ELECTRONIC ATTACHMENTS (CD)

- 1 Soil Boring, Test Pit, and Well Construction Logs
 - a. Wall Boring Logs
 - b. Soil Boring Logs
 - c. Test Pit Logs
 - d. Piezometer Logs
 - e. Monitoring Well Construction & Boring Logs
 - f. NAPL Recovery Well Construction Logs

2 Community Air Monitoring Data

3 Project Correspondence/Reports

a. Reports

- 1 Initial Submittal (January 1995)
- 2 Preliminary Site Assessment/Interim Remedial Measures Report (Vol 1) (February 1998)
- 3 Remedial Investigation Report (May 2003)
- 4 Supplemental Remedial Investigation Report (November 2007)
- 5 Final Remedial Investigation Report (September 2008)
- 6 Vapor Intrusion Report (February 2009)
- 7 Feasibility Study Report (July 2014)
- 8 Site Management Plan (January 2018)

b. Correspondence

- 1 April 28, 2005 Letter Not a Subsite
- 2 1998 2006 Historic Letters & E-mail Correspondence
- 3 November 13, 2007 SRI Report
- 4 December 27, 2007 NYSDOH Comments on SRI Report
- 5 April 4, 2008 Summary of Recent Discussion, Follow-up Activities, and Project Schedule
- 6 April 14, 2008 NYSDEC Approval of Schedule and SOW
- 7 April 18, 2008 Soil Vapor Investigation Response Letter
- 8 April 25, 2008 Pre-FS Additional Investigation Work Plan
- 9 May 2, 2008 NYSDEC Approval of Pre-FS Additional Investigation Work Plan
- 10 May 16 and May 22, 2008 E-mail Status Update to NYSDEC
- 11 June 26, 2008 NYSDOH Request Heating Season Sampling
- 12 July 9, 2008 Schedule Letter
- 13 July 11, 2008 NYSDEC Approval Letter
- 14 July 18, 2008 Data Submittal Letter
- 15 August 15, 2008 Sub-Slab Vapor Sampling Concept
- 16 August 25, 2008 Schedule Letter
- 17 September 12, 2008 NYSDEC Approval of Schedule Change
- 18 September 19, 2008 Final RI Report
- 19 September 25, 2008 NYSDEC Approval of Conceptual Sub-Slab Vapor and Indoor Air Sampling Plan
- 20 October 27, 2008 Vapor Intrusion Work Plan
- 21 November 5, 2008 NYSDEC Approval Letter
- 22 February 13, 2009 Vapor Intrusion Investigation Report
- 23 March 31, 2009 NYSDEC Comments on Vapor Intrusion Report
- 24 April 24, 2009 Product Inventory Summary Letter
- 25 May 4, 2009 Chlorinated Solvents in Soil Vapor
- 26 July 31, 2012 Building D Handicap Entrance Ramp Construction Proposed Soil Investigation
- 27 February 8, 2013 NAPL Summary Approval

- 28 March 8, 2013 Groundwater Monitoring Letter Report
- 29 April 16, 2013 Soil Investigation Report (Ramp and Bridge Construction Project)
- 30 June 26, 2013 NAPL Summary Approval
- 31 July 25, 2014 Draft Revised Feasibility Study Approval
- 32 July 29, 2014 Feasibility Study Report
- 33 February 24, 2015 Proposed Remedial Action Plan Fact Sheet
- 34 February 24, 2015 Proposed Remedial Action Plan
- 35 March 30, 2015 Record of Decision
- 36 May 6, 2016 Remedial Action Work Plan Approval
- 37 May 9, 2016 Remedial Action Work Plan (Final)
- 38 August 9, 2016 Catch Basin Replacement and Soil Management Work Plan
- 39 August 10, 2016 NYSDEC Approval of Catch Basin Replacement and Soil Management Work Plan
- 40 February 28, 2017 NAPL Gauging and Removal Pilot Study Summary
- 41 March 15, 2017 NAPL Study Report Approval
- 42 July 20, 2017 NYSDEC Comments on Draft SMP
- 43 December 8, 2017 Semi-Annual NAPL Gauging Summary Letter
- 44 December 20, 2017 NAPL Study Report Approval
- 45 January 11, 2018 Site Management Plan
- 46 January 16, 2018 Site Management Plan Approval
- 47 October 24, 2018 2018 Semi-Annual NAPL Gauging, Groundwater Monitoring, and Site Inspection
- 48 December 19, 2019 NYSDEC Approval of the 2018 Semi-Annual NAPL Gauging, Groundwater Monitoring, and Site Inspection
- 49 April 8, 2020 2019 Annual Groundwater Monitoring and Site Inspection Summary Report
- 50 April 9, 2020 2019 Groundwater Emerging Contaminant Summary Report
- 4 Construction Photos
- 5 Site Management Plan

ARCADIS

Wall Boring Logs

Contrezion: Worth star Driller: <u>Harry Lyon s</u> Inspector: W. D. Lilley	– ENGINEERING-SCIENCE – DRILLING RECORD	BORING NO. V		
Rig Type: CM & 45 - ATV Drilling Method: MS A - SS GROUNDWATER OBSERVATIO	PROJECT NAME Wall Replacement PROJECT NO.	Location Nor-	thern must	
White C.O G.4 Level C.0 G.4 Time 2:45 8:00 Date $\frac{3}{29}$ $\frac{3}{30}$	Date/Time Start $3/27/45$ $3:00 \text{ pm}$ Date Time Finish, $3/31/45$ $4:00 \text{ pm}$	Plot Plan Onon day Creek + M NMPC H9		
Protection & Remarks & Provide State	T FIELD IDENTIFICATION OF MATERIAL			
0 A 20		WELL SCHEMATIC	COMMENT	
	Black and Brown Silt and Sand, Trace. Gravel, trace Wood (minst) (Fill) Same	Boring grouted with Bartonite Conserve	T CL/THI O-G' with 3' splitspon Grain Sie	
C C H 30 2 1 1 1 .5 1	Same.		Sangle	
v p 6 25 1 7 7	G.5' Brown coarse San C, little Gracel, Trace S.14 Trace Brick, (Cobble and Brick) (wet) (Fill) Bro		Buschole PID=2n LEL=2ne	
◦ E 8 50 12 9 17 17 17	Brown and Gray Gravely some sand, little Silt (2" layor of topsoil) (writ)		÷.	
v F 10 50 12 11 7 6 6 6 .	IZ.0'			
13 6 13 7 0 H 14 L0 8	Brown Gravel, little sand, Trace Silt (wet) (Brown strains) 14.0		Lob Sangle BT X, Phy CN -	
· 15 5 · 15 7 · 16 70 11	Brown Gravel, some sind, Trace silt (wet) Same			
17 7 6 6 3 8	Same		·.	
19 7 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		i	800rehole PID = 1.0 LEL = 200ro	
ANDARD PENETRATION TEST	SUMMARY FILL O- 8, Sundy Grace		d and	

Driller: <u>Harr</u> Inspeacer: <u>L</u>		on s	 e y	ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 2 of		
Rig Type: <u> </u>	ME 45	- 4-T	v S	PROJECT NAME Wall Replacement PROJECT NO.	Location		
CROUNDW.	ATER OBS	SER VAT	LIONS	Weather: Sunny 65" - Rain	Plot Plan		
Level Fime	<u> </u>			Date/Time Start 3/2.8	See Sher	4 ± 1	
Date				Date Time Finish.			
Phonomena i Securite Ronchae i LEL	Saraphe Depta	Recovery	19T	FIELD IDENTIFICATION OF MATERIAL			
0 K	······	50	8		WELL SCHEMATIC	COMMENT	
	21		4	Brown Gravely some Sund, Trace Silt			
<u>ې له</u>	22	50		Gray Gravel and sond (layers)			
	~ ~ ~		5	Trace Silt (wet)			
	23		4 4				
0 m	24	5	-7	Same			
· · · · · · · · · · · · · · · · · · ·	2.6		3				
	25		Ч 4				
U W	24	10	5	Same			
			5				
	27		- <u>+</u>				
\ C	28 -	6	à	Same			
			?	-			
	29		7 8	· · · · · · · · · · · · · · · · · · ·		·.	
、 P	30 2	.s		Same.			
			25				
	31		9				
<u>\</u> 9	32 3	3.5		Same			
			9				
	33		<u>5</u>				
R	३५ इ	50	G				
			\sum	Cobble (Trace Stain)		Lab	
	5		3			Sample	
<u> </u>	S 2	.5 9	5	Same (Trace Stain)		PHH 34.5-36	
	7		2			BT 44 J CN~	
	· · ·		6 8			36 - 38	
<u> </u>	8 2		2				
3	g		<u>></u> '	Cobble Same (Truce Strin)			
			<u>s</u> t				
<u> </u>	ò	· · · · · · · · · · · · · · · · · · ·	6	(6" layer of sitt)			
_]				
NDARD PEN	I RTP AUTO	111 11970		SUMMARY			

Oviller:	Har	<u>ry</u> L	<u>yon</u> yons Lil	·····	ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 3 of	
Rig Typ Drilling		:m e d: <u>H</u> S	45 - 4 A - 9 OBSERV	-τ <u>ν</u> 35	PROJECT NAME <u>Wall Replacement</u> PROJECT NO.	Location	·····
Waler Level			ouseace		Date/Time Start	Plot Plan See Sthe	ut#1
)alc	1				Date Time Finish.		
"bostovne) (Roskistanji (Sacapia Depta	Record	spt spt	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
		41	20 	6 7 8 12	Grey Sand and Gravel (Stained) Same (Stained)		ран 20-42
	W	43 44 44	50	4 6 7 8 6 8	43.5 Gray Sund, little Gravel (Brown Staine) 45.0		8ahdote 44'-46'
5	× Y	46	10	15 16 12 14 16 17 20	Gray sund, little Gravel, trace Silt (till) (Brown Stains) Same		
	2. A K	<u>५</u> 9 <u>५</u> 0 <u>५</u>	2.5	17 14 17 17 21	Same 51 Gray Sand and Frace J. H (+ill)		Borehole PJO = 0. LEL = Zer PAH
	<u> </u>	53 54 55	(0	17 11 34 25 19 14	Some (Gravel layer stained)		52-54
	<u>cc</u>	56 57		43 48 50/14	Same		-,
	> P	58 59	20	21	Sane		
E	r E	60		33 41 43	- -		
			ATION'		SUMMARY	(

Contractor: Northstar Oriller: Harry Lyons Inspector: W. D. Lilley					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. $WB - 1$ Sheet 4 of 5				
iyi tir Drilling	pe: <u> </u>	:те и a: <u>Н</u> 5	45 - 4. A - 5	τý S	PROJECT NAME Wall Replacement	Location				
WALLET	<u>ימאעכ</u> ו	VATERO	BSERVA	TIONS	Weather: Cloubly -> Snow	Plot Plan				
.cvci ĭme			*****	Date/Time Start 3 3 1 9 5 - 9: 10 an	. See So	1.1.4.1				
)MC				····	Date Time Finish.		rec. 1			
Losovan Losokas	1	Santpia Dopta	2	y spr	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT			
<u> </u>	<u>6</u> E	61	60	30	Gray Gravel and Sormal track Silt					
			•	45	(Suleans)					
	F [-	62	0	48	-					
		63	+	++						
	66	64	0	50/34	Same					
 ;;				1			:			
1		65	 	$ \downarrow - $						
	IΓ	66	0	30/10	Same					
				1						
		67	ļ	┨╋						
	35	68	0	100/14	Dame					
			1							
		69			69'		·.			
	xk	70	50	14	Giny Sund and Grovel (Scheens)		Borr ho le			
				17			PID=1.			
		71		16			トゼ しゃ 200			
	LI	2.	· · · · · · · · · · · · · · · · · · ·	66			PAH Lub sang			
	<u></u>	72	5	18	Some (selecus)		70-72			
		73		13						
+				14						
	mm	74	50	15	Sung (Scherns)					
		75		14			•			
				15						
<u>+ ĭ</u>	JN	76		18	same (schens)	1	BTEX5 CN-			
		77		16		1	76-78			
				13			Branchall			
	26	78		12	Coarse Sand, little Gravel		PID:0			
		79		12			しビレ~0			
				12						
_	<u>e</u> e	80]							
_										
<u></u>		ENETRA			SUMMARY					

Driller:	Har	Vorth ry L: J. D	2 NO Y	.ev	ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 5 of		
Rig Tyr Drilling	>e: <u>⊂</u> Methox	ме d: <u>Н</u> S	45 - 4- A - S	TV S	PROJECT NAME Wall Replacement PROJECT NO.	Location		
Water Levei Time Date		VATER C	DESERVA	TIONS	Weather: Pf Cloudy to Lit Show Date/Time Start $3/31/95 - 12:25$ Date Time Finish. $3/31/95 + 100 \text{ pm}$	Plox Plan		
Phonema Romana		Sampia Depos	4 2400-00		FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT	
20		81	10 70	15 15 12 14	Gray Coarse sand, little Gravel (some Sales) Same (little scleres) (Odor)		РАН 80-82	
	RR	83		15	Same (Sulerro)			
:		<u>84</u> 8 <u>6</u> 	5.0	1 <u>5</u> 1 <u>4</u> 1 <u>4</u> 11			Lab Samp P4H	
	·····	86		10	Boring terminatel at 86'		B7EX 84-84	
							•.	

					· · ·		,	
							•5	
			TION					

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Driller: _	Hare	Vorth CY Ly	ion s	۹. Sm. ++	ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W		
Rig Type Drilling N	a:⊂ Aethoc	<u>me 4</u> 1: <u>Hs f</u>	·ś-μ- t-s	tv S	PROJECT NAME Wall Replacement PROJECT NO.	Sheet of 5		
Water Level		ATER O	BSER VA	TIONS	Weather: <u>Cloudy</u> 450	Plot Plan	-9N 19	
Time Data				~~~~	Date/Time Start 4/14 0900 an	m onon das	" Great	
	Secretar	 			Date Time Finish. $\frac{9}{19}/19/95$ 0900 an	NMPC	<u>— Х с</u> [" Н Ф	
Annang	LEL.	Sataple Dopos	1.00000 50	J.PT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC		
0		2	30	- - - - - - - - - - - - - - - - - - -	Dark Brown Silt, some sand (Fill) Trace growel, Trace Brick (moist)		TCL/TH MSTMSD grain sin sungeles	
25		4	20	3336	4.5 Light Yellow Cinders	Co mois	0-6'	
		_2	20	6 7 7 17 11	5.5 Brown silt and sand, little cinders Trace Gravel, (web) (Fill)			
5		9	50		8.5' Black to Olive gray Sand , some gravel (wet) (Sheens) (Tupsoil)		·,	
0		11	10	8	Gray Grad and sand the silt			
G		13	10	6 7 5 4	(wet) (bose) (sheens) Same (Sheens and brown spots)			
6		5		57	Same (Strong Odo- + Sheene)		•	
		17	20 1	6 6	18.5'		L.5 PAH1 16-18	
		20		-	Brown & Gray Silt, some sand little gravel.			
1			ION TE					

Contractor: Worth star Driller: Harry Lyon S Inspector: W.D.L: Ilicyt UAS.					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 2. of	The second s	
Rig Typ Drilling :	xe: <u>⊂</u> Methoo	<u>me</u> 1: <u>H</u> s	HS - A- A - S HESERVA	tv S	PROJECT NAME Wall Replacement PROJECT NO.			
Waler Level Time		.		TIONS	Weather: <u>Cloudy 450</u> Date/Time Start <u>4/14</u> 10:50 an	Plot Plan		
Date	İ				Date Time Finish.			
Phonorem I Reactions I	Second LD	Застрія Дерев	town	LIT.	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENTS	
181	•	21	25	7	Gray sand and silt, little gravel			
<u>ي</u> ، د		24	12.5	8	Same (odor)			
		23		7	23′			
.5. 7 		24	10	5 6 4	Gray sund and gravely little Silt			
		25		3 4	(trace of black Sheen)			
		26	<u> </u>	4 & &	No Recovery			
5.3		28	12.5	4 6 6	Same (Sheens)			
		29		5 10	291		r,	
0		30	37.5	12	Fire to medium ""Sand, some Fire gravel (wd)	-		
		31		8				
		32	62 5	6	Same (Slight septic odo-)			
0		33	37.5	6 5 7				
		35		6 5	Fincto medium gray sand, some Fine gravel, trace silt (slight odd.)			
<u>э</u>		36	62.5	6 5	Same_		ВТЕУ	
		3 7		8 9			Somple 36-38	
3		38	25	6 WOT	Sance			
		39		4				
2		40	2.5	6 12	Finate me diven gray and some Fine gravel, little salt (wed)			
ANDA	RD PE	 NETRA	TION T	9 EST	SUMMARY			

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Contractor IV or th star Driller: Harry Lyon S Inspector: W. D. Lille, & NA Shit Rig Type: CM E 45- A-TV Drilling Method: HS A - SS					PROJECT NAME Wall Replacement	BORING NO. W Sheer <u>3</u> of Location	
		ATERO			PROJECT NO.		
Water Levei					Weather:	Plot Plan	
Time Date		<u> </u>			Date/Time Start Date Time Finish,		
		Same rates					
Ronne	Sample LDA	Запрів Дерів	Reason		FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
		41	25	9	Fine - medium gray sand, sime Fine gravel		
21.5		42	50	8	little silt (with)		PAHLON
				8	Sarol.		Sample
		43		8			42-44
39.1		44	32.5	*********	same (trace steen)		
<u></u>	<u> </u> 	45	 	15	44.5'		-
				.19	Ciny sund, ittle silt, little gravel (Till) (wet)		
00		46	25	16	(Till) (wet)		
		42		22			
29		48	50	50/1.1	(three of Free phise at 47)		
				12-			
		49	•	12	(tree of Free phase 48.5 - 49)		•.
1		SO	50	19			BTEX
		5 1	*******	38			samerie so-sz
. ^		<i>m</i>		34			
		52	NR	50/01			
		53	•••••••••				
40.5		54	دكر	39	Gray Sand, little silt , little grant		
		55		33	(congred) (suttand free phase sy -62 Feet)		PAH .
		<u>ر پ</u>		19 18	54-62 Feet)		simple
. 2		56	۷٩	40			54-56
• •		57		50/3'			
4.1		58	50				•.
				17 24			
		59		28			
2	6	50	25	27			
				50/2'			
		 NETRA	TON	1	SUMMARY		

Contractor: IV or th star Driller: Harry Lyon S Inspector: W.D. Lilley & N.M. Swith Rig Type: Cm E 45 - 470					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. U. Sheet 4 of		
Orilling	Metho	d: <u>H</u> S	45 - 4 A - 9 OBSERV	35	PROJECT NAME Wall Replacement	Location		
Waler Lovel Time			OBSERT		Date/Time Start	Plot Plan		
Date					Date Time Finish.	ļ		
Tacanana (Romatang (Sectore LCA	Sacapia Depta	2	ay SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT	
41		61	25	50	Gray Sund, some silt, little gravel (trace Free phase in scores		•	
29		62		18	Gray sand, some gravel, little silt (sheen)			
8		64 65		18	Some (Scattered Free phase layers 1)		BTEXA	
. 4 1 i		6 6 6 7	625	32 32 41 20 20	sume (Free phase 66.66.5)		sangle GY-6C'	
2.7		68 69	50	20 128 20 25	Gray Sand, sone silt, little gravel (no sheen or free phin			
0 		7 0	GL .5	23	5 m the acc-			
		7 <u>1</u> 72	50	17	(Free gnase 20.5-21) 71.5'			
		73		121 18 18	Gray Sunc, some gravel, little Silt (loose) (free phase)			
5. 1		74 75	37.5	17 16 21 14	Gruy some , some growel (loose) (Free ghing)			
•		76	50	14 15 20	Same (Free genere 76.15-27 Get)			
2		7 7 7 8	VR	15	Same		s.	
		79 30	62.5	<u>kou/.</u>]				
			ATION	17 16	Gray Samel, some gravel; trace silt in partings (474 thick)			

Contractor: North star Driller: <u>Harry Lyon s</u> Inspector: WO Liller NASS.						BORING NO. W Sheet 5 of		
) nilling	Metho	a: <u>HS</u>	45 - 4- A - S	5	PROJECT NAME <u>Wall Replacement</u> PROJECT NO.	Location		
YALCZ	<u>מאטכ</u> ו	VATER	OBSERVA	TIONS	Weather:	Plot Plan		
.evei Ime				Date/Time Start				
) a ic					Date Time Finish.			
	(Second	Sample Dopte	Lenner	srr	FIELD IDENTIFICATION OF MATERIAL	WET I SCITTLE		
7.4			62.5	17		WELL SCHEMATIC	COMMENT	
		81		16	Gray Sund Some gravel trace silt in parting (LYx" thicks)		PAH	
7.8		82	50	15	parting (LIV on all)		50-82	
				18	(I'' Free prese on top of oilt			
<u> </u>		83		19	44 81 ')			
71		84	75	15				
	.	104	12	14	Gray sand some gravel (Corporat) (Free			
1		85	1	14	phase			
			1	14				
<u>s i</u> ī		106	37.5	15	(5 her)			
		87		14	(Free phace)		BTEX&	
			<u> </u>	IJ	•		P14 H	
		88		10	Boring terminated at 88'		59.88'	
		89						
							Ÿ.	
		90						
		91						
		92						
		93						
		<u></u>						
		94						
		95	·					
		<u></u>					-	
		96						
		<u></u>						
		97					•.	
		98						
		99						
	\overline{i}	00						
NDA	RD PE	NETRA	TION TI	IST	SUMMARY			

Contractor Northstar Driller: Havry Lyons Inspector: W. D. Lilley	- ENGINEERING-SCIENCE - DRILLING RECORD	BORING NO. W	
Rio Type: <u>CM E 45-470</u> Drilling Method: <u>HS A - SS</u>	PROJECT NAME Wall Replacement PROJECT NO.		
GROUNDWATER OBSERVATIONS Water S.Y'. Level S.Y'. Time 1.000 Date 4/4	Weather: $P + Cloudy = hite Rain 50°$ Date/Time Start $\frac{9}{4/95}$ 9:30 gm Date Time Finish. $\frac{9}{6}$ (95 3:00 pm	Ploc Plan Onon	× × × ×
tosoven i Samran Securies 7 SPT Lonking LD. Drpth Receivery SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Dart Brown Fr Black Sand, little Silt, Trace Cinders, trace gravel (Fill) (moist)	Borins Stouted With Bentonite Cament	Boring gouted
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same 5.0' Gray Gracel (Fill) 7.6'		Coment/ Banten it
10 8 50 36 9 9 9 9 10 50 26 11 8	Brown sand and gravel, these Silt (west) Sume		
12 50 11 12 50 11 4 4 4 13 7 10 14 10 1 15 10	Black Sund and growel, trace Silt (wes) (S heens)		ран+вт 12-14
λ6 5 4 16 5 4 17 7 6 6 18 25 16 16	Dart Gray Sund and gravel (Sheens) (Well) Same (Sheens)		.
NDARD PENETRATION TEST			

Contractor: Worth star Driller: <u>Havry Lyon s</u> Inspector: W. D. Lilley	ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 2. of	
Rig Type: <u>CME4S-ATU</u> Drilling Melhod: <u>HSA-SS</u> GROUNDWATER OBSERVATIONS	PROJECT NAME <u>Wall Replacement</u> PROJECT NO.	Location	
Water Level · · · · · · · · · · · · · · · · · · ·	Weather: $\underline{\iota + R_{ain}} = \frac{S_{vow} - 38^{\circ}}{28^{\circ}}$ Date/Time Start $\frac{4}{4}$ Date Time Finish.	Plot Plan See SI	(^{itt} taa
PLORVING Sample Sample 16 Straple Receivery SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Darn Gary Sand + gravel, Trace Silt (wet) (Sheens) Same (Strong Sheens)		Boro hold 950=2 LEL=20
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same Same		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same (Sheens)		PAH, BTE) + CN- 30-32'
32 15 7 8 33 6 7 7	Same		30 - 32
3Y 5 8 9 35 7 10 3 <u>C</u> 10 8	Gray Bund + Gravel (Sheens)		
37 8 8 38 20 16 14 39 30	Sane		
40 11 11 11 NDARD PENETRATION TEST			

Contractor: <u>IVor th star</u> Driller: <u>Havry Lyon S</u> Inspector: <u>W</u> , <u>D</u> . <u>Lilley</u> Rig Type: <u>Cm E 45 - ATV</u> Drilling Method: <u>HS A - SS</u> <u>CROUNDWATER OBSERVATIONS</u>					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W	
				5	PROJECT NAME Wall Replacement	Location	
Water	<u>AWUMI</u>	TERO	BSERVA	TIONS	Weather: 510 30' \$ 20.	Plot Plan	
Level					,		
lime	{				Date/Time Start 4/4	See Shee] [™] K
34C					Date Time Finish.		
Photovne (3 Roading (Sacapie Dopole	Receive	·	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMEN
		41	25	7	Gray Sand, some grovel, little Sitt		
İ				1-7			
		42	5	17	(Slight Sheen)		
				7			
		43		11	Same		
<u> </u>		44	2 4	8			
		14	30	8	Gray sand, some silt, little Gravel		
1		45		8	(1. He stains)		
:	1		·····	7			
!		46	20	1			
1				14	46.5		
		<u>+7 </u>		5	C c l al aread trace Silt		
		48	25	7	Gray sand and gravel, trace Silt (till) (trace odo)		
		<u>. ' 0</u>	~ >	LO S			
		49		12			
				10	· · · · ·		٠.
		50	20	10	Sane		
			,	16	(2" anvel layer stained)		
		51		11			L-P
		37	25	15		ł	BIEX
		<u>72</u>	<u> </u>	38	Some (Strins)		94+1 52-53.
<u> </u>		3	·	50/3"			347 23
			·····	V			
	2	5Y	5	50/3"	Same		
				avser			-
		55					•
		56	30				
		~	**	20	Sane		
	3	2		24			
				30		ĺ	••
	5	8	80	30	Gray gand, cons and treas silt		
	- 3	6		21	Gray sond, some gravel, tracesilt (Stiff) (Slight odar)		
•	+			23	(Stit) (Slight odi)		~~
	6	6		17			(N) 58-60
		<u>×</u>		<u></u>			20.00
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	DDCM	GTR A'	TIONT	EST	SUMMARY	1	

Contractor: North star Onlier: Harry Lyons Inspector: W. D. Lilley					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 4 of	
Rig Type: CM E 45 - HT U Drilling Method: HS A - SS GROUNDWATER OBSERVATIONS				τν S	PROJECT NAME Wall Replacement PROJECT NO.	Location	·····
GRC Whiter Levei Fime			BSERVA	TIONS	Weather: Cloudy $30^{\circ} - 5 \text{ snow}$ Date/Time Start $4/s$ Date Time Finish. $4/6$	Plox Plan See S	hert # 1
bononan (Roadkaa)	Sectore LDA	Sample Dopta	Racennery	SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
		61	60	20 19 21 18	Gray Sandy little gravel, trace S. It (Vary Slisht Oder) Same		
		G 3	50	9 45 22		-	PA: H 62 · 64
		65		30 16 31	Cobble Same		
		66	70	42 24 22 22			
		68 69	00	23 40 19 20	Gray sund, some gravel, trace silt (trace solver)		
		70 71	60	23 27 30	Gray sund, some Fine gravel, littles. 14 (No show)		
		72 73	20	20 9 10	72' Gray coase Sand, Some gravel, trace		
		74 75	70		Same Silt (No Sheen)		
		76		12	Same		
		77 78		12 14 14	18' Boring torminated.		PAH BIE) + CN- 76-78'
	RD PF		TION T	EST	SUMMARY		

Drilling Method: $HSA - SS$ PROJECT NO. <u>GROUNDWATER OBSERVATIONS</u> Waiter Level 5.9 . Time \$15 Date 9 12 Date 9 12 Date 9 12 Date Time Start 9 / <u>Date 9 12</u> <u>Date 9 12</u> <u>Date Time Finish.</u> 9 <u>FIELD ID</u> <u>So </u> <u>1 2 60 1</u> <u>2 60 1</u> <u>2 60 1</u> <u>3 8 12 15 16 16 17 17 17 17 17 17</u>	12 95 0830 1/13 95 11:00 DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL Boring Groutcl with Boring Groutcl with Bordonite Cement Cement 6-8 PAN BTEX
Water $ 5.9 $. Level $ 5.9 $. Time $ 5.9 $. Date $ 7 13 $ Date $ 7 13 $ Date Time Start $ 4 / / 13 $ Date Time Finish. $ 4 / 13 $ Date Time Finish. $ 4 / 13 $ Date Time Finish. $ 4 / 13 $ Date Time Start $ 4 / 13 $	12 95 0830 1/13 95 11:00 DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL DENTIFICATION OF MATERIAL Boring Groutcl with Boring Groutcl with Bordonite Cement Cement 6-8 PAN BTEX
Receiver intervent Intervent Receiver intervent Receiver intervent Receiver intervent 1 1 1 1 1 1 1 1 1 1 1 1 1 2 GO 1 1 1 1 5 2 Bluelle oilte 1 1 5 2 Go 1 1 1 5 2 Go 1 1 1 5 2 Go 1 1 1 6 35 3 Blactic oilte 1 1 6 35 3 Blactic of or of other 1 1 1 1 1 1 1 1 1 1 1 1 1	DENTIFICATION OF MATERIAL WELL SCHEMATIC COMMEN ittle sand Baring TCL/TI Groutel with odor, true bricky d some sand, little silt d some sand, little silt
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	with odon, true bricky with odon, true bricky el, some sand, little silt g shken) Groutel Groutel With Generat G
12 40 5 12 40 5 4 5 13 7 5 14 30 7 15 4 Gray Gravel	little Sound, little silt sheen, Free Ghase) purifice Odor)
ANDARD PENETRATION TEST S	

Contracor: Worth sta Driller: <u>Harry Lyon</u> Inspector: EA Feller d			BORING NO. W	the state of the s
Rig Type: <u>CM & 45 -</u> Drilling Melhod: <u>HS A -</u> GROUNDWATER OBSER	55	PROJECT NAME Wall Replacement PROJECT NO.	Location	
Water Level -		Weather: Date/Time Start	Plot Plan	
246	-	Date Time Finish.		
Tourves & Securite Security Contract Security Se	t IPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COLOUENT
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c} 12\\ 16\\ 10\\ 10\\ 14\\ 7\\ 6\\ 8\\ 5\\ 5\\ 6\\ 5\\ 4\\ 4\\ 4\\ 5\\ 7\\ 6\\ 8\\ 5\\ 6\\ 5\\ 7\\ 6\\ 8\\ 5\\ 6\\ 5\\ 7\\ 6\\ 8\\ 5\\ 7\\ 6\\ 8\\ 7\\ 6\\ 9\\ 7\\ 5\\ 7\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\ 9\\$	Gray Gravel and silt, little sand (wet) (Brown stain, sheen stree phase, oder) same same Same (center appears class) 32 Gray Sand, little silt, trace Gavel		20-22
33 34 35 35 36 36 37 25 38 38 39 40	7 10 20 50/····* 50/···* 50 	33 (Cobble) Brown Gravel and sample strice s.) + same (Free Phase, odor & shoen)		28-40, си- би-

Contractor: Worth star Driller: <u>Harry Lyon S</u> Inspector: EA Feth. 2 W. D. L	- ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 3 of			
Rig Type: <u>CM E 45-47Ú</u> Drilling Meuhod: <u>H3 A - 55</u>	PROJECT NAME Wall Replacement PROJECT NO.	Location			
GROUNDWATER OBSERVATIONS Water Levei Time Date	Date/Time Start Date Time Finish.	Plot Plan			
Postviel Sampa Sampie S. Rosane Lill Dopta Reservery SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Brown gravel and sound little silt (wet) (Stringd) (ode.)(Steen) Same (we stain or sheen) 48' Gray brown gravely silt, little sud (Till)		BIERJPAN		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same Same Same Same		PA H Sargel 56 - 58		

Contracor: Northstar Driller: <u>Harry Lyons</u> Inspector: W.D.L.II _{Ex} Rig Type: <u>CME 45-4-TV</u> Drilling Method: <u>HSA - SS</u> GROUNDWATER OBSERVATIONS				ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W	B-4
				PROJECT NAME Wall Replacement PROJECT NO.	Sheer <u>4</u> of <u>1</u> Location	
GROUN	DWATERO	BSERVA	TIONS	Weather:	Plot Plan	
Level	· .				- riot Pian	
Time				Date/Time Start		
D no				Date Time Finish.		
Phoneyment Sam Remine 13	nan Santaia Depen	Reason	T SFT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMME
		10	10	(man a b b i i i i i i i i i i i i i i i i i		
	6 1		20	Gray Sund and gravely little silt		
25			30			
	<u> </u>	10	20	Same (Sheons)		
		<u> </u>	14			
	63	<u> </u>	12	· ·		
	64		<u> </u>			
	<u> </u>	10	12	Same (No sheers)		
	65	 	20			
i			24			
	66	25	23	Same (No sheen)		
·!	<u> </u>	22	26	Same (100 star)		66 - 67.
i	67		30			PAH,
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		30 59/41			BTEX
í	68		1 - 7 4*	Boring terminated at 67.5'		CM-
			┼╾──┤			Sunple
	69	~~~~~	╈			2
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	70		<u> </u>			
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ANDARD	PENETRA	TIONT	EST	SUMMARY		

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Contractor: Northstar Driller: Harry Lyons Inspector: W. D. Lilley	- ENGINEERING-SCIENCE DRILLING RECORD	BORING NO.			
Rig Type: <u>CM E 45-ATV</u> Drilling Melhod: <u>HS A - SS</u>	PROJECT NAME Wall Replacement PROJECT NO.		on Southorn most		
GROUND WATER OBSER VATIONS Water 5.9 . Level 5.9 .	Weather: <u>Sonny 30°</u> Date/Time Start <u>4/10</u> 9:30 a~	$\begin{array}{c c} Plot Plan \\ \hline \alpha \\ \alpha \\ \gamma \\$	Y (1)		
nic 4/10	Date Time Finish. 4/11 11.00 an	2	1-64		
Description ( Second Second Responsery SPT 3 500 500 500 500 500 500 500 500 500 50	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMEN		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Davh Brown Silt + Dand little Eurovel 1.5 Concrete 2.5 Gray & Red Sand J little grave (J Trace Silt, Trace coal (I' layer of yellow cirders)	1 1	0-6 Surgle ~ 3" spor THL/TC t Greinsin		
6     6     2       3     3       7     2       8     50       9     7       9     7       8     50       9     7       8     50       9     7       8     50       9     7       8     50       9     7       8     50       9     7       8     50       9     7       8     50	6.5 7.0 Black Sand (Sewer Odar) (Wet) 8.0' Gray Sand Gray Brown Sand, little F gravet, (wet) 10.0'	-	Р4н4 втех 6-8		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Gray Brown sand and Gravel (unet) Brown and Black prevel med sand trace silt (slight 0 do-)				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same				
- 18 10 9 19 8 20 6	Same		ν.		
NDARD PENETRATION TEST	SUMMARY Eill 0-6.5 Sand der	- ve ( 8.0 - 52			

Driller: <u>l</u> In <del>spe</del> ctor	Harry : W.	Lyon D.L	illey	- ENGINEERING-SCIENCE - DRILLING RECORD	BORING NO. W Sheer 2 of		
Rig Type: <u>CM E 45 - HTU</u> Drilling Method: <u>H5 A - 5.5</u>				PROJECT NAME Wall Replacement PROJECT NO.	Location		
GROUND WATER OBSERVATIONS			RVATIONS	Weather:			
Levei	·	•		Date/Time Course	Plot Plan		
Time				Date/Time Start	-		
Date				Date Time Finish.			
Photovno i Je Rosting (	LIL Dop	k J.	SPT	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT	
	2		6	Brown and Black Sand and gravel			
0	2	2	7	(No ador) trace Bilt			
<u> </u>	2.	2	7	- same			
			$-\frac{7}{7}$				
5		<u> </u>	<u>C</u>	some (Slight Odo.)			
	123	5	5	4			
3	2.0	·	5				
	27		8				
				Brown and Bluch Gravel, some Filther sand			
3	-28		8	Same Silt (Sight od	·-)		
	29		8				
3	30		13	36'			
	31	_	6	30' Gray Goravel, some samel, tree silt- (slight odor)			
			13	(slight oder)			
	32						
	33	-	12	33			
.7	34	ιo	13				
	35		8	Gray FAC Gravel & Fire to Coorse sand little cili			
			10	little silt (slight odor)		•	
	36	30	7	Same (No Oder)			
	37	1	9				
2	38	30	7 8	Same		•.	
	39		9				
			6				
	40		4				
NDARD	PENETR			SUMMARY	((		

iller: <u>Harry Lyons</u> Aspedor: W. D. Lilley	ENGINEERING-SCIENCE DRILLING RECORD	BORINGNO. WB- C
Rig Type: CME 45-4TV		Sheer 3 of 3
Drilling Method: HSA - SS	PROJECT NAME Wall Replacement PROJECT NO.	Location
GROUNDWATER ORSER VATIONS		
Water Level	Weather:	Ditas Di
Time	Date/Time Start	Plot Plan
Date		.
	Date Time Finish.	
Phonovao i Seconda Sacapie de SPT Romana III Depuis Racevary SPT	FIELD IDENTIFICATION OF MATERIAL	
0 1		WELL SCHEMATIC COMM
41 .2		
1.2 42 10 2		
1.2 42 10 2	3	
43	Brown Silt and sand, little F-C grand	
7	43.5	
2 44 15 4		
4 4 1	Gray Smal and Gravel, little Bilt	
13 5	Stavelj und bitt	
2 146 35 5		
Y I I	Same	
1 40		
		1
	Same	
8	> ofre	
49 7		
50 21 8		
	2ame	
Ci Wo H		ļ
13		
52 35 22	52'	
53 11	ing sandy gravel, sume silt (+ill)	
		ł
94 12		
55 16		
56 23 R		Putt
	oring terminated at 56	BTEY
		CN- 54-56
ARD PENETRATION TEST		
IT SPOON A = AUGER CUITING	SUMMARY	

Contractor: Worth star Driller: Harry Lyon 5	- ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W	<u>B-6</u>	
Inspector: N.A. Sm. H Rig Type: Cm E 45- ATV Drilling Method: H3 A - SS	PROJECT NAME Wall Replacement PROJECT NO.	Sheet 1 of 4 Location NMPC Parking		
GROUNDWATER OBSERVATION Whiter Level . Time Date	Date/Time Start $\frac{4}{20}$ / $\frac{95}{2:55}$	Plot Plan Onon 2 X wal Lot?	nge Cree   (× × × M × 0-6	
Phonenes   Samples   Samples   R. Reading ID. Dopos   Reasonary   S		NMPC		
2.1 50 12	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT	
1         4 3           2 - 5!         2         62 - 5         40           3         3         3         3	Links Brown	Bentonita	TCL/TRI MS/MSD Surgle 0-6	
2.4 4 75 27 18 5 15	- Same	Convent		
2.2 6 C25 12 .2 7 6 C25 12 . 2 6	S.S Durk brown Silt, some Fine Sand, trace brich,			
8         2.5         7           9         8         7           5         1         6         75         6	s are.		x	
11     6       2     2       5.9     12       13     8	Same (Strined 10.5 - 14.75) (ode-) Same (moist to wet)			
9 1 4 75 7 1 5 1 1 6 75 1	15' Duk sny sild, Trace sand, trace clay		атал ран См — 14-16	
1 7 3 4 1 8 87.5 3	( Stained 16-17) ) Same		~	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	20' (thick black Free phase) Gray brown sand, little silt, little gravel (mired)			
NDARD PENETRATION TEST	SUMMARY Fill 0-5.5. Such 5			

ionimator: North star Driller: <u>Harry Lyon s</u> nspector: N.A. Sm. +2	- ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 2 of	
ilio Type: <u>CME 45-ATU</u> Drilling Method: <u>HSA - SS</u>	PROJECT NAME Wall Replacement	Location	·····
GROUNDWATER OBSERVATIONS	Weather;		
evel		Plot Plan	
ime	Date/Time Start		
110 III	Dato Time Finish.		
contrast ( Samples Samples 6 SPX contrast LDA Depth Researcy SPX	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT
2    6	Fray brown sand, little silt, little Gravel . (maist)		
25 22 12.5 24	- 5 AN -		
20	(Sheen 22-24') (wer)		
2 4 25 14	Same (Brow Free phase 24-26)		
257 6 74 26 3257 6	- Gray Sand, some gravel (wet) (Sheen)		
2 7 6 6 24 2 8 2 5 9 Nor	Same (Sheen & Odo-)		
2 9 4 5 3 6 5 6 12 1 5	Same (heavy sheen , little Free grace)		BTEY PA CN - Lib Sangle
3         1         9           10         10         10           2         3         2         50         10           3         3         12         12	Gray Sund, some gracely little silt (Free 8 have)		30-35
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Same (heavy sheen 34.3-38.25)		
+ 36 We 16			
37 10 4 30 25 19 3	Same (No stean)		-2
396			
40 50 6 33 14	Same (Sheen)		
NDARD PENETRATION TEST	SUMMARY	1	

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Driller: North star Driller: Harry Lyons Inspector: NA Sm. 12					ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W		
Rig Type: <u>CME45-ATU</u> Drilling Method: <u>HSA-SS</u> GROUNDWATER OBSERVATIONS Water			- 5	5	PROJECT NAME Wall Replacement Location			
			SERVA	TIONS	Weather:	Plot Plan		
Level Time					Date/Time Start			
)alo		••••••••••••••••••••••••••••••••••••••			Date Time Finish.			
tonevar i S Gestag	in Sea	-ia	Remain	SPT	FIELD IDENTIFICATION OF MATERIAL			
55.9			50	2.3		WELL SCHEMATIC	COMMENT	
	4			14	Gray Sand , some smull (Sheen )			
 	4	2	NR	9 8				
			<u>10 II</u>	8				
	<u> </u> Y	3		8				
59	4	+ -	37,5	8 7				
			11.2	4	Same (Trace Shern)			
	4	5		4				
10				Ş				
<u>.                                    </u>		3	<u>()</u>	_75	5 arc			
	4 -	>'		6				
5.5	110	$-\Gamma$		9	a l'alle s'Irte		BTFX PA	
<u>&gt; · &gt;  </u>	48	<u> </u>	50	14	Gray Sand, some gravel, little silt		Sunce	
	ų c			6			48-50	
		·		7			•.	
5.9	5	3 61	1.5	2	mySand, little Smull, littlesilt (No share)			
	5			8				
				16				
<u>.1. </u>	5 2	62	5	10	Gray Sand, some silt, little gravel			
	53			8				
		-						
.3	54	20		30	Same			
	55		·	10	-		-	
	<u> </u>			8				
s –	56	37	2,5	8	Sance			
				<u>Z</u>				
	15 7			3				
8	58	12	.5	9	5.00		••	
				6	S. er men			
	59			5				
3	60	120		$\frac{2}{7}$	<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>			
		1			any Sand, some Sit, some gravel			
		1	and the second second	Ч				
	PENETI				SUMMARY	1		
SPLITS	SPOON /	\ <b>= A</b>	1101672	CITT	NGS C=CORED			

udller: _	Harr	V Ly N.A.	2 40		ENGINEERING-SCIENCE DRILLING RECORD	BORING NO. W Sheet 4 of	<b>B-</b> 6 4		
Inspector: N.A. Smith Rig Type: CME 45-4-TV Drilling Method: HSA - 35					PROJECT NAME _ Wall Replacement PROJECT NO.				
GRO Water Level	<u>אסאט</u>	ATER O	BSERVA	TIONS	Weather:	Plot Plan			
lime					Date/Time Start	-			
Date					Date Time Finish.				
	<u>зана</u> ЦЦ	Saca pia Depen	Lunn	y 19T	FIELD IDENTIFICATION OF MATERIAL	WELL SCHEMATIC	COMMENT		
5 25		61	20	<u>с</u> 14	Gray Sund, some silt, some gravel				
8.2		<u> </u>	<u></u>	ι <u>ο</u> 5 14					
				(0	Sane				
		63		5-/3					
11		64	50	-			<b>₽</b> К1.		
1		65		14	Gray squel, some silt, little grand		PAH Sonjeli		
55		66	27.	40			, ,		
				13	San				
		67	. <u></u>	<u>।५</u> ८५			Que to c		
(.9		68	60	21	Sance		втех, РАН		
		69		16 18			CN-		
		70	 	24	Boring terminated at 701		hb Sangle		
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		1							
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### Appendix A

Well Construction Logs and Soil Boring / Test Pit Logs

#### APPENDIX A ELEVATIONS WELL CONSTRUCTION LOGS AND SOIL BORINGS/TEST PIT LOGS

#### FINAL REMEDIAL INVESTIGATION REPORT NATIONAL GRID ERIE BOULEVARD FORMER MGP SITE SYRACUSE, NEW YORK

	Elevations (f	eet, NAVD 88)		Ground Surface	
Location ID	Measuring Point	Ground	Location ID	Elevation (feet, NAVD 88)	
MW-1S	390.82 (thru 4/25/08)	391.23 (thru 4/25/08)	SB-1	390.9	
	390.76 (after 4/25/08)	391.35 (after 4/25/08)	SB-2	391.8	
MW-1D	390.49	391.1	SB-3	393.6	
MW-2	391.16 (thru 4/25/08)	391.45 (thru 4/25/08)	SB-4	388.2	
	391.35 (after 4/25/08)	391.95 (after 4/25/08)	SB-5	387.1	
MW-3S	395.26	395.7	SB-7	392.3	
MW-3D	395.68	395.7	SB-8	387.3	
MW-4S	388.74	389.5	SB-9	391.3	
MW-4D	389.12	389.5	SB-10	388.7	
MW-6	400.71	398.2	SB-11	391.1	
MW-7S	388.22	388.4	SB-12	389.6	
MW-7D	387.98	388.3	SB-13	388.7	
MW-8S	398.06	398.4	SB-14	388.6	
MW-8D	398.09	398.4	SB-15	389.4	
MW-9D ₁	397.92	398.3	SB-16	388.4	
MW-9D ₂	398.10	398.5	SB-17	387.1	
MW-10S	394.37	394.8	SB-18	389.8	
MW-10D	394.49	394.8	SB-19	387.6	
MW-11D	394.50	392.2	SB-20	387.2	
MW-12D	399.24	399.6	SB-21	389.9	
MW-13D	399.05	397.1	WB-1	374.6	
MW-14D	398.27	396.4	WB-2	373.9	
MW-15D	398.82	399.4	WB-3	376.4	
MW-16D	398.80	399.3	WB-4	374.6	
MW-17D	387.63	388.2	WB-5	374.9	
MW-18D	376.31	376.7	WB-6	389.0	
MW-19	390.73	391.1	TP-1	389.9	
PZ-1	376.99	374.1	TP-2	389.5	
PZ-2	378.70	376.0	TP-2A	389.2	
PZ-3	393.94	392.1			

#### Notes:

- 1. NAVD 88 = North American Vertical Datum of 1988, based on NGS Station S-34, elevation 405.340 feet.
- 2. Wells MW-1S and MW-2 were modified on April 25, 2008 so that the cover for each well is flush with new asphalt pavement installed in Fall 2007. Casings were extended and new curb boxes were installed. Wells were resurveyed on May 12, 2008.

# ARCADIS

Soil Boring Logs

# SAMPLE/CORE LOG

Boring/W	'eli	SB-1	Project/No.	E	erie Blvd. PSA/IRM	AY0207.001		Page	1	of	2
Site											
Location	Syra	cuse, NY		Drilling Started	8/8/95		<b>D</b> (1)				
				Dramg oranted	676795		Drilling C	Completed	<u> </u>	8/8/95	
Total Dep	th Drilled		50	Hole feet Diame		inches		Sample/ g Device	Sp	lit-Spoo	n
Longth an	d Diameter										
of Coring			2'x 2" (2'x	3" for lab sample)			6	• . •			
			······			·····	Sampling	interval	2	2	feet
Land-Surf Elevation	face		390.9	feet	XSurveyed	Estimated		Datum		(p 93 19	29
Drilling F	luid Used	·····	Water			Drilling	Method	H	ollow Stem	Auger	
Drilling C	ontractor		Parratt-Wolff	, Inc.	Driller	Brian Wate	rs	Helper	Rick Nav	atka	
Prepared By	<u>S. B</u>	lackmer		·····		Hammer Weight	140 lb.	Hammer Drop	30		inches
OVM	Sample/Cor (feet below lar From		Core Recovery (feet)	Time/Hydrau Pressure or Blows per 6 inches	r						
				Inches		Sa	mple/Core	Description			
0,0	0.0	0.5			Asphalt,						
0.0	0.5	2.0	1.5	9,7,8	Fill: Brown to re	eddish brown fine	Sand, some	silt, some grav	el, (rock fra	gments o	f
					various composi	tion. cinders, coa	l) dev				
0.0	2.0	4.0	0.5	8,7,3,1		ck fragments, cine		k), little sand.	dry.		
0.0	4.0	6.0	0.5	5,3,6,7		, damp in some zo					
0.0	6.0	8.0	2.0	4,3,3,4	Fill: Gravel (con	d. cinders and ash	i, brick fragm	ents and rock)	. some sand	, trace sil	t,
·····			· ·		dry (damp in zoi	ncs).					
0.0	8.0	10.0	0.75	15,22,7,4	Brown, very find	e Sand, some grav	vel, trace silt,	damp.			
0.0	10.0	12.0	0.2	8,4,3,5	Same as above.						
0.0	12,0	14.0	0,2	5,3,2,1	Same as above;	wet.					

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0.0 14.0 16.0 2.0 Brown Silt, some clay, trace fine sand, trace fine gravel, damp to wet. 1,2,8,13 0.0 16.0 18.0 0,3 80,35,36,22 Top 1": like above; Bottom 2": Gravel, little silt, rock flour, dry. 2.9 18.0 20.0 1.0 8,18,15,10 Brown very fine to fine Sand, some silt, some gravel, trace clay, damp. 0.2 20 22 1.0 15,26,28,14 Brown silty Sand and Gravel, damp (with wetter zones in more gravelly zones) 0.0 22 24 1.2 24,14,14,18 Same as above with trace clay, Bottom 7" wetter than top 7" but not saturated. 9.0 24 26 0.8 14.15,16.12 Gravel, little sand, trace silt, strong petroleum hydrocarbon odor, wet, little sheen 7,5 26 28 0.5 18.11.12,6 Gravel (finer than above) and Sand, trace sill, strong odor, sheen, trace visible petroleum (brownish liquid). 1.6 28 30 1.5 9,7,6,5 Same as 26' to 28', Ð

GERAGHTY & MILLER, INC.

# SAMPLE/CORE LOG (Cont.d)

Boring/Well SB-1

Prepared by S. Blackmer

	Sample/Core Depth (feet below land surface)		Core	Time/Hydraulic Pressure or	
00М	From	To	Recovery (feet)	Blows per 6 inches	Sample/Core Description
3.0		32.0	0.4	5,6,7,5	Gravel and fine to coarse Sand, trace silt, slight odor, sheen, wet.
4.5	32.0	34.0	1.0	7,10,16,14	Gravel and fine to coarse Sand, trace silt, slight odor, sheen, wet.
3.5	34.0	36,0	1.0	9,7,5.6	Gravel and Sand, trace silt, wet, petroleum stringers throughout.
12.0	36.0	38.0	0.5	6,6,6,7	Gravel and Sand, trace silt, wet, petroleum stringers in tip.
0.0	38.0	40.0	1.75	8,11,6,11	Gray-brown, medium to coarse Sand and Gravel, trace sitt/clay.
0.1	40.0	42.0	1,0	6,7.8,12	Gray-brown, coarse Sand and Gravel, wet, trace petroleum "bubbles", trace sheen.
0.2	42.0	44.0	0.75	12,12,15,12	Same as above, but petroleum absent.
1.9	44.0	46.0	2,0	3,6,7,8	Gray-brown Sand and Gravel, little silt, wet, slight sheen, faint odor.
1 <u>7.0</u>	46.0	48.0	1.5	6,6,8,31	Same as above, but stronger odor and petroleum in tip.
3.2	48.0	50.0	1.0	24,29,27,28	Gray-brown Sand and Gravel, little to trace silt, wet, sheen, faint odor.
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### SAMPLE/CORE LOG

Boring/Wel	I	SB-2 Project/	/No	Erie Blvd. PS	A/IRM	AY0207.001		Page	<u> </u>	2
Site Location	Syracu	se, NY	Drilli	ng Started8/15/	95		Drilling Co	ompleted	8/15/9	95
Total Depth	Drilled	43.5	fect	Hole Diameter	8	inches	Type of Coring	Sample/ Device	Split-Sp	oon
Length and of Coring I		2' x 2"	(2' x 3" for la	ab sample)			Sampling I	Interval	2	feet
Land-Surfa Elevation		391.8	feet	XSurve	eyed	Estimated		Datum	NAVD 38	
Drilling Flu	iid Used	None				Drilling I	Method	Но	llow Stem Aug	er
Drilling Co	ntractor	Parrati-	Wolff, Inc.		Driller	Brian Water	rs	Helper	Layne Pech	
Prepared By	S. Blac	kmer		<del></del>		Hammer Weight	140 lb	Hammer Drop	30	inches
ΟνΜ	Sample/Core (feet below land From		Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6						
0.0	0.0	0.5		inches	Asphalt.		Sample/Cor	e Descriptio	11	
0.0	0.5	2.0	0.5	7,9-7		and and Gravel, d	in loose			
0.0	2.0	4.0	1.0	3-5 , 9-15		to above but more		trace silt		
0.0	4.0	6.0	1.2	7-7 , 6-4		o reddish brown S			e silt. dry to dam	n.
0.0	6.0	8.0	1.0	2-2 , 3-3		ery fine to coarse				
						ly loose, dry to da				
0.0	8.0	10.0	0.75	12-26 , 25-14	Brown v	very fine to coarse	Sand, and Gr	ravel, dry,loos	e	
0.0	10.0	12.0	1.2	10-14 , 23-12	Same as	above.				
0.0	12.0	14.0	1.0	15-9 , 11-11	Same as	above.				
0.0	14.0	16,0	0.2	17-12 , 4-3	Same as	above, but damp.			·····	
0.0	16.0	18.0	1.0	13-9,11-8	Same as	above, dry with d	amp zones.			
	18.0	20.0	0.0	50/.2	No reco	very,	····			
0,0	20.0	22.0	0.25	29-18, 12-12	Gravel	and brown Sand, di	ry.			
0.0	22.0	24.0	1.0	22-22, 12-14	Gravel (	(various sizes, con	npositions, an	d textures).		
					and very	y fine to coarse sa	nd, dry excep	t fpr bottom 2'	wet.	
0.0	24.0	26.0	0.75	9-19, 11-9	Gravel,	some sand, little t	o trace fines (	silt and clay),	wet, faint sheen,	no odor,
0,0	26.0	28.0	0.5	13-11 , 8-9	Gmvel (	(various sizes, con	npositions), li	ttle sand, trace	silt and clay,	
	<u> </u>				wet, fai	nt sheen, faint peti	roleum hydro	carbon odor.		

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# SAMPLE/CORE LOG (Cont.d)

SB-2

Boring/Well

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Prepared by S. Blackmer

	Sample/Co (feet below la	ore Depth nd surface)	Core Recovery	Time/Hydraulic Pressure or Blows per 6	
OVM	From	To	(feet)	inches	Sample/Core Description
0.0	28.0	30.0	2.0	14-8 , 8-7	Gray-brown very fine to coarse Sand, some fine gravel, some to little silt.
0.0	30.0	32.0	1.0	8-13, 10-11	Gray-brown very fine to coarse Sand, some gravel, little fines (silt and clay), wet, no sheen.
0.0	32.0	34.0	1.2	6-7 , 9-9	Gravel (various sizes and compositions), some very fine to coarse sand, trace silt
					and clay, wet.
0.0	34.0	36.0	0.6	10-11, 12-12	Brown Sand and Gravel, wet, loose, trace silt and clay.
0.0	36.0	38.0	0.75	6-5 , 4-8	Gravel (fine to coarse, various compositions, sub-rounded), little to trace
					sand, wet, loose.
0.0	38.0	40.0	2.0	9-12,9-9	Gravel and brown fine to coarse Sand, little to trace silt and clay, wet, loose.
0.0	40.0	42.0	0.3	13-15, 22-22	Same as above.
0.0	42.0	44.0	0.5	6-11 , 50/.4	Gravel (various compositions, fine to coarse), trace sand, wet, loose.
					Refusal at 43.5' (very large boukler?). End hole.
				······································	
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			· · · · · · · · · · · · · · · · · · ·		
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### SAMPLE/CORE LOG

Boring/Well	SB-3	Project/No.		Erie	Blvd. PSA/IRN	4 AY	/0207.001		Page	<u> </u>	of	2
Site Location	Syracuse, NY	······	Drilli	ng Started -	8/14/95	<del></del>		Drilling Co	mpleted	8/1	4/95	
Total Depth Drilled	<del> </del>	50	feet	Hole Diameter		8	inches	Type of S Coring	•	Split	Spoon	
Length and Diamete of Coring Device	r 	<u>2' x 2" (2' x</u>	3" for la	ab sample)		<u> </u>		Sampling Ir	nterval	2	1	feci
Land-Surface Elevation	<b></b>	393.6	feet	Ľ	X Surveyed		Estimated		Datum	NAVD NGV	98 9-1929	<u>~                                    </u>
Drilling Fluid Used		None					Drilling	Method .	Ho	ollow Stem A	uger	
Drilling Contractor		Parratt-Wolff	<u>Inc.</u>		Dri	ller	Layne Pech	l	Helper	Brian Wate	s	
Prepared By	S. Blackmer	<u></u>					Hammer Weight	140 іь	Hammer Drop	30		inches

Sample/Core Depth (feet below land surface)		Core Recovery	Time/Hydraulic Pressure or Blows per 6			
OVM	From	To	(feet)	inches	Sample/Core Description	
0.0	0.0	0.5		·····	Asphalt.	
0.0	0.5	2.0	1.0	13,17,8	Gravel (natural and brick), and brown sand, dry.	
0.0	2.0	4.0	1.75	10.8,7,6	Top 3": Like above. Bottom 16": Brown very fine Sand, some gravel, little	
					silt, little coarse sand; top 6°dry, bottom 10° damp.	
0.0	4.0	6.0	1.75	3,6,10,22	Brown to dark brown very fine Sand, some gravel. little silt, trace clay,	
			-	<u> </u>	trace coarse sand, dry with damp zone in middle of sample.	
0.0	6.0	8.0	1.5	28,20,23,19	Brown Sand and Gravel (various compostions, sizes, and textures), dry.	
0.0	8.0	10.0	1.0	9,16,12,9	Brown very fine to coarse Sand and Gravel, little to trace silt, top 2" damp,	
					the rest of sample dry.	
0.0	10.0	12.0	1.0	23,18,50/0.4	Same as above, dry.	
0.0	12.0	14.0	1.3	9,13,14.10	Same as above, dry to damp.	
0.0	14.0	16.0	1.5	16,35,31,14	Brown to red-brown very fine to coarse Sand and Gravel, trace silt, dry.	
0.0	16.0	18.0	0.5	22,72	Brown very fine to coarse Sand and Gravel, dry.	
0.0	18.0	20.0	0.4	23,14,14,10	Brown very fine to medium Sand, some gravel, trace silt, dry.	
0.0	20.0	22.0	0.5	26,25,12,12	Gravel (gray siltstone, angular, fine to coarse), little brown very	
					fine to coarse sand.	
0.0	22.0	24.0	1.0	11.26.50/0.3	Brown very fine to coarse Sand, some gravel, trace silt, dry.	
0,0	24.0	26.0	1.5	22,22,11,13	Top 8": Gravel (various compostions and sizes), trace sand, dry.	

### SAMPLE/CORE LOG (Cont.d)

Boring/Well SB-3

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Prepared by S. Blackmer

	Sample/C (feet below la		Core Recovery	Time/Hydrauli Pressure or Blows per 6	ic
OVM	From	То	(feet)	inches	Sample/Core Description
0.0	. 24.0	26.0	(cont.)		Bottom 10*: Brown very fine to medium Sand and Gravel, little to trace silt and clay, wet.
1.0	26.0	28.0	0.75		Same as above.
0.7	28.0	30.0	1.0	38,8,6,8	Top 6": Brown very fine to medium Sand, little silt, trace gravel/coarse sand. Bottom 6":
					Gravel, some to little sand, trace silt and clay, wet, sheen, faint odor.
0.0	30,0	32.0	0.75	10.14.15.16	Brown Sand, little silt. little gravel, wet, sheen more evident than above.
0.0	32.0	34.0	1.0	38.23.21,17	Gravel and fine to coarse Sand, trace silt and clay, wet, faint odor, faint sheen,
0.0	34.0	36.0	1.5	33,43,44,39	Fine to coarse Sand and Gravel (various compositions), wet, trace sheen.
0,0	36.0	38.0	0.75	24,18,14,12	Gravel, some sand, trace silt and clay, wet, no odor, no sheen.
0.0	38.0	40.0	1,0	8,4,3,2	Brown to gray fine to course Sand, some gravel, wet, trace silt and clay.
0.0	40.0	42.0	0,75	5,6,8,11	Same as above.
0.0	42.0	44.0	1.0	5,8,14,9	Same as above.
0.0	44.0	46.0	2.0	31,16,14,13	Brown to gray Sand, some gravel, little silt, trace clay, fairly compact.
0.0	46.0	48.0	1.5	13,14,17,13	Similar to above - more gravel.
0.0	48.0	50.0	1.5	18.21,19,19	Brown-gray Sand and Gravel. little to trace silt, wet, less compact than above.
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# SAMPLE/CORE LOG

Boring/Well -	SB-4	Project/No.	•••	Eria	Blvd. PSA/IRM	AY0207.001	<u> </u>	Page	<u> </u>	2
Site Location	Syracuse, NY	- <u></u>	_ Drillir	ng Started	8/23/95		Drilling Co	mpleted		/95
Total Depth Drilled	·	50	feet	Hole Diameter		inches	Type of S Coring	•	Split-S	poon
Length and Diameter of Coring Device	<del></del>	2' x 2" (2' x	: 3* for la	b sample)			Sampling L	nerval	2	feet
Land-Surface Elevation -		388.2	fcet		XSurveyed	Estimated		Datum	NAVD 88 NGVD	<del>192</del> 9
Drilling Fluid Used		None				Drilling	Method .	Но	ollow Stem Au	ger
Drilling Contractor		Parratt-Wolff	f, Inc.		Drill	er Brian Wate	rs	Helper	Layne Pech	
Prepared By C	C. Moul					Hammer Weight	140 lb	Hammer Drop	30	inches

. (	Sample/Core D (feet below laud s		Core Recovery	Time/Hydraulic Pressure or Blows per 6	
OVM	From	То	(feet)	inches	Sample/Core Description
0.0	0.0	0.5			Asphalt.
0.0	0.5	2.0	0.8	8,17-13	Top 5": Brown, silty Sand and gravel, moist. Bottom 4":Yellow-brown
		<u>.</u>			Sand, trace clay, moist, no odor.
0.0	2.0	4.0	0.8	6-11 , 7-6	Top 4": Red-brown Sand and gravel (broken brick), dry.Bottom 5":
					Yellow-brown Sand, trace clay, dry.
0.3	4.0	6.0	0.2	4-4 , 2-1	Red-brown Sand and gravel (broken brick), dry, fragment of
					red sandstone.
1.3	6.0	8.0	0.5	1-7 , 8-6	Dark brown Sand, little sand and silt, moist, odor.
2.5	8.0	10,0	1.5	4-5 , 5-9	Top 12": Black clayey Silt, moist, odor, Bottom 6": Black, silty Sand,
2.4					moist, odor,
4.7	10.0	12.0	1.2	3-3 , 4-6	Top 6": Black-brown, clayey Silt, little sand, moist, odor. Bottom 8":
					Black, sandy Silt. trace clay, moist, odor.
22.3	12.0	14.0	1.0	4-4 , 4-6	Black Sand, silt, trace clay, moist, odor, thick petroleum stringers.
25.0	14.0	16.0	2.0	1-1 . 2-1	Black and dark brown, silty Clay, little fine sand, moist, odor.
23.3	16.0	18.0	2.0	3-3 , 3-6	Top 6*: Black fine sandy Silt, moist, odor, petroleum droplets; bottom 18*:
					Dark brown to brown, fine, silty Sand, trace clay, odor, moist, no petroleum.
25.2	18.0	20.0	1.3	7-16 , 12-11	Black, fine, sandy Silt, moist, odor, petroleum stringers and droplets.
20.3	20.0	22.0	1.0	6-9 . 13-50/.2	Black Sand and Gravel, little silt, trace clay, wet, odor.

GERAGHTY & MILLER, INC.

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Boring/Well SB-4

Prepared by C. Moul

	Sample/Core Depth (feet below land surface) /M From To		Core Recovery	Time/Hydraulic Pressure or Blows per 6	
OVM	From	To	(feet)	inches	Sample/Core Description
	22.0	24.0	0.0	50/.2	No recovery.
27.5	24.0	26.0	0.7	13-13 , 12-14	Black Sand and gravel, little ailt and clay, wet, odor, petroleum.
24.6	26.0	28.0	0.6	7-15 , 11-11	Same as above.
25.0	28.0	30.0	0.3	12-9 , 2-8	Same as above.
28.7	30.0	32.0	0.7	6-9 , 13-8	Same as above.
23,6	32.0	34.0	2.0	8-9, 17-17	Same as above.
25.0	34.0	36.0	1.0	6-9, 11-13	Black Sand and Gravel, some silt and clay, wet, odor, petroleum.
27.4	36.0	38.0	1.5	6-10 , 11-15	Same as above.
19.3	38,0	40.0	1.0	18-8 , 9-8	Same as above.
19.0	40.0	42.0	0.7	6-9, 15-11	Saine as above.
15.0	42.0	44.0	2.0	18-12, 19-21	Dark gray-brown Gravel, little sand, trace silt, odor, petroleum, wet.
21.1	44.0	46.0	2.0	8-8-, 9-8	Top 18": Black Sand and Gravel, little silt and clay, wet, odor, petroleum.
					Bottom 6": Brown-gray, clayey Silt, some sand, moist, petroleum in pockets,
20.2	46.0	48.0	1.5	7-7 , 9-8	Black Gravel, little silt and clay, wet, odor, petroleum, Brown-gray, clayey
					Silt, with some sand in tip.
14.7	48.0	50.0	1.0	7-12 , 19-11	Black Gravel, little silt and clay, wet, odor, petroleum droplets. Brown gray clayey
					Silt, with some sand in tip.
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# SAMPLE/CORE LOG

Boring/Well	SB	-5Project/No.		Erie E	Blvd, PSA/IRM	AY0207.001		Page	of	2
Site Location	Syracuse,	NY	Drilli	ing Started	8/21/95	·····	Drilling Co	mpleted	8/21/5	95
Total Depth Dril	led	50	feet	Hole Diameter		inches	Type of a Coring	•	Split-Sp	oon
Length and Dian of Coring Device		2' x 2* (2'	x 3* for 1	ab sample)			Sampling I	nterval	2	feet
Land-Surface Elevation		387.1	feet		X Surveyed	Estimated		Datum	NAVO NGVD	
Drilling Fluid U	sed	None				Drilling	Method	He	ollow Stem Aug	er
Drilling Contract	lor	Parratt-Wol	ff, Inc.		Driller	Layne Pech		Helper	Brian Waters	
Prepared By	C.Moui					Hammer Weight	140 lb	Hammer Drop	30	inches
	ample/Core D below land si		lore	Time/Hydra Pressure o						

ОУМ	VM From To		Core Recovery (feet)	Pressure or Blows per 6	
				inches	Sample/Core Description
0.0	0.0	2.0	1.3	5,10-26	Asphalt (0 - 0.5'); Brown clayey Silt, some fine to medium gravel, moist.
0.0	2.0	4.0	0.7	16-17, 10-19	Brown-gray Sand and Gravel, little clay and silt, dry.
0.0	4.0	6.0	1.2	6-13 , 9-7	Top 6": Brown-gray Sand and Gravel, some clay and silt, dry.
					Bottom 8*: Brown-yellow silty clay, trace fine to medium gravel, moist.
1.1	6.0	8.0	1.0	5-5 , 8-19	Brown to brown-gray clayey Silt, some Sand and Gravel, moist.
4.8	8.0	10.0	1.1	6-3 , 5-5	Top 9": Brown silty Clay, trace fine sand, moist. Next 4": Red brown Gravel,
				······	dry. Bottom 1*: Black organic silty Clay, moist, odor.
12.8	10.0	12.0	0.5	10-9 . 5-4	Black silty fine Gravel, little clay, moist, odor.
10.9	12.0	14.0	2.0	2-3 , 2-3	Top 1': Black Sand and Gravel, some silt and clay, moist, odor.
					Bottom 1': Black clayey Silt, trace fine to medium gravel, moist, odor.
10.6	14.0	16.0	0.1	4-1 , 2-1	Black silty clay, wet, odor,
15.0	16,0	18.0	1.8	1-1 , 11-11	Top 18*: Brown-gray clayey silt, odor, sheen around outside of
					profile. Bottom 2": Red-brown to black, Sand and Gravel, little
					silt and clay, wet, edor.
15.8	18.0	20.0	0.7	6-14 , 22-17	Brown-gray Sand and Gravel, wet, odor, petroleum in pockets.
22,1	20.0	22.0	1.7	14-27, 14-15	Brown-gray Sand and Gravel, little silt and clay, moist, odor,
			_		petroleum in pockets.
23.5	22.0	24.0	0.5	9-11, 12-12	Black Sand and Gravel, little silt and clay, moist, odor.

SB-5

Boring/Well

Page 2 of 2

Prepared by C. Moul

	Sample/Core Depth (feet below land surface)		Core Recovery	Time/Hydraulic Pressure or	
OVM	From	To	(feet)	Blows per 6 inches	Sample/Core Description
14.3	24.0	26.0	0.5	8-5,7-4	Black-gray Sand and Gravel, trace silt and clay, wet, odor, petroleum in pockets
16.4	26.0	28.0	0.5	6-7,8-7	Black Gravel (cobble fragments), wet, odor, pétroleum stringers.
22.8	28.0	30.0	0.5	7-7,8-5	Black Gravel (like above), little silt and clay, wet, odor.
21.1	30.0	32.0	0.5	2-8,16-11	Black Gravel (like above), trace silt and clay, wet odor.
24,0	32.0	34.0	1.5	12-11, 10-7	Top 6": Same as above.Bottom 12": Brown Sand and Gravel, some silt
					and clay. wet, odor.
22.4	34.0	36.0	1.5	9-14,7-6	Top 14": Black Gravel, trace silt and clay, wet, odor, sheen.
					Bottom 4": Rock fragments (shale).
32.2	36.0	38.0	0.7	6-12, 30-13	Brown-gray Gravel, some silt and clay, wet, odor, petroleum in pockets.
28.9	38.0	40.0	0.3	25-17, 10-10	Rlack Sand and Gravel, trace silt and clay, wet. odor.
22,4	40.0	42.0	1.2	9-8,5-4	Top 12": Brown-gray Sand and Gravel, trace silt and clay, wet, odor.
		······································			Rottom 2": Gray fine sandy Silt, some clay, trace fine to medium gravel, wet, odor,
					petroleum dropiets.
18.0	42,0	44.0	1.0	4-7 , 8-7	Top 10": Black Sand and Gravel, trace silt and clay, wet, odor.
					Bottom 2*: Gray Sand, some silt and clay, odor, wet.
18.2	44.0	46.0	1.2	9-5 , 7-4	Top 12": Black Sand and Gravel, trace clay and silt, wet, odor. Bottom 2":
		·····			Gray Sand, some clay and silt, wet, odor, petroleum in pockets.
12.9	46.0	48.0	0.5	6-8 ,6-12	Same as above.
10.9	48.0	50.0	1.5	3-5 , 5-7	Top 12": Gray Sand, little silt and clay, wet, odor. Bottom 6": Gray sandy, silty
<u> </u>					Ciny. wet. odor.
		·····			End hole.
		······································			·
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# SAMPLE/CORE LOG

B	oring/Well		SB-7 Pro	oject/No.	<del></del>	Erie Blvd.	PSA/IRM A	Y0207.001		Page	1 0	1 of 3	
	te ocation	Syracus	e NY		Delli	ing Started	8/15/95			Drilling Completed		8/23/95	
_							0112193		Drilling C	ompleted	8/2	3/95	
Т	otal Depth I	Drilled	50		feet	Hole Diameter	8	inches		Sample/ Device	Split-	Spool	n
L	ength and D	Diameter											
of	Coring De	vice	2'	x 2* (2' >	3" for	lab sample)			Sampling	Ínterval	2		feet
L	and-Surface												
E	levation		39	2.3	feet	XSu	rveyed	Estimated		Datum	NAVD •NGV	88 <del>D-192</del>	9-
D	rilling Fluic	l Used	Nc	one				Drilling	Method	Но	llow Stem A	uger	
Drilling Contractor Parratt-W		rratt-Wolf	f. Inc.		Driller	Brian Wate	rs	Helper	Layne Pech				
Р	repared							Hammer		Hammer			
В		S. Blac	kmer			· · · · · · · · · · · · · · · · · · ·		Weight	140 іь	Drop	30		inches
							Page	3 of 3		-			
		Sample/Co:	re Depth			Time/Hydrauli	2						
		(feet below lar	id surface)		Core	Pressure or							
	OVM	From	To		covery feet)	Blows per 6 inches			Sample/Cor	e Description			
	0.0	0.0	0,5				Asphalt			e Description	A		
	0.0	0.5	2.0		1.0	10 21 16					· · · · · · · · · · · · · · · · · · ·		
					1.0	19,21-16	Brown	meduim Sand and	t Gravel (top 3	-4 inces and b	ottom inch are		_
							more gr	avelly, middle zo	one more sand	y), dry.			
	0.0	2.0	4,0		1.5	11-16 , 26-26	Brown	fine to coarse Sar	id and Gravel.	trace silt, dry,	loose with zo	n <del>cs</del> of	
							сопрас	tion.					
	0.0	4.0	6.0										
-		4.0	0.0		1.4	23-37, 19-13	Brown	lo gray-brown ve	ry fine to coar	se Sand and gi	avel (varying		
							compos	tions), trace silt,	dry.		·····		
	0.0	6.0			1.0	25-22, 17-25	Same as	above.					
-	0.0	8.0	10.0		0.5	65/,5	Same as	· • • • • • • •					
	0.0	10.0	12.0		1.0	32-41 , 50/.4	Same as	s above (browner	- less gray).		·····		
	0,0	12.0	14.0		1.0	24-25 , 41-21	Brown	to gray brown ve	ry fine to coar	se Sand and G	ravel, trace sill	and	
							clay, dr	у.					
	0.0	14.0	16.0		1.2	9-9 , 9-11		s above.					
	0.0	16.0	18.0		0.5	13-19, 9-15	Same a	above, but sligh	tly damp in pl	aces.			
	0.0	18.0	20.0		0.2	4-6 , 50/.4		s above.					
	0.0	20.0	22.0		12	07.7 10.0							
		20.0			1.3	27-7.12-8	Brown	very fine to coan	se Sand and G	ravel, little to t	race silt, mode	rately	
							compac	t. dry.					
	0.0	22.0	24.0		0.5	7-12 , 50/.3	Same a	s above but damp	».				

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SB-7

Boring/Well

Prepared by S. Blackmer

	Sample/C	ore Depth		Time/Hydrauli	c
	(feet below la	and surface)	Core	Pressure or	
OVM	From	To	Recovery (feet)	Blows per 6 inches	CompletComp Days 1 1
					Sample/Core Description
0.0	24.0	26.0	0.3	50/.3	Brown-gray very fine to coarse Sand, some silt, trace clay, trace fine gravel, wet.
					Auger refusal at 24.5'; move hole and attempt to resume sampling at 26'.
					Refusal at 21' at second location. End hole.
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C.Moul

Boring/Well SB-7

Prepared by

	Sample/Core Depth Time/Hydraulic (feet below land surface) Core Pressure or Recovery Blows per 6				
OVM	From	То	(feet)	inches	Sample/Core Description
1.2	24.0	26.0	1.1	12-16 , 16-15	Brown clayey Silt, some sand, wet, odor (wetter at bottom of spoon).
7.4	26.0	28.0	1.5	14-14 , 14-14	Brown clayey Silt, some sand and gravel, odor.
27.5	28.0	30.0	1.2	8-11,11-11	Brown-gray Sand and Gravel, some clayey silt, wet, odor, sheen.
8.4	30.0	32.0	1.3	7-14 , 22-11	Brown-gray clayey Silt, some sand and gravel, wet, odor.
0.0	32.0	34.0	0.5	12-9,9-6	Brown-gray clayey Silt, some sand and gravel, wet, odor, sheen.
0.0	34.0	36.0	0.9	19-13 10-12	Brown-gray Gravel, some clayey silt, wet, odor.
0.0	36.0	38.0	1.5	14-10 , 6-12	Brown-gray Gravel, some modium to coarse sand, trace silt and clay, wet, odor.
0.5	38.0	40.0	0.2	22-28 , 12-13	Brown Sand and Gravel, wet, odor.
0.0	40.0	42.0	0.5	7-8 , 7-13	Brown-gray Sand and Gravel, little silt and clay, wet, slight odor.
0.0	42.0	44.0	1,2	13-8,8-8	Top 6": Same as above. Bottom 8": Gray Gravel, some medium to coarse sand,
ļ					wet. slight odor.
0.0	44.0	46.0	1.5	15-16 , 14-12	Top 10 ": Brown-gray silty Clay, some sand and gravel, wet, slight odor; Bottom
			_		8': Gray Silt, some clay, little sand and fine gravel, slight odor, wet.
0.0	46.0	48.0	0.5	26-26 , 5-5	Gray Gravel (angular limestone fragments), little medium to coarse sand,
					wet, no odor or sheen.
0.0	48.0	50.0	1.0	14-9 , 17-22	Gray clayey Silt, some sand, little gravel, wet, slight odor.
		<u> </u>			End hole.

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# SAMPLE/CORE LOG

Boring/Well		SB-8 Project/	/No	Erie Blvd. PS	a/IRM_A`	Y0207.001		Page	of	2
Site Location	Syracus	e. NY	Drilli	ng Started8/18/9	)5		Drilling Co	ompleted	8/18/95	5
Total Depth I	Orilled	50	feet	Hole Diameter	8	inches		Sample/ Device	Split-Spo	<u>on</u>
Length and D of Coring De		2' x 2*	(2' x 3* for l	ab sample)			Sampling 1	Interval	2	feet
Land-Surface Elevation		387.3	feet	XSurve	yed [	Estimated		Datum	NAVD 8 	8 )29
Drilling Fluid	d Used	None			Drilling Method Hollow Stem Aug					Г <b></b>
Drilling Cont	ractor	Parratt	Wolff, Inc.		Driller	Layne Peck	<u>ı</u>	Helper	Brian Waters	
Prepared By	S. Black	kmer				Hammer Weight	140 lb	Hammer Drop	30	inches
	Sample/Cor (feet below lan		Core Recovery	Time/Hydraulic Pressure or Blows per 6						
OVM	From	<u> </u>	(feet)	inches	- 1		Sample/Core	e Description	1	
0.0	0.0	0.5			Asphalt,	·····				
0.0	0.5	2.0	0.3	10,23-13	Brown-g	ray very fine to	course Sand a	nd Gravel (fine	e to coarse, various	
					composti	ons, subrounded	to round), dr	у		
0.0	2.0	4.0	1.2	9-9 , 5-4	Brown-g	ray very fine to	coarse Sand a	nd gravel (incl	uding brick	
					fragment	s), little cinder/s	ush, dry.			
0.0	4.0	6.0	0.3	7-6 , 5-2	Cinders	and Sand, some	to little grave	l, dry.		
0.0	6.0	8.0	0.2	2-1 , 1-1	Black cir	nders/ash, little t	o trace fine to	medium sand.	dry to damp.	
0.0	8,0	10.0	1.0	5-3 , 4-1	1				sand and cinders;	
					top inch	a damp, rest dry.				
0.0	10.0	12.0	0.6	6-4 , 6-12	Same as	above, damp to	dry.			
0:1	12.0	14.0	0.5	9-4 , 6-18	Top 4*:	Brick, dry to da	mp. Bottom 2	*: Black staine	d Gravel and sand,	
						own petroleum,				
0.0	14.0	16.0	1.3	14-11 , 52-45				8": Brown Cl	ay, trace silt, trace	
						near bottom), so				
						ng some concrete				
0.0	16.0	18.0	1.5	18-19 . 24-19		very fine to coars				
h					Terown V	recy rule to cours	se oanu anu O	10p 5	wet with sheen.	

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Boring/Well SB-8

Prepared by S. Blackmer

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	Sample/Co (fect below la		Core Recovery	Time/Hydraulic Pressure or	
OVM	From	То	(feet)	Blows per 6 inches	Sample/Core Description
	16.0	18.0	cont.		Middle 10* damp. Bottom 4* dry and lighter brown.
0.0	18.0	20.0	1.0	17-9 , 16-17	Brown Sand and Gravel, trace silt and clay, wet, very faint (trace) sheen.
0.0	20.0	22.0	1.0	12-13 , 8-5	Same as above with faint odor.
0.1	22.0	24.0	0.5	9-18, 24-14	Gravel, little sand, wet with sheen, faint odor.
2.2	24.0	26.0	0.6	17-13 . 17-19	Fine Gravel and fine to coarse Sand, wet with sheen, trace visible petroleum (brown
					thin liquid)
2.0	26.0	28.0	1.5	8-9,9-11	Top 6": Brown Sand and Gravel, some silt, wet with sheen. Bottom 1': Gravel, blue/gray
					silty water with brown petroleum stringers.
1.7	28.0	30,0	0.5	10-10, 10-6	Same as bottom of above.
2.1		32.0	1.5	8-5,6-8	Gravel (fine to coarse, various textures), some fine to coarse sand, silty/muddy
					brown-gray water with a sheen and trace visible petroleum, no odor.
1.9	32.0	34.0	0.3	17-17, 6-4	Saine as above.
1.1	34.0	36.0	2.0	13-13 , 13-14	Brown to grayish-brown, Gravel and very fine to coarse Sand, some to little silt, wet,
ļ	-				some sheen, fairly loose - Bottom 3* more compact.
2.8	36.0	38.0	1.3	12-10 . 7-6	Top 3": fine to coarse Sand, wet with sheen. Bottom 12": Gravel, little fine to
<u>.</u>					coarse sand, silty water and petroleum (has a copper-colored appearance).
0.2	38.0	40.0	0.75	6-7 , 8-8	Gravel, some fine to coarse sand, little to trace petroleum droplets, wet (water less silty/muddy)
0.0	40.0	42.0	0.75	7-5 , 10-8	Gravel and brown-gray sand, silty/muddy water, little faint sheen.
0.0	42.0	44.0	1.0	7-7 , 11-12	Gravel, some fine to coarse sand, little to trace petroleum, wet (water less silty/muddy).
0.0	44.0	46.0	1.75	9-8 , 7-7	Brown very fine to coarse Sand, some silt, little gravel, wet, loose, trace sheen.
0.0	46.0	48.0	2.0	14-14 , 19-12	Top 1.5': Same as above: Bottom 6": Gray-brown Gravel and Sand, some to little silt,
					wet, little sheen.
0,0	48.0	50.0	0.75	44-18 , 4-9	Gravel and Sand, trace silt, wet, sheen.
L		<u> </u>			

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# SAMPLE/CORE LOG

Boring/Well	SB-9 Project/ł	No	Erie Blvd. PS	01	Page	of	2	
Site Location Syracus	se, NY	Drilli	ng Started	8/22/95	Drilling C	Completed	8/22	/95
Total Depth Drilled	38	feet	Hole Diameter	8inche	••	f Sample/ g Device	Split-S	poon
Length and Diameter of Coring Device	2' x 2"	(2' x 3" for l	ab sample)		Sampling	Sampling Interval		feet
Land-Surface Elevatión	391.3	feet	XSurve	yed Estim	ated	Datum	NAVD 3 	
Drilling Fluid Used	None		····· · · · · · · · · · · · · · · · ·	Dr	illing Method	He	ollow Stem Au	ger
Drilling Contractor	Parratt -	Wolff, Inc.		Driller <u>Brian</u>	Waters	Helper	Layne Pech	
Prepared By C. Mo	1]				amer ight <u>140 lb</u>	Hammer Drop	30	inches
Sample/Co (feet below lar OVM From	•	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches		Sample/Cos	re Description		
0.0 0.0	2.0	1.2	26 , 47-56	Asphalt (0 - 0.5'):	Top 8": Brown Sa	·····		ack fine
				Sand, dry,			<u>, Doublin 0 , D</u>	ack the
0.0 2.0	4.0	0.3	57-50/.4	Black fine Sand, d	ry.			
0.0 4.0	6.0	0.1	50/.3	Same as above.				
0.0 6.0	8.0	0.1	44-50/,4	Black to brown fir	e Sand, little mediu	m to coarse sar	nd, dry.	
0.0 8.0	10.0	0.1	6-6 , 4-2	Dark brown Sand,	some medium to co	oarse sand, qua	rtzite fragment	
				in tip, dry.			·····	

2.2	20.0	22.0	0.0	33-23 . 16-9	Red-brown sandstone (1 fragment).
2.0	18.0	20.0	1.0	15-26 , 36-45	Brown-yellow, clayey Sand, moist, odor.
					moist. odor.
					green, clayey Sand, moist, odor. Bottom 6*: Brown-yellow clayey Sand,
2.2	16.0	18.0	2.0	11-13 , 21-18	Top 12°: Black, silty Sand, wet (petroleum droplets), odor. Next 6°: Gray-
					ciayey silt, moist, odor, some wood fragments.
					wet, odor. Bottom 9": Dark brown, fine Sand, with pockets of
1.3	14.0	16.0	1.8	2-2 , 4-8	Top 12": Black Sand, some clay (clayey fine sand), petroleum in pockets,
0.9	12.0	14.0	0.0	3-4 , 2-4	No recovery - odor at bottom of spoon.
0.1	10.0	12.0	0.1	4-6 , 7-5	Dark brown to yellow brown clayey Silt, little fine sand, moist.
					in tip, dry.

Boring/Well SB-9

Prepared by C. Moul

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	Sample/Co		0	Time/Hydraulic	
	(feet below la	id surface)	Core Recovery	Pressure or	
OVM	From	То	(feet)	Blows per 6 inches	Sample/Core Description
					Sample/Core Description
0.9	22.0	24.0	0.5	13-12, 10-11	Gray-hrown Sand, some silt and clay, some fragments of red and gray
					sandstone, moist, slight odor.
4.1	24.0	26.0	0.5	9-17, 20-12	Brown Sand and Gravel, little silt and clay, wet, odor, sheen, petroleum stringers.
4.0	26.0	28.0	0.6	9-14, 23-37	Saine as above.
3.6	28.0	30,0	0.6	8-16, 18-15	Brown-gray Sand and Gravel, little silt and clay, wet, odor, sheen, petroleum stringers.
5.0	30.0	32.0	0.5		Brown claycy Sand and Gravel.wet, odor, petroleum stringers.
4.3	32.0	34.0	0.8	11-11, 16-10	Same as above.
2.3	34.0	36.0	0.7	7-14 , 21-16	Brown-gray Sand and Gravel, little silt and clay, wet, odor, petroleum droplets.
3.4	36.0	38.0	1.0	14-14 , 23-18	Saine as above,
					Auger refusal at 38'. End hole.
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Page 2 of 2

# SAMPLE/CORE LOG

Boring/Well	SB-10	Project/No.		Erie I	Blvd. PSA/IRM	AY0207.001		Page	of	2
Site Location Syr	acuse, NY	<u> </u>	_ Drilli	ng Started	8/22/95		Drilling Co	ompleted	8/22/9	5
Total Depth Drilled		50	feet	Hole Diameter	8	inches	Type of Coring	-	Split-Spc	oon
Length and Diameter of Coring Device		2' x 2" (2' x	3" for l	ab sample)			Sampling L	nterval	2	feet
Land-Surface Elevation		388.7	feet		XSurveyed	Estimated		Datum	NAND 8 <u>NGVD-1</u>	
Drilling Fluid Used		None	-		·	Drilling	Method	Ho	ollow Stem Auge	r
Drilling Contractor		Parratt-Wolf	, Inc.		Drill	er Layne Peck	1	Helper	Brian Waters	
Prepared By <u>C.</u>	Moul					Hammer Weight	140 lb	Hammer Drop	30	inches

(	Sample/Core E (feet below land s	•	Core Recovery	Time/Hydraulic Pressure or Blows per 6	
OVM	From	То	(feet)	inches	Sample/Core Description
0,0	0.0	2.0	0.5	5,21-22	Brown-gray Sand and Gravel, moist.
0.0	2.0	4.0	0.5	14-20, 11-19	Brown-gray Sand and Gravel, little silty clay, moist.
0.0	4.0	6.0	0.7	11-9, 3-2	Top 5*: Brown to yellow brown silty Clay, little sand, moist;
					Bottom 3*: Brown-gray Sand and Gravel, moist.
0.0	6.0	8.0	0.5	2-4 , 16-13	Top 4": Brown-gray Gravel and Brick; Bottom 2": Brown clayey Silt,
					little sand, moist.
0.0	8.0	10.0	1.0	25-6 , 13-18	Top 5": Brown-gray Sand and Gravel (with concrete and cobble
					fragments), dry; Next 4*: Brown clayey Silt, little sand, moist;
					Bottom 3*: Brown-gray Sand and Gravel, dry.
0.0	10.0	12.0	0.4	16-22 , 16-16	Brown-gray Sand and Gravel, dry.
0.0	12.0	14.0	1.0	17-10 , 20-10	Brown silty Sand, trace clay, moist, some fine to medium gravel.
0.0	14.0	16.0	1.2	10-10, 13-25	Brown silty Sand and fine Gravel, moist, moist in pockets.
0.0	16.0	18.0	0.3	14-16 , 22-9	Brown silty Sand and Gravel, moist.
	18.0	19,0			Cobble at 18' (augered through to 19').

Boring/Well SB-10

Prepared by S. Blackmer

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	Sample/Co (feet below lar	•	Core Recovery	Time/Hydraulic Pressure or	
OVM	From	To	(feet)	Blows per 6 inches	Sample/Core Description
0.0	19.0	20.0	0.0	19-21	No recovery (gray sandstone in tip)
0.4	20.0	22.0	0.9	5-7.8-7	Brown silty Sand and Gravel; top 4" moist, bottom 5" wet.
3.4	22.0	24.0	0.70	10-11 , 17-14	Top 4*: Brown silty Sand and Gravel, wet; Bottom 4*: Gray-brown silty Sand
					and Gravel, wet, odor, sheen.
5.7	24.0	26.0	1.0	33-29 , 24-27	Top 9": Same as bottom 4" of above; Bottom 4": Gray angular gravel, wet, odor.
4.6	26.0	28.0	0.6	22-9, 13-7	Gray-brown silty Sand and Gravel, wet, odor.
3.9	28.0	30,0	1.0	5-5 , 6-6	Same as above.
3.5	30.0	32.0	1.0	4-5 , 6-7	Gray-brown silty Sand and Gravel, little clay, wet, odor.
3.2	32.0	34.0	0.2	8-9,6-9	Gray-brown silty Sand and Gravel, wet, odor.
3.4	34.0	36.0	0.5	3-5 , 8-8	Gray-brown silty Sand and Gravel, wet, odor, petroleum in pockets.
2.1	36.0	38.0	1.0	8-10, 19-10	Gray-brown silty Sand and Gravel, wet, odor, some angular sandstone fragments.
2.4	38.0	40.0	2.0	7-8 , 9-15	Top 15 *: Gray-brown silty Sand and Gravel. wet, odor. Bottom 9*: Gray-brown
					silty Sand and Gravel, little clay, wet, odor, petroleum in pockets.
2.5	40.0	42.0	0.8	15-29, 31-27	Gray-brown Sand and Gravel, little silt, wet, odor.
2.2	42.0	44.0	1.0	7-11 , 6-5	Gray Sand and Gravel, trace silt, wet, odor.
1.3	44.0	46.0	0.9	18-18, 18-12	Gray-brown clayey Silt, some sand, little fine to medium gravel, wet, odor
					product in pockets.
1.5	46.0	48.0	1.0	12-8 , 2-5	Gray-brown clayey Silt, some sand, little fine to medium gravel, wet, odor.
1.1	48.0	50.0	0.2	8-10, 22-37	Gray-brown clayey Silt, some sand and gravel, wet, odor.
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Drill Drill Drill Aug Rig	e Star ing C er's N ing N er Siz Type: pling	iom Iam Ieth Ie: Cl	pany ie: iod: 4.25 ME-7	y: P Jim I Holl 5" OE 75	arrati ₋ansi ow S )	l-Wo ng tem J	lff, Ir	IC.	8		Northing: 1112412.89 Easting: 933902.804 Casing Elevation: NA Borehole Depth: 43' bgs Surface Elevation: 391.1056 Descriptions By: Dan Zuck	Client: Nati	g ID: <b>SB-11</b> ional Grid Erie Boulevard Syracuse, NY
DEPTH		Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	441 4 Journa - 1	Well/Boring Construction
<del>0</del> ···-					NA 6				SM		ASPHALT Light gray very fine to fine Silly SAND, some subengular fine G		
	390 -	1	0-2	8.0	6	12	0.0			00	(SM)	/	
	-				9					0	Black/trace brown medium angular Gravely SAND, RCA materia Concrete, Asphalt) with fine to medium Sand, Volcanic like mater wood pieces, moist. (GM)	ai (Brick, erial, some small	
	-	2	2-4	0.75	2	5	0.0		GM	000	Light to medium gray/trace brown medium subangular Sandy G moist. (GM)	RAVEL, Sill,	
	-				4						Light to medium brown very fine to fine Silty SAND, little mediur subrounded to subangular Sand, wet. (SM)	n lo coarse	
5	-	3	4-6	0.8	2 3	5	0.0						
	385 -	4	6-8	0.3	3 2 2 2	4	NA		SM		No recovory (Stone stuck in tip @ 6.3' bgs.)		
	-	5	8-10	0.6	2 2 2 3	5	0.0				Medium brown very fine to fine subangular Silty SAND, some C coarse Sand, moist to wet. (SM)	lay, trace	Borehole tremie-grouted with Bentonite/Cen to grade
10	- 380	6	10-12	1.2	4	2	0.0				Medium brown Sandy CLAY, little coarse subrounded Sand, tra plasticity, wet. (GC)	ce Gravel, low	
	-				1 2			1	GC				
		7	12-14	0.4	3 3	6	0.0				Color change to brown below 14' bgs.		
	-				3 NA			-			Black/dark gray Sandy SILT, and Organics (wood), some Clay, wet. (OL)	organic odor,	
15	-	8	14-16	1.0	NA 1	na	0.0		OL		Light to medium brown Silty CLAY, low plasticity, medium densi (OL) Black/dark gray Sandy SILT, and Organics (wood), some Ciay,	/	
					2			t	<b>J</b>		wet (OL) Remarks: bgs = below ground surface; NA = N Level; SS = Split Spoon; RCA = Re-	lot Applicable/ Constituted-Ac	Available; AMSL = Above Mean Sea ggregate.

Project Number: B0036694.000000 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-11.dat Date: 7/10/2008 CFA

#### Site Location: Erie Boulevard

Syracuse, NY

# Well/Boring ID: SB-11

Borehole Depth: 43' bgs

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Vafue	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	ell/Boring nstruction
	375 -	9	16-18	0.9	3 3 2 2	5	1.3			1111111	Black-stained Silly SAND, odor, wet. (SM)	
~~	-	10	18-20	0.9	2 3 2 4	5	14.3			HELEPHER	Black-stained Silty SAND, oil like material, sheen, odor, wet. (SM)	
20	 370	11	20-22	0.8	1 1 3 3	4	15.6		SM	<u> </u>	Saturated @ 20' bgs.	
	-	12	22-24	0.4	3 4 3 7	7	70.6			HANNAN AN	tar like material present @ 22' bgs.	
25	-	13	24-26	0.5	4 6 6 8	12	15.1				Light gray angular SHALE fragments, dry. Black Silty SAND, trace fine Gravel, strong odor, saturated with oil like material.	Borehole
	365 -	14	26-28	0.6	7 9 9 9	18	11,1		SM GN		Light gray Clayey SAND, trace subangular to subrounded Gravel, moist to wet, saturated with oil like material. (GM)	tremie-grouted with Bentonite/Cem to grade
	-	15	28-30	0.5	6 8 9 9	17	22.2			<u> </u>	Black-stained, wet @ 28' bos. Light gray/some black-stained/trace brown Silty fine to medium SAND, wet.	
30	360 -	16	30-32	1.0	5 8 5 8	13	11.1		GN		Black-stained subangular Silty GRAVEL, and Silt, tar like material, sheen, odor, saturated. (GM) Black-stained/trace brown and gray Sandy CLAY, little fine Gravel, odor, saturated with oil like material, sheen. (SC)	
		17	32-34	1.0	4 6 5 5	11	16.6	-	sc		mix of tar like material and Silt, saturated @ 32' bgs.	
35	-	18	34-36	0.75	5	13	0.0	1	GN	00000	Black fine subangular to angular Sandy GRAVEL, odor and tar like material, sheen, saturated. (GM)	
					Al			tuss			Remarks: bgs = below ground surface; NA = Not Applicable// Level; SS = Split Spoon; RCA = Re-Constituted-Ag	= Above Mean Sea

Project Number: B0036694.000000 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-11.dat Date: 7/10/2008 CFA

### Well/Boring ID: SB-11

#### Site Location:

Erie Boulevard Svracuse, NY

# Borehole Depth: 43' bgs

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample		Geologic Column	Stratigraphic Description		Well/Boring Construction
	333 -				4				GМ		Black-staining/olive gray Gravely CLAY, odor, wet to saturated.		
-		19	36-38	0.8	4 5	9	56.3			$\Sigma$			
-	-	20	38-40	0.4	5 6 8 4 4	12	0.0		GC	30000	mix of tar like material and Silt, saturated @ 38' bgs.		Borehole tremie-grouted
- 40	-	1			32			1			Dark gray to black subangular GRAVEL, tar like material, sheen, saturated.		with Bentonite/Cemer
	350 -	21	40-42	1.6	16 15 9	31	7.5		GM	00	Medium gray Silty GRAVEL, some fine Sand and fine to coarse Gravel, little Cobbles, saturated. (GM)		to grade
	-	22	42-43	0.0	14 9	NA	0.0			$\sum_{i=1}^{n}$			
- 45	- 345 - -												
- 50	- 340 -												
- 55													
	45 Å	เอริย	ician.	RC e con	ironn	ooni,	tacib				Remarks: bgs = below ground surface; NA = Not Applicable/, Level; SS = Split Spoon; RCA = Re-Constituted-Ag	Available; Al ggregate.	MSL = Above Mean Sea

Drill Drill Drill Aug Rig	rilling Company: Parratt-Wolff, Inc. riller's Name: Jim Lansing rilling Method: Hollow Stem Auger ager Size: 4.25" OD g Type: CME-75 simpling Method: 2"x 2' SS Descriptions By: Dan Zuck										Casing Elevation: NA Borehole Depth: 60' Surface Elevation: 389.6046	Client: Nat	ng ID: SB-12 ational Grid Erie Boulevard Syracuse, NY	
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction	
-														
	-	1	0-2	0.7	NA 4 6 7	10	0.0		GC		ASPHALT Light gray broken PEBBLES, subangular to angular Gravel, RC (Brick, Concrete, Asphalt) with very fine to medium Sand, dry. ( Redish brown fine to medium subangular Clayey SAND, low to			
-	-	2	2-4	0.4	3 2 11 14	13	0.0		sc		moisi. (SC)			
-5	385 -	3	4-6	0.3	16 10 3 3	13	0.0				Brown angular BRICK fragments (0.5-1" diamerter), some fine Sand, dry. Gravel content increasing to some below 4.7' bgs.	to medium Silly		
-	-	4	6-8	0.0	2 2 1 2	3	NA				No recovery Medium brown fine to medium Silty SAND, trace odor and shee	en saturated		
	- 380	5	8-10	0.9	1 1 50 0	51	20.0 48.0	•	SN	3111111	(SM) Black Silty SAND and tar like material, odor and sheen, moist t		trem with	tonite/Cemen
10	-	6	10-12	0.4	45 5 3	8	0.0				While to light gray fine to medium Gravel and fine to coarse Sa angular Stones (0.5-1" diameter), dry. [FILL]	nd, fractured		
7     12-14     0.8     2     3     14.0     X     Fine to medium subangular Silty SAND, trace coarse Sand, slight odor, medium dense, wet. (SM)														
- 15	375 -	8	14-16	0.5	1 1 1 1 1	2	123			× * * * * * * * * * * * * * * * * * * *	SLAG, fine to medium Sand, trace tar like material, slight odor	loose, wet.		
Proje	tofr	asta imbi	ictar er: B(	o, em	, /i.cnr 6940	):(*)) ₍	tec d	e: G:			Remarks: bgs = below ground surface; NA = t Level; SS = Split Spoon; RCA = Re Analytical sample collected from 12 Cyanide. re\LogPlot 2001\LogFiles\B0036694\2007 Erie Blw /2008 CFA	-Constituted-A	Aggregate. 24' bgs for BTEX, PAHs, and Te	

# Well/Boring ID: SB-12

Borehole Depth: 60'

### Site Location: Erie Boulevard

Syracuse, NY

UEPTH FLEVATION		Sample Kun Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analyticał Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
		9 1	·6-18	0.25	4 3 2 1	5	146			× × × × × ×	SLAG, fine to medium Sand, trace lar like material, slight odor loose, wet.		
376		10	8-20	1.1	3 3 2 50	5	248			× × × × ×	SLAG and oil like material, some Silts and fine Sand, odor, sheen, salurated.		
20		11	20-22	0.8	1 1 1 50	2	694			* * * * * * * * * * * * * * * * * * *			
	1	12	22-24	1.0	7 7 6 4	13	304	$\times$	SM	<u> </u>	Silty SAND, some coarse subangular to angular Gravel, medium dense, odor, moist. (SM)		
3 <i>6</i> : 25		13	24-26	0.0	15 12 12 8	24	NA				No recovery		Barriet
		14	26-28	0.8	6 8 8 11	16	128			3000	Angular GRAVEL and SILT, some oil like material and tar like material blebs, odor, saturated.		Borehole tremie-grouted with Bentonite/Cem to grade
36	-	15	28-30	1.1	3 4 5 4	9	355			0000	Black fine to coarse subangular to angular Silty GRAVEL, little tar like material and sheen, odor, saturated. (GM)		
30		16	30-32	0.9	3 2	4	148			0000	Trace Silt (30-30.25' bgs).		
	-	17	32-34	0.7	5 5 6 7	11	214		GN	<u>5007</u>			
35 • 35	5 -	18	34-36	0.5	4 5 4 3	9	160			3080			
							S Jaci	dics			Remarks: bgs = below ground surface; NA = Not Applicable/A Level; SS = Split Spoon; RCA = Re-Constituted-Ag Analytical sample collected from 12-14' and 22-24' Cyanide.	gregate.	

# Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-12

Borehole Depth: 60'

ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
	-	19	36-38	1.6	4 5 11 16	16	239			<u>vooi</u>	Black fine to coarse subangular to angular Silty GRAVEL, little tar like material and sheen, odor, saturated. (GM)		
10	350 -	20	38-40	0.6	5 7 9 7	16	70			5051	Less saturated with NAPL, more dense (38-40' bgs).		
	-	21	40-42	1.2	2 3 3 3	6	184			0000			
	-	22	42-44	1.3	3 6 5 4	11	193		GМ	5000	More serperate faze NAPL (42-44' bgs).		
5	345	23	44-46	1.4	17 7 5 4	12	86			000C	Light gray/brown NAPL staining subangular Silty GRAVEL, saturated.(GM)		Borehole
	-	24	46-48	1.3	5 4 3 2	7	128			2000			tremie-groute with Bentonite/Ce to grade
10	- 340 -	25	48-50	1.3	4 5 4 4	9	38.2				Fine to medium Clayey SAND, trace fine angular Gravel, medium stiff, saturated.		
	-	26	50-52	0.8	7 7 9 14	16	90.8		GM	00011	Light gray coarse subangular Silty SAND, biebs of tar like material, medium dense, saturated. Light gray subangular Silty GRAVEL, slight to no odor, medium dense, saturated. (GM to GC)		
	-	27	52-54	0.9	6 6 8 6	14	28.6		to GC	0000	Trace angulard Gravel (52-54° bgs).		
55	335 -	28	54-56	0.9	2 4 4 5	8	104			<u>5006(</u>	Light to medium gray Silly GRAVEL, slight odor and staining, loose, saturated.		
					Al			facs.			Remarks: bgs = below ground surface; NA = Not Applicable/ Level; SS = Split Spoon; RCA = Re-Constituted-Ag Analytical sample collected from 12-14' and 22-24 Cyanide.	ggregate.	

# Site Location:

Erie Boulevard Svracuse, NY

# Well/Boring ID: SB-12

Borehole Depth: 60'

	Syle	icus	e, in									
ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
-	-	29	56-58	0.9	4 3 4 4	7	97.4		GM	ଟିଠିତ୍ୟ	Light gray medium to coarse subangular to angular Silty GRAVEL, trace fine Sand, slight odor, medium dense (unknown?) (GM to OC)	
	- 330	30	58-60	0.5	6 7 6 8	11	68.3	and a second second second second second second second second second second second second second second second	to OC	5000		Borehole tremie-grouted with Bentonite/Cement to grade
- 65	325											
				XC. V crv				fræs			Remarks: bgs = below ground surface; NA = Not Applicable Level; SS = Split Spoon; RCA = Re-Constituted-A Analytical sample collected from 12-14' and 22-24 Cyanide.	
Droio	ert Number: R00366940 (TDetrolate: G.)Rockware)LogPlot 2001)LogEiles/R0036694/2007 Erie Blud HSA Idfy											

Project Number: B00366940.0004 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-12.dat Date: 7/10/2008 CFA

Drill Drill Drill Aug Rig	e Star ling C ler's N ling N er Siz Type pling	Com Nam Aeth ze: : CN	oany e: od: 4.25 //E-7	r: Pa Jim L Holk " OD 5	arrati ansi ow S	l-Wo ng tem /					Northing: 1112277.51 Easting: 933947.6639 Casing Elevation: NA Borehole Depth: 54' Surface Elevation: 388.7386 Descriptions By: Dan Zuck	Client: Nat	ng ID: SB-13 Itional Grid Erie Boulevard Syracuse, NY	
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Vatue	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction	
	390													
- 0	-	1	0-2	1.1	NA 4 5	9	0.0		GM SM	ht :	SPHALT ight brown/trace gray fine to medium subangular course subro RAVEL, little Siit, trace coarse Sand, loose, dry. (GM)	ounded Sandy		
	-				5		ļ		SN		ark brown Sitty SAND, fine to medium subangular to subroun oarse subangular Sand and Gravel, medium dense, moist. (St	ded Gravel, trace M)		
<b>.</b>		2	2-4	0.8	4 6 7	13	0.0		GN	Ď	ight gray fractured course subangular Silty GRAVEL, little fine ourse subrounded Sand, dry. (GM)	Sand, trace		
	000				8					Ď	cm piece of Coal (4-4.4')			
-5	-	3	4-6	1.0	2 2 2	4	0.0				ight brown/trace green very fine to fine subrounded Sandy Sil ense, moist. (SM)	.T, medium		
f	_	4	6-8	1.1	2 4 2	6	29.8		sM		Vood fragments (6.7-8.1')			
-	-	-			2				_		to wood fragments, slight odor, and becomes saturated @ 8.1 bark brown/black-stained Silty fine to medium subangular to su		Borehole	
	380 -	-			WH WH		207		,	E	AND, medium dense, saturated. (SM)		tremie-grou with	
	-	5	8-10	1.6	3	NA	815		GF	22.27	Redish brown Silly CLAY, trace course subangular Sand, low p		Bentonite/C to grade	enten
- 10				<b> </b>	10 6		122 106		- SC		SC) Ilack-staining/trace brown Silly GRAVEL, trace Gravel, odor e			
_	-	6	10-12	1.25	5	12	722			<u>v</u> df	lense, moist. (GM)	/		
	-				4			-	GN	þ				
Ļ	-		12.14	1.75	4	7	681			Ŕ				
	375 -	'	14-14	1.75	3	<i>'</i>	922			P	il like material present @13.5			
ĺ					1	-		1	SN		Black Sandy SILT, loose, saturated. (SM) Black Silty CLAY, low plasticity, medium sliff, moist to wet. (ML	CL)	- 199 - 199 - 199	
15	-	8	14-10	1.75	2	5	275		ML to		Color change to brown @ 20'	·		
<u> </u>	-	-	L		3				CL		slight plasticity @ 16'	Not Applicable		
				RC 				rtic is			emarks: bgs = below ground surface; NA = I Level;SS = Split Spoon. Analytical sample collected from 8- Cyanide.			3

Project Number: B00366940.0004 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-13.dat Date: 7/10/2008 CFA

### Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-13

Borehole Depth: 54'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	II/Boring struction
	_	9	16-18	1.9	4 6 7 5	13	253		ML to CL		Brown Silty CLAY, low plasticity, medium stiff, moist to wet. (ML-CL)	
	370 -	10	18-20	1.4	WH WH 2	NA	183 91		ML,		Light brown Silty CLAY, trace staining, slight odor and plasticity, moist. (ML) Black/dark brown Silty GRAVEL, medium to coarse subangular Sand, some oil	
20					5 7 11		346		-	000	like material, significant odor, wet. (GM) Becomes saturated @ 20	
	-	11	20-22	1.0	11 13 12	22	1218		-	000	Silty fine subangular GRAVEL, medium to course subangular Sand, some oit	
	 365 -	12	22-24	C.6	34 27 16	61	203			000	like material, salurated. (GM)	
25		13	24-26	0.8	6 4 4	8	809		GМ	000	Light brown trace Silty CLAY, odor @ 24'	
	-	14	26-28	0.75	4 6 4 4 4	8	233			0000	oil like material, no Silty CLAY @ 26'	Borehole tremie-grouted with Bentonite/Ceme to grade
	360 -	15	28-30	0.5	2 4 3 2	7	55			0000		
30	-	16	30-32	0.6	6 5 6 8	11	114			5050		
	- 355 -	17	32-34	0.3	8 8 12 12	20	63			0000	Light brown/gray coarse subangular Sandy GRAVEL, Sand and far like material blebs , saturated.	
35	-	18	34-36	0.9	6 4 5	9	105				Black/trace light brown and gray oil like material, Sand and coarse subangular Gravel, saturated.	
				RC	8 Al			l .	<u> </u>		Remarks: bgs = below ground surface; NA = Not Applicable/Ava Level;SS = Split Spoon. Analytical sample collected from 8-10' and 20-22' bgs Cyanide.	

Project Number: B00366940.00041plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-13.dat Date: 7/10/2008 CFA

#### Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-13

Borehole Depth: 54'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
	1	19	36-38	2	11 12 16 17	28	111			<u>1000</u>	Black/trace gray Silty GRAVEL, oil like material and fine Sand, loose, odor, saturated. (GM)	
10	350 -	20	38-40	2	9 8 8 11	16	132		GМ	300k	Brown/light gray Gravely SILT, medium dense, oil like material, some staining, wet to saturated. (GM) Black outside of recovery (38.3-42.2')	
10	-	21	40-42	1.3	8 8 7 5	15	89			<u>3000</u> 0		
	- 345 -	22	42-44	0.75	8 7 4 3	11	44			5050	Dark gray Silty GRAVEL, trace Clay, oil like material, saturated.	
45		23	44-46	NA	6 6 5 4	11	NA			* * * * * *	No recovery	 Borehole tremie-grouted with
	1	24	46-48	0.6	7 5 6 4	11	10,1			2020	Light gray coarse subangular Silty GRAVEL, little fine to medium Sand, trace angular Gravel, slight odor, trace oil like sheen, saturated. (GM)	Bentonite/Cent to grade
50	340 -	25	48-50	0.8	5 4 3 3	7	17.3			2000	Light gray coarse subangular Silly GRAVEL, little fine to medium Sand, trace angular Gravel, slight odor, trace oil like sheen, saturated. (GM)	
	1	26	50-52	1.0	6 3 3 5	6	18.6		GM	000		
	335 -	27	52-54	1.6	4 5 6 7	11	114			5000		
55	-											
				<b>кС</b> .				hos -			Remarks: bgs = below ground surface; NA = Not Applicable/Av Level;SS = Split Spoon. Analytical sample collected from 8-10' and 20-22' bg: Cyanide.	

Project Number: B00366940.0004 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-13.dat Date: 7/10/2008 CFA

Dril Dril Dril Aug Rig	e Star ling C ler's I ling N jer Siz Type npling	Com Nam Neth ze: : CN	pany e: od: 4.25 //E-7	/: P Jim L Holl " OD 5	ansii ow S	-Wo ng tem /					Northing: 1112197.647 Easting: 933948.3549 Casing Elevation: NA Borehole Depth: 50' Surface Elevation: 388.5556 Descriptions By: Dan Zuck			
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction	
	390 -											:		
		1	0-2	0.8	NA 5 7 10	12	0.0			0.0.0	Light brown/light gray coarse subangular Gravelly fine to mediu material (Brick, Concrete, Asphalt) with fine to medium Sand, lil fragments and Pebble fragments, dry. (GM)	m SAND, RCA tle Brick		
•		2	2-4	0.9	9 8 5 4	13	0.0			<u>3000</u>	Medium brown fine to coarse subrounded to rounded Gravelly medium Sand, medium dense, moist. (GM)	SILT, little fine to		
	-	3	4-6	0.75	6 3 3 2	6	0.0		GМ	10000	Some coarse subrounded Sand @ 4'			
	-	4	6-8	0.5	3 3 3 2	6	0.0		1	30905	Becomes wet @ 6'		Borehole	
10	380 -	5	8-10	0.8	2 2 3 2	5	106 885	$\times$	GN to GC	<u>0000</u>	Dark brown/black-stained Gravelly SILT, some odor, soft, wet.	GM-GC)		outec
	-	6	10-12	0.9	1 1 3 4	4	514		GN	5090				
	- 375 -	7	12-14	0.3	2 4 3 3	7	58		ML		Black/brown Silty CLAY, possible oil like material, very soft, low plasticity, viscous, wet. (ML)	to medium		
15	-	8	14-16	0.5	38 11 4 5	15	72		GN	0000	Light brown Silty angular GRAVEL, some fine to medium Sand (GM)	loose, wet.		
					irono irono			decia			Remarks: bgs = below ground surface; NA = N Level;SS = Split Spoon; RCA = Re- Analytical sample collected from 8-	Constituted-Ag	Aggregate.	iea

#### Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-14

Borehole Depth: 50'

	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		II/Boring struction
	_				16 18		174		G№	Б	Black subangular Gravelly SILT, oil like material with small tar like blebs, odor. (GM)		
	-	9	16-18	2.0	12 11	30	350		SM		Medium brown fine to medium Sandy SILT, some subangular coarse Sand, dense, moist. (SM)		
	370	10	18-20	2.0	11 9 6	15	398	×		000	slight.odor (18-18-25') Medium brown fine to course subangular Gravelly SILT, some NAPL (droplets), trace fractured Pebbles, wel. (GM)		
0		11	20-22	0.75	5 8 8 7	15	154		1	0000	Trace black (oil like material) staining, becomes saturated @ 20'		
	365 -	12	22-24	0.9	9 7 5 6 5	11	217			5000C	Some reddish brown Silt @ 22'		
5		13	24-26	1.7	5 7 10 10	17	230		GN	0000	Redish brown fine to coarse subangular Graveliy SILT, tar like material (droplets) some fine to medium Sand, trace Petbles and odor, saturated. (GM)		Borehole
	-	14	26-28	0,75	6 5 6 4	11	46.3			2000	some odor, no oil like material @ 26'		tremie-grouted with Bentonite/Cem to grade
	360 -	15	28-30	1.1	3 4 4 4	8	64.3			20000	Medium brown coarse subangular Silly GRAVEL, fine to medium Sand, some black (oil like material) staining and tar like material (droplets), saturated. (GM)		
0		16	30-32	2.0	3 4 3 3	7	59			0000	Black Gravelly SILT, oil like material with small blebs of tar like material, some fine to medium subangular Sand, liltle coarse Gravel, saturated.		
		17	32-34	2.0	2 3 3 4	6	45			3050			
35	-	18	34-36	2.0	8 7 8 9	15	96		GN	3000C	Black fine to course subangular Silty GRAVEL, coarse subangular Sand and oil like material, little medium Sand, strong odor and sheen, saturated. (GM)		
		-	***		*****	-	*****	ol		Ĭ	Remarks: bgs = below ground surface; NA = Not Applicable// Level;SS = Split Spoon; RCA = Re-Constituted-Ag	AMSL =	Above Mean Sea
				RC 2. 044				dier.			Analytical sample collected from 8-10' and 18-20' b	 EX, PAH	s.

### Site Location:

Erie Boulevard Svracuse, NY

# Well/Boring ID: SB-14

Borehole Depth: 50'

	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
4	350 ~	19	36-38		7 9 13 12 8 8	22	126			<u>) 6'06'06'</u>	Black fine to coarse subangular Silty GRAVEL, coarse subangular Sand and cil like material, little medium Sand, strong odor and sheen, saturated. (GM)	
0	-		40-42		8 7 8 6 10 10		177	_		<u> </u>	materia and oil like material, strong odor and sheen, loose to medium dense, saturated. (GM)	
5	345 -		42-44		3 4 5 4 5	8	59.3		GM	<u>;000000</u>	Light brown to light gray fine to coarse subrounded to sub angular Gravelly SiLT, some tar tike material (droplets), little medium to course subangular Sand, saturated. (GM) Light gray little tar like material blebs @ 43.4*	Borehole tremie-grouted with Bentonite/Cen to grade
			44-46		5 10 6 5 4	10	115			0'00'0'0C	Light gray fine to coarse subangular Gravelly SILT, significant tar like material, some fine to medium Sand, toose, saturated. (GM)	
<del>.0</del>	340 -		48-50	0.875	3 4 4 5	8	92.6			5000		
5	-										Remarks: bgs = below ground surface; NA = Not Applicable/Avai	lable; AMSL = Above Mean Sea
				XC. y and				tas			Level;SS = Split Spoon; RCA = Re-Constituted-Aggreg Analytical sample collected from 8-10' and 18-20' bgs f	

Project Number: B00366940.000thplate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-14.dat Date: 7/10/2008 CFA

Drill Drill Drill Aug Rig	e Star ling C ling N ling N er Si Type Ipling	Com Nam Meth ze: : Cl	pany ie: iod: 4.25 VE-7	y: P Jim L Holl 5" OD 75	arrati Lansi ow S	t-Wo ng tem J					Northing: 1112098.112 Easting: 933967.1159 Casing Elevation: NA Borehole Depth: 40' Surface Elevation: 389.3586 Descriptions By: Dan Zuck	Client: Nation:	ng ID: SB-15 tional Grid Erie Boulevard Syracuse, NY	
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction	
-	- 390	-												
-	-	1	0-2	1.1	NA 11 12 14	20	0.0		GM GN	þ	ASPHALT Light to medium brown fine to coarse subangular Silty GRA\ Sand, loose, moist to wet. (GM) Gray fractured LIMESTONE fragments	/EL, some coarse		
-	-	2	2-4	1.2	16 34 24 17	58	0.0				Light to medium brown fine to coarse subangular Silty GRAN Sand, loose, moist to wet. (GM) Light gray fine to coarse Gravely SILT, some medium to coa moist to dry. (GM)			
-5	385	3	4-6	1.3	19 18 7 4	25	0.0		G№	× × × HO	Black SLAG, dense, dry. Redish brown BRICK, loose to medium dense, moist. Dark gray Gravely SILT, fine to medium Send, some Slag. Ic	ose, wet. (GM)		
	-	4	6-8	1.3	3 4 4 3	8	0.0	-	GN to SN	<del></del>	Medium brown/trace light gray fine to medium Sandy SiLT, f Gravel, trace fragments of Brick and Concrete, loose to med (GM to SM) Redish brown Brick fragments (7-7.2')	Ille fine subangular ium dense, moist.		
-	- 380	5	8-10	0.4	4 3 2 2	5	0.0				Fragmented BRICK, moist. Brick stuck in tip @ 8.4*		trer with Ber	ehole nie-grouted n ntonite/Cemei grade
- 10	-	6	10-12	1.1	1 WOH	1	0.0				Fragmented BRICK, loose, moist. Medium brown Silty fine to medium subangular SAND, trace fragmented Brick, loose, moist to wet. (SM)	Gravel and		
-	-	7	12-14	0.75	1 1 WOH WOH	NA I	0.0		SM	<u> </u>	Litlle coarse subangular Gravel, saturated (GM to GC) @ 12			
- 15	375 -	8	14-16	1.25	4 4 8 7	12	28.3		GN	NONCH	Black-stained coarse subrounded Gravely SILT, some odor, moist. (GM) Light brown/trace stainng, slight odor @ 15.1'	medium dense,		
Proje	terir ot Nu	avbo imbe	iciuri er: B0		iton:	orni,	tadi		.I		emarks: bgs = below ground surface; NA = Level;SS = Split Spoon. Analytical sample collected from and PAH (1 Jar), and from 22-24' for Cyanide (1Jar).	14-16' for BTEX bgs for BTEX (	(3 Jars), 8270c and 9012B (2	2 Jars),

# Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-15

Borehole Depth: 40'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description			II/Boring struction
	-	9	16-18	2	8 10 14	24	41.2		SM		Dark brown/trace grayish-black fine to medium subangular Sandy StLT, some tar like material (droplets), little coarse Sand, significant odor, saturated. (SM)			
					22				GΝ		Light gray to light brown Silty GRAVEL, slight odor, moist to dry. (GM)			
		10	18-20	1.2	7 8 11 23	19	18.2				Dark brown/trace grayish-black fine to medium subangular Sandy SILT, some lar like material (droplets), little course Sand, odor, saturated. (SM)			
20	-				10			1			Fractured SHALE?? (20.4-20.5')			
	-	11	20-22	1.3	15 12 4	27	53			000	Light gray to medium brown fine to coarse subangular to angular Silty GRAVEL, trace fractured angular Cobbles, moist to dry. (GM)			
	_	12	22-24	1.7	8 10 11	21	99.8	$\times$		000	Light gray to medium brown/slight stained fine to coarse subangular Silty GRAVEL, little blebs of tar like material, trace fractured angular Cobbles, some odor, moist to dry. (GM)			
	365 -				8					R	Dark gray fine subangular Gravely SILT, little course Gravel, trace tar like material (droplets), some odor, dense to medium dense, moist. (GM)			
5	-	13	24-26	0.9	12 9 8	21	62			200	Medium brown fine to coarse subangular to angular Gravely SILT, some far like material, loose, saturated. (GM)			
	_	14	26-28	1.5	2 2 5 7	7	53			0000				<ul> <li>Borehole tremie-groutec with Bentonite/Cem to grade</li> </ul>
	- 360	15	28-30	1.2	3 5 5 7	10	48.1		GМ	0000	Medium brown fine to coarse subrounded gravely SILT, some fine to medium Sand, trace lar like material, slight odor, loose, saturated. (GM)			
10		16	30-32	1.3	3 5 6 6	11	38.6			001				
	-	17	32-34	1.4	3 3 6 8	9	38.8			<u>5050</u>				
35	355 -	18	34-36	0.8	6 7 6 5	13	0.3			2000				
		h								T	Remarks: bgs = below ground surface; NA = Not Applicable/Av	vailable;	AMSL ≃ .	Above Mean Sea
					AC			205			Level;SS = Split Spoon. Analytical sample collected from 14-16' for BTEX (3 and PAH (1 Jar), and from 22-24' bgs for BTEX (1 J for Cyanide (1Jar).	Jars), 82 Jar), 827	270c and 70c and 9	9012B (2 Jars), 012B (2 Jars), and

Data File: SB-15.dat Date: 7/10/2008 CFA

### Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-15

Borehole Depth: 40'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Biows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description			ell/Boring nstruction
	-	19	36-38	1.1	6 6 8 5	14	8.1			000	Medium brown fine to coarse subrounded Gravely SILT, some fine to medium Sand, Irace tar like material, slight odor, loose, saturated. (GM)			
1 <del>0</del> -	- 350	20	38-40	0.9	8 6 5	12	13.8		GM	500'0				Borehole tremie-grouted with Bentonite/Ceme to grade
	-													
5	- 345 -										· ·			
0	- 340 -	a sa a faran a faran a gan a sa a sa a sa a sa a sa a sa a												
	-													
	- 335 -													
55											Remarks: bgs = below ground surface; NA = Not Applicable	Available	: AMSL =	Above Mean Sea
				۲C , cnv				lias			Level;SS = Split Spoon. Analytical sample collected from 14-16' for BTEX and PAH (1 Jar), and from 22-24' bgs for BTEX ( for Cyanide (1Jar).	(3 Jars), 8	3270c and	9012B (2 Jars).

Data File: SB-15.dat Date: 7/10/2008 CFA

Drill Drill Drill Aug Rig	e Star ling C ler's I ling N er Siz Type pling	Com Nam Aeth ze: : Cl	pany e: od: 4.25 //E-7	/: Pi Jim L Hoild "OD 5	arratt .ansii ow S	-Wo ng tem /					Northing: 1112309.823 Easting: 934001.0439 Casing Elevation: NA Borehole Depth: 50' Surface Elevation: 388.3566 Descriptions By: Dan Zuck	Client: Nat	g ID: SB-16 lional Grid Erie Boulevard Syracuse, NY
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Anatytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
-	- 390 												
0	-	1	0-2	0.9	NA 13 11 5	23	0.0				ASPHALT Dark brown Sandy SILT, RCA material (Brick, Concrete, Aspha medium Sand, loose, moist to dry. (SM)	ilt) with fine to	
-	- 335 -	2	2-4	0.5	4 3 4 5	7	1.0		SM	i			
-,	-	3	4-6	0.8	1 1 1 1	2	1.9				Medium to dark brown Sandy SiLT, little fine to coarse angular Coal fragments, loose, wet. (SM)	Gravel, trace	
	-	4	6-8	0.9	2 1 1	2	1.7	·····	SN to GN				Borehole
- 10	380 -	5	8-10	1.0	1 1 1 3	2	0.0	_			Slight staining @ 8'		tremie-grouted with Bentonite/Ceme to grade
	-	6	10-12	1.7	2 2 1	3	114		sN		Black-stained fine to medium Sandy SILT, trace Gravel, odor, I Black-stained fine to medium SAND, trace oil like material (abo saturated. (SM)		
-	- 375 -	7	12-14	1.9	1 1 2	3	476		GN to SN	<u> </u>	Black Sandy SILT, little fine to coarse subangular Gravet, trace ( about 5%), loose, saturated. (GM to SM)		
- 15		8	14-16	1.5	2 4 4 8 4	12	91.3		SN GN	2 dirt	Black to dark brown stained SILT, trace course Sand, odor, me wet. (SM) Medium to dark brown fine to coarse subangular to angular Gra odor, medium dense, moist. (GM)		
					9 Al			itus		İΥ	Remarks: bgs = below ground surface; NA = N Level;SS = Split Spoon; RCA = Re- Analytical sample collected from 12	Constituted-A	ggregate.
Deale											e\LogPlot 2001\LogFiles\B0036694\2007 Erie Blv		Page: 1 of 3

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### Site Location:

Erie Boulevard Syracuse, NY

### Well/Boring ID: SB-16

Borehole Depth: 50'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
-	-	9	16-18	1.0	6 7 8 14	15	66.1		GM	0000	Medium to dark brown fine to coarse subangular to angular Gravely SILT, slight odor, medium dense, moist. (GM) Trace staining on exterior of sample (16-16.2')	
-	370	10	18-20	0.9	5 5 13 19	18	41.3	$\times$		<u>50 otb</u>	Black-stained fine to coarse angular Gravely SILT, strong odor, sheen, wet.     (GM) Medium to dark brown fine to coarse subangular to angular Gravely SILT,     fractured Cobbles, slight odor, medium dense, moist. (LS)	
- 20	-	11	20-22	2.0	11 14 13 19	27	140		-	<u>70000</u>	Medium brown Gravely SiLT, some odor, dense, wet. (GM) Trace blebs of tar like material @ 20.0'	
	 36.i -	12	22-24	2.0	11 22 14 16	36	41.3		GМ	<u>के 0 जे(</u>	Dark gray fine to coarse angular Silty GRAVEL, trace tar like material (droptets).	
- 25	-	13	24-26	2.0	6 8 11 10	19	427			5000	loose, wel to saturated. (GM) Trace Clayey SILT, saturated @ 25.4'	
	-	14	26-28	NA	10 7 6 7	13	NA				No recovery	Borehole tremie-grouted with Bentonite/Ceme to grade
	360 -	15	28-30	NA	3 3 4 3	7	NA					
- 30	-	16	30-32	2.0	4 5 5 4	10	66.2			100	Not representative recovery Dark gray/trace medium brown fine to coarse angular Gravely SILT, some odor, trace to no sheen and staining, saturated. (GM)	
	- 355 -	17	32-34	1.75	4 5 4 5	9	25.6		GN	000	Dark gray fine to coarse angular Silly GRAVEL, far like material, trace sheen, saturated. (GM) Black silt, odor @ 33.6'	
- 35	-	18	34-36	0.9	6 9 7 4	16	25.1			2000	Trace fractured Cobble @ 34.31	
				<b>3</b> C. 1 ov				(fax)			Remarks: bgs = below ground surface; NA = Not Applicable/ Level;SS = Split Spoon; RCA = Re-Constituted-Ag Analytical sample collected from 12-14' and 18-20	igregate.

Project Number: B00366940.0000 phplate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-16.dat Date: 7/10/2008 CFA

# Site Location:

Erie Boulevard Syracuse, NY

### Well/Boring ID: SB-16

Borehole Depth: 50'

			·						1			
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
	- 350 -	19	36-38	2.0	2 4 7 10 5 4	11	49.3			ଟ୍ରାପ୍ତର୍ପ	Dark gray fine to coarse Gravely SiLT, trace fractured Cobbles,tar like material sheen and odor, saturated. (GM) Dark gray fine to coarse Silly GRAVEL, little fine to medium Sand, slight odor, medium dense, saturated. (GM)	
- 40	-	20	38-40	0.8	5 5 4 4	9	96.9			50000	Trace sheen on outside of recovery (38-40)	
	-	-	40-42		6 6 5 4	10	81.2		GM	1000C		Bcrehote
- 45	345 -		42-44		4 5 4 5 4	8	91.3			0010101 00	Light to dark gray fine to coarse subrounded Gravely SILT, slight odor, medium dense, wet. (GM) Light to dark gray fine to coarse angular Silty GRAVEL, loose, saturated. (GM)	tremie-grouted with Bentonite/Ceme to grade
	-	24	46-48	1.3	4 5 8 6	14	75.8			00001		
50	340 -		48-50	1.25	7 7 5 8 5	13	41.6		GC		Trace sheen on outside of recovery (48-50) Light gray/olive gray Clayey SILT, little fine subrounded to rounded Gravel, trace coarse Gravel, slight odor and plasticity, stiff, saturated to wet. (GC)	
	-											
	335 -											
- 55	-											
					AI			ten:			Remarks: bgs ≖ below ground surface; NA = Not Applicable/Ava Level;SS = Split Spoon; RCA = Re-Constituted-Aggre Analytical sample collected from 12-14' and 18-20' bg	gate.

Dril Dril Dril Aug Rig	e Star ling C ler's M ling N er Siz Type npling	Com Nam Aeth ze: : Di	pany e: od: 4.25 edric	/: Pa Jim L Holld " OD h D-t	arratt ansii ow St	-Wo ng tem /					Northing: 1112205.886 Easting: 934030.7299 Casing Elevation: NA Borehole Depth: 64' bgs Surface Elevation: 387.1286 Descriptions By: Dan Zuck	Client: Nat	g ID: <b>SB-17</b> lional Grid Erie Boulevard Syracuse, NY
рертн	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Weil/Boring Construction
-					NA			· · · · · · · · · · · · · · · · · · ·			ASPHALT Medium brown fine to coarse angular to subangular Gravely SI		
		2	2-4	1.3	5 5 8 5 7	11	0.0	-	GN SP	00	Coment), trace fractured Cobles , medium dense, moist. (GM; Slag and Silt (0.9-1' bgs). Light brown fine to medium SAND, trace Silt, loose, wet. (SP)		
5		3	4-6	1.1	4 3 6 6 4	9	0.0		SM	$) \odot O d^{\times H_1}$	moist. (SM) Black SLAG and COAL fragments, moist. Medium brown fine to coarse angular Gravely SILT, little RCA f Cement), Irace fractured Cobbles, loose to medium dense, moi	ragments (Brick, st. (GM)	
t	380 -	4	6-8	0.5	3 3 3 3 2	6	0.0		GN 		Medium brown fine to coarse angular Gravely SILT, some fine medium dense, wel to saturated. (GM) medium to dark brown fine to coarse angular GRAVEL, little Si		Borehole tremie-grouted with
- 10	-		8-10	0.9	3 3 2 2 1	5	0.0				Black fine to coarse Gravely SLAG, little Brick and Cement frag odor, salurated.	/	Bentonite/Cemen to grade
<u>.</u>	375 -	7	12-14	1.3	2 2 1 1 2	2	304			× × × × × × × × ×	Odor, sheen @ 12' bgs. Black fine Gravely SLAG, some fine to medium Sand, some od loose, wet to saturated.	lor and sheen,	
15	-	8	14-16	1.25	6 50/ 0.2	NA	602		SN		Medium brown/gray Sandy SILT, trace fine Gravel, droplets of staining and odor, sheen throughout, medium dense, wet. (SM	)	/Available; AMSL = Above Mean Sea
	₽.lt	a.o.	1034474	RC	incon e	avai.	tacil				Level;SS = Split Spoon; RCA = Re-	Constituted-A	ggregate. Page: 1 of 4

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#### Site Location:

Erie Boulevard Syracuse, NY

# Well/Boring ID: SB-17

Borehole Depth: 64' bgs

DEP1H	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	. Stratigraphic Description	Weil/Bo Constru	-												
	370 -	9	16-18	0.6	34 50/ 0.0	NA	407		SM	::	Medium brown/gray Sandy SILT, trace fine Gravel, droplets of tar like material, staining and odor, sheen throughout, medium dense, wet. (SM) Brown saturated tar like material @ 16.3' bgs.														
		10	18-20	1.25	13 17 1.25 50/0.2 NA 204			20011	Medium brown fine to coarse subrounded to subangular Gravely SILT, some fine Sand, trace droptets of tar like material, slight sheen and odor, medium dense, wet. (GM)																
20	_	11	20-22	0.6	50/ 0.1	NA	243			2000	fine to coarse Gravely SILT, some odor and staining, medium dense, moist. (GM)														
	365 -	12	22-24. 2	. 2.0	34 41 37 8	78	212				Sandy SILT, trace fine subrounded Gravel, loose, dry. (GM)														
25		13	24.26	1.3	6 5 6 8	11	55.3		GМ	G№	<u>s'oo'd</u>	Dark gray fine to coarse subrounded Silty GRAVEL, mix of water and tar like matenat (~5%), odor and sheen, saturated. (GM)													
	- 360	14	26-28	1.25	3 4 3	7	64.6													1000	Some fractured and full Cobbles, some brown droplets on water surface (26-28' bgs).		<ul> <li>Borehole tremie-grouted with Bentonite/Ceme to grade</li> </ul>		
	-	- 15	28-30	0.3	3 6 7 7	14	25.1																		
30	-	- 16	30-32	0.6	5 6 8 8	16	32.6		SN to		Dark gray Sandy SILT, little fine to coarse subangular Gravet, odor and sheen, trace droplets/pockets of tar like material, medium loose to loose, wet. (SM-GM)														
	355 -	- 17 32-34 2.0 1.2 24 116 GM	Dark oray fine to coarse apoular Gravely SILT trace fractured Cobbles some																						
35	-	18	34-36	2.0	9 7 9 10	19	83.2	2	GN	<u>0000</u>	Dark gray fine to coarse angular Gravely SILT, trace fractured Cobbles, some droplets of tar like material within spaces, toose, saturated. (GM)														
					9 Al					to	<b>Remarks:</b> bgs = below ground surface; NA = Not Applicable/A Level;SS = Split Spoon; RCA = Re-Constituted-Agg	vailable; AMSL = Ab regate.	ove Mean Sea												

υy Data File: SB-17.dat Date: 7/10/2008 CFA

# Well/Boring ID: SB-17

# Site Location:

.

Erie Boulevard Syracuse, NY Borehole Depth: 64' bgs

	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Vatue	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
	350 -	19	36-38	2.0	13 9 10 9	19	154			0000	Dark gray fine to coarse angular Gravely SILT, trace fractured Cobbles, some droplets of far like material within spaces, loose, saturated. (GM)		
0	-	20	38-40	1.6	8 8 8 6	16	97.5			5050			
		21	40-42	2.0	7 7 7 7	14	72.8			50500	Dark olive gray fine to coarse subrounded Gravely SILT, some fine to medium Sand, little pockets/droplets of tar like material within spaces, odor and staining, some sheen, saturated. (GM)		
		22	42 <b>:</b> 44	2.0	9 7 7 6	14	123			<u>1000</u>	-		
45	-	23	44-46	1.7	5 6 6 6	12	89.3		GN	<u>SO S</u>	Greenish light gray fine to coarse subangular Gravely SILT, little fine to medium Sand, some pockets of tar like material and odor, medium dense, wet to saturated. (GM)	-	Borehole
	- 340	24	46-48	0.7	11 6 6 4	12	114			0000	Light gray @ 46' bgs.		tremie-groutec with Bentonite/Cem to grade
50	-	25	48-5(	0.6	7 7 7 4	14	96.4			1000			
20		26	50-5:	2 2.0	8 6 7 8	13	85.5			090			
	335 -	27	52-54	4 2.0	8 8 8 6	16	40.5		M		Light gray fine to coarse subangular Gravely SILT, some fine Sand, titlle pockets of tar like material, sheen and odor, medium dense, wet. (GM)		
· 55		- 28	54-5	6 2.0	12 11 10 12	21	0.0 42.7			K O d	Light gray Clayey SILT, slight odor and plasticity, dense, moist. (ML) Greenish light gray fine to coarse subangular Gravely SILT, little fine to medium Sand, some pockets of tar like material and odor,medium dense, wet to saturated. (GM) Light gray fine to coarse subangular Gravely SILT, some fine Sand, little pockets of tar like material, sheen and odor, medium dense, wet. (GM)		
				R( c. cr				buer			Remarks: bgs = below ground surface; NA = Not Applicable/Ava Level;SS = Split Spoon; RCA = Re-Constituted-Aggre	iilable; AM gate.	ISL = Above Mean Sea

# Well/Boring ID: SB-17

Borehole Depth: 64' bgs

# Site Location:

Erie Boulevard Syracuse, NY

рертн	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		II/Boring struction
-	330	29	56-58	1.25	10 9 9 9	18	83.9			0000	Light gray fine to coarse subangular Gravely SILT, some fine Sand, little pockets of tar like material, sheen and odor, medium dense, wet. (GM)		•
- - 60	-	30	58-60	0.9	16 12 10 12	22	91,4		GМ	5000			Borehole
-	-	31	60-62	1.3	NA NA NA NA	NA	115			50000			tremie-groutec with Bentonite/Cemer to grade
-	325 -	32	62-64	15	NA NA NA	NA	63.9			000	Light greenish gray fine to coarse subrounded Gravety SILT, some fine Sand, trace Pebbles, little pockets of brown tar tike material, sheen on water, some odor, trace staining, medium dense, wet.		
- 65		F											
	320 -												
- 70													
	315												
-													
- 75		-											
					A			- Less			Remarks: bgs = below ground surface; NA = Not Applicable/, Level;SS = Split Spoon; RCA = Re-Constituted-Ag	Availabie; AMSL = gregate.	Above Mean Sea

Date Drilli Drilli Auge Rig 1 Sam	er's N ing M er Siz Type:	iom lam leth e: CN	oany e: od: 4.25 /IE-7	r: Pa Jim L Holld " OD 5	arratt ansii ow St	-Wol ng tem /					Northing: 1112058.117 Easting: 934018.9509 Casing Elevation: NA Borehole Depth: 44' Surface Elevation: 389.8146 Descriptions By: Dan Zuck	Client: Nat	ng ID: SB-18 ntional Grid Erie Boulevard Syracuse, NY	
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Weil/Boring Construction	
-					NA						ASPHALT			
-	-	1	0-2	1.4	6 8 9	14	0.0		GN	000	Medium to light gray fine to coarse Gravely SILT, RCA material Concrete, Asphalt) with fine to medium Sand, moist. (GM)	(Brick,		
	-	2	2-4	1.3	34 17 12 11	29	0.0				Medium brown Sandy Sil.T, little coarse subangular Sand, Irac medium dense, moist to wel. (SM)	e fine Gravels,		
-5	385 -	3	4-6	1.5	4 3 3 3	6	0.0	×	SM		Medium brown Sandy SILT, RCA material (Brick, Concrete, Asj medium Sand, little Brick and Cement pieces, trace Coat pieces Some Clay, slight plasticity (4-6')	phalt) with fine to s, wet. (SM)		
	-	4	6-8	1.25	3 4 4	8	0.0		SN to SC		Medium brown Sandy SILT, trace coarse angular Sand, soft, w	et. (SM to SC)	- Borehole	
		5	8-10	1.2	2 2 3 3	5	0.6		GN	5	Medium brown fine to coarse subangualr Gravely SILT, some f Sand, medium dense, moist to wel. (GM)	ine to medium	- Borenoie tremie-grout with Bentonite/C to grade	
- 10	-	6	10-12	0.9	3 8 8	16	0.0	-		000	Olive brown/gray Sitty fine to coarse angular GRAVEL, trace C Limestone and Quartzile), medium dense, moist.	obbles (fractured		
<b>-</b>	-	7	12-14	1.0	9 2 4 9 11	13	0.0		GN	50 61 OK	Medium brown fine to coarse subangular to angular Gravely Si medium Sand, trace Cobble fragments, medium dense, wet. (	LT, some fine to GM)		
- 15	375 -		14-10	5 1.4	4 6 4 3	10	0.0		SN		Olive gray SILT, trace coarse subangular Sand, medium dense	e, moist. (SM)		
				RC				-terr			Remarks: bgs = below ground surface; NA = I Level;SS = Split Spoon; RCA = Re- Analytical sample collected from 4-	Constituted-A	e/Available; AMSL = Above Mean Sea Aggregate. bgs for for BTEX, 8270c and 9012B.	

Project Number: B00366940.0004 plate: G:\Rockware\LogPiot 2001\LogFiles\B0036694\2007 Data File: SB-18.dat Date: 7/10/2008 CFA

#### Site Location:

Erie Boulevard Syracuse, NY

#### Well/Boring ID: SB-18

Borehole Depth: 44'

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/E Constr	· ·
	-	9	16-18	0.75	3 8 11 14	19	0.8				Olive gray SILT, Irace coarse subangular Sand, medium dense, moist. (SM)		
20	- 370 +	10	18-20	1.4	5 10 12 16	22	0.8		s™	3000	Olive gray/medium brown fine to course angular Gravely SILT, little fractured Cobbles (Limestone and Quartzite), moist. (SM)		
20	-	11	20-22	0.8	19 21 7 6	28	0.0			50000			
	-	12	22-24	0.75	6 4 6	10	0.0		SN to SC		Medium brown fine Sandy SILT, Clay, trace course subrounded Sand, soft, slight to low plasticity, wet. (SM to SC)		
25	365 -	13	24-26	1.0	5 9 10 4	19	135	$\times$		NON	Light gray fine to course subangular Gravely SIL1, little tar like material (droplets within pore space), odor and sheen, loose, wet. (GM)		Borehole
	-	14	26-28	0.8	9 9 8 8	17	62	1		1000C	Light gray fine to course subangular Gravely SILT, little tar like material (droplets, about 1%), odor and sheen, toose, saturated. (GM)		tremie-grouted with Bentonite/Ceme to grade
30	- 360	15	28-30	0.9	5 6 6 8	12	27.3		GN	<u>O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</u>			
	-	16	30-32	2.0	6 7 8 7	15	40.1			0000	Trace fractured Cobbles @ 32'		
		17	32-34	0.75	8 16 3 5	19	16.2			200			
- 35	355 -		34-36	0.75	2 3 4 5	7	8.2			2001			
				RC 2. cav				रीटाइ			Remarks: bgs = below ground surface; NA = Not Applicable/A Level;SS = Split Spoon; RCA = Re-Constituted-Agg Analytical sample collected from 4-6' and 24-26' bg	regate.	

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### Well/Boring ID: SB-18

Site Location:

Erie Boulevard Syracuse, NY

Borehole Depth: 44'

										,			
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
-	-	19	36-38	0.6	3 3 5 8	8	21.9			5000	Light gray fine to coarse subangular Gravely SILT, little tar like material (droplets, about 1%), odor and sheen, loose, saturated. (GM)		
- 40	- 350	20	38-40	1.1	6 6 6 4	12	0.0		_	NOOR	Medium brown fine to coarse subangular Gravely SILT, trace tar like material sheen, slight odor, saturated. (GM)		Borehole
-	-	21	40-42	0.5	6 6 5 7	11	0.0		GM		No Recovery (40-42') Color change to light gray @ 42'		tremie-groutec with Bentonite/Cemen to grade
	-	22	42-44	0.9	6 6 6	12	1.3 to 10.1			20013	Medium brown fine to course subangular Gravely SILT, trace tar like materialsheen, slight oxfor, saturated. (GM)		·
- 45	345 -												
-													
- 50	340												
-		-											
		-											
- 55	335											A 15 4 4 1 1	
				RC c, ca			S Tack	hues			Remarks: bgs = below ground surface; NA = Not Applicable// Level;SS = Split Spoon; RCA = Re-Constituted-Ag Analytical sample collected from 4-6' and 24-26' bg	gregate.	

Project Number: B00366940.0004tiplate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\2007 Erie Blvd HSA.ldfx Data File: SB-18.dat Date: 7/10/2008 CFA

Dril Dril Dril Aug Rig	e Star ling C ler's N ling N ler Siz Type: npling	iom Nam Neth Ze: : CN	pany e: od: 4.25 //E-7	im L Jim L Hollo OD 5	arratt .ansii ow S	-Wo ng tem J					Northing: 1112063.874 Easting: 934120.1709 Casing Elevation: NA Borehole Depth: 40' Surface Elevation: 387.5656 Descriptions By: Dan Zuck	Client: Nat	ng ID: SB-19 ntional Grid Erie Boulevard Syracuse, NY	
рертн	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction	
- -	390				<b>K</b> 14						ASPHALT			
	-	1	0-2	0.6	NA 4 5 7	9	0.0		G№		Dark gray fine to medium Sandy SILT, RCA material (Brick, Cc with fine to medium Sand, trace coarse subangular to angular ( odor (tar), loose, moist to wet. (GM)	uncrete, Asphall) Gravel, slight		
	385	2	2-4	0.5	9 5 11 50\.2	16	0.0			3000 I - I - I - I - I - I	Refusal, Had to drill to 6'			
-5	_	3	4-6	NA	NA NA NA	NA	NA				Fractured CONCRETE.			
	- 380 ~	4	6-8	1.3	5 9 11 9	19	0.0	-	GN	NON	Medium brown to ofive gray fine to coarse subangular Gravely to medium Sand, medium dense, moist. (GM)	SILT, some fine	Borehole	
- 10		5	8-10	0.3	12 15 12 5	27	0.0				Light gray to light brown SILT, little fine to medium Sand, trace toose, dry. (SM)	fine Gravels,	tremie-gro with Bentonite to grade	
-	-	6	10-12	0.8	7 11 6 8	17	0.0		SN					
	375 -	7	12-14	1.2	16 15 14 14	29	0.0			3005	Medium brown fine to coarse subangular to angular Gravely S medium Sand,trace to little fractured Cobbles, medium dense,	ILT, some fine to moist. (GM)		
- 15	-	8	14-16	5 1.1	15 16 13 12	29	0.0		GN	<u>3080</u>				
				RC e, ca	A			- <b>-</b>			Remarks: bgs = below ground surface; NA = Level;SS = Split Spoon; RCA = Re	Not Applicable Constituted-A	e/Available; AMSL = Above Mean S Aggregate.	ea

ogFiles\B0036694\2007 Erie Blvd HSA.ldfx Project Number: B00366940.0004 plate: G:\Rockware\L e: G:\Rockware\LogPlot 2001 Date: 7/10/2008 CFA יר01 Data File: SB-19.dat

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#### Well/Boring ID: SB-19

Borehole Depth: 40'

### Site Location: Erie Boulevard

	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
	370 -	9	16-18	1.3	10 8 11 12	19	0.0		GМ	5000	Medium brown fine to coarse subangular to angular Gravely SILT, some fine to medium Sand, Irace to little fractured Cobbles, medium dense, moist. (GM) Fractured Quartzile Cobbles, moist to wet @ 16.5'		
20	-	10	18-20	0.3	8 11 10 9	21	0.0		SM	<u>500(</u>	Medium brown fine to coarse subangular to subrounded Gravely SILT, trace fractured Cobbles, wet. (SM)		
	-	11	20-22	1.1	5 4 5 9	9	0.0			500G			
	.)65 - -	12	22-24	NA	75\.1 NA NA NA	NA	NA				No recovery		
25	-	13	24-26	1.0	8 11 22 24	33	0.0			0000	Medium to dark brown fine to coarse subangular to angular Gravely SILT, some fine to medium Sand, little fractured Cobbles, trace sheen, saturated. (GM)		Borehole
	360 -		26-28	0.8	8 8 6 5	14	0.0			3030			tremie-grouted with Bentonite/Cem to grade
30		15	28-30	2.0	5 6 11 9	17	0.0			10200	No sheen @ 29'		
50		- 16	30-3:	2 1.2	4 8 11 7	19	0.0		GN	<u>1000</u>	Light olive gray fine to coase subangular to angular Gravety SILT, some fine to medium Sand, little fractured Cobbles, saturated. (GM)		
	355	1	32-3	4 1.9	6 7 7 7	14	0.0			5050			
• 35		18	34-3	6 1.1	4 4 4 4	8	0.0	2		NONC			
			A					ilues			Remarks: bgs = below ground surface; NA = Not Applicable// Level;SS = Split Spoon; RCA = Re-Constituted-Ag	Available; AN gregate.	MSL = Above Mean Sea

### Well/Boring ID: SB-19

Borehole Depth: 40'

### Site Location: Erie Boulevard

	Syra	acus	e, N	T								
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
-	350 -	19	36-38	1.25	4 4 3 4	7	0.0		GМ	20000	Light olive gray fine to coarse subangular to angular Gravely SILT, some fine to medium Sand, little fractured Cobbles, saturated. (GM)	Borehole
	-	20	38-40	1.3	3 4 4 5	8	0.0			<b>5001</b>		tremie-grouted with Bentonite/Cemen to grade
	345 -											
- 45	-											
	340											
- 50		-		-								
-	335	-										
- 55		-										
				e, cr				hturs			Remarks: bgs = below ground surface; NA = Not Applicable Level;SS = Split Spoon; RCA = Re-Constituted-A	e/Available; AMSL = Above Mean Sea ggregate.

Drill Drill Drill Aug Rig	e Star ing C er's N ing N er Siz Type pling	iom Nam Neth ze: Die	oany e: od: NA edrici	: Pa Jim L Geoj h D-5	arratt ansii probe 50	-Wo ng e		IC.			Northing: 1112263.612 Easting: 934194.5941 Casing Elevation: NA Borehole Depth: 32' bgs Surface Elevation: 387.22 Descriptions By: Ricardo Jaimes	Client: Nat	g ID: SB-20 ional Grid Erie Boulevard Syracuse, NY
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
		1	0-2	NA		-	0.0				ASPHALT Brown fine to coarse SAND and fine to course subrounded to s GRAVEL, medium dense, dry.	ubangular	
.5	385	2	2-4	NA	-	-	0.0			00000000	Hand dug (0-4' bgs) Brown fine to coarse SAND and fine to coarse subangular to su GRAVEL, dense, dry.	ubrounded	
	.380 -	3	4-8	2.23	-	~	0.0			00000000000			Borehole tremie-grouted with Bentonite/Cemen
- 10			8-12	2.8	-	-	0.0			00000000	Brown to gray fine to coarse SAND and fine to coarse subangu subrounded GRAVEL, dense, non-plastic, dry.	ular to	to grade
- 15		- 5	12-16	4.0	-	-	0.0	****		0000000			
	int	rðstr	ucior	e et		orgai	, faci				Remarks: bgs = below ground surface; NA = Level;SS = Split Spoon; OLM = Oil Petroleum Like Odor.	Like Material;	TLM = Tar Like Material; PLO =

LogFiles\B0036694\boring_well geop Project Number: B00366940.000thplate: G:\Rockware\LogPlot 2001\ Data File: SB-20.dat Date: 7/10/2008 CFA

#### Site Location: Erie Boulevard

Syracuse, NY

#### Well/Boring ID: SB-20

Borehole Depth: 32' bgs

рертн	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analyticat Sample	USCS Code	Geologic Column	Stratigraphic Description			Well/Boring Construction
	370 -	6	16-20	4.0	-	-	0.0			· · · · · · · · · · · · · · · · · · ·	Brown to light brown fine to coarse SAND, some Silt and angular Gravel, dense, dry.			
	1				-		0.0			•				
	-				-	-	0.0			· · · · · ·				
-	365	7	20-24	4.0	-		0.0			•••••	Angular ROCK fragments, some Sill, dense, invist to wet at the tip			
- 25			24.00	2.80	•	-	0.0			00000	Brown fine to coarse SAND and fine to coarse subangular to subrounded GRAVEL, dense, dry.			Borehole tremie-groutec with Bentonite/Cem to grade
•	- 360 -		24-20	2.00			0.0			0 68686	Gray fine to coarse subrounded GRAVEL, some fine to coarse Sand, medium dense to loose, wet.			
• •	-				-		0.0			20000	Gray fine to coarse SAND and fine to coarse subangular GRAVEL, dense to medium dense, wel.			
- 30	-	9	28-32	2.35	-		0.0			0000				
	355 -							-					1	
- 35	-													
3				RC e. cm				(r(a))s			Remarks: bgs = below ground surface; NA = Not Applicable Level;SS = Split Spoon; OLM = Oil Like Material; Petroleum Like Odor.	/Available FLM = Ta	e; AMS ar Like	SL = Above Mean Sea Material; PLO =

Project Number: B00366940.0004hplate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\boring_well geoprobe 2007.ldfx
Data File: SB-20.dat Date: 7/10/2008 CFA Date: 7/10/2008 CFA

Drill Drill	er's N ing M er Siz Type:	om Iam Ieth :e: Die	oany e: od: 4.25 edric	: Pa Jim L Holid ' OD h D-5	arratt ansir ow St 50	ng tem /					Northing: 1112344.65 Easting: 933949.5633 Casing Elevation: NA Borehole Depth: 50' bgs Surface Elevation: 389.871 Descriptions By: Ricardo Jaimes	Client: Nat	ng ID: <b>SB-21</b> ational Grid Erie Boulevard Syracuse, NY
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description		Well/Boring Construction
					NA						ASPHALT		
<b>.</b>	-	1	0-2	0.9	NA 0.5 2	NA	0.0				Dark brown to black Silty CLAY, Sand, and fine Gravel, slight o plasticity, moist. Brown Silty CLAY and fine Sand, some Coal, wet.	dor and	
~	_	2	2-4	1.0	0 4 5 5	9	0.0						
-5	385 -	3	4-6	0.82	6 3 2 3	5	0.0			0000	Dark brown line to course SAND and angular fine GRAVEL, tra moist.	ace Silt, toose,	
-	-	4	6-8	1.4	6 7 5	12	0.0				Dark brown to dark gray fine to coarse SAND, some fine angul Sill, Slag, and Brick, moist.	ar Gravel, little	
-	-	5	8-10	1.38	7	15	0.0				Dark gray Silty CLAY and fine Sand, slight plasticity, medium d petroleum like odor (PLO), moist.	lense, slight	→ Borehole tremie-groute with Bentonite/Cer to grade
- 10	- 380 -	6	10-12	0.93	4 3 4 3	7	10.0				Brown to dark gray SAND and SILT, IIIIe Brick fragments, PLC		
	-	7	12-14	0.0	11 13 11 13	24	NA			1	No revovery		
- 15	375 -	8	14-16	1.7	20 2 4 4	8	11.5	5			Dark gray fine to medium SAND and SILT, trace Clay, low plas medium stiff, wet.	sticity, PLO ,	
		asta	жи	0, C)1		owni	, faci				Remarks: BGS = Below Ground Surface; NA Sea Level; SS = Split Spoon; OLM Petroleum Like Odor.	= Oil Like Mat	aterial; TLM = Tar Like Material; PLO =

Project Number: B00366940.0004 plate: G:\Rockware\LogPlot 2001\LogFiles\B0036694\boring_well2008 Erie Blvd HSA.ldfx Data File: SB-21.dat Date: 7/10/2008 CFA

#### Site Location:

Erie Boulevard Syracuse, NY

#### Well/Boring ID: SB-21

Borehole Depth: 50' bgs

DЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Bo Constru	· 1
		9	16-18	2.0	4 5	11	14.7				Dark gray fine to medium SAND and SILT, trace Clay, low plasticity, PLO , medium stiff, wet.		
	_				6 6						Dark gray-stained CLAY and SILT, slight PLO, medium plasticity, stiff, moist.		
				_,	6				1		Dark gray Clayey SAND, medium dense, moist.		
	-	10	18-20	1.9	6 6	12	3.8				Gray to brown-stained Silty CLAY, high plasticity, stiff, moist.		
20	370 -				7		<u> </u>	-					
	-	11	20-22	1.62	2 3 20	23	7.7						
	-				23					D.	Gray and dark gray fine to coarse SAND and subangular GRAVEL, PLO, dense, wet.		
					16						Dark gray CLAY and SILT, little Sand, slight PLO, plastic, medium sliff, moist.		
	-	12	22-24	0.9	12 10 15	22	2.3						
	-				8	ן י ו					Dark gray fine to coarse SAND and CLAY, slight PLO and plasticity, medium dense, moist.		
25	365 -	13	24-26	1.25	8	15	3.8			1111			
	-			<u> </u>	12	ļ	ļ			0	Gray to dark brown fine to coarse SAND and fine to coarse angular GRAVEL,		- Borehole
	-	14	26-25	0.4	8 12 12	24	7.2			000	some Silt, trace Clay, PLO, medium dense, moist.		tremie-grouted with Bentonite/Ceme
	-				9		ļ			0			to grade
					10					Ď,	Dark gray fine to coarse SAND and fine to medium subangular to subrounded GRAVEL, slight odor, sheen, medium dense, wet.		
	- 360	15	28-30	0.62	976	16	2.6			NO C			
-30	500				2	-	1	-		2003	Gray fine to coarse subangular to subrounded GRAVEL, liny blebs of oil like material (OLM), PLO, sheen, medium dense, wel.		
		16	30-32	0.56	°	11	3.1			05050			
	-	1		+	5			-			Gray line to coarse subangular to subrounded GRAVEL, trace fine to coarse		
		17	32-34	1.55	5	11	3.0			202020	Sand, very small blebs of OLM, PLO, medium dense, wet.		
		-		-	6					ß	Dark gray medium to course subangular GRAVEL, little blebs of OLM, PLO,		
	355 -	_			6 5					$\bigcirc$	sheen, medium dense, wet.		·
- 35	200	18	34-30	5 1.25	6	11	6.0			Ň	Small blebs of tar like material (TLM), and wet @ 36' bgs		
				RC.				l hter			Remarks: BGS = Below Ground Surface; NA = Not Applicable/ Sea Level; SS = Split Spoon; OLM = Oil Like Materia Petroleum Like Odor.	II /Available; AMSL = / al; TLM ≃ Tar Like №	Above Mean laterial; PLO =

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### Site Location:

Erie Boulevard Syracuse, NY

### Borehole Depth: 50' bgs

ELEVATION	Sample Run Number	Sample/int/Type	Recovery (feet)	Blows / 6 Inches	N - Value	PID Headspace (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description			II/Boring struction
<u></u>	_	36-38	1.5	2 5 7 10	12	5.1			0000	Dark gray medium to coarse subangular GRAVEL, little blebs of OLM, PLO, shean, modium dense, wet.			
350		38-4(	2.0	10 13 17 3	30	6.3			$\overline{O}$	Gray fine to coarse SAND and fine to coarse subangular to subrounded GRAVEL, PLO, dense, wet.			
0 350	-	40-42	0.7	10 10 7 5	17	0.5			0000	Gray fine to coarse SAND and fine to coarse subangular to subrounded GRAVEL, trace Sill, medium dense, wet.			
	]22	42-44	0.85	7 7 8 15	15	0.0			0000	Gray to dark gray coarse SAND and fine to coarse angular to subrounded GRAVEL, medium dense, wel.			Borehole tremie-grouted with
45 ³⁴⁵	2	44-46	0.68	5 7 5 6	12	0.0				Gray SILT and fine to coarse SAND, some angular Gravel, medium dense, wet.			Bentonite/Cem to grace
	24	i 46-41	3 1.10	7 5 6 5	11	0.2			<u> </u>	Gray coarse SAND and fine to coarse angular GRAVEL, medium dense, wet.			
- 340		5 48-51	) 1.3	10 9 6 5	15	0.0			<u>000000</u>	Slight organic matter odor at 48' bgs			
50	-											<u></u>	
	_												
55 ³³⁵	5 -												
			RC e, env				tues	<u></u>		Remarks: BGS = Below Ground Surface; NA = Not Applicable Sea Level; SS = Split Spoon; OLM = Oil Like Mater Petroleum Like Odor.	/Availab ial; TLM	le; AMSL = Tar Lik	. = Above Mean e Material; PLO =

Date: 7/10/2008 CFA ng_v 32/0002009 Data File: SB-21.dat

# ARCADIS

Test Pit Logs

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# TEST PIT LOG

Site       I       Ot       I         Location       Syracuse, NY       Start Date       8/28/95       Finish Date       8/28/95         Excavated Depth       9       feet       Diameter       NA       feet       Coring Device       Back-hoe         Length and Width of Surface Cut       10' x 4'       Sampling Interval       Cont.       feet         Land-Surface       Elevation       389.9       feet       X Surveyed       Estimated       Datum       -NGVD +929         Fluid Used       None       Excavator       Back-hoe       Back-hoe         Subcontractor       Parratt-Wolff. Inc.       Operator       Brad       Helper	Test Pit	1	P-1 Project/No.	<u></u>	Erie	Blvd, PSA/IRI	M AY0207.001		Page	l of	
Sint Date     B72805     First Date     B2293       Excavated Dapth     9     feet     Diameter     NA     feet     Coring Device     Back-hoe       Length and Width of Surface Cut     10" x 4"     Sampling Interval     Cont.     feet     Interval     Cont.     feet       Land-Surface     10" x 4"     Sampling Interval     Cont.     feet     INAV § 88       Find Used     None     Excavator     Back-hoe     INAV § 88       Subcontractor     Parrolit-Wolff. Inc.     Opstator     Brad     Holper       Prepared     By     S. Blackmer     Sample/Care Description.     Index       0.0     0.0     0.5     Anphal.     Opstator     Brad barbag and not stating, some       0.5     0.5     2.5     Brick (nordy red, some yellow/off white) and contract, some brown stad, little cinders, dry, losse.       3.5     2.5     5.0     Concrets and red brick, larger fragmatis than hove, some gray-black staining, some       3.6     5.0     6.0     Brick and State fragments, some and natural gravel.       3.6     5.0     Concrets fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments, fragments	Site									10	1
Hole     Prink Date     8/28/95       Excavated Doph     9     feet     Diameter     NA     feet     Coring Device     Back-hoe       Length and Width     0' X 4'     Sampling Interval     Cont.     feet     Gent	Location	Syrac	ise, NY	Start D	ate	8/28/05		<b>—</b>			
Excivated Dapih       9       feet       Diameter       NA       feet       Coring Device       Back-hos         Length and Width       0° x 4°       Sampling Interval       Cont.       feet       Cont.       feet         Land Starface       Beak-hos       389.9       feet       Xarveyed       Baimated       Datum       MAVD 88*         Elevation       389.9       feet       Xarveyed       Baimated       Datum       MAVD 88*         Flaid Used       None       Excervator       Back-hos       Back-hos         Subcontractor       Parratt-Welff. Inc.       Operator       Brad       Helper       Helper         Prepared       By       S. Blackmer       Core       Recovery       Sample/Core Depth       Generate       Nome       MavD 48         0.0       0.5       Asplah.       Operator       Back-hos       MavD 48       Martace         0.4       0.0       0.5       Asplah.       Operator       Brad       Helper       MavD 48         0.5       2.5       Brick (nonthy red, some yellow/off-whits) and concrete, nume brown and, listle cioadem       dy, losse,       3.5       2.5       S.0       Concrete fagments, nome stand antoring growti.       Gonerete         3.6					-	0720793		Finish Da	le	8/28/	95
Langth and Wide,       10' x 4'       Sampling Interval       Cont.       feet         Land Surface       Elevation       389.9       feet       Surveyed       Estimated       Datum       MAN () 88         Elevation       389.9       feet       Surveyed       Estimated       Datum       MAN () 88         Fluid Used       None       Excavator       Back-boc         Subcontractor       Parrati-Wolff. Inc.       Operator       Brad       Helper         Prepared       S. Elackmer       Core       Recovery       Recovery         OVM       From       To       (feet)       Sample/Core Description         0.0       0.5       Asplab.       Asplab.       Asplab.         0.5       2.5       Brick (mostly red, sone yellow/off-white) and concrete, some brown and, little cindern.         3.5       2.5       5.0       Concrete and red brick, larger fregments than above, some gray-black staining; concrete         3.6       5.0       6.0       Brick to Concrete fregments, some send, dots, staining; concrete         3.6       5.0       6.0       Brick to Concrete block) at 7'.         2.8       7.0       Brown faure fregments, some send, thick petroleon liquid, edors.         2.9.0       Brock tained fill materials (very fine	Excavated ]	Depth		feet		]	NA feet			Back-	100
Land-Surface											
Land-Surface       389.9       feet       Surveyed       Estimated       Datum       MAVB 983- MOVD-9939         Find Used       None       Excavator       Back-hoe         Subcontractor       Parratt-Wolff. Inc.       Operator       Brad       Heiper         Prepared       Back-hoe       Excavator       Back-hoe         Prepared       Subple/Core Depth (feet below land surface)       Core Recovery       Supple/Core Description         0.0       0.0       0.5       Asphalt.	of Surface (	Cut	10' x 4'					Sampling	[		
Elevation       389.0       feet       Surveyed       Estimated       Datum       May 1423         Fluid Used       None       Excevator       Back-hoe         Subcontractor       Parratt-Wolff. Inc.       Operator       Brad       Heiper         Prepared       S. Blackmer         Soupple/Core Depth (feet below land surface)       Core       Recovery         OVM       From       To       (feet)         0.0       0.5       Asphale.         0.5       2.5       Brick (mently red, some yellow/off white) and concrete, some brown sand, little cinders.         3.5       2.5       5.0       Cencrete and red brick, larger (regments than shore, some gray-black staining, some         3.6       5.0       6.0       Brick and Concrete fragments than shore, some gray-black staining, concrete         3.6       5.0       6.0       Brick and Concrete fragments, some send and naturil gravel,         7.9       6.0       7.0       Brown Sand, some brick ((es than shore), finit ofor, black staining; concrete         7.9       6.0       7.0       Brown Sand, some brick ((es than shore), finit ofor, black staining; concrete         7.9       6.0       7.0       Brown Sand, some brick ((es than shore), thick petroleum liquid, colon.         7.9       6.0       9.0	Land-Surfac	ce					······	oampning .	Interval	Cont.	feet
Fluid Used       None       Extension       Back-hoe         Subcontractor       Parrati-Walff. Inc.       Operator       Brad       Helper         Prepared       S. Blackmer         Sample/Care Depth. (feet below kand surface)       Core       Recovery         OVM       From       To       (feet)         0.0       0.5       Asphak.         0.5       0.5       2.5         Brick (mostly red, some yellow/off-white) and concrete, some brown sond, little cinders, dry, losse.         3.5       2.5       5.0         Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0         97       6.0       7.0         98       Sand, very fine, some gravel and concrete sand and natural gravel.         7.9       6.0       7.0         90       7.0       Brown Sand, some brick (las than above), fint odor, black staining; concrete         199       6.0       7.0         199       8.0       Sand, very fine, some gravel and concrete sand, thick petroleum liquid, odors.         23.8       7.0       8.0       Sand, very fine, some gravel and concrete sand, thick petroleum liquid, odors.         23.7       8.0       9.0       Black stained fill materia			389.9	feet	r.		<b></b>			LIAUN	00.
Induc     Excavator     Back-hoc       Subcontractor     Parrat-Wolff. Inc.     Operator     Brad     Helper       Prepared     By     S. Blackmer         Sample/Core Depth (feet below land surface)     Core       Recovery     Recovery       OVM     From     To     (feet)       0.0     0.5     Asphalt.       0.5     0.5     2.5     Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little cinders.       3.5     2.5     S.0     Concrete and red brick, larger fragments than above, some prev-black staining; some       3.6     5.0     6.0     Brick and Concrete fragments, some sand and natural gravel.       7.9     6.0     7.0     Brown Sand, some brick (less than above), faint color, black staining; concrete       23.8     7.0     8.0     Sand, very fine, some gravel and coarse sand, dick petrolesun liquid, odorn.       25.7     8.0     9.0     Black faind fill materials (very fine Sand, some coarse sand, and gravel), wood       1     1     1     1     1       25.7     8.0     9.0     Black faind fill materials (very fine Sand, some coarse sand, and gravel), wood       1     1     1     1     1       25.7     8.0     9.0     Black faind fill materials (very fine Sand, some coarse sand, and gravel, wood				_ 1000	Ľ	X Surveyed	Estimated	3	Datum	-NGVD-1	<del>92</del> 9
Subconstructor       Parrat-Wolff. Inc.       Operator       Brad       Helper         Prepared By       S. Blackmer         Sample/Core Depth (feet below land surface)         Core Recovery         OVM       From       To       (feet)       Sample/Core Description         0.0       0.0       0.5       Aphalz.         0.5       0.5       2.5       Brick (mostly red, some yellow/off-white) and concrete, some brown smal, little einders.         3.5       2.5       5.0       Concrete and red brick, larger fragments than above, some gray-black staining; some         3.6       5.0       6.0       Brick and Concrete fragments, some smal and antural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint door, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some grave land coarse sand, and gravel), wood         23.8       7.0       8.0       Sand, very fine, some grave land coarse sand, and gravel), wood         23.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         23.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         25.7       8.0       9.0       Black stained	Fluid Used		None				Excav	ator			
Prepared       Brad       Helper         By       S. Blackmer         Sample/Core Depth (feet below land surface)         Core         Recovery         OVM       From       To         0.0       0.0       0.5         0.1       0.0       0.5         0.2       0.5       Asphalt.         0.3       0.5       2.5         Brick (nostly red, some yellow/off-while) and concrete, some brown send, little einden,         0.4       dry, losse.         3.5       2.5       5.0         Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0         Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0         Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0         Sand, very fine, some gravel and coarse sand, dnd gravel), wood         planks (4x6 or possibly milroad tied?), concrete and brick, neet ords or pipes.         25.7       8.0       9.0         Black stained fit materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly milroad tied?), concrete and	Subcontracto	or	Domott Malf	<i>C</i> 1					*·····	Back-hoe	
By         S. Blackmer           Sample/Core Depth (feet below land surface)         Core Recovery           0.0         0.0         0.5         Asphale.           0.5         0.5         2.5         Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little cindem, dry, loose.           3.5         2.5         5.0         Concrete and red brick, larger fragments than above, some gray-black staining, some brown sand, little natural gravel, trace metal fragments.           3.6         5.0         6.0         Brick and Concrete fragments, some sand and networal gravel.           7.9         6.0         7.0         Brown Sand, some brick (less than above), faint odar, black staining; concrete foundation (or large concrete block) at ?'.           23.8         7.0         8.0         Sand, very fine, some gravel and coarse sand, and gravel), wood planks (4x6 or possibly milroad ties?), concrete and gravel, and coarse sand, and gravel), wood			Parratt-wolf	1. Inc.		Operat	tor Bra	d	Helper		
Sample/Core Depth (feet below land surface)         OVM       From       To       Core Recovery         0.0       0.0       0.5       Asphalt.         0.5       0.5       2.5       Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little eindern, dry, loose.         3.5       2.5       5.0       Concrete and red brick, larger fregments than above, some gray-black attaining; some         3.6       5.0       6.0       Brick and Concrete fregments, some stand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete foundation (or large concrete block) at 7'.         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, and gravel), wood planke (4x6 or possibly milroad tin?), concrete and gravel), wood         25.7       8.0       9.0       Black staining (fill materials (very fine Sand, some coarse sand, and gravel), wood         23.7       8.0       9.0       Black staining fill materials (very fine Sand, some coarse sand, and gravel), wood         25.7       8.0       9.0       Black staining fill materials (very fine Sand, some coarse sand, and gravel), wood         21.7       8.0       9.0       Black staining fill materials (very fine Sand, some coarse sand, and gravel), wood         21.7       8.0       9.0       Black											
Core Recovery       Core Recovery         OVM       From       To       (feet)       Sample/Core Description         0.0       0.0       0.5       Asphalt.         0.5       0.5       2.5       Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little cinders, dry, loose.         3.5       2.5       5.0       Concrete and red brick, larger fragments than above, some gray-black staining, some brown sand, little natural gravel, trace metal fragments.         3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete foundation (or large concrete block) at 7'.         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stain fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1         23.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1         1       1       1       1       1         23.8       7.0       8.0       Sand, very fine, some grav	ву	S. Blac	kmer								
0.0       0.0       0.5       Asphalt.         0.5       0.5       2.5       Brick (mostly red, some yellow/off-while) and concrete, some brown sand, little cinders,         0.5       0.5       2.5       Brick (mostly red, some yellow/off-while) and concrete, some brown sand, little cinders,         0.5       0.5       2.5       Brick (mostly red, some yellow/off-while) and concrete, some brown sand, little cinders,         0.5       0.5       2.5       S.0       Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravet.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1         1       1       1       1       1         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1       1         1       <	OVM	(feet below la	id surface) ( Re	covery							
0.5       0.5       2.5       Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little einders, dry, loose.         3.5       2.5       5.0       Concrete and red brick, larger fragments than above, some gray-black staining, some brown sand, little natural gravel, trace metal fragments.         3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (leas than above), faint odor, black staining; concrete foundation (or large concrete block) at 7'.         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odore.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood planks (4x6 or possibly milroad ties?), concrete and brick, metal rods or pipes.			10 (	feet)		S	ample/Core Des	cription			
2.5       Brick (mostly red, some yellow/off-white) and concrete, some brown sand, little cinders,         3.5       2.5       5.0         3.6       5.0       Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0         Brown sand, little natural gravel, trace metal fragments.         3.6       5.0         6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0         7.9       6.0         7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0         8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0         Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood       planks (4x6 or possibly milroad ties?), concrete and brick, metal rods or pipes.	0.0	0.0	0.5	As	phalt.						
3.5       2.5       5.0       Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly milroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.	0.5	0.5	26			······································	······································				
3.5       2.5       5.0       Concrete and red brick, larger fragments than above, some gray-black staining, some         3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.			2.5	Bri	ck (mostly red.	some yellow/of	f-white) and concr	ete, some brown	sand, little cin	iders,	
3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, little natural gravel, trace metal fragments.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete foundation (or large concrete block) at 7'.         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly milroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.											
3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand. very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly milroad tics?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.	3.5	2.5	5.0	0.0			······································				
3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         25.7       8.0       9.0       1       1         1       1       1       1       1         1       1       1					terete and red	brick, larger frag	gments than above,	some gray-black	c staining, som	ne	
3.6       5.0       6.0       Brick and Concrete fragments, some sand and natural gravel.         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         1       1       1       1       1         25.7       8.0       9.0       1       1         1       1       1       1       1         1       1       1				bro	wn sand, little	natural gravel, ti	race metal fragmen	ts.			
7.9       6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         6.0       7.0       Brown Sand, some brick (less than above), faint odor, black staining; concrete         23.8       7.0       8.0       Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.	3.6	5.0	6.0	1							
23.8       7.0       8.0       Sand. very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.	79	6.0									
23.8       7.0       8.0       Sand. very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad tics?). concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.		0.0	7.0	Bro	wn Sand, some	: brick (less than	above), faint odor	, black staining;	concrete		
23.8       7.0       8.0       Sand. very fine, some gravel and coarse sand, thick petroleum liquid, odors.         25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.											
25.7     8.0     9.0     Sand, very fine, some gravel and coarse sand, thick petroleum liquid, odors.       25.7     8.0     9.0     Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood       planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.     Concrete foundation or floor at 9'.	23.8	7.0									
25.7       8.0       9.0       Black stained fill materials (very fine Sand, some coarse sand, and gravel), wood         planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes.       Concrete foundation or floor at 9'.		/.v	8.0	Sanc	1, very fine, ao	me gravel and c	oarse sand, thick p	etroleum liquid,	odors.		
planks (4x6 or possibly railroad ties?), concrete and brick, metal rods or pipes. Concrete foundation or floor at 9'.	25.7	8.0	9.0					-			
Concrete foundation or floor at 9'.										·	
Concrete foundation or floor at 9'.		**************************************		plan	ks (4x6 or poss	sibly railroad tics	s?), concrete and bi	rick, metal rods	or pipes.		
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# TEST PIT LOG

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Test Pit	TP-2	Project/No.		Erie	Blvd. PSA/IRM	AY0207.001	Page	<b></b>	of	1
Site Location	Syracuse, NY		_Slart Date		8/28/95		Finish Date		8/28/9	95
Excavated Depth	••••••	11	feet	Hole Diameter	NA	fect	Type of Sample/ Coring Device	<u></u>	Back-1	100
Length and Width of Surface Cut		10' x 4'					Sampling Interval		Cont.	fect
Land-Surface Elevation	·	389.5	feel	[	XSurveyed	Estimated	Datur	n	NAVD NGVD	88 <del>1929</del>
Fluid Used		None	<del></del>			Excavator		В	ack-hoe	
Subcontractor	<del></del>	Parratt-Wolff	, Inc.		Operator	Brad	Helpe	r		
Prepared By	S. Blackmer									

	Sample/Core I (feet below land s	surface)	Core Recovery
OVM	From	To	(feet) Sample/Core Description
0,0	0.0	0.5	Asphalt.
0.0	0.5	2.0	Brown Sand and gravel, dry; bricks and brick fragments evident at 2'.
0.0	2.0	4.0	Brown sand, some gravel, little red brick/concrete, dry, trace metal, little to trace cinders;
			Larger fragments/blocks of brick and concrete evident.
0.2	4.0	5.0	Stone/rock and concrete wall or foundation materials.
0.0	5.0	6.0	Brown very fine Sand, some to little coarse sand and gravel.
2.3	6.0	7.0	Brown Sand and Gravel with some black staining (coal, cinders, and/or asphalt)
			evident - shiny appearance.
1.9	7.0	11.0	Brown very fine to fine Sand, some gravel, dry to damp. End test pit.
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# TEST PIT LOG

Boring/Well	TP-2A	Project/No.		Erie	Blvd. PSA/IRM	AY0207.001		Page	l of	1
Site Location	Syracuse, NY		_Start Date		9/19/95		_Finish Date		9/19/	95
Excavated Depth		10	feet	Hole Diameter	NA	feet	Type of S Coring E		Back-l	100
Length and Width of Surface Cut		10' x 4'					Sampling Int	icrval	Cont.	feet
Land-Surface Elevation		389.2	feet	D	Surveyed	Estimated		Datum	NAVD NGVD	83
Fluid Used	••••••	None				Excavator			Back-hoe	
Subcontractor	<del></del>	Parratt-Wolff.	Inc.		Operato		•	Heiper	Back-Hoe	
Prepared By	S. Blackmer									

	Sample/Core I (feet below land s	surface) Co	pre
OVM	From	Reco To (fe	•
0.0	0.0	0.5	Asphalt.
0.0	0.5	2.0	Brown Sand and Gravel (various sizes and compositions), dry to damp; bricks
			and brick fragments evident at 2'.
0.0	2.0	5.0	Brown fine to very coarse Sand and Gravel, some red brick/concrete, little to
			trace cinders. dry to damp.
0.0	5.0	10.0	Brown Sand and Gravel (finer than above), dry.
			Move back (away from wall) to extend test pit.
0.0	0.5	5.0	Fill - Sand and Gravel, some to little brick and cinders, little metal debris.
6.0	5.0	10.0	Dark brown Sand and Gravel (various sizes, compositions, and textures), dry to
			damp, trace black "staining" from coal or cinders(?) - petroleum not evident.
			Move back (away frowm wall) to extend test pit.
7,0	0,5	3.0	Fill, as seen inadjacent cuts, plus trace wood fragments.
			At approximately 3' pipes diagonal across hole; attempt to move back and go around;
			hit large concrete block (unmovable) at about 2.5".

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# ARCADIS

Piezometer Construction Logs and Soil Boring Logs

### WELL CONSTRUCTION LOG (UNCONSOLIDATED)

1	
	Project Erie Blvd Site PSA/IRM Well PZ-2
	Town/City Syracuse
	County Onondaga State New York
Land Surface	Permit No.
<u>6</u> inch diameter	Land-Surface Elevation
drilled hole	and Datum <u>374.1</u> feet Surveyed
	NAVD 88 Estimated
Well Casing	Installation Date October 2, 2000
<u> </u>	Drilling Method Hollow Stem Auger
Schedule 40 PVC	Drilling Contractor Parratt Wolff
	Drilling Fluid Potable Water
Backfill	
X Grout <u>Cement/Bentonite</u>	Development Technique(s) and Date(s)
ft.* Choke Sand	
K	
ft.*	Fluid Loss During Drilling gallons
	Water Removed During Development gallons
Bentonite	Static Depth to Water feet below M.P.
4 ft.* x pellets	Pumping Depth to Water feet below M.P.
	Pumping Duration hours
5 ft.* Choke Sand	Yield gpm Date
5 ft.* Top of Screen	Specific Capacitygpm/ft.
Well Screen	
<u> </u>	Well Purpose Groundwater Monitoring
Gravel Pack	
X Sand Pack	Remarks
Formation Collapse	
15 ft.* Screen	
ft,* Sump	
ft.* Bentonite Seal	
Measuring Point is	· · · · · · · · · · · · · · · · · · ·
Top of Well Casing	
Unless Otherwise Noted.	
* Depth Below Land Surface	Prepared by TM/DD

# ARCADIS Sample/Core Log

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Boring/We	el <u>l</u>	PZ-1	_Project/No.	Niagara Mohawk - Erie Boulevard/AY0	00207.0005 Page 1 of 1	
Site Location	Syracuse,	NY		Drilling Started 10/2/0	Drilling	
Total Dep	th Drilled	14	Feet	Hole Diameter 8 inches	Type of Sample/ Coring Device Track Rig	
Length an of Coring I	d Diameter Device	2-feet x 2	-inches		Sampling Interval 2.0' feet	
Land-Surf	ace Elev.	374.13	feet	X Surveyed Estimated	Datum	
Drilling Flu	rid Used	Potable w	/ater		Drilling Method 4 1/4 HSA	
Drilling Contractor	Parratt W	olff			Driller J. Perry Helper J. Lansing	
Prepared By	T. McClena	han/D. De	Orazio		Hammer Hammer Weight 140 lbs. Drop 30 ins.	
Sample/Cor (feet below )	e Depth and surface)	Core Recovery	Time/Hydraulic Pressure or Blows per 6			
From	То	(feet)	Inches	Sample/Core Description		PID
0	2	0.4	wh,wh,2,3	brown, f SAND		0.9
2	4	0.3	7,10,7,7	brown, f SAND and GRAVEL, with pie	eces of concrete, trace wood chips	0.4
4	6	1	2,5,5,12	brown, f-m SAND and GRAVEL; 1" a		1.2
6	8	0.8	7,10,8,10	brown, f-m SAND and GRAVEL, little		2.1
8	10	0.5	7,7,11,7	f-m SAND and GRAVEL, some silt ar		1.3
10	12	1.0	5,6,8,6	SAME AS ABOVE		0.8
12	14	0.5	15,5,6,5	SAME AS ABOVE		1.7
					······································	
L	1	1	- <u>I</u>	_ <u></u>		

# WELL CONSTRUCTION LOG

(UNCONSOLIDATED)

	Project Erie Blvd Site PSA/IRM Well PZ-2 Town/City Syracuse
Land Surface	County Onondaga State New York
6 inch diameter	Land-Surface Elevation
	and Datum <u>376.0</u> feet
Well Casing	NAVD 88         Estimated           Installation Date         October 2, 2000
2 inch diameter,	Installation DateOctober 2, 2000Drilling MethodHollow Stem Auger
Schedule 40 PVC	Drilling Contractor Parratt Wolff
	Drilling Fluid Potable Water
Backfill	
x Grout Cement/Bentonite	Development Technique(s) and Date(s)
ft.* Choke Sand	
ft.*	Fluid Loss During Drilling gallons
	Water Removed During Development gallons
Bentonite slurry	Static Depth to Water feet below M P
4 ft.* x pellets	Pumping Depth to Water feet below M.P.
	Pumping Duration hours
🔬 🥿 5 ft.* Choke Sand	Yield gpm Date
5 ft.* Top of Screen	Specific Capacity gpm/ft.
Well Screen	
<u> </u>	Well Purpose Groundwater Monitoring
PVC	
Gravel Pack	
X Sand Pack	Remarks
Formation Collapse	
10.4 + 0	
18 ft.* Screen	
ft.* Sump	
ft.* Bentonite Seal	
Measuring Point is	
Top of Well Casing	
Unless Otherwise Noted.	
* Depth Below Land Surface	Prepared by TM/DD

# ARCADIS Sample/Core Log

Boring/W∈		PZ-2	Project/No.	Niagara Mohawk - E	rie Bouleva	d/AY00	0207.00	05	Page	1 c	of 1	
Site Location	Syracuse,	NY			Drilling Started	10/2/00		Drilling Completed				
Total Dep		18	Feel	Hole Diameter	8_inches		Type of Coring	Sample/ Device	Split Sp	000n		
Length an of Coring	d Diameter Device	2-feet x 2-	-inches					Sampling In	lerval	2.0'	feet	
Land-Surf	ace Elev.	376.01	feet	XSurveyed	Estimate	ed	Datum			·····	1 ⁰ -11-11-11-11-11-11-11-11-11-11-11-11-11	
Drilling Flu	uid Used	Potable w	ater		·····			Drilling Meth		<u>4 1/4 H</u>		
Drilling Contracto	r Parratt W	olff					<b></b>					
Prepared By		ahan/D. De	Orazio				Hammo	J. Perry er 140 lbs.	_Helper Hammi _Drop	er	ing ins.	
Sample/Co (feet below From	re Deplh land surface) To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6	Sample/Core Descripti	,							
0	2	0.5	Inches 14,12,6,9	brown, f-m SAND, v								PID
2	4	1	6,4,4,7	brown, f-m SAND a			ick love	r bottom	1" cond	aroual		0.8
4	6	0.5	3,3,3,5	brown, f-m SAND, i					+ sano,	graver	and ash	2.4
6	8	0.5	5,3,1,5	gray, f-m SAND, tra								2.1
8	10	0.8	8,9,32,4	f-m SAND and GRA					wei			1.7
10	12	0.4	100/.4	f SAND, f-m gravel,						 >'		3.1
12	14	0.8	5,6,7,5	brown, f-m SAND a			<u> </u>		10 11 - 12			1.7
14	16	0.8	3,5,6,14	f-m SAND and GRA			ense a	rav clav litt	le silt f.	m and	Gravel	2.4
16	18	0.4	12,5,4,4	gray, f-m SAND, tra					<u>/// 011, 1</u>	ang.	Oraver	1.1
ļ												
									-			
									- <del>1</del>		<del></del>	

# WELL CONSTRUCTION LOG

(UNCONSOLIDATED)

	З,
	Project Erie Blvd Site PSA/IRM Well PZ-1/
	Town/City Syracuse
	County Onondaga State New York
Land Surface	Permit No
<u>6</u> inch diameter	Land-Surface Elevation
drilled hole	and Datum <u>392.1</u> feet XSurveyed
	NAVD 88 Estimated
🔍 🧹 Well Casing	Installation Date October 3, 2000
<u> </u>	Drilling Method Hollow Stem Auger
Schedule 40 PVC	Drilling Contractor Parratt Wolff
	Drilling Fluid Potable Water
Backfill	
X Grout Cement/Bentonile	Development Technique(s) and Date(s)
17 ft.* Choke Sand	
17 ft.*	Fluid Loss During Drilling gallons
	Water Removed During Development gallons
Bentonite slurry	Static Depth to Water feet below M.P.
19 ft.* x pellets	Pumping Depth to Water feet below M.P.
	Pumping Duration hours
🖌 🛌 21 ft.* Choke Sand	Yield gpm Date
	Specific Capacity gpm/ft.
Well Screen	
2 inch diameter	Well Purpose Groundwater Monitoring
PVC _010 slot	
Gravel Pack	
x Sand Pack	Remarks
Formation Collapse	
36 ft.* Screen	
ft.* Sump	
ft.* Bentonite Seal	
Measuring Point is	
Top of Well Casing	
Unless Otherwise Noted.	
* Depth Below Land Surface	Prepared byTM/DD

# ARCADIS Sample/Core Log

Boring/We	:II	PZ-3	Project/No.	Niagara Mohawk - E	rie Boulevard/AY00	00207.0005		Page	1	of	1	
Site Location	Syracuse,	NY			Drilling Started 10/2/0		rilling ompleted	10/3/00				
Total Dept	lh Drilled	36	Feet	Hole Diameter	8 inches	Type of S Coring De	,	Split S	poon			****
Length an of Coring I	d Diameter Device	2-feet x 2-	-inches			S	ampling In	terval	2.0'		feet	
Land-Surf	ace Elev.	392.14	feet	XSurveyed	Estimated	Datum						
Drilling Flu	uid Used	Potable w	ater			D	rilling Meth	nod	4 1/4	HSA	4	
Drilling Contracto	r Parrall W	/olff				Driller J.	. Perry	Helper	J. La	nsino	3	
Prepared By	T. McClen	ahan/D. De	Orazio			Hammer Weight <u>1</u> -		- Hamm _Drop	er		ins.	
Sample/Cor (feet below From	land surface)	Recovery	Time/Hydraulic Pressure or Blows per 6									
0		(feet) 1.0	Inches	Sample/Core Description								PID
2	2		5,20,16,13	brown, f SAND, som				t of spo	on			1.2
4	6	1	12,12,13,16 13,19,18,21	brown, f SAND, dry,					<b></b>		···	0.8
6	8	0.6	18,21,13,16	SAME AS ABOVE	e small gravel (a	ngular), tra	ice silt	·····.				1.1
8	10	0.5	9,10,9,8		" down poolest of	f bloois						0.7
10	12	0.9	5,7,9,10	it. Brown, f SAND, 3 SAME AS ABOVE,			n, trace s	ilt and (	gravel			0.5
12	14	0.8	14,16,15,20	f SAND, f-m gravel		········						0.8
14	16	1.0	14,11,10,11	SAME AS ABOVE,		ice sit						1.1
16	18	1.5	10,10,9,9	It brown, f SAND, tr		little group	l tropo or					0.3
18	20	1	12,13,5,4	top 8" SAME AS AE						 		0
20	22	1.0	2,2,2,2	gray, plastic CLAY	, 10 dan, 10	utioni 4 gi	ay plastic	J OLAT	, 110 00	101		1.2
22	24	1.5	2,4,5,5	top 1' gray CLAY, la	ever of wood chin	s at 1' dow		A ^u ara	v oilt			
24	26	2	20,34,24,31	top 1' SILT and SA					y Silt	· ·		
26	28		41, 50/.3	NO RECOVERY		9.4101 (411	galar), oli	(y, wet				
28	30	0.3	50/.3	f-m GRAVEL, wet,	some silt							
30	32	0.8	10,15,12,13	f-m GRAVEL (round		······						
32	34	0.5	29,10,9,8	SAME AS ABOVE			······································	·····	<del></del> ,			
34	36	1.2	4,2,2,4	top 8", f-m SILTY G	RAVEL; bottom	5" brown \$	SILT, trac	e grave	1			

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Dril Dril Dril Aug Rig	Date Start/Finish: 5/26/16-5/27/16 Drilling Company: Parratt-Wolff Driller's Name: Bill Rice Drilling Method: Hollow Stem Augers Auger Size: 3.25" ID followed by 10.25" ID Rig Type: Truck-mounted CME-75 Sampling Method: 2' x 2" Split Spoon						ers ).25"	D	Northing: 1112414.84' Easting: 933900.16' Casing Elevation: 390.54' AMSL Borehole Depth: 44' bgs Surface Elevation: 391.04' AMSL Descriptions By: Chris Kassel	<b>g ID: RW-1</b> ional Grid Erie Blvd Former Manufactured Gas Plant				
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description			Well/Boring Construction		
-									Anabali					
-	390 <b>-</b> -	1	0-5'	Hand	NA	NA	0.0		Asphalt Brown fine to coarse GRAVEL, some fine to coarse Sand, trace moist [FILL]. Brown Sandy fine to coarse subangular to subrounded GRAVEI			Locking J-Plug Concrete (0.0- 1.0' bgs) Sand Drain (1.0- 2.0' bgs)		
	-			cleared				00000	Brick, Silt, moist [FILL].					
-	385 <b>-</b> -	2	5-7'	0.8	1 2 3 2 8	5	0.2		Brown SILT, little fine to medium subangular Gravel, trace Brick to medium Sand, clay, low plasticity, soft, moist [FILL]. Little Sand, non-plastic starting at 7' bgs.	tragments, fine		Cement-Bentonite Grout (2.0-7.0' bgs)		
-	-	3	7-9'	0.6	5 4 2	9	0.2		Light spotty black staining, no odor starting at 9' bgs.		100000	Bentonite Chips (7.0-9.0' bgs)		
- 10	-		9-10'	0.6	5 2 2 2 2	NA	0.2		Brown and light blue-stained Silty fine to medium SAND, little fir	ne subangular	-	6" OD sch 40 PVC Riser (0.4- 14' bgs)		
-	380 -	5	10-12	0.9	2 1 9	4	3.1		Gravel, trace coarse Sand, loose, moist. [FILL] Brown SILT, little fine to medium subangular Gravel, trace Brick moist. Light spotty black staining, no odor [FILL].	fragments, soft,		to good Deale		
-	-	6	12-14	1.2	3 3 2	6	0.2		No odor at 12' bgs.			∷:: #2 Sand Pack (9.0-34' bgs)		
- 15	_	7	14-16	0.7	4 2 2	4	4.6		Olive grey SILT, trace fine to coarse Sand, soft, moist [FILL]. Heavy black-coated Silty SAND and WOOD, soft, wet. Coating oily. No odor [FILL].	is viscous and		6" OD 0.020" slot sch 40 PVC Screen (14-34' bgs)		
Proje		mbe	r: B0				ign & Con natural ar t assets Ten	sultancy d	Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North A Geographic coordinates referenced boring_well HSA 2007.ldfx 2/27/2017					

Borehole Depth: 44' bgs

### Site Location:

Erie Blvd Former Manufactured Gas Plant

#### PID Headspace (ppm) Sample Run Number Geologic Column Sample/Int/Type Recovery (feet) Well/Boring Blow Counts ELEVATION Stratigraphic Description N - Value Construction DEPTH 375 Heavy black-coated Silty SAND and WOOD, soft, wet. Coating is viscous and 2 . Т oily. Iridescent sheen at 16.3 - 16.8' bgs, no odor [FILL]. . 7 Т. .T .T 8 16-18 1.1 10 2.6 Т. 3 BRICK and black-stained WOOD, no odor [FILL], 3 Black-stained SILT, trace fine Sand, soft, wet. Several dozen sand-sized iridescent blebs, slight coal tar-like odor. 2 2 9 18-20 1.7 5 27.0 Black Silty fine SAND, wet. Iridescent sheen, slight coal tar-like odor, saturated 3 with viscous oily material. 7 Black-stained SILT, trace Clay, soft, low to moderately plastic, wet. Slight coal - 20 ÷ tar-like odor. 12 Greyish black stained medium to coarse SAND, little Silt, trace fine Gravel, 26 . . Wood. Coarsens down to little Gravel, moist. Light spotty black coating with 10 20-22 0.4 62 85.4 370 • 36 iridescent sheen. #2 Sand Pack • (9.0-34' bgs) 36 Grey to olive coarse SAND, little fine subangular Gravel, trace Silt, loose, wet. Noderate coal tar-like odor, heavy coating of brown oily material. Note: Based on rig behavior, blow counts and recovery, likely coarser material . • 7 from 20-23.5' bgs 10 11 22-24 1.5 17 76.2 . • 7 Black-stained to olive grey Sandy SILT, trace fine to medium angular Gravel, medium dense, wet. Moderate to heavy coating of black to brown viscous oil material on gravel, slight coal tar-like odor. Coarsens downward and coating decreases with depth. At 24' bgs coarsened to black-stained fine to coarse GRAVEL, trace small Cobbles, Silt, medium to coarse Sand, Dense, wet, light viscous brown to black coating, slight coal tar-like odor. No coating below 26' heaved is a state of the advertised by a fibre of brown oils like 8 5 5 - 25 6" OD 0.020" slot 24-26 0.7 9 95.4 12 sch 40 PVC 5 bgs. 26-27' bgs approximately 6 medium sand-sized blebs of brown oily-like material. No staining starting at 28' bgs. Screen (14-34' 4 .... bas) Note: based on rig behavior, blow counts and recovery, likely coarser material . . 365 from 23.5-33' bgs. 8 6 13 26-28 0.9 13 7.5 7 <u>...</u> 7 ..... ..... 12 25 ::: 14 28-30 0.7 15 3.7 8 : [ : ] : . . . 8 - 30 ..... 7 ..... .... 6 ..... 15 30-32 0.7 1.8 Grey coarse Sand with fine angular Gravel lens from 31 - 31.5' bgs, wet, 360 18 <u>...</u> 10 ••• dense, no odor ... 10 <u>...</u> ..... 8 $\equiv \pm$ 7 16 32-34 0.9 14 15.8 Black-stained coarse SAND, little fine subangular Gravel, trace Silt, fine to 7 • medium Sand, dense, wet. Slight coal tar-like odor . 5 Cement-Bentonite Black-stained Silty fine to coarse GRAVEL, little small to medium Cobbles, 4 $\sim$ Grout (34-44' trace coarse Sand, medium dense, wet, no odor. 01 bqs) 4 - 35 17 34-36 0.9 8 6.2 Olive grey to black stained from 35-36' bgs. 6" OD sch 40 4 PVC Sump (34-39' bgs) Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ARCADIS Design & Consult of natural and built assets ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North American Vertical Datum of 1988. Geographic coordinates referenced to New York State Plane Central Zone, 3102. Template: boring_well HSA 2007.ldfx Date: 2/27/2017 Project Number: B0036694.0000 Page: 2 of 3 Data File: RW-1.dat

Borehole Depth: 44' bgs

### Site Location:

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
-	355 -	18	36-38	0.6	8 7 6 6	13	6.1		Olive grey fine to coarse GRAVEL, some subround to rounded Cobbles, trace coarse Sand, dense, wet. Note: Based on rig behavior, blow counts and recovery, likely coarser material from 36-40' bgs.	6" OD sch 40 PVC Sump (34- 39' bgs)
- 40	-	19	38-40'	0.4	9 5 5 5	10	1.3			Cement-Bentonite Grout (34-44' bgs)
	350 -	20	40-42	1.0	5 6 6 7	12	2.8			000000000000000000000000000000000000000
	_	21	42-44	0.7	6 6 5 6	11	4.8			00000 000000
- 45	- 345 -	22								
		23								
- 50	-	24								
	- 340 -	25								
	-	26								
- 55	-									
9	Α	R	C	4C	DIS	buit	<mark>ign &amp; Con:</mark> natural an t assets		Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North American Vert Geographic coordinates referenced to New York 3	

Drill Drill Drill Aug Rig	ling C ler's I ling N er Si Type	Comp Nam Metho ze: 3 : Tru	oany e: E od: 3.25" ick-m	: Parr Bill Rice Hollow ID foll	Parratt-Wolff Easting: 933898.96' Rice Casing Elevation: 388.92' AMSL Client: N. Ilow Stem Augers followed by 10.25" ID Pareto Is Pareto Is Pareto Is 54' base					Client: Nati	<b>ng ID: RW-2</b> tional Grid Erie Blvd Former Manufactured Gas Plant			
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description		Well/Boring Construction			
									sphalt		12" Heavy Duty Flush-Mount			
-	5 -	1	0-5'	Hand cleared	NA	NA	0.0		oftdig to 5' bgs. Grey fine to medium rounded GRAVEL, little fi lit and Clay, dense, dry [FILL]. No odor. tone pavers/blocks [FILL]. No odor rey fine to medium rounded GRAVEL, little fine Sand, trace Si ense, Dry [FILL]. No odor.	It and Clay,	Concrete (0.0- 1.0' bgs) Sand Drain (1.0- 2.0' bgs)			
-	-	2	5-7'	0.9'	2 5 6 5 6	11	0.0		ricks [FILL].		Cement-Bentonite Grout (2.0-7.0' bgs)			
-	_	3	7-9'	0.9'	7 8 10	15	2.0		ellow-brown to black stained fine to coarse SAND, trace Silt ar te Gravel, loose, moist [FILL]. No odor.	nd subangular	Bentonite Chips (7.0-9.0' bgs)			
- 10	-10 -	4	9-10' 10-12		5 7 8 7 7 7 7	NA 14	178.6 168.4		ack stained Silty fine to medium SAND, trace fine to medium s ravel, loose, moist [FILL]. moderate coating of black viscous ta ubstance, moderate coal tar-like odor.		6" OD sch 40 PVC Riser (0.4- 15.3' bgs)			
_	-	6	12-14	1.4'	8 7 9 7	16	161.0		live Grey SILT, little Clay, trace coarse Sand, medium stiff, me oist [FILL].	dium plasticity,	#2 Sand Pack (9.0-45.3' bgs)			
- 15	-15 -	7	14-16	1.5'	3 2 1 2	3	396.3		ack stained Silty fine SAND, trace Wood fibers, loose, moist [ bating of viscous tar-like substance, strong coal tar-like odor. 4.5 - 14.7' bgs: Black stained fine to medium angular GRAVEL he to medium SAND, little Silt, wet [FILL]. Heavy viscous tar-lik bating, strong coal tar-like odor.	fining down to	6" OD 0.020" slot sch 40 PVC Screen (15.3- 45.3' bgs)			
								sultancy d	marks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches Elevations referenced to the North A Geographic coordinates referenced					

CMK/NPS

Borehole Depth: 54' bgs

### Site Location:

DEPIH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description		Boring ruction
					3 2				14.7 - 16' bgs: Black stained fine SAND, little Silt, trace Wood fibers, soft, wet [FILL]. Strong coal tar-like odor.		
	-	8	16-18	2.0'	2	4	189.5		16 - 16.4' bgs: Black stained fine GRAVEL to coarse SAND, little fine Sand, trace Wood, loose, wet [FILL]. Saturated with oil-like material with slight iridescent sheen, strong coal tar-like odor.		
	-				2				Black stained Sandy SILT, medium stiff, moist [FILL]. Staining decreases with depth and soil becomes olive grey at 17.9' bgs. Moderate coal tar-like odor.		
	-	9	18-20	1.2'	3 7	10	32.1		Olive Grey Clayey SILT, medium stiff, moist [FILL]. Slight odor.		
20	-20 -				22				WOOD [FILL].		
	-	10	20-22	0.6'	12 18	34	95.7		Olive Grey angular Shale fragments, medium sand to fine gravel in size, loose, dry [FILL]. Slight odor.		
					16 14						
	-	11	22-24'	0.8'	10 9 8	17	6.8		Olive grey Silty fine subangular GRAVEL, little fine to medium Sand, medium dense, moist [FILL]. Trace black spotty staining and brown coarse sand-sized oily blebs. Slight coal tar-like odor increasing with depth.		<ul> <li>— 6" OD 0.020" sla sch 40 PVC</li> <li>Screen (15.3- 45.3' bgs)</li> </ul>
	-				8			$\overline{\mathbf{\nabla}}$			
5	-25 -	12	24-26	0.5'	6 6 5	11	8.0				
	-				8						
	-	13	26-28	0.0'	6 8 6	14	NA		No Recovery.		— #2 Sand Pack (9.0-45.3' bgs)
0	-30 -	14	28-30	0.3'	7 6 6 7 5	13	1.3		Black stained subround fine to coarse GRAVEL and freshly shattered COBBLES, little coarse Sand, trace fine Sand and Silt, loose, wet. Moderate coating of black viscous oil-like material with spotty silvery to iridescent sheens, slight coal tar-like odor.		
	_	15	30-32	0.7'	3 5 9	14	17.7				
	-	16	32-34	0.8'	24 29 50/ 0.3' -	NA	12.0				
5	-35 -	17	34-36	1.2'	11 11 7 6	18	6.1		Yellow-brown to dark grey brown with some black staining Silty fine to coarse subangular to subround GRAVEL, trace fine to coarse Sand, loose, wet. Spotty iridescent sheens in split spoon and moderate coal tar-like odor.		
9	Α	R	C	4C		Des for buil	<mark>ign &amp; Con:</mark> natural an t assets		Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches Elevations referenced to the North American Vertic Geographic coordinates referenced to New York S		one, 3102.

Borehole Depth: 54' bgs

### Site Location:

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
	_	18	36-38	0.8'	8 9 9	18	57.0		Black stained fine to coarse subangular GRAVEL, little coarse Sand, loose, wet. Heavy coating of black oily tar-like material, moderate coal tar-like odor. Dark grey brown with spotty black staining Silty fine to coarse subangular to subround GRAVEL, trace fine to coarse Sand, loose, wet. Moderate coal tar- like odor.	
	_	19	38-40	1.1'	9 11 11 7	18	12.8	00000	Black Stained Sandy fine to coarse subround to subangular GRAVEL, trace Silt, loose, wet. Approximatly 12 sand-sized brown blebs of low viscosity NAPL, spotty iridescent sheens, moderate coal tar-like odor.	6" OD 0.020" slot sch 40 PVC Screen (15.3-
40	-40 -	20	40-42	0.7'	6 12 5 9 2	14	20.8		Balck stained coarse SAND and fine rounded GRAVEL, trace fine to medium Sand, medium dense, wet. Moderate coal tar-like odor.     Olive Grey Silty fine SAND, trace medium to coasre Sand, medium stiff, non plastic, wet. One brown low viscosity bleb at 41' bgs.	45.3' bgs)
	-	21	42-44	0.5'	11 10 9 11	19	24.9		Dark Grey to black stained medium SAND, little coarse Sand, trace fine to medium subround to sub angular Gravel, one freshly broken small Cobble, medium dense, wet. Spotty iridescent sheen, one brown low viscosity bleb at 43.5' bgs, moderate coal tar-like odor.	#2 Sand Pack (9.0-45.3' bgs)
45	-45 -	22	44-46	0.5'	9 5 6 5	11	39.7		Dark Grey fine to coarse subround to subangular GRAVEL, some medium to coarse Sand, trace Silt, dense, wet. Spotty silverly to iridescent sheens, slight coal tar-like odor. Fining down to Sandy fine to medium GRAVEL trace Silt.	
	_	23	46-48	0.9'	6 5 5 4	10	70.9		Light Grey coarse subangular to subround GRAVEL with medium Sand, trace Silt and Clay, dense, wet. Spotty iridescent sheen 46.5-48' bgs only, no odor.	6" OD sch 40 PVC Sump
50	-50 -	24	48-50'	0.8'	10 12 5 8	17	2.4	00000		(45.3-50.5' bgs)
	_	25	50-52	0.9'	5 4 9 5 5	13	2.7	0000		Bentonite Pellets (45.3-51.5' bgs)
	_	26	52-54'	0.9'	5 5 8 4	13	2.5	0000		Callapse
- 55	-55 -									
9	Α	R	C	40	DIS	Des for buil	<mark>ign &amp; Con</mark> natural an it assets		Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches Elevations referenced to the North American Verti Geographic coordinates referenced to New York S	

Drill Drill Drill Aug Rig	ing C er's l ing N er Si Type	Com Nam Meth ze:	pany e: E od: 3.25" uck-n	: Par Bill Ric Hollov ID fo	v Sten	'olff n Aug I by 1( E-75	ers ).25"	D	Northing: 1112244.30' Easting: 933922.73' Casing Elevation: 388.29' AMSL Borehole Depth: 53' bgs Surface Elevation: 388.75' AMSL Descriptions By: Chris Kassel	<b>g ID: RW-3</b> tional Grid Erie Blvd Former Manufactured Gas Plant			
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description			Well/Boring Construction	
	- - - - -	- 1	0-5'	NA	NA	NA	0.0	000000000	Asphalt Softdig to 5' bgs. Dark Grey Sandy fine to coarse subround GR dense, moist to dry [FILL].	/ AVEL, trace Silt,		12" Heavy Duty Flush-Mount Locking J-Plug Concrete (0.0- 1.0' bgs) Sand Drain (1.0- 2.0' bgs) Cement-Bentonite Grout (2.0-3.0' bgs) Bentonite Chips (3.0-5.0' bgs)	
- 5	-5 <b>-</b> -	2	5-7'	0.7	2 1 2 1 1 5	3	0.3		Black stained medium SAND, little fine to medium subround to Gravel, trace fine to coarse Sand, Silt, brick and slag, loose, mo light coating of hard asphalt-like tar, no odor [FILL]. Yellow brown Silty CLAY, trace fine Sand, medium stiff, mosit [I Black stained medium SAND, little fine to medium subround to Gravel, trace fine to coarse Sand, Silt, brick, wood and slag, loo Partial heavy coating of viscus tar-like material, strong coal tar-	pist. Slag has FILL]. subangular pse, moist.		6" OD sch 40 PVC Riser (0.4- 7.0 bgs)	
- 10	- -10 -	4	9-10' 10-12	0.9	11 10 6 4 6 5 4	NA 9	580.3 286.4		Becomes wet with irridesent sheen at 9 feet [FILL]. Black stained WOOD and fine angular GRAVEL, little Silt, Dens coating of viscous tar-like material, moderate coal tar-like odor	se, wet. Heavy [FILL].		#2 Sand Pack (5.0-47.0' bgs)	
- 15	- - - 15 -	6	12-14		2 3 4 3 4 3 3 3 3 3	7	268.8		Olive grey SILT, trace fine Sand, fine subround Gravel, and Cla plasticity, moist. Moderate coal tar-like odor.	ıy, stiff, low		6" OD 0.020" slot sch 40 PVC Screen (7.0-47.0' bgs)	
					4 DIS	<b>b</b> ui	ign & Con natural an It assets	sultancy d	Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North A Geographic coordinates referenced boring_well HSA 2007.ldfx 2/27/2017				

Borehole Depth: 53' bgs

### Site Location:

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
					3 4			 	Olive grey SILT, trace fine Sand, fine subround Gravel, and Clay, stiff, low plasticity, moist. Moderate coal tar-like odor.	
		8	16-18	1.9	4 7	8	20.0		Dark grey SILT, trace fine Sand, fine subround Gravel, and Clay, stiff, low plasticity, wet to moist, steadily coarsens down to caosres SAND, little Sitt, little fine subangular Gravel, Dense by 18 feet, coarsens further to Silty medium to fine SAND, some subround fine Gravel, dense. Moderate to slight coal tar-like	
	-	9	18-20	0.8	3 5 13 17	18	103.8		odor.	
20	-20 -	10	20-22	0.9	3 6 9 11	15	240.2		Olive grey fine to coarse subround to angular GRAVEL with larger pieces freshly broken, trace Silt and fine to coarse Sand, Dense in spoon, slight coal tar-like odor. Wet with trace spotty dark grey staining 22-24 feet, moderate coal tar-like odor. small cobble in nose of spoon and augers heavily grinfing through this zone indicates coarser material than recovereed likely present at this depth.	
	-	11	22-24	0.7	19 9 13 12	22	79.4			6" OD 0.020" sic sch 40 PVC Screen (7.0-47.0 bgs)
25	-25 -	12	24-26	0.3	- - 6 9	NA	1.2		Grey fine to coarse subround to angular GRAVEL, trace Cobbles, loose, wet. Blebs of oily brown NAPL, spotty irridesent sheen, moderate odor.	
	-	13	26-28	0.2	14 8 6 6	14	5.4			#2 Sand Pack (5.0-47.0' bgs)
	_	14	28-30	1.2	7 6 8 15	14	11.3		Grey Silty subround to angular fine to coarse GRAVEL, some fine to coarse Sand, loose, wet. Black stained coarse SAND, little medium to coarse subangular Gravel and Silt, loose, wet. Strong coal tar-like odor becoming slight by 30 feet. Augers grinding through this interval as if gravel or coarser material present.	
0	-30 -	15	30-32	0.7	29 20 8 10	28	7.0		ginneng unough this interval as ingraver of coarser matchial present.	
	-	16	32-34	0.9	4 6 5 5	11	2.8		Black stained to olive grey fine to coarse subround to subangular GRAVEL, little coarse Sand, trace Silt and fine to medium Sand, loose, wet. Coarsening down to some cobbles. Spotty irridescent sheen around approximatly 12 fine sand- sized blebs of brown oily material from 32-34 feet, moderate coal tar-like odor.	
35	-35 -	17	34-36	1.0	3 4 6 6	10	25.0			
	Α	R	C	4C	DIS	S Des for buil	<mark>ign &amp; Con:</mark> natural an It assets		Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North American Vertic Geographic coordinates referenced to New York S	

Borehole Depth: 53' bgs

### Site Location:

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Constructio	-
-	-	18	36-38	0.5	5 6 9 9	15	2.0		Black stained to olive grey fine to coarse subround to subangular GRAVEL, little coarse Sand, trace Silt and fine to medium Sand, loose, wet. Coarsening down to some cobbles. Moderate coal tar-like odor.		
- 40	-40 -	19	38-40	0.2	9 10 9 6	19	1.3			so So	' OD 0.020" slot ch 40 PVC creen (7.0-47.0' gs)
-	-	20	40-42	0.7	1 1 5 3	6	6.1		Olive grey coarse SAND, trace fine to coarse subround Gravel, small Cobbles and Silt, loose, wet, no odor. 45-46.5 feet gravel heavily coated with brown oily material, fine sand-sized blebs of same material in sand and silt, Strong coal tar-like odor.		
-	-	21	42-44	0.7	5 5 7 7	12	1.7				2 Sand Pack 6.0-47.0' bgs)
— 45	-45 —	22	44-46	0.7	5 8 8 7	16	179.4				
	-	23	46-48	0.7	9 8 8 6	16	15.8	••	Olive grey Silty coarse SAND, trace fine to medium subround Gravel, medium stiff, wet, no odor.		
- 50	-50 -	24	48-50'	0.7	5 7 14 10	21	0.7		Olive Grey Silty fine to coarse GRAVEL, little small subround Cobbles, trace fine Sand, dense, wet, no odor.	P'	' OD sch 40 VC Sump .7.0-52.0' bgs)
	-	25	50-52	0.6	11 9 9 11	18	0.5			G	ement-Bentonite rout (47.0- 2.4' bgs)
		26	52-53	0.0	NA	NA	NA			C	ormation <del>allapse (52.4</del> 3.0' bgs)
55	-55 —										
9	Α	R	C	4C	DIS	Des for buit	<mark>ign &amp; Cons</mark> natural an t assets		Remarks: NM: Not Measured NA: Not Applicable bgs: Below ground surface ': Feet ": Inches AMSL: Above Mean Sea Level Elevations referenced to the North American Vertic Geographic coordinates referenced to New York S		3102.