



C&S Companies

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July 15, 2019

David Von Derau
Chief Administrative Officer
McGuire Development Co
455 Cayuga Road, Suite 100
Buffalo, New York 14225

Re: Pilgrim Village Limited Site Characterization Report

Dear Mr. Von Derau:

The McGuire Group has requested C&S Engineers, Inc. (C&S) to complete a Limited Site Characterization Report through sampling of the urban fill soils at the current Pilgrim Village Apartments (Site). **Figure 1** shows the location of the Site. The parcel is being considered for potential redevelopment and, based on the known presence of urban fill at the Site, the project is considering making application for inclusion in the New York State Department of Environmental Conservation's (NYSDEC's) Brownfield Cleanup Program (BCP). C&S understands this sampling is being conducted to screen soils and determine if an environmental impairment exists.

EXECUTIVE SUMMARY

The Limited Site Characterization was conducted on the entire Pilgrim Village Site, excluding the BCP area. Urban fill was encountered throughout the Site from the surface to six to ten feet below ground surface (bgs). Despite petroleum-like odors in two locations, volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) concentrations were below the Soil Cleanup Objectives (SCOs) in those locations.

The analytical results indicate that the urban fill contains concentrations of metals above NYSDEC SCOs, specifically above those appropriate for the intended reuse of the Site (the Restricted Residential SCOs). All three areas of the Site produced generally the same types of analytical results, with elevated concentrations of lead, mercury, and/or zinc. Soil remediation would be required to meet the Restricted Residential Use SCOs. Therefore, the Site appears to be eligible for the NYSDECs Brownfield Cleanup Program.

SITE DESCRIPTION

The Pilgrim Village Apartment complex is located on the block bounded by Best Street, Michigan Avenue, East North Street and Ellicott Street (with the exception of the parcel that is in the Brownfield Cleanup Program and the Cornerstone Manor) in Buffalo, New York, as shown in **Figure 1**. The entire Site has a total area of approximately 7.9 acres and is split into the following three separate areas for analysis, as shown on **Figure 2**:

- “Area 1” is approximately 1.4 acres
- “Area 2” is approximately 4.0 acres
- “Area 3” is approximately 2.5 acres

The Site is currently occupied by twelve apartment buildings that were constructed sometime prior to 1981. However, the Site was once occupied by approximately 75 single family homes that were demolished prior to the construction of the apartment buildings. The Site had also housed at least two gasoline filling stations.

A portion of the block was parceled off and is now identified at the Campus Square Site in New York State’s BCP due to the presence of urban fill with elevated concentrations of SVOCs and metals. The urban fill is believed to have been placed, at least in part, during the demolition of the single family homes and the backfilling of the basements and other low-lying areas in order to accommodate the construction of the apartment buildings.

Because the Site and the Campus Square BCP Site show similar histories with respect to demolition and backfilling activities, urban fill with elevated contaminant concentrations is expected to exist across the Site.

METHODOLOGY

The fieldwork completed as part of this Limited Site Characterization included the completion of a direct- push Geoprobe® 54LT soil boring program to assess subsurface conditions in the three separate areas within the Pilgrim Village Site.

Prior to drilling, a subsurface utility stakeout was arranged with the Underground Facilities Protection Organization (UFPO) to locate any underground public subsurface utilities servicing the Site.

Twenty-four soil borings (designated SB-01 through SB-24) were completed by TREC Environmental of Spencerport, New York under C&S observation. The borings were advanced to depths ranging from approximately 8 to 12 feet bgs using a Geoprobe® direct-push sampling system. The locations of the soil borings were selected at random, evenly spaced throughout the entire Site and are shown on **Figure 3**.

The Geoprobe® unit utilizes a four-foot-long macro-core sampler with disposable polyethylene sleeves. Soil cores are retrieved in four-foot sections that can be cut from the polyethylene sleeves for observation, field screening, and sampling. The macro-core sampler was decontaminated between samples and borings using an Alconox and water solution.

The soil from the borings was screened for evidence of contamination (visual and olfactory observations) and these observations as well as lithologic and other pertinent information were recorded on boring logs. The soil boring logs prepared by C&S are included in **Attachment 1**.



Based on the screening results, 24 samples were collected for analysis.

SUBSURFACE INVESTIGATION

This report describes the results of 24 soil samples, separated into 3 areas, collected within the Site boundaries. The investigation consisted of soil borings to evaluate layers of urban fill that were encountered during the boring program conducted on June 6 and 7, 2019. The borings were performed by TREC Environmental from ground surface to approximately eight to twelve feet bgs, or until the top of the native soil material was encountered.

Soil borings were sampled off visual observation. The area within the soil boring in which appeared to show the highest amount of abnormalities in fill was the depth in which we sampled. This was generally around 1 to 2 feet bgs. Precise depth of sample retrieval are shown in the soil boring logs and in results tables located in the appendix.

Soil cores were collected for each vertical 4 foot interval. Soil from each core was visually described and recorded. Soil boring logs are included in **Attachment 1**. A map of boring locations is presented as **Figure 3**.

Tables 1, 2, and 3 summarize the samples collected from each boring. **Table 1** shows the analytical results for Area 1 along East North Street which includes soil borings SB-01 through SB-08. **Table 2** shows the analytical results for Area 2 along Michigan Avenue and Best Street which includes soil borings SB-09 through SB-16. **Table 3** shows the analytical results for Area 3 along Best Street and Ellicott Street which includes soil borings SB-17 through SB-24. Each soil sample was analyzed for SVOCs using EPA Method 8270C and metals using EPA Method 6010. At two of the boring locations (SB-04 and SB-21), VOCs were also analyzed using EPA Method 8260B due to observed petroleum-like odors in those borings.

FINDINGS

A total of 24 samples were collected for analysis within the full Site boundary. Eight samples were taken within each Area. The tables included in the appendix presents soil sample results compared to 5 New York Codes, Rules, and Regulations (NYCRR) Part 375 SCOs. For the intended use of the Site, the primary discussion relates the results to the Restricted Residential Use SCOs. The complete analytical results report are included in **Attachment 2** at the end of this document.

No discrete contamination layer was observed. Urban fill was generally encountered from the surface to approximately six to ten feet bgs. Native soil encountered beneath the fill consisted of Silty Clay – organic clays of medium to high plasticity and variable silt content with a reddish brown clay appearance.

For the purposes of this report the generic term “fill” is defined as anthropogenic sources of any one, or mixture, of the material re-worked to build a Site to a defined grade. This material can include:

Crushed Rock	Lumber
Sand	Ash/Cinders
Silt	Ceramics
Clay	Bricks
Plastics	Metal
Construction Debris	

Urban fill in most borings appeared to be a heterogeneous mixture consisting of predominantly sand, silt, crushed rock, asphalt fragments, and brick. Past this point, native brown silty clay is evident throughout the Site. Water was not encountered in any of the boring locations. For reporting purposes, it was assumed that urban fill extends down to 8 feet bgs in every area of the Site. With a total area of 1.4 acres, Area 1 contains approximately 18,000 cubic yards (cyd) of urban fill; Area 2, with an area of 4.0 acres, contains approximately 51,600 cyd of urban fill; and the 2.5 acre Area 3 contains approximately 32,300 cyd of urban fill.

Area 1:

Due to a slight petroleum odor, the sampled collected from SB-04 was analyzed for VOCs. No VOCs were detected at concentrations above the SCOs.

No SVOCs were detected in the soil samples collected in Area 1 above the SCOs.

Metals were detected in six of the eight soil boring locations in Area 1 above the Unrestricted Use SCOs for lead, mercury, and/or zinc. Three of these samples also contained concentrations of metals that exceeded the Restricted Residential Use SCOs.

Area 2:

No samples were analyzed for VOC in Area 2 because no petroleum odors or elevated PID measurements were detected.

No SVOCs were detected in the soil samples collected in Area 2 at concentrations above the SCOs.

Metals were detected in seven of the eight soil samples collected in Area 2 at concentrations above the Unrestricted Use SCOs for lead, mercury, and/or zinc. Four of these samples also contained concentrations of metals that exceeded the Restricted Residential Use SCOs.

Area 3:

Due to a slight petroleum odor, the sampled collected from SB-21 was analyzed for VOCs. No VOCs were detected at concentrations above the SCOs.

No SVOCs were detected in the soil samples collected in Area 3 above the SCOs.

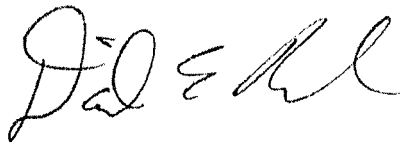
Metals were detected in seven of the eight soil boring locations in Area 3 above the Unrestricted Use SCOs for lead, mercury, and/or zinc. Five of these samples also contained concentrations of metals that exceeded the Restricted Residential Use SCOs.

CONCLUSION AND RECOMMENDATIONS

The Limited Site Characterization was conducted on the entire Pilgrim Village Site, excluding the BCP area. Urban fill was encountered throughout the Site from the surface to six to ten feet bgs. Despite petroleum-like odors in two locations, VOC and SVOC concentrations were below the SCOs in those locations.

The analytical results indicate that the urban fill contains concentrations of metals above NYSDEC SCOs, specifically above those appropriate for the intended reuse of the Site (the Restricted Residential Use SCOs). All three areas of the Site produced generally the same types of analytical results, with elevated concentrations of lead, mercury, and/or zinc. Soil remediation would be required to meet the Restricted Residential Use SCOs. Therefore, the Site appears to be eligible for the NYSDECs Brownfield Cleanup Program.

Sincerely yours,
C&S ENGINEERS, INC.



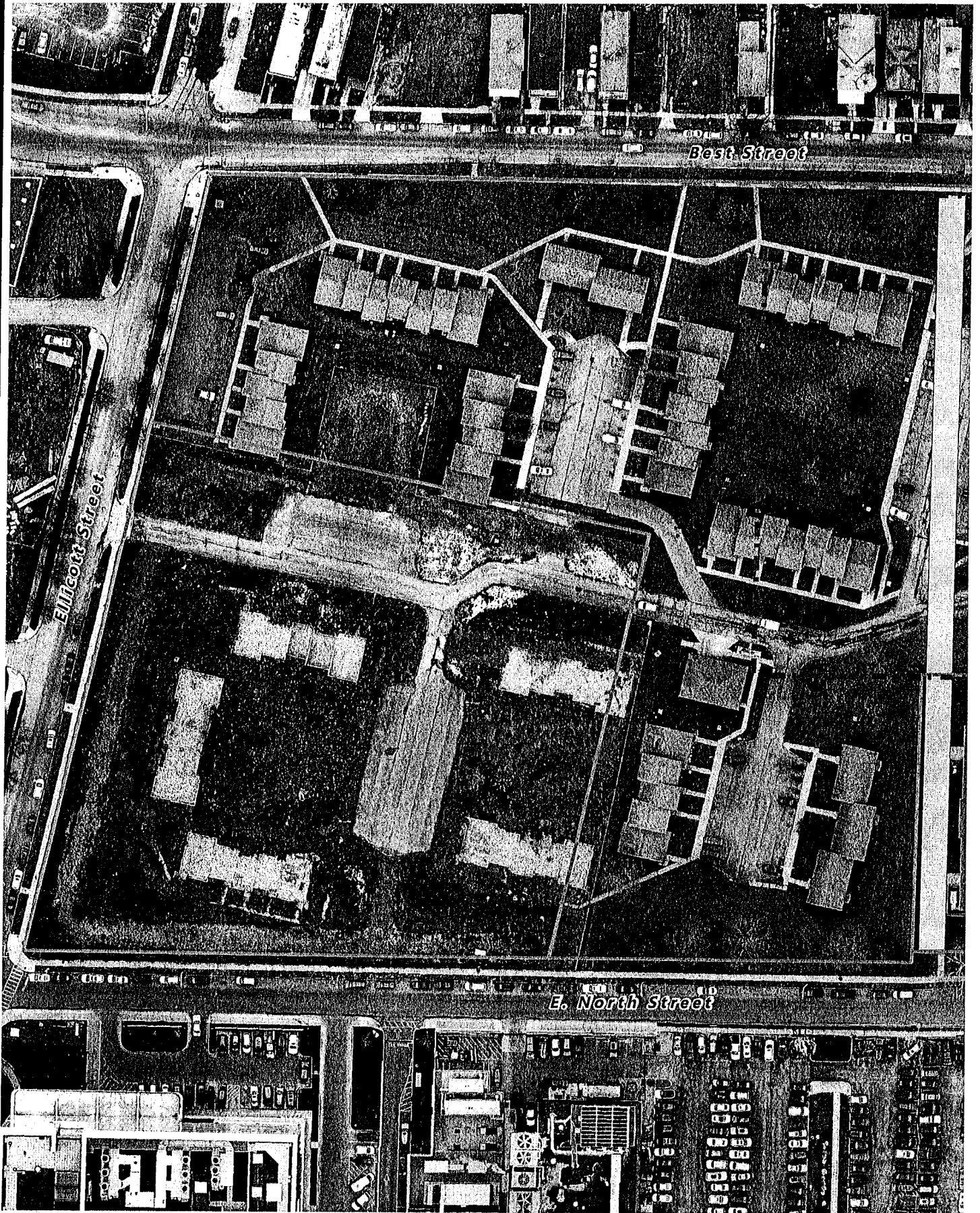
Daniel E. Riker
Department Manager – Environmental Services

Figures

Figure 1: Site Location

Figure 2: Tax Parcels

Figure 3: Soil Boring Locations



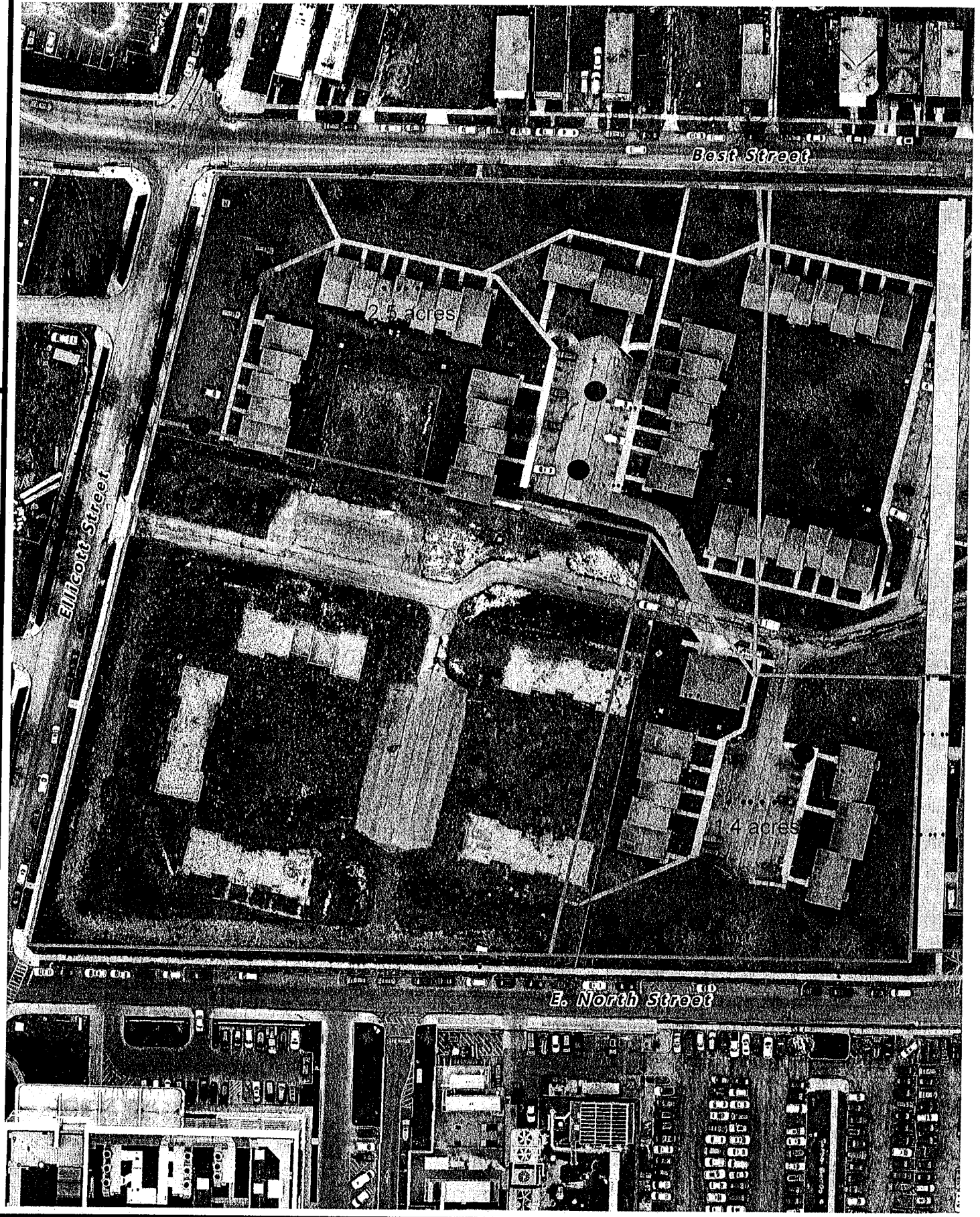


Table 2: Area 2 Soil Results

LOCATION	Area 2	SB-09		SB-10		SB-11		SB-12		SB-13		SB-14		SB-15		SB-16	
		6/6/2019	6/6/2019	6/6/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019	6/7/2019
SAMPLING DATE	SAMPLE DEPTH (ft.)	1-2 ft.		1-2 ft.		4-5 ft.		1-2 ft.		1-2 ft.		1-2 ft.		1-2 ft.		4-5 ft.	
NY-RESRR	NY-RESRR	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Units	Units																
Semivolatile Organics																	
Acephenanthrene	20	100	J	0.025	U	0.16	U	0.16	U	0.15	U	0.16	U	0.16	U	0.15	U
Fluoranthene	100	100	J	0.54	U	0.12	U	0.17	U	0.36	U	0.12	U	0.12	U	0.11	U
Naphthalene	12	100	J	0.033	J	0.19	U	0.026	J	0.19	U	0.2	U	0.2	U	0.19	U
Benzo(a)anthracene	1	1	1	0.43	U	0.065	J	0.089	J	0.21	U	0.12	U	0.12	U	0.11	U
Benzo(b)fluoranthene	1	1	1	0.57	U	0.15	U	0.075	J	0.16	U	0.16	U	0.16	U	0.15	U
Benzo(k)fluoranthene	0.3	1	1	0.18	U	0.12	U	0.082	J	0.23	U	0.12	U	0.12	U	0.11	U
Chrysene	1	1	1	0.36	U	0.12	U	0.04	J	0.161	J	0.12	U	0.12	U	0.11	U
Acenaphthylene	100	100	J	0.035	J	0.15	U	0.074	J	0.16	U	0.12	U	0.12	U	0.11	U
Acenaphthene	100	100	J	0.097	J	0.12	U	0.12	U	0.031	J	0.16	U	0.16	U	0.15	U
Benzo(a)pyrene	100	100	J	0.34	U	0.12	U	0.048	J	0.093	J	0.12	U	0.12	U	0.11	U
Fluorene	30	100	J	0.023	J	0.19	U	0.045	J	0.093	J	0.16	U	0.16	U	0.15	U
Phenanthrene	100	100	J	0.29	U	0.12	U	0.2	U	0.19	U	0.2	U	0.2	U	0.19	U
Dibenz(a,h)anthracene	0.33	0.33	0.33	0.11	J	0.098	J	0.11	J	0.15	U	0.12	U	0.12	U	0.11	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.38	U	0.15	U	0.12	U	0.028	J	0.12	U	0.12	U	0.11	U
Pyrene	100	100	J	0.3	U	0.034	J	0.046	J	0.1	J	0.16	U	0.16	U	0.15	U
Dibenzofuran	7	14	59	0.022	J	0.19	U	0.098	J	0.3	U	0.12	U	0.12	U	0.15	U
Total Metals																	
Aluminum, Total				11700		5480		5570		8220		4190		11100		6000	
Antimony, Total				2.13		1.03		0.895		0.495		4.87		11.8		20.9	
Arsenic, Total	13	16	16	6.81		5.97		5.91		5.4		2.5		3.88		8.1	
Barium, Total	350	350	400	106		45.6		116		68.5		27.9		64.8		144	
Beryllium, Total	7.2	14	72	0.543		0.231		0.245		0.347		0.149		0.414		0.312	
Cadmium, Total	2.5	2.5	4.3	0.891		0.16		0.226		0.098		0.103		0.941		0.165	
Calcium, Total				12100		9100		12400		28000		27500		3270		15000	
Chromium, Total				16.7		7.38		9.42		11.7		7.2		15		9.65	
Cobalt, Total				8.9		2.77		3.68		5.63		3.82		6.78		4.88	
Copper, Total	50	270	270	20.4		15.3		20.4		15.3		11.8		11.8		4.88	
Iron, Total				21300		8490		11200		13500		10400		19800		14300	
Lead, Total	63	400	400	987		37.7		495		325		14.3		19.8		408	
Magnesium, Total				6790		1180		5200		9930		16100		2920		5630	
Manganese, Total	1600	2000	2000	520		238		465		306		296		183		194	
Mercury, Total	0.18	0.81	0.81	0.128		0.119		0.585		0.06		0.088		0.088		0.28	
Nickel, Total	30	140	310	19.9		4.57		6.88		12.1		7.6		11.6		10.3	
Potassium, Total				991		261		632		805		530		609		609	
Selenium, Total	3.9	36	180	1.78		0.791		1.88		1.78		1.87		1.88		1.84	
Silver, Total	2	36	180	0.889		0.511		0.942		0.89		0.934		0.941		0.919	
Sodium, Total				94.2		123		79.2		91.3		81.2		33.6		18.3	
Sulfur, Total				23.6		13.7		15.7		18.1		15.3		25		16.3	
Vanadium, Total				92.4		86.8		72.8		96.6		78.4		79.1		79.2	
Zinc, Total	109	2200	10000	92.4		86.8		72.8		96.6		78.4		79.1		79.2	

* Only analytes detected in at least one sample are shown
 U - Comparison is not performed on parameters with non-humic criteria.
 J - Not detected at the reported detection limit for the sample.
 J - 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.

NY-RESRR: New York NY-CRR Part 375 Restricted-Residential Criteria, New York Restricted uses Criteria per 6 NY-CRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
 NY-RESR: New York NY-CRR Part 375 Commercial/Industrial/Institutional/Environmental Remediation Programs, effective December 14, 2006.



C&S Engineers, Inc.
 141 Elm Street
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 Fax: 716-847-1454

BORING LOG

Boring No. SB-09
Sheet 1 of: 24
Project No.: O63.003.001
Surface Elev.:
Datum:
Start Date: 6/6/19
Finish Date: 6/7/19
Inspector: J. Alt-Winzig

Project Name: Pilgrim Village
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209
Client: The McGuire Group
Drilling Firm: TREC Environmental
Groundwater **Depth** **Date & Time** **Drill Rig:** Geoprobe 54LT
While Drilling: **Casing:** **Rock Core:**
Before Casing Removal: **Sampler:** **Other:**
After Casing Removal: **Hammer:**

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS
1	S-9			0-19" - Topsoil loam, fill	74 Degrees - Clear 1:30 PM Start
2				19-23" - Gravel and sand	2:00 PM End
3				23-38" - Light brown sandy silt, moist	
4					38" Recovered
5				0-10" - Light brown sandy silt, moist	
6				10-48" - Native silty clay	
7					
8					All Recovered
9				0-48" - Native silty clay	
10					
11					
12				End of Boring at 12 ft	All Recovered
13					SB-09 at 1-2 ft
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					



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BORING LOG

Boring No. SB-10
Sheet 1 of: 24
Project No.: O63.003.001

Project Name: Pilgrim Village				Surface Elev.:
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209				Datum:
Client: The McGuire Group				Start Date: 6/6/19
Drilling Firm: TREC Environmental				Finish Date: 6/7/19
Groundwater	Depth	Date & Time	Drill Rig: Geoprobe 54LT	Inspector: J. Alt-Winzig
While Drilling:			Casing:	Rock Core:
Before Casing Removal:			Sampler:	Undist:
After Casing Removal:			Hammer:	

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION <small>c - coarse m - medium f - fine</small> S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey	COMMENTS <small>a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%</small> (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
1	S-10			0-6" - Topsoil loam, fill	74 Degrees - Clear
2				6-15" - Dark brown silty sand, moist	2:00 PM Start
3				15-20" - Light brown sand, moist	2:30 PM End
4				20-29" - Dark brown silty sand, moist	
5				29-41" - Light brown sand, moist	41" Recovered
6				0-24" - Fine sand, saturated	
7				24-48" - Native clay, saturated	
8				End of Boring at 8 ft	All Recovered
9					SB-10 at 1-2 ft
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					



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BORING LOG

Boring No.	SB-11
Sheet 1 of:	24
Project No.:	O63.003.001
Surface Elev.:	
Datum:	
Start Date:	6/6/19
Finish Date:	6/7/19
Inspector:	J. Alt-Winzig

Project Name: Pilgrim Village
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209
Client: The McGuire Group
Drilling Firm: TREC Environmental
Groundwater **Depth** **Date & Time** **Drill Rig:** Geoprobe 54LT
While Drilling: **Casing:** **Rock Core:**
Before Casing Removal: **Sampler:** **Other:**
After Casing Removal: **Hammer:**

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION		COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
				c - coarse m - medium f - fine	a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%	
1				0-23" - Topsoil loam, fill, some coal		74 Degrees - Clear
2				23-37" - Dark brown sand, some brick fragments		2:30 PM Start
3				37-41" - Light brown sand, moist		3:00 PM End
4						41" Recovered
5	S-11			0-2" - Light brown sand, moist		
6				2-10" - Dark brown silty sand		
7				10-20" - Light brown silty sand and gravel		
8				20-48" - Light brown silty sand, moist		All Recovered
9				0-14" - Light brown silty sand, moist		
10				14-36" - Native clay, saturated		
11						
12				End of Boring at 12 ft		36" Recovered
13						SB-11 at 4-5 ft
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						



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BORING LOG

Boring No. SB-12
Sheet 1 of: 24
Project No.: O63.003.001

Project Name: Pilgrim Village		Surface Elev.:
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209		Datum:
Client: The McGuire Group		Start Date: 6/6/19
Drilling Firm: TREC Environmental		Finish Date: 6/7/19
Groundwater	Depth	Date & Time
While Drilling:		Drill Rig: Geoprobe 54LT
Before Casing Removal:		Casing:
After Casing Removal:		Rock Core:
		Inspector: J. Alt-Winzig
		Undist:
		Other:
		Hammer:

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION <small>c - coarse m - medium f - fine</small> S - Sand, \$ - Silt, G - Gravel, C - Clay, clay - clayey	a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%	COMMENTS	
						(e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)	
1	S-12			0-5" - Topsoil loam, fill		64 Degrees - Overcast	
2				5-16" - Dark brown sand, and gravel, little brick, dry		8:00 AM Start	
3				16-36" - Black sandy silt, some gravel, moist		8:30 AM End	
4						36" Recovered	
5				0-2" - Black sandy silt, some gravel, moist			
6				2-3" - Gravel			
7				3-48" - Native clay, saturated			
8				End of Boring at 8 ft		All Recovered	
9						SB-12 at 1-2 ft	
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							



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BORING LOG

Boring No. SB-13
Sheet 1 of: 24
Project No.: O63.003.001

Project Name: Pilgrim Village
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209
Client: The McGuire Group
Drilling Firm: TREC Environmental
Groundwater **Depth** **Date & Time** **Drill Rig:** Geoprobe 54LT
While Drilling: **Casing:** **Rock Core:**
Before Casing Removal: **Sampler:** **Other:**
After Casing Removal: **Hammer:**

Surface Elev.:
Datum:
Start Date: 6/6/19
Finish Date: 6/7/19
Inspector: J. Alt-Winzig
Undist:

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION		COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)	
				c - coarse m - medium f - fine	a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%		
1	S-13			0-14" - Topsoil loam, fill		64 Degrees - Overcast	
2				14-21" - Light brown, silty clay, soft, moist		8:30 AM Start	
3				21-33" - Dark brown sand, and gravel, little brick, dry		9:00 AM End	
4				33-42" - Black sandy silt, some gravel, moist			
5				0-12" - Black sandy silt, some gravel, moist		42" Recovered	
6				12-48" - Native clay, moist			
7							
8				<u>End of Boring at 8 ft</u>		All Recovered	
9						SB-13 at 1-2 ft	
10							
11							
12							
13							
14							
15							
16							
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21							
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23							



C&S Engineers, Inc.
 141 Elm Street
 Buffalo, New York 14203
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BORING LOG

Boring No. SB-14
Sheet 1 of: 24
Project No.: O63.003.001

Project Name:	Pilgrim Village			Surface Elev.:	
Location:	951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209			Datum:	
Client:	The McGuire Group			Start Date:	6/6/19
Drilling Firm:	TREC Environmental			Finish Date:	6/7/19
Groundwater	Depth	Date & Time	Drill Rig:	Geoprobe 54LT	Inspector:
While Drilling:			Casing:		Rock Core:
Before Casing Removal:			Sampler:		Undist:
After Casing Removal:			Hammer:		

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION <small>c - coarse m - medium f - fine</small> S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey	a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%	COMMENTS
						(e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
1	S-14			0-14" - Topsoil loam, fill, little gravel		66 Degrees - Overcast 9:00 AM Start
2				14-32" - Dark brown silty clay, some asphalt		9:30 AM End
3				32-38" - Light brown dandy silt, little gravel, dry		
4						38" Recovered
5				0-21" - Light brown sandy silt, little gravel, dry		
6				21-32" - Light brown sand, saturated		
7						
8						32" Recovered
9				0-16" - Light brown sand, saturated		
10				16-36" - Native clay, and sand, saturated		
11						
12					<u>End of Boring at 12 ft</u>	36" Recovered
13						SB-14 at 1-2 ft
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						



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BORING LOG

Boring No.	SB-15
Sheet 1 of:	24
Project No.:	O63.003.001
Surface Elev.:	
Datum:	
Start Date:	6/6/19
Finish Date:	6/7/19
Inspector:	J. Alt-Winzig

Project Name: Pilgrim Village			
Location: 951 Ellicott Street, 1100 Michigan Avenue Buffalo, NY 14209			
Client: The McGuire Group			
Drilling Firm: TREC Environmental			
Groundwater	Depth	Date & Time	Drill Rig: Geoprobe 54LT
While Drilling:			Casing:
Before Casing Removal:			Sampler:
After Casing Removal:			Hammer:

Rock Core:	
Undist:	
Other:	

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS
1	S-15			0-16" - Topsoil loam, fill, dark brown	66 Degrees - Overcast
2				16-48" - Light brown sandy clay, trace gravel, saturated	9:30 AM Start
3					10:00 AM End
4					All Recovered
5				0-24" - Native clay, trace gravel, saturated	
6					
7					
8				End of Boring at 8 ft	24" Recovered
9					SB-15 at 1-2 ft
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11					
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