

LABELLA

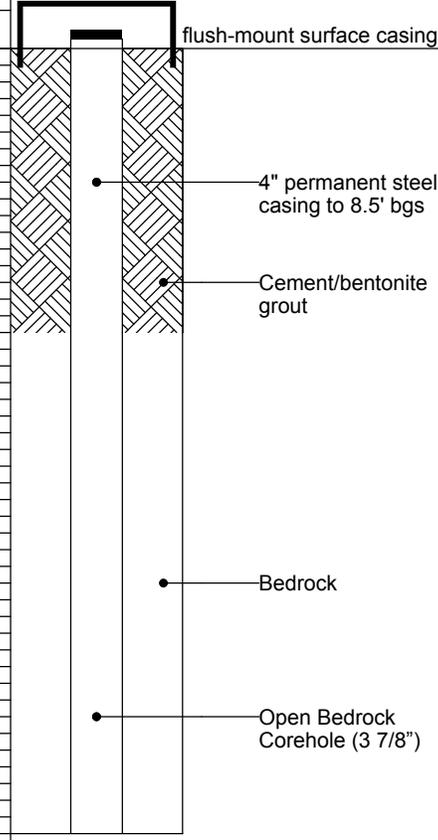
LaBella Associates, P.C.

300 State Street

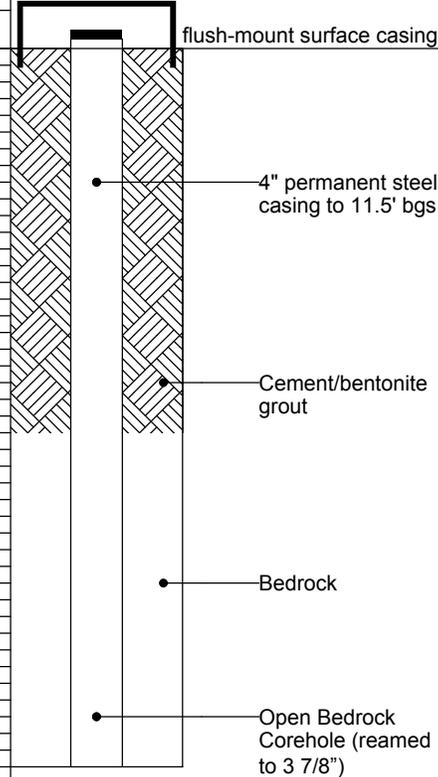
Rochester, New York 14614

Appendix 4
Test Boring Logs
&
Well Completion Reports

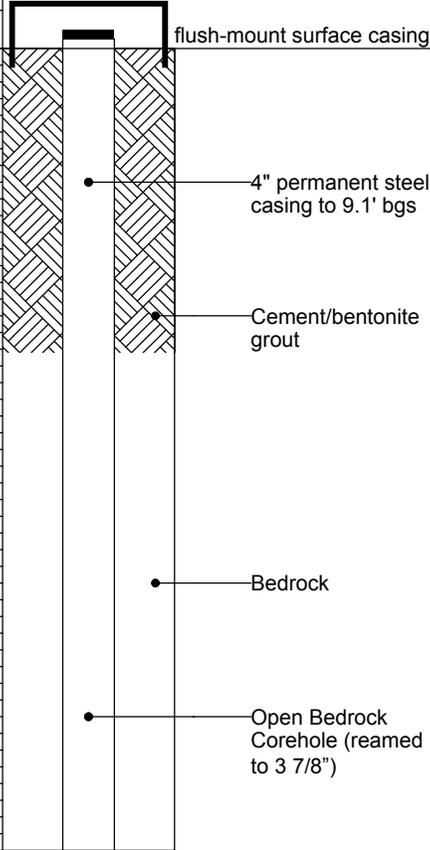
BORING LOCATION: East Side of Vanguard Pkwy	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/27/10	DATE FINISHED: 9/28/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 23.5 fbg	SCREEN INTERVAL: 8.5-23.5 fbg
DRILLING EQUIPMENT: CME 55 ATV	DEPTH TO WATER:	FIRST: COMPL. CASING: 4" steel
SAMPLING METHOD: 2" dia. Split Spoons	LOGGED BY: KRM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: REG. NO. RM

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ foot	ft		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
Surface Elevation: fmsl							
1	1	X	5	0.2	Brown to reddish brown silty clay with fine to coarse gravel and trace fine sand. Medium plasticity.	 <p style="font-size: 8px;">flush-mount surface casing</p> <p style="font-size: 8px;">4" permanent steel casing to 8.5' bgs</p> <p style="font-size: 8px;">Cement/bentonite grout</p> <p style="font-size: 8px;">Bedrock</p> <p style="font-size: 8px;">Open Bedrock Corehole (3 7/8")</p>	
2	2	X	8	0.1			
3		X	10				
4		X	12				
5	3	X	3	0.1			
6	4	X	4	0.1	Sampler and auger refusal at 6.4' bgs. Advanced 5 7/8" roller bit to 8.5' bgs. Begin HQ Core run at 8.5' bgs. Run #1 Depth: 8.5-13.5 'bgs Rec: 60" (100%) RQD: 28" (42%) Run #2 Depth: 13.5-18.5 'bgs Rec: 58.75" (98%) RQD: 53.75" (90%) Run #3 Depth: 20.5-23.5 'bgs Rec: 62" (100%) RQD: 58" (94%) Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, medium-bedded moderately hard to hard, siliceous Dolostone, with occasional to frequent argillaceous partings and occasional shale interbeds. Zones of occasional pits and vugs are present. Secondary crystallization (calcite or gypsum) infilling of bedding planes, joints and vugs is common. Rock coring details: *Rough high-angle joints at 8.6 -9.1' *Low angle joints at 9.2, 10.1' *Vertical joint 10.4-10.9' (tight) *Low angle joint at 11.7' *Vertical joints at 17.2-17.5', 18.7-18.9'		
7			50/0.6				
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

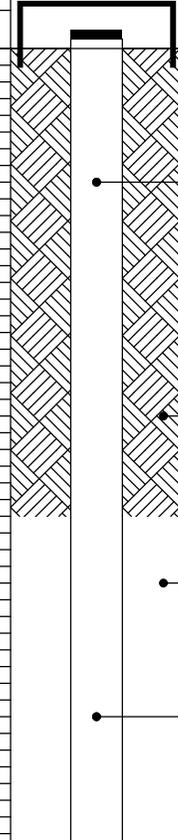
BORING LOCATION: NW Corner of Colfax and Emerson St intersection	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/27/10	DATE FINISHED: 9/28/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 21.5 fbg	SCREEN INTERVAL: 11.5-21.5 fbg
DRILLING EQUIPMENT: CME 850	DEPTH TO WATER:	FIRST: COMPL. CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler	LOGGED BY: MAC	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: REG. NO. RM

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/foot	foot		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
1						Surface Elevation: fmsl	
2	1		NA		0	Brown silt with fine sand and little fine subrounded gravel, trace brick and coal fragments, dry throughout.	 <p>flush-mount surface casing</p> <p>4" permanent steel casing to 11.5' bgs</p> <p>Cement/bentonite grout</p> <p>Bedrock</p> <p>Open Bedrock Corehole (reamed to 3 7/8")</p>
3							
4	2		NA		0	sampler refusal at 5.0' bgs	
5						advance 4 1/4" dia HSA to 11.5' bgs through bedrock.	
6							
7							
8							
9						Begin NX Core run at 11.5' bgs.	
10						Run #1	
11						Depth: 11.5-21.5 'bgs	
12						Rec: 114" (95%)	
13						RQD: 43" (36%)	
14						Lithology: LOCKPORT FORMATION	
15						(Penfield Dolostone Member)	
16						Light to medium gray, fine-grained, medium-bedded moderately hard to hard, siliceous Dolostone, with occasional to frequent argillaceous partings and occasional shale interbeds. Zones of occasional pits and vugs are present. Secondary crystallization (calcite or gypsum) infilling of bedding planes, joints and vugs is common.	
17							
18							
19							
20							
21							
22							
23						Rock coring details:	
24						*closely space partings 11.5-16' bgs.	
25						*short high angle joint at 14.3'	
26						*rough vertical joint at 14.5-15'	
27						*severely weathered seam at 15.4'	
28						*highly fractured zone at 18-18.3'	
29						*severely weathered seam at 18.7'.	
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOCATION: 1575 Emerson Street	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/27/10	DATE FINISHED: 9/28/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 24.0 fbg	SCREEN INTERVAL: 9.1-24.0 fbg
DRILLING EQUIPMENT: CME 55 ATV	DEPTH TO WATER:	FIRST COMPL. CASING: 4" steel
SAMPLING METHOD: 2" dia. Split Spoons	LOGGED BY: MAC/KRM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM
		REG. NO.

DEPTH (feet)	SAMPLES			OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ foot		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
Surface Elevation: fmsl						
1					Topsoil (ML) brown silt and fine sand, some weathered shale/limestone gravel, loose, dry.	 <p style="font-size: 8px;">flush-mount surface casing</p> <p style="font-size: 8px;">4" permanent steel casing to 9.1' bgs</p> <p style="font-size: 8px;">Cement/bentonite grout</p> <p style="font-size: 8px;">Bedrock</p> <p style="font-size: 8px;">Open Bedrock Corehole (reamed to 3 7/8")</p>
2	1		NA	0	Fill- (FESL Ash) Ash, black coal pieces, clinker, brick plastic, glass	
3					NATIVE brown silt (ML) and some fine sand, moist, firm, becoming saturated at 6.3' bgs. sampler refusal at 6.5' bgs.	
4				0	Advance 4 1/4" HSA to 9.1' bgs.	
5	1		NA		Begin HQ Core run at 9.1' bgs.	
6					Run #1	
7					Depth: 9.1-10.1' bgs	
8					Rec: 10" (83%)	
9					RQD: 0" (0%)	
10					Run #2	
11					Depth: 10.1-14.1' bgs	
12					Rec: 49" (102%)	
13					RQD: 21" (43%)	
14					Run #3	
15					Depth: 14.1-19.1' bgs	
16					Rec: 60" (100%)	
17					RQD: 37" (62%)	
18					Run #4	
19					Depth: 19.1-24.0' bgs	
20					Rec: 59" (99%)	
21					RQD: 43" (72%)	
22					Lithology: LOCKPORT FORMATION	
23					(Penfield Dolostone Member)	
24					Light to medium gray, fine-grained, medium-bedded moderately hard to hard, siliceous Dolostone, with occasional to frequent argillaceous partings and occasional shale interbeds. Zones of occasional pits and vugs are present. Secondary crystallization (calcite or gypsum) infilling of bedding planes, joints and vugs is common.	
25					Rock coring details:	
26					*closely spaced partings 9.1-12' bgs	
27					*rubby seam at 10.0'	
28					*severely weathered seams at 10.3-10.5'	
29					*short vertical joint at 11.5'	
30					*rough vertical joints at 14.1-14.5', 14.8-15.2'	
31					*short irregular vertical joint at 18.7-18.8'	
32					*rough low angle joint at 21.7'	
33						
34						
35						
36						
37						
38						
39						
40						

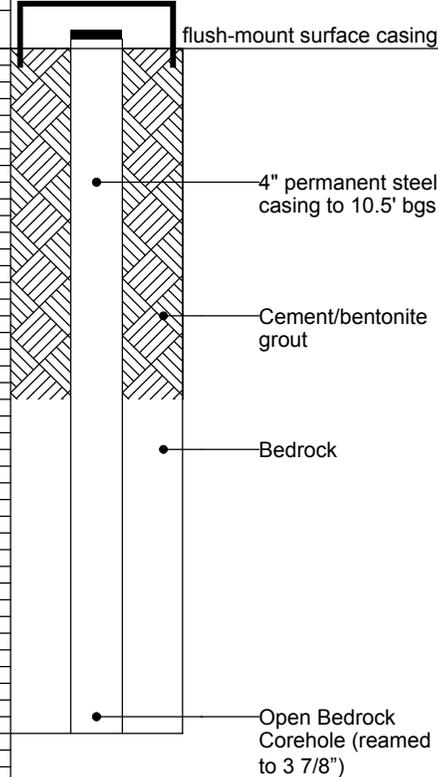
BORING LOCATION: 1684 Emerson Street	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/27/10	DATE FINISHED: 9/28/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 24.0 fbg	SCREEN INTERVAL: 14.0-24.0 fbg
DRILLING EQUIPMENT: CME 850	DEPTH TO WATER:	FIRST COMPL. CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler	LOGGED BY: MAC	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM
		REG. NO.

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ foot	Structure		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
						Surface Elevation: fmsl	
1						Topsoil (ML) brown silt and fine sand, loose, dry.	 <p style="font-size: 0.8em;">flush-mount surface casing</p> <p style="font-size: 0.8em;">4" permanent steel casing to 14.0' bgs</p> <p style="font-size: 0.8em;">Cement/bentonite grout</p> <p style="font-size: 0.8em;">Bedrock</p> <p style="font-size: 0.8em;">Open Bedrock Corehole (reamed to 3 7/8")</p>
2	1		NA	0	Fill: brown silt with fine sand (ML), trace ash, brick, glass, coal clinker, coal cinders. Trace fine rounded gravel. Moist throughout.		
3							
4							
5							
6	2		NA	0	grey shale and limestone bedrock gravel		
7					Fill, as above. Saturated		
8							
9							
10	3		NA	0	NATIVE dark grey to light tan-brown fine sand with silt (ML), soft, saturated top 6", slight septic odor.		
11							
12	4		NA	0	sampler refusal at 12.2' bgs.		
13							
14					Advanced roller bit to 14.0' bgs.		
15							
16					Begin NX bedrock core at 14.0' bgs.		
17							
18					Run #1		
19					Depth: 14.0-24.0 'bgs		
20					Rec: 119" (99%)		
21					RQD: 42" (35%)		
22					Lithology: LOCKPORT FORMATION		
23					(Penfield Dolostone Member)		
24					Light to medium gray, fine-grained, medium-bedded		
25					moderately hard to hard, siliceous Dolostone, with		
26					occasional to frequent argillaceous partings and		
27					occasional shale interbeds. Zones of occasional pits		
28					and vugs are present. Secondary crystallization (calcite or		
29					gypsum) infilling of bedding planes, joints and vugs is		
30					common.		
31					Rock coring details:		
32					*moderately closely spaced partings throughout		
33					*vertical joint at 17.8-18.0' bgs		
34					*rough high angle joint at 18.3-18.6'		
35					*vug with secondary gypsum at 21.7'		
36					*severely weathered, intersecting high angle joints at		
37					22.4-22.5'		
38					*rough vertical joint at 21.7-22.0'		
39					*occasional pits and vugs throughout.		
40							

PROJECT: Former Emerson Street Landfill- SVI Investigation Rochester, New York		Log of Well No. LAB-105	
BORING LOCATION: 60 McCrackenville Street (East end of lot)		TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling		DATE STARTED: 9/27/10	DATE FINISHED: 9/28/10
DRILLING METHOD: 4 1/4" Diameter HSA		TOTAL DEPTH: 27.7 fbgs	SCREEN INTERVAL: 13.9-30.0 fbgs
DRILLING EQUIPMENT: CME 55 ATV		DEPTH TO WATER:	FIRST COMPL. CASING: 2" PVC
SAMPLING METHOD: 2" dia. Split Spoons		LOGGED BY: KRM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM	REG. NO.:

DEPTH (feet)	SAMPLES		OVM (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Blows/foot			
				Surface Elevation: fmsl	stick-up protective casing
1	1	7	0.1	FILL- brownish grey silty clay with fine to coarse gravel and sand. Trace brick.	
2		13			
3	2	14	0.2		
4		5			
5	3	6	0.4	black FESL ash with glass, clinker and fine gravel at 5.0'.	
6		5			
7	4	2	0.2		
8		2			
9	5	2	0.2		
10		2			
11	6	2	0.1		
12		2			
13	7	2	0.5		
14		2			
15	8	2	0.4		
16		2			
17	9	2	0.2		
18		2			
19	10	2	0.2		
20		2			
21	11	2	0.2		
22		2			
23	12	2	0.2	saturated at 22' bgs.	
24		2			
25	13	2	0.3		
26		2			
27	14	2	0.1	gray clay between 26.5 and 27' bgs. Spoon and auger refusal at bedrock surface at 27.0' bgs. Advance 3 7/8" roller bit to 30.0' bgs.	
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

BORING LOCATION: 1769 Emerson Street	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/27/10	DATE FINISHED: 9/29/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 30.5 fbg	SCREEN INTERVAL: 10.5-30.5 fbg
DRILLING EQUIPMENT: CME 850	DEPTH TO WATER:	FIRST COMPL. CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler	LOGGED BY: MAC/KRM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM
		REG. NO.

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ foot	ft		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
Surface Elevation: fmsl							
1						Topsoil (ML) brown silt and fine sand, loose, dry.	 <p style="font-size: small;">flush-mount surface casing</p> <p style="font-size: small;">4" permanent steel casing to 10.5' bgs</p> <p style="font-size: small;">Cement/bentonite grout</p> <p style="font-size: small;">Bedrock</p> <p style="font-size: small;">Open Bedrock Corehole (reamed to 3 7/8")</p>
2	1		NA	0	FILL- brown fine sand with silt, trace brick pieces, angular limestone shale gravel, loose, dry.		
3					Auger through obstacle between 4.0 and 5.0' bgs.		
4					loose, gravel fill as above.		
5					Sampler refusal at 8.5' bgs.		
6					Advance 4 1/4" HSA to 10.5' bgs.		
7	2		NA	0	Begin HQ Core run at 10.5' bgs.		
8					Run #1		
9					Depth: 10.5-15.5 'bgs		
10					Rec: 59.5" (99%)		
11					RQD: 55" (92%)		
12					Run #2		
13					Depth: 15.5-20.5 'bgs		
14					Rec: 61" (100%)		
15					RQD: 60" (98%)		
16					Run #3		
17					Depth: 20.5-25.5 'bgs		
18					Rec: 60" (100%)		
19					RQD: 58" (94%)		
20					Run #4		
21					Depth: 25.5-30.5 'bgs		
22					Rec: 61" (100%)		
23					RQD: 58" (94%)		
24					Lithology: LOCKPORT FORMATION		
25					(Penfield Dolostone Member)		
26					Light to medium gray, fine-grained, medium-bedded		
27					moderately hard to hard, siliceous Dolostone, with		
28					occasional to frequent argillaceous partings and		
29					occasional shale interbeds. Zones of occasional pits		
30					and vugs are present. Secondary crystallization (calcite or		
31					gypsum) infilling of bedding planes, joints and vugs is		
32					common.		
33					Rock coring details:		
34					*cavities (0.1' dia.) at 11.1' and 12.2' bgs		
35					*vertical joint at 12.8-13'		
36							
37							
38							
39							
40							

PROJECT: Former Emerson Street Landfill- SVI Investigation Rochester, New York		Log of Well No. LAB-107	
BORING LOCATION: 1560 Emerson Street		TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling		DATE STARTED: 9/28/10	DATE FINISHED: 9/29/10
DRILLING METHOD: 4 1/4" Diameter HSA		TOTAL DEPTH: 29.0 fbg	SCREEN INTERVAL: 19.0-29.0 fbg
DRILLING EQUIPMENT: CME 850		DEPTH TO WATER:	FIRST COMPL. CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler		LOGGED BY: MAC	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM	REG. NO.:

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/foot				
Surface Elevation: fmsl							
1					0	Topsoil. Silt with fine sand (ML) and some fine, rounded gravel, dry.	<p>flush-mount surface casing</p> <p>4" permanent steel casing to 19.0' bgs</p> <p>Cement/bentonite grout</p> <p>Bedrock</p> <p>Open Bedrock Corehole (reamed to 3 7/8")</p>
2	1		NA			Angular limestone bedrock gravel within fine sand/ silt matrix (fill), loose, dry throughout.	
3							
4							
5							
6	2		NA		5.0	Dark gray to black silt with fine to medium sand and gravel (fill). moist, firm, slight petroleum-hydrocarbon type odor at 6.0' bgs.	
7							
8							
9							
10	3		NA		0		
11							
12							
13							
14	4		NA		0	Broken limestone bedrock fragments (gravel to sand-sized particles), loose, dry, appearance of blasted bedrock.	
15							
16						sampler refusal at 16.0' bgs.	
17						Advanced roller bit to 19.0' bgs	
18							
19						Begin NX bedrock core at 19.0' bgs.	
20							
21						Run #1	
22						Depth: 19.0-29.0 'bgs	
23						Rec: 118" (98%)	
24						RQD: 84" (70%)	
25						Lithology: LOCKPORT FORMATION	
26						(Penfield Dolostone Member)	
27						Light to medium gray, fine-grained, medium-bedded	
28						moderately hard to hard, siliceous Dolostone, with	
29						occasional to frequent argillaceous partings and	
30						occasional shale interbeds. Zones of occasional pits	
31						and vugs are present. Secondary crystallization (calcite or	
32						gypsum) infilling of bedding planes, joints and vugs is	
33						common.	
34						Rock coring details:	
35						*irregular cracks at 19.8' bgs	
36						*vertical joint at 23.1-23.4'	
37						*severely weathered seam at 26.7'	
38							
39							
40							

BORING LOCATION: 110-210 Colfax Street	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothnagle Drilling	DATE STARTED: 9/29/10	DATE FINISHED: 9/30/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 25.0 fbg	SCREEN INTERVAL: 15.0-25.0 fbg
DRILLING EQUIPMENT: CME 850	DEPTH TO WATER:	FIRST COMPL. CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler	LOGGED BY: MAC/KRM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM
		REG. NO.

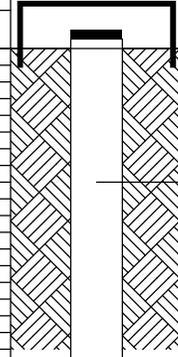
DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/foot	Structure		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
						Surface Elevation: fmsl	
1						Brown topsoil, moist, firm	<p>flush-mount surface casing</p> <p>4" permanent steel casing to 15.0' bgs</p> <p>Cement/bentonite grout</p> <p>Bedrock</p> <p>Open Bedrock Corehole (reamed to 3 7/8")</p>
2	1		NA	0	ASH/FILL- Shale bedrock fragments, procelain, glass, ash, coal clinker, coal fragments, loose, moist, no odors.		
3							
4							
5							
6	2		NA	0	As above, within brown fine-sand/silt matrix. Little brick, no odors.		
7							
8							
9							
10	3		NA	0			
11							
12	4		NA	0	refusal at 13.0' bgs (sampler bouncing)		
13							
14					Advanced roller bit to 15.0' bgs.		
15					Begin NX bedrock core at 15.0' bgs.		
16							
17					Run #1		
18					Depth: 15.0-25.0 'bgs		
19					Rec: 118" (98%)		
20					RQD: 72" (60%)		
21					Lithology: LOCKPORT FORMATION		
22					(Penfield Dolostone Member)		
23					Light to medium gray, fine-grained, medium-bedded		
24					moderately hard to hard, siliceous Dolostone, with		
25					occasional to frequent argillaceous partings and		
26					occasional shale interbeds. Zones of occasional pits		
27					and vugs are present. Secondary crystallization (calcite or		
28					gypsum) infilling of bedding planes, joints and vugs is		
29					common.		
30					Rock coring details:		
31					* highly fractured zone, intersecting, planar, moderately		
32					dipping to high angle joints between 15 and 16.3' bgs		
33					* short fractured zone at 16.7', 17.3-17.5', 18.9-19.2',		
34					19.7-19.9', 10.0-21.1'		
35					*vertical cracks, pits, vugs at 21-22'		
36					* high angle joints at 22.2-22.5', 22.8-23.0'		
37							
38							
39							
40							

PROJECT: Former Emerson Street Landfill- SVI Investigation Rochester, New York		Log of Well No. LAB-109	
BORING LOCATION: West of 1640 Emerson Street		TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothangle Drilling		DATE STARTED: 12/13/10	DATE FINISHED: 12/14/10
DRILLING METHOD: 4 1/4" Diameter HSA		TOTAL DEPTH: 27.0 fbgs	SCREEN INTERVAL: 12.0-27.0 fbgs
DRILLING EQUIPMENT: CME 850		DEPTH TO WATER:	FIRST COMPL. CASING: 2" PVC
SAMPLING METHOD: Geoprobe (direct push) 4' acetate sleeves		LOGGED BY: RM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM	REG. NO.

DEPTH (feet)	SAMPLES			OVM (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter. Surface Elevation: fmsl	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/foot			
1					Topsoil	<p>flush-mount surface casing</p> <p>Cement/bentonite grout</p> <p>2" dia. schedule 40 PVC riser</p> <p>#00N Filter sand</p> <p>15' 0.010" slot schedule 40 PVC well screen</p> <p>Bedrock corehole reamed with 3 7/8" dia. to 27' bgs.</p>
2	1		NA	0	Red-brown SILT with little fine sand and little fine to medium angular gravel, moist throughout, no odors.	
3					ASH/FILL- Black sand with approximately 80% cinders, and 20% ash, trace glass, metal.	
4						
5						
6	2		NA	0		
7						
8						
9						
10	3		NA	0		
11						
12						
13					As above with some wood pieces, saturated.	
14	4		NA	0		
15						
16						
17						
18	5		NA	0	Brown fine to medium SAND, little silt, little fine angular gravel, saturated.	
19						
20					sampler refusal at 20.1 feet below ground surface. Advance 4 1/4" HSA to 22' bgs (1.8' into bedrock).	
21					Begin HQ rock core at 22.0' bgs.	
22					Run #1	
23					Depth: 22.0-26.5 'bgs	
24					Rec: 41" (76%)	
25					RQD: 4" (7%)	
26					Lithology: LOCKPORT FORMATION	
27					(Penfield Dolostone Member)	
28					Light to medium gray, fine-grained, medium-bedded	
29					moderately hard to hard, siliceous Dolostone, with	
30					occasional to frequent argillaceous partings and	
31					occasional shale interbeds. Zones of occasional pits	
32					and vugs are present. Secondary crystallization (calcite or	
33					gypsum) infilling of bedding planes, joints and vugs is	
34					common.	
35					Rock core details:	
36					*closely spaced bedding plane joints throughout.	
37					*high angle joint at 24.9-25.1' bgs.	
38					*apparent void between 26 and 26.5' bgs. Approximately	
39					60 gallons water loss in this zone.	
40						

WELL_OVM FESL WELL LOGS 9-2010.GPJ (4/11)

BORING LOCATION: 535 Colfax Street (in road)	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLING CONTRACTOR: Nothangle Drilling	DATE STARTED: 12/13/10	DATE FINISHED: 12/14/10
DRILLING METHOD: 4 1/4" Diameter HSA	TOTAL DEPTH: 19.0 fbgs	SCREEN INTERVAL: 9-19 fbgs
DRILLING EQUIPMENT: CME 850	DEPTH TO WATER:	FIRST: COMPL. CASING: 4" steel
SAMPLING METHOD: not sampled	LOGGED BY: RM	
HAMMER WEIGHT: 140	DROP: 30"	RESPONSIBLE PROFESSIONAL: REG. NO.
		RM

DEPTH (feet)	SAMPLES				OVM (ppm)	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/foot	ft		NAME (USCS Symbol): color, moist, % by weight, plast., structure, cementation, react. w/HCl, geo. inter.	
						Surface Elevation: fmsl	
1						TOPSOIL	
2						<p>Advance air knife without sampling to refusal at approximately 7.0' bgs. Air knife cuttings consist of brown silt with some medium-fine angular gravel, little fine sand. Trace fill material (rubber). Moist throughout. No odors encountered.</p>	 <p>flush-mount surface casing</p> <p>4" permanent steel casing to 9.0' bgs</p>
3							
4							
5							
6							
7							
8							
9						Advance 4 1/4" HSA to 9.0' bgs. Begin NX Core run at 9.0' bgs.	
10						Run #1	
11						Depth: 9.0-14.0 'bgs	
12						Rec: 47" (78%)	
13						RQD: 0" (0%)	
14						Run #2	
15						Depth: 14.0-19.0 'bgs	
16						Rec: 53" (88%)	
17						RQD: 8" (13%)	
18						Lithology: LOCKPORT FORMATION	
19						(Penfield Dolostone Member)	
20						Light to medium gray, fine-grained, medium-bedded	
21						moderately hard to hard, siliceous Dolostone, with	
22						occasional to frequent argillaceous partings and	
23						occasional shale interbeds. Zones of occasional pits	
24						and vugs are present. Secondary crystallization (calcite or	
25						gypsum) infilling of bedding planes, joints and vugs is	
26						common.	
27						Rock coring details:	
28						*Severely fractured "rubble" zones 9.0-9.2', 11.0-11.2,	
29						15.7-16.7' bgs.	
30						*very closely spaced bedding plane joints 9.0-14.0'	
31						*planar, vertical joint 10.7-11.5'	
32						*irregular vertical joint 13.3-13.6'	
33						*severely fractured rubble zone 17.5-17.7'.	
34							
35							
36							
37							
38							
39							
40							