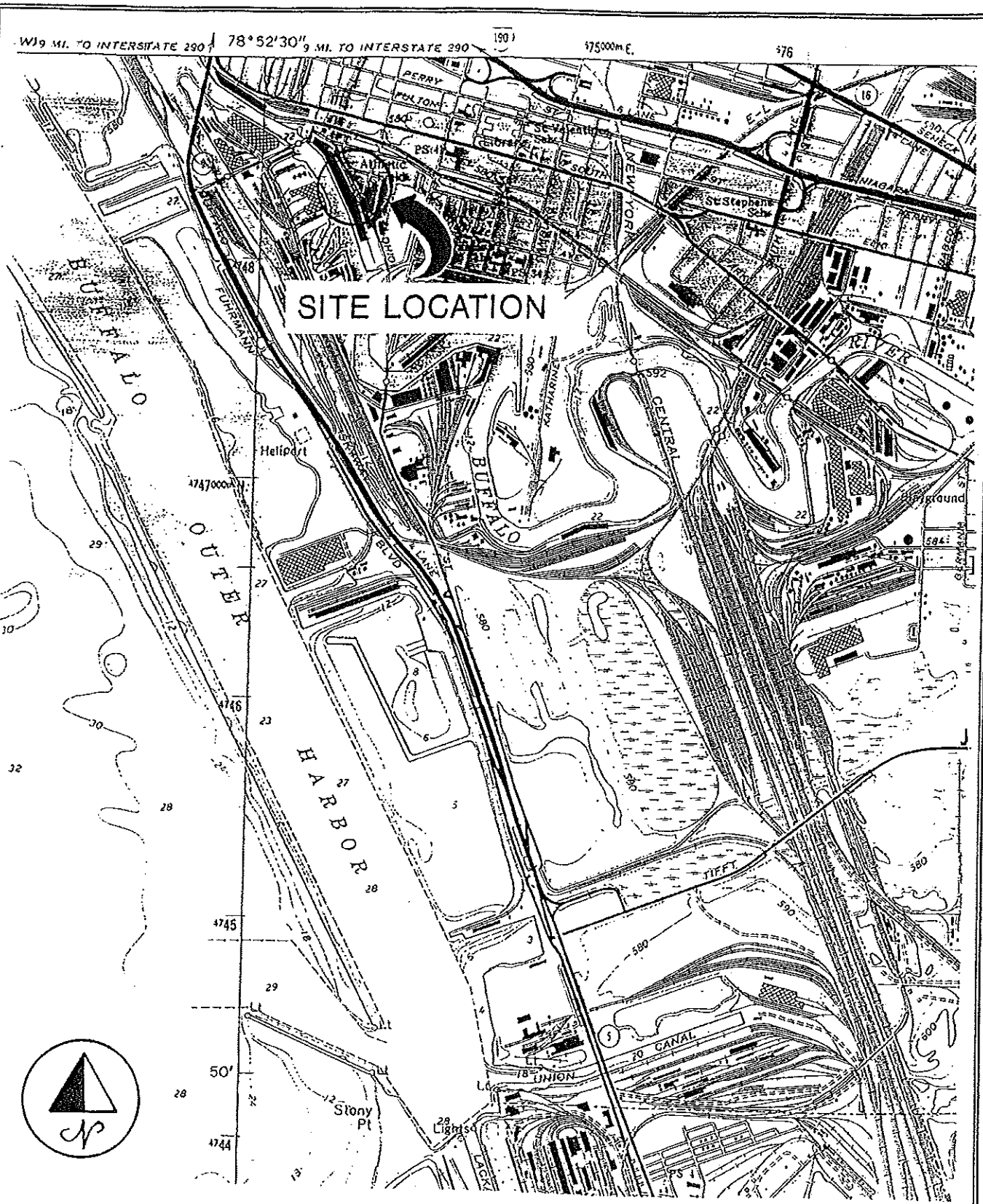
AST	- Aboveground Storage tank
ASTM	- American Society for Testing and Materials
BDC	- Buffalo Drilling Company, Inc.
BCE	- Barron Consulting Engineers, P.C.
CERCLA	- Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	- Comprehensive Environmental Response, Compensation and Liability Information System
EPA	- (U.S.) Environmental Protection Agency
EPCRA	- Emergency Planning and Community Right to Know Act
ECDEP	- Erie County Department of Environment and Planning
ECDOH	- Erie County Department of Health
ECSD	- Erie County Sewer District
ECWA	- Erie County Water Authority
ERNS	- Emergency Response and Notification System
FOIA	- Freedom of Information Act
FOIL	- Freedom of Information Law
LQG	- Large Quantity Generator
LUST	- Leaking Underground Storage Tanks
MSDS	- Material Data Safety Sheets
N/A	- Not Available, Not Applicable
N/R	- Not Reviewed, Not Researched
NPDES	- National Pollution Discharge Elimination System
NPL	- National Priorities List
NYSDEC	- New York State Department of Environmental Conservation
NYSDOH	- New York State Department of Health
NYSDOL	- New York State Department of Labor
OSHA	- Occupational Safety and Health Administration
PBS	- Petroleum Bulk Storage
PCB(s)	- Polychlorinated Biphenyl(s)
RCRA	- Resource Conservation and Recovery Act
SACM	- Suspected Asbestos Containing Materials
SARA	- Superfund Amendments and Reauthorization Act of 1986
SCS	- Soil Conservation Service (by County)
SPDES	- State Pollution Discharge Elimination System
SQG	- Small Quantity Generator
TSDF	- Treatment, Storage and Disposal Facility
USDA	- United States Department of Agriculture
USGS	- United States Geological Survey
UST	- Underground Storage Tanks
USEPA	- United States Environmental Protection Agency

END OF SECTION

ATTACHMENT #1
MAPS, FIGURES, AND OWNERSHIP DOCUMENTATION

Date or I.D. No.	Description
Figure 1	Site Location map

END OF ATTACHMENT #1



BUFFALO DRILLING COMPANY, INC. 10440 Main Street Clarence, New York 14031		U.S.G.S. SITE LOCATION MAP SITE INSPECTION 282 - 301 Ohio Street & Vacant Lot Buffalo, New York	
DATE: 6/14/95	JOB NO.: 95-198	SCALE: 1" = 2000'	FIGURE: 1

ATTACHMENT #2
REGULATORY DOCUMENTATION

Date or I.D. No.	Description
-	Refer to Section 2.0.

END OF ATTACHMENT #2

ATTACHMENT #3
SITE INSPECTION AND PHOTOGRAPHIC DOCUMENTATION

Date or I.D. No.	Description
June 15, 1995	Preliminary Subsurface Investigation Report, 282 - 301 Ohio Street, Buffalo, New York
Table 1	Photoionization Detector (PID) Summary of Organic Vapor Screening Results

END OF ATTACHMENT #3

BUFFALO DRILLING COMPANY
INC.
10440 MAIN STREET
CLARENCE, NEW YORK
14031
(716) 759-7821
FAX (716) 759-7823

June 15, 1995

JOB NO: 95-198

Magnano - Paladino
210 Ellicott Square Building
Buffalo, New York 14203-2545

ATTN: Mr. Paul Moretta

RE: Preliminary Subsurface Exploration Report for 282 - 301 Ohio Street, Buffalo, New York

Gentlemen:

This report presents findings of the preliminary subsurface investigation program for the above referenced project. The project site is illustrated in Figure No. 1, entitled "Boring Location Plan," which includes: approximate locations of six test borings drilled by Buffalo Drilling Company, Inc. (BDC) on May 23 and 24, 1995; and additional site details.

EXPLORATION METHODS

A truck mounted Diedrich D-50 rotary drill rig was used to drill the test borings to depths of approximately 15 feet below ground surface using 4-1/4 inch inside diameter (ID), continuous flight hollow stem augers. Soil samples were recovered by driving a standard split-spoon sampler (2 foot long by 1-3/8 inch inside diameter) 24 inches using a 140 pound hammer falling 30 inches each blow (ASTM D1586). The number of blows for 12 inches of penetration is defined as the Standard Penetration Test (SPT) N-value.

Retrieved soil samples were initially classified and logged in the field by the driller and a portion of each soil sample was placed and sealed in a glass jar. The boring logs, included as Appendix A, were prepared based on the field log and a second visual classification of the retained soil samples in the laboratory by a B.S. degreed geologist.

Classification of soil samples, as noted on the logs, is based on the Unified Soil Classification System. Refer to Appendix B entitled "Geotechnical Reference Standards" for an explanation of the terminology used for soil descriptions.

SUBSURFACE CONDITIONS

The site is addressed as 282 - 301 Ohio Street, located in Buffalo, New York. Currently the site is occupied by a restaurant and a commercial facility. In general, subsurface conditions consist of an upper random fill layer underlain by naturally deposited clay, and silty sands.

Granular and cohesive fill materials, generally extending to depths of three to nine feet below ground surface, were encountered at all test boring locations. It is noted that the fill depth at test boring location B-4 extended the full length drilled of 15 feet below ground surface. The slightly to moderately plastic, medium stiff cohesive fill is composed of a silt and clay intermixed with varying amounts of sand, gravel, and brick. The granular fill consisted of a loose to very dense mixture of sand, and gravel with lesser amounts of silt, brick,

cinders, rubble, concrete, and slag. Moisture contents of the fill units ranged from moist to saturated.

Several of the borings were extended into a unit of naturally deposited stiff to very stiff silty clay, intermixed with trace amounts of sand and organic matter (roots). Plasticities and moisture contents of this unit were noted as moderately plastic and moist, respectively. This unit extended the full length drilled in boring location B-6 only.

A wet silty sand was encountered underlying the silty clay or fill material in most of the boring locations. This loose to medium dense granular unit extended to an approximate depth of ten feet below ground surface.

Samples retrieved below the silty sand consisted of medium stiff to hard silty clay, which extended the full length drilled. Moisture contents throughout the cohesive unit were noted as moist.

Groundwater was encountered at several boring locations at approximately ten feet below ground surface. Note that groundwater measurements were taken at the completion of drilling efforts and may not represent the actual static groundwater depth. Lastly, it is noted that fluctuations in groundwater level may occur due to factors other than those present during field operations.

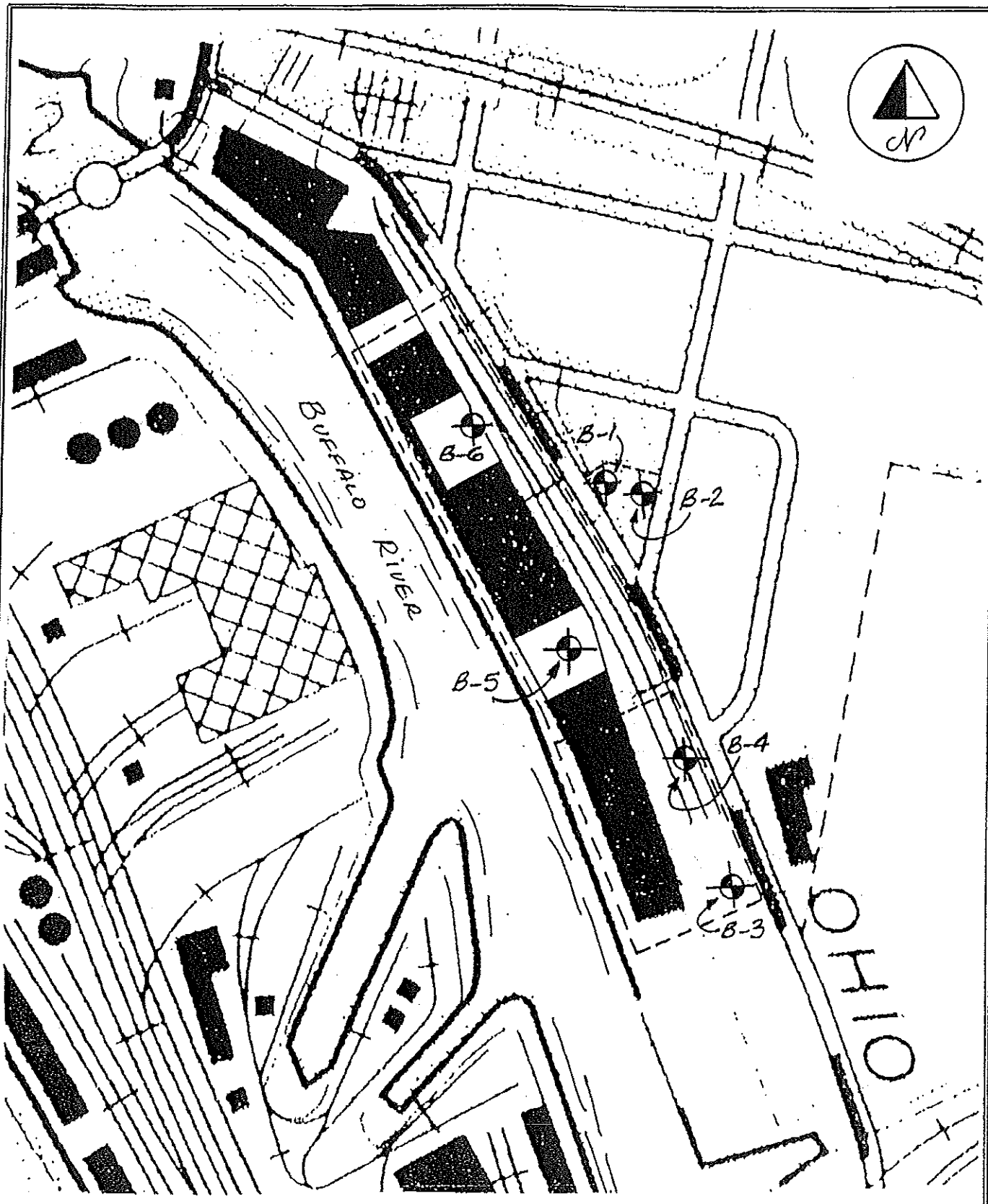
Thank you for the opportunity to assist on this project. Please call at your earliest convenience, if questions should arise.

Very truly yours,
BUFFALO DRILLING COMPANY, INC.

James S. Barron, P.E.
President

Michele M. Patterson

Michele M. Patterson
Geologist



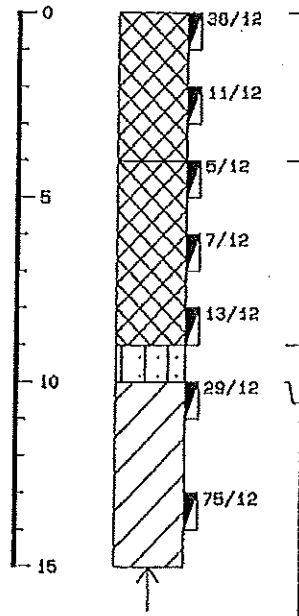
BUFFALO DRILLING COMPANY, INC. 10440 Main Street Clarence, New York 14031		BORING LOCATION MAP SITE INSPECTION 282 - 301 Ohio Street & Vacant Lot Buffalo, New York	
DATE: 6/14/95	JOB NO.: 95-198	SCALE: 1" = 250'	FIGURE: 2

APPENDIX A

TEST BORING LOGS

TEST BORING LOG

TEST BORING NO: 8-1
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/24/95 COMPLETED: 5/24/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): No water at completion



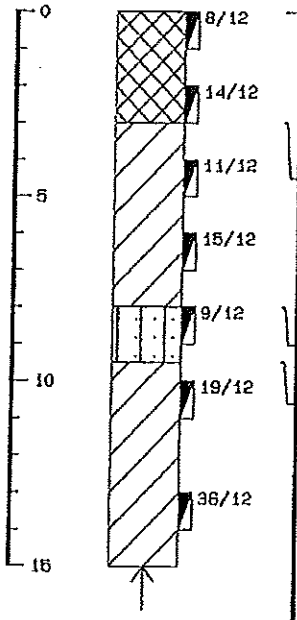
ELEV. / DEPTH	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
	Grey, dense f/c Sand, some Gravel, some Silt, little Brick, moist (FILL)	S-1: 0-2'	8-9-29-67	38	40
	...grade: med. dense, little Silt, tr. Brick	S-2: 2-4'	10-6-5-6	11	10
	Brown, med. stiff Clay, some Silt, tr. f/c Sand, mod. plastic, moist (FILL)	S-3: 4-6'	2-3-2-3	5	40
	...grade: grey, and Silt, little f/m Sand	S-4: 6-8'	2-3-4-4	7	30
	...grade: stiff, tr. Brick	S-5: 8-10'	5-6-7-6	13	50
	Brown, med. dense f/c SAND and Silt, wet (SM)	S-6: 10-12'	6-10-19-27	29	50
	Brown, v. stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL)				
	...grade: hard	S-7: 13-15'	17-21-54-30	75	70

1. Bottom of hole 15.0 feet.

BUFFALO DRILLING CO., INC.

TEST BORING LOG

TEST BORING NO: B-2
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/23/95 COMPLETED: 5/23/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): No water at completion



ELEV. / DEPTH	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
0	Dk. grey, loose f/c Sand, little Cinders, little Silt, little Gravel, little Rubble, tr. Brick, moist (FILL)	S-1: 0-2'	4-4-4-4	8	60
	...grade: med. dense, tr. Slag	S-2: 2-4'	4-6-8-9	14	40
5	Brown, v. stiff CLAY and Silt tr. f/c Sand, mod. plastic, moist (CL)	S-3: 4-6'	4-5-6-6	11	50
	...grade: stiff, tr. Organic matter (Roots)	S-4: 6-8'	5-7-8-9	15	40
	...grade: v. stiff	S-5: 8-10'	3-4-5-6	9	60
10	Grey, loose f. SAND and Silt, tr. Clay, wet (SM)	S-6: 10-12'	6-8-11-16	19	20
	Brown, v. stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL)	S-7: 13-15'	8-16-20-25	36	90
	...grade: hard				
15					

1. Bottom of hole 15.0 feet.

BUFFALO DRILLING CO., INC.

TEST BORING LOG

TEST BORING NO: B-3
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/23/95 COMPLETED: 5/23/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): 10' at completion

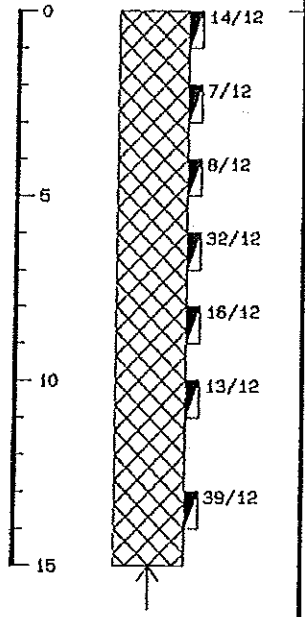
ELEV. / DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
0	142/12	Grey, v. dense f/c Sand, little Gravel, little Slag, tr. Brick, tr. Cinders, wet (FILL)	S-1: 0-2'	1-46-96	100+	10
5	13/12	...grade: some Gravel, some Silt, tr. Slag	S-2: 4-6'	12-7-6-4	13	20
	4/12	Dk. grey, med. stiff Silt, some f/c Sand, little Clay, tr. Gravel, sl. plastic, wet (FILL)	S-3: 6-8'	3-2-2-3	4	30
	5/12		S-4: 8-10'	5-3-2-7	5	60
10	11/12	Grey, med. stiff SILT, some Clay, tr. f/c Sand, mod. plastic, moist (ML)	S-5: 10-12'	6-6-5-10	11	80
	28/12	Brown, stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL) ...grade: v. stiff, tr. Gravel	S-6: 13-15'	9-11-17-21	28	80
15						

1. Oil sheen noted in sample S-2 and S-3.
2. Bottom of hole 15.0 feet.

BUFFALO DRILLING CO., INC.

TEST BORING LOG

TEST BORING NO: B-4
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/23/95 COMPLETED: 5/23/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): 10' at completion



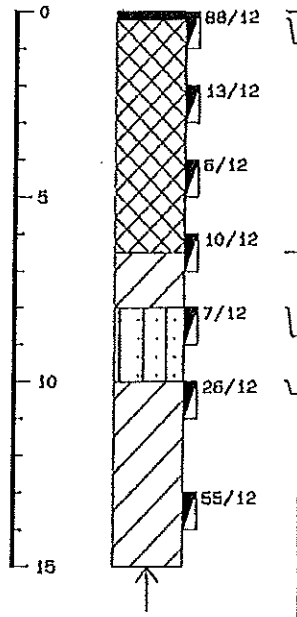
ELEV. / DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
		Brown-grey, med. dense f/c Sand and Gravel, little Silt, tr. Concrete, tr. Brick, moist (FILL)	S-1: 0-2'	9-7-7-6	14	20
		...grade: loose, wet	S-2: 2-4'	3-4-3-6	7	10
		Same as S-2	S-3: 4-6'	5-5-3-4	8	30
		...grade: dense	S-4: 6-8'	8-16-16-17	32	10
		...grade: med. dense, saturated	S-5: 8-10'	35-10-6-6	16	40
		Same as S-5	S-6: 10-12'	6-6-7-8	13	60
		...grade: dense	S-7: 13-15'	13-17-22-30	39	10

1. Bottom fo hole 15.0 feet.

BUFFALO DRILLING CO., INC.

TEST BORING LOG

TEST BORING NO: B-5
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/24/95 COMPLETED: 5/24/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): 10.0' at completion



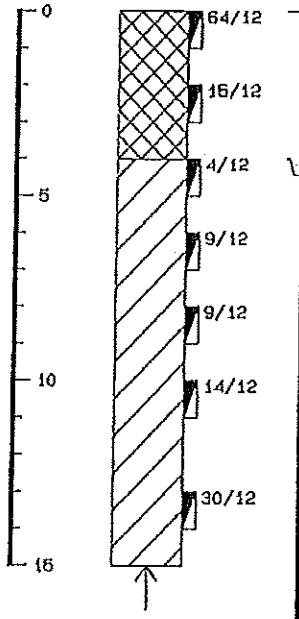
ELEV. / DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
		Asphalt	S-1: 0-2'	27-58-30-20	88	10
		Grey, v. dense f/c Sand and Gravel, tr. Silt, saturated (FILL)	S-2: 2-4'	10-8-5-7	13	20
		...grade: med. dense	S-3: 4-6'	2-3-3-3	6	10
		...grade: loose, tr. Brick	S-4: 6-8'	9-5-5-5	10	20
		Grey, stiff CLAY and Silt, tr. f/c Sand, mod. plastic, moist (CL)	S-5: 8-10'	3-3-4-4	7	60
		Brown, loose f/c SAND and Silt, saturated (SM)	S-6: 10-12'	8-12-14-17	26	70
		Brown, v. stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL)				
		...grade: hard	S-7: 13-15'	12-17-38-37	55	80

1. Bottom of hole 15.0 feet.

BUFFALO DRILLING CO., INC.

TEST BORING LOG

TEST BORING NO: B-6
PROJECT: Ohio Street, Buffalo, New York JOB NO: 95-198
DRILLER: D. Robinson TYPE OF DRILL RIG: Diedrich D50
SAMPLING METHOD: ASTM D1586 SIZE AND TYPE OF BIT: 4 1/4" ID auger
DATE STARTED: 5/24/95 COMPLETED: 5/24/95
SURFACE ELEV (FT): 0 GROUNDWATER DEPTH (FT): No water at completion

ELEV. / DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	SOIL AND ROCK DESCRIPTION	REMARKS	BLOW/ .5 FT.	N VALUE	%REC (RQD)
0		Grey, dense f/c Sand and Gravel, little Brick, tr. Slag, tr. Silt, wet (FILL)	S-1: 0-2'	20-52-12-11	64	20
		...grade: med. dense, some Silt, little Gravel tr. Brick	S-2: 2-4'	10-8-7-8	15	40
		Grey, med. stiff CLAY and Silt, tr. f/c Sand, mod. plastic, moist (CL)	S-3: 4-6'	1-2-2-3	4	30
		...grade: stiff	S-4: 6-8'	3-4-5-6	9	60
		...grade: brown, some Silt	S-5: 8-10'	7-5-4-8	9	80
		Same as S-5	S-6: 10-12'	4-5-9-10	14	90
		...grade: hard	S-7: 13-15'	8-16-14-19	30	80

1. Bottom of hole 15.0 feet.

BUFFALO DRILLING CO., INC.

APPENDIX B

GEOTECHNICAL REFERENCE STANDARDS

GEOTECHNICAL REFERENCE STANDARDS
SUMMARY OF LOGGING TECHNIQUES

Depth (ft.)	Blows per .5 ft.	Sample No.	N	% REC (ROD)	SOIL AND ROCK DESCRIPTION	REMARKS

Depth– The depth column provides the verticle scale of the boring log in feet below ground surface.

The number of blows obtained from each of the 0.5 ft. intervals of sampler penetration.

NOTE: WR represents the static weight of drill rods. WH represents the static weight of rods and hammer.

Sample Identification Number– Disturbed samples are identified with "S" preceding the sample number. Undisturbed samples (shelby tube) samples are identified with "U" preceding the sample number. Rock core samples are identified with "C" preceding the core run.

% Recovery– The length of sample recovered divided by the total length sampled. The result is numerically expressed as percent.

(RQD)– The "Rock Quality Designation". The total length of pieces>4 inches divided by the total length of core run.

N-value– The Standard Penetration Test N-value, as specified by ASTM D1586 is defined as the number of blows required by a 140-pound hammer falling 30 inches each blow to drive a 2 inch outside diameter split spoon sampler 12 inches.

TERMINOLOGY USED FOR SOIL DESCRIPTION

Density Description of Granular Soil

Number of Blows per ft., N.	Relative Density
0–4	Very loose
4–10	Loose
10–30	Medium
30–50	Dense
Over 50	Very dense

Consistency Description of Cohesive Soil

Number of Blows per ft., N.	Consistency
Below 2	Very soft
2–4	Soft
4–8	Medium
8–15	Stiff
15–30	Very stiff
Over 30	Hard

Grain Size

- Boulder – greater than 12 inch diameter
- Cobble – passing 12 inch, retained on 3 inch
- Gravel – passing 3 inch, retained on No. 4 sieve
- Sand – Coarse – passing No. 4 sieve, retained on No. 10 sieve; Medium – passing No. 10 sieve, retained on No. 40 sieve; Fine – passing No. 40 sieve, retained on No. 200 sieve
- Silt – 0.074 mm to 0.005 mm
- Clay – smaller than 0.005 mm

Description of Percentage or Proportions Used in Soil Sample Classification

Trace	0–10%
Little	10–20%
Some	20–35%
And	35–50%

Abbreviations Used In Soil Sample Classification

f	– fine	v	– very
m	– medium	gr	– gray
c	– coarse	bn	– brown
f/m	– fine to medium	yel	– yellow
f/c	– fine to coarse	sl	– slight
tr	– trace		

Plasticity

- Non-plastic – A 1/8 inch thread cannot be rolled at any water content.
- Slight plasticity – The thread can barely be rolled.
- Moderate Plasticity – Thread is easy to roll and little time is required to reach plastic limit.
- Plastic – Considerable time is required to reach plastic limit. Thread can be re-rolled several times after reaching the plastic limit.

Moisture

- Dry – Absence of moisture, dusty, dry to the touch.
- Moist – Small quantity of moisture. Soil usually above groundwater level.
- Wet – Moisture noticeable to the touch. Soil may be below groundwater level.
- Saturated – Visible free water, usually soil is below groundwater level.

TERMINOLOGY USED FOR ROCK DESCRIPTION

Bedding

Parting	Less than 0.02 ft.
Band	0.02 to 0.2 ft.
Thin bed	0.2 to 0.5 ft.
Medium bed	0.5 to 1.0 ft.
Thick bed	1.0 to 2.0 ft.
Massive	Over 2.0 ft.

Hardness

Very Soft or Plastic	– Can be indented w/ thumb
Soft	– Can be scratched with fingernail
Moderately Hard	– Can be scratched easily with knife; cannot be scratched with fingernail
Hard	– Difficulty to scratch with knife
Very hard	– Cannot be scratched with knife

Crystallinity or Texture

Dense – Crystals are so small they cannot be distinguished with the naked eye.

Very Fine Crystalline – Crystals barely discernible with the naked eye.

Crystalline – Crystals are medium size –up to 1/8 inch diameter.

Very Coarsely Crystalline – Crystals larger than 1/8 inch diameter.

Voids

- Pourous – Smaller than a pinhead. Their presence is indicated by the degree of absorbency.
- Pitted – Pinhead size to 1/4 inch. If only thin walls separate the individual pits, the core may be described as honeycombed.
- Vug – 1/4 inch to the diameter of the core. The upper limit will vary with core size.
- Cavity – Larger than the diameter of the core.

Remarks – Denotes exact depth of recovery and general documentation of drilling efforts.

Notes – Description and classification are based on visual inspection of samples and boring operations.

The stratum lines shown on the boring logs are based upon interpretation and may not represent precise subsurface conditions.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the water level may occur due to other factors than those present at the time measurements taken.

SOIL CLASSIFICATION CHART
(Unified Soil Classification System)

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material larger than No. 200 sieve	GRAVELS- More than 50% of coarse fraction larger than No. 4 sieve	Clean Gravels (little or no fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with appreciable amounts of fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS- Less than 50% of coarse fraction larger than No. 4 sieve	Clean sands (little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		Sand with appreciable amounts of fines		SM	Silty sands, silt-sand mixtures
				SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS Less than 50% of material larger than No. 200 sieve	SILTS AND CLAYS Low plasticity Liquid Limit < 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS High plasticity Liquid limit > 50%			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
	Highly Organic Soils			Pt	Peat, humus, swamp soils with organic contents
	Miscellaneous Fill			FILL	Miscellaneous fill may belong in any division but is identified as FILL

TABLE NO. 1
PHOTOIONIZATION DETECTOR
SUMMARY OF ORGANIC VAPOR SCREENING

CLIENT:	Magnano - Paladino	SAMPLES REC'D BY:	BDC
PROJECT:	282-301 Ohio St., Buffalo, NY	SAMPLE METHOD:	ASTM D1586
JOB NO:	95-198	TEST DATE:	5/26/95

TOTAL IONIZABLES PRESENT

SAMPLE I.D.		DEPTH (ft.)	PID READING (ppm)
Background		in air	0.0
B-1	S-1	0-2	10.9
	S-2	2-4	15.2
	S-3	4-6	13.2
	S-4	6-8	5.2
	S-5	8-10	8.8
	S-6	10-12	8.8
	S-7	13-15	5.2
B-2	S-1	0-2	7.2
	S-2	2-4	5.2
	S-3	4-6	4.7
	S-4	6-8	10.0 (a)
	S-5	8-10	4.2
	S-6	10-12	0.0
	S-7	13-15	0.0

SAMPLE I.D.		DEPTH (ft.)	PID READING (ppm)
B-3	S-1	0-2	28.0
	S-2	2-4	---
	S-3	0-2	104 (b) (c)
	S-4	2-4	95 (c)
	S-5	4-6	31.7 (c)
	S-6	6-8	14.6
	S-7	8-10	12.0
B-4	S-1	0-2	15.0 (a)
	S-2	2-4	25.0
	S-3	4-6	15.0
	S-4	6-8	7.0
	S-5	8-10	11.3
	S-6	10-12	14.0
	S-7	13-15	13.2
Background		in air	0.0

NOTES:

(a) Slight organic (topsoil) odor.

(b) Gasoline odor

(c) Oily sheen on sample

TABLE NO. 1
PHOTOIONIZATION DETECTOR
SUMMARY OF ORGANIC VAPOR SCREENING

CLIENT:	Magnano - Paladino	SAMPLES REC'D BY:	BDC
PROJECT:	282-301 Ohio St., Buffalo, NY	SAMPLE METHOD:	ASTM D1586
JOB NO:	95-198	TEST DATE:	5/26/95

TOTAL IONIZABLES PRESENT

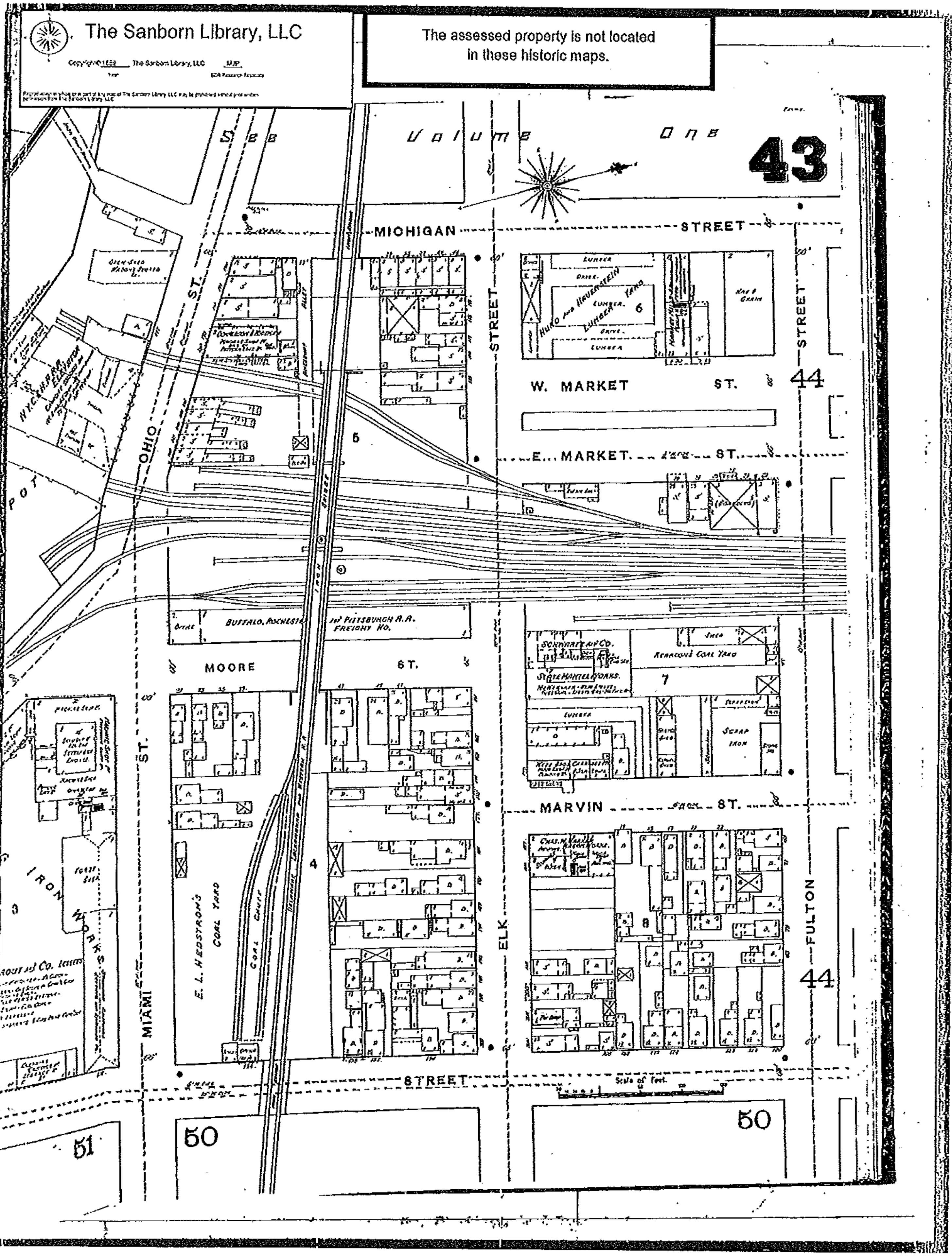
SAMPLE I.D.		DEPTH (ft.)	PID READING (ppm)
Background		in air	0.0
B-5	S-1	0-2	3.4
	S-2	2-4	0.0
	S-3	4-6	0.0
	S-4	6-8	0.0
	S-5	8-10	2.3
	S-6	10-12	2.3
	S-7	13-15	3.5
B-6	S-1	0-2	0.0
	S-2	2-4	0.0
	S-3	4-6	0.0
	S-4	6-8	7.1
	S-5	8-10	0.0
	S-6	10-12	0.0
	S-7	14-16	0.0

SAMPLE I.D.	DEPTH (ft.)	PID READING (ppm)
Background	in air	0.0

NOTES:

1. Screening of the headspace of samples containers was done using a Photovac Inc. (Microtip HL-200) hand held air monitor/ photoionization detector (PID) equipped with a 10.6 eV bulb.
2. The PID was calibrated, prior to sample screening using isobutylene in air at equivalent concentration of 56.2 ppm benzene in air.
3. The detected concentration in sample headspace does not represent actual concentration in soil but rather a relative measure of total ionizables present with an ionization potential less than 10.6 eV.
4. Soil samples were allowed to acclimate to room temperature (22 deg. C) prior to headspace screening. Readings were obtained by inserting the sample line into the sample container through a hole in the lid.

The assessed property is not located in these historic maps.



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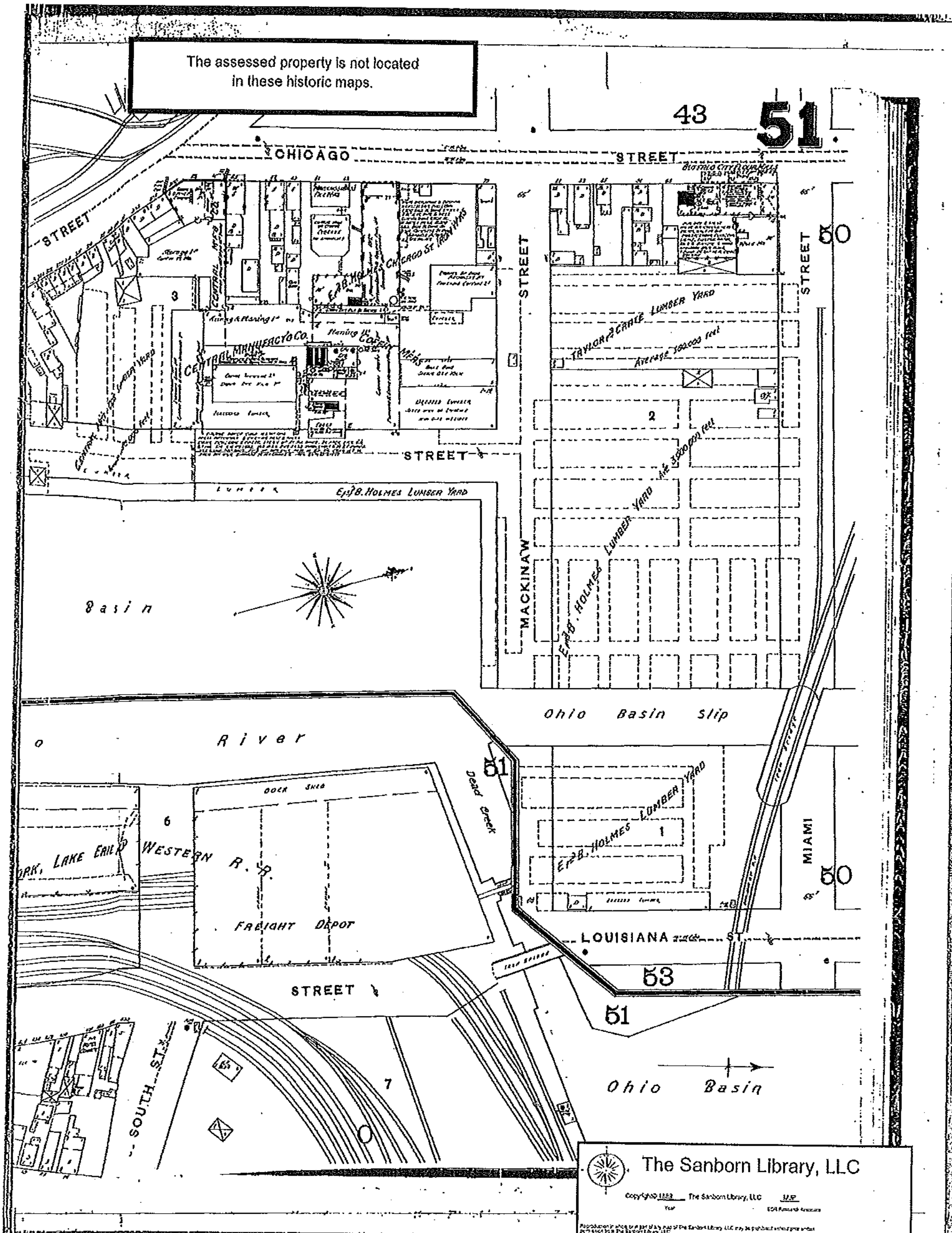

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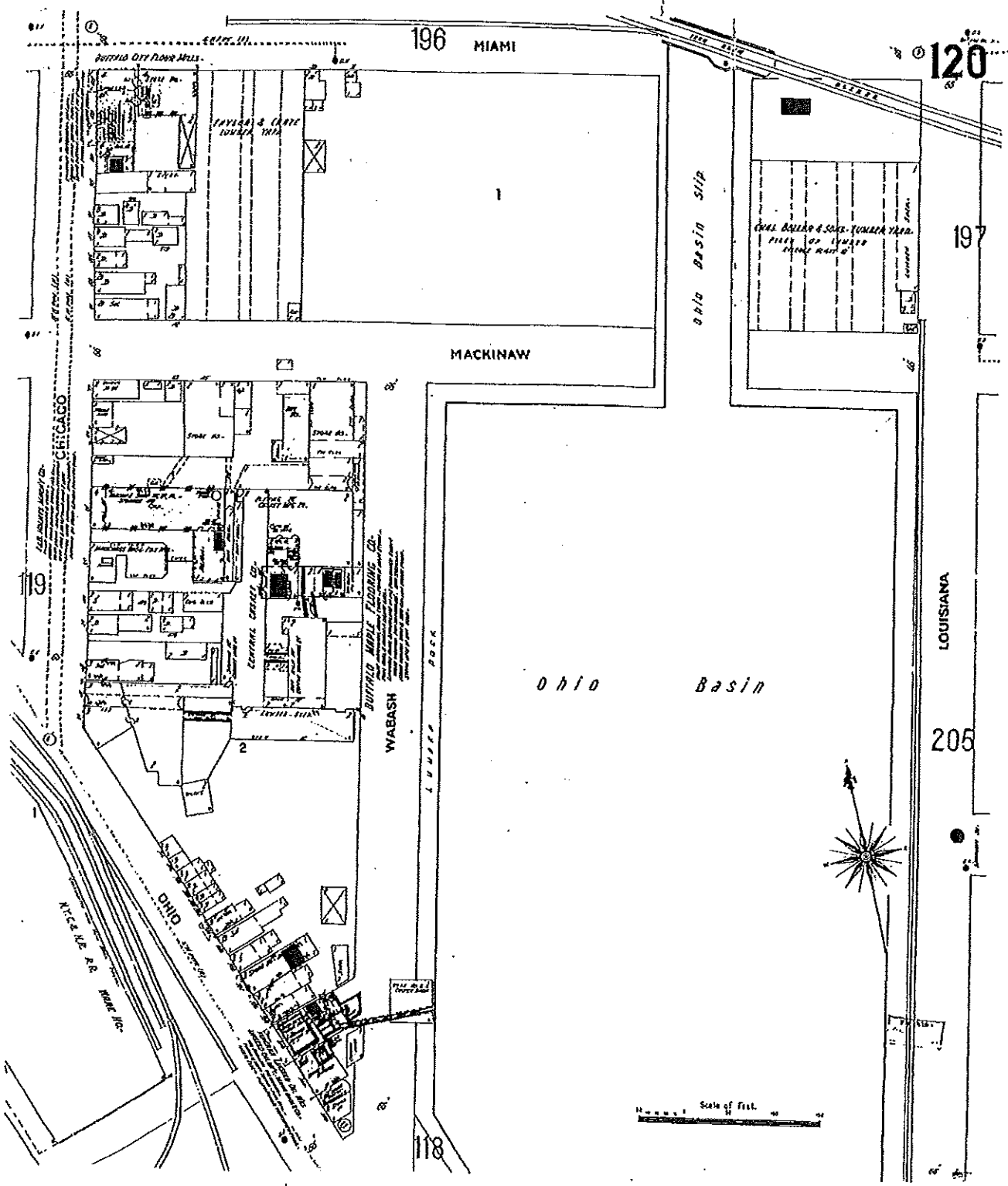

The assessed property is not located
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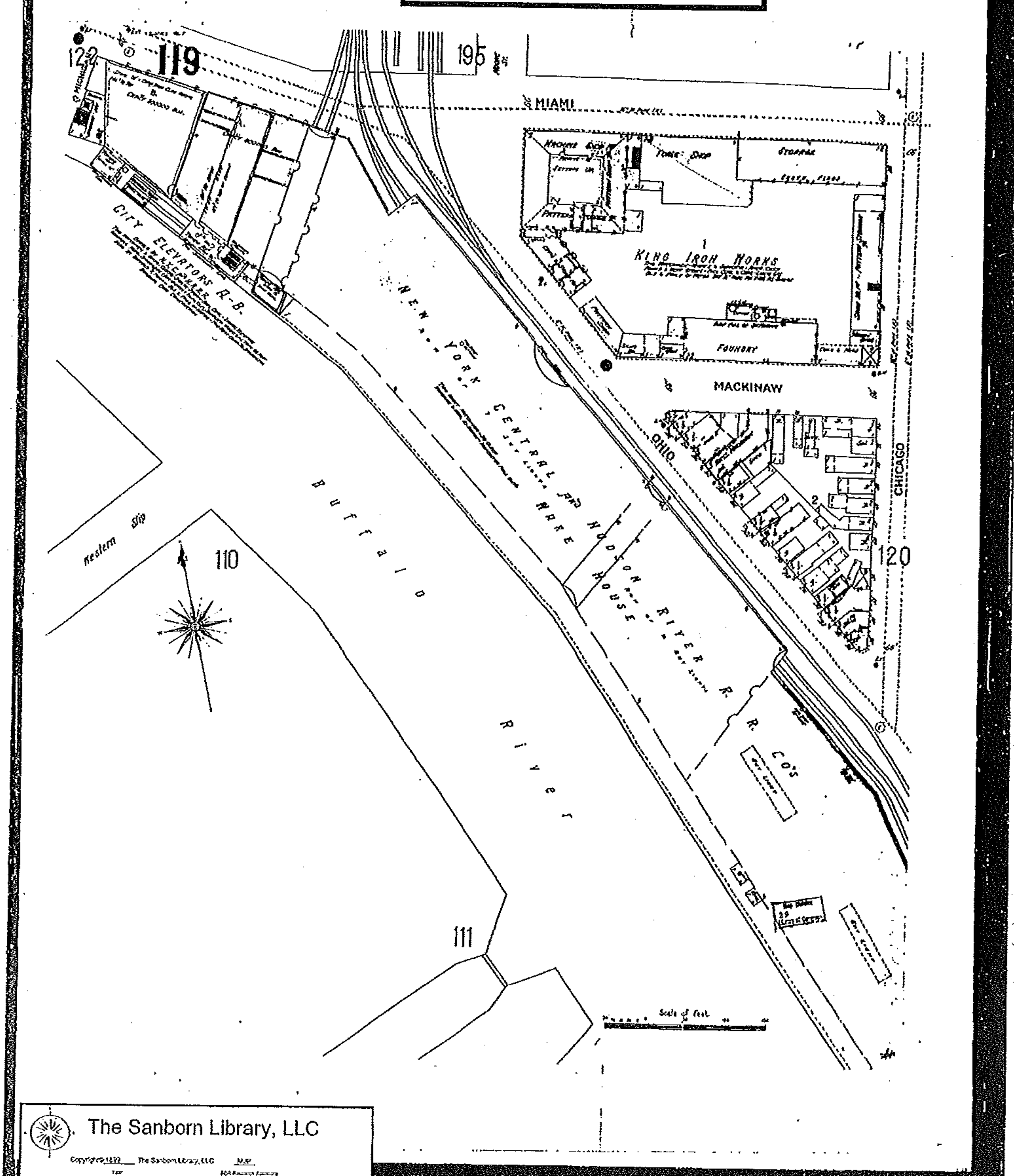

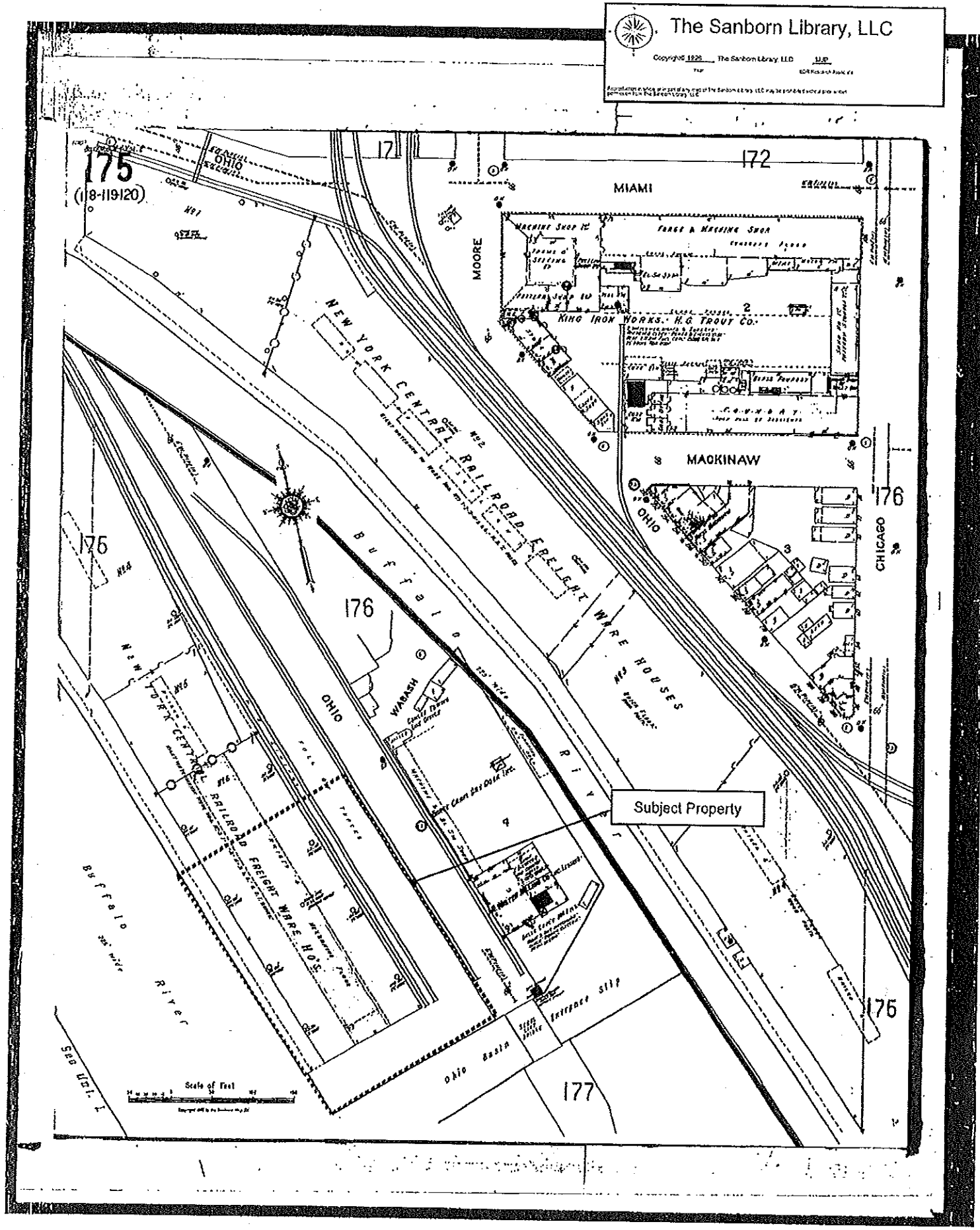
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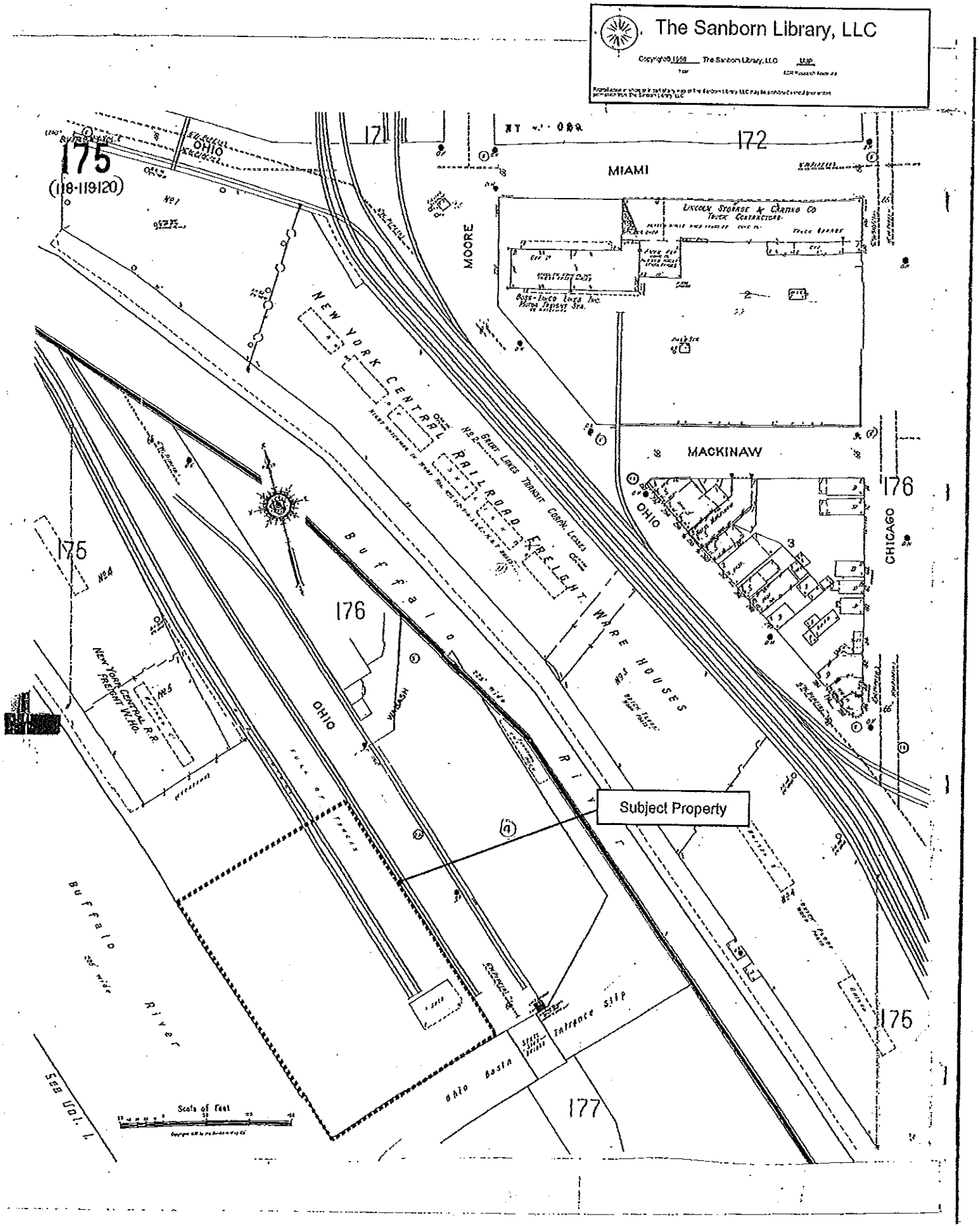
Scale of Feet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WARE HOUSES
Subject Property
Buffalo River
Ohio Basin
Scale of Feet