

REMEDIAL INVESTIGATION REPORT

Gastown Former MGP Site

Site No. 9-15-171

Tonawanda, Erie County, NY

Work Assignment No. D003821-21

Prepared for:

Superfund Standby Program
NYS Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Prepared by:

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December 2004

Volume 2 of 3 – Appendices A through G

APPENDIX A

NYSDEC Site Investigation Report, January 2001
(CD in front cover pocket)

APPENDIX B

PREVIOUS BORING LOGS AND WELL LOGS

**1998 Boring Logs,
New York State Department of Environmental
Conservation**

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 26.0 feet	Hole Designation: MW-11 Date Completed: 6/4/98 Drilling Company: Maximum Technologies Drilling Method: 4 1/4" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H
	Ground Surface	575.85				
0.0	0.0'-0.3': Brown topsoil with many rootlets and high clay content. Dry. Poor recovery.		1	6	14	0.0
	0.3'-2.0': Brown silty clay with large rock fragments, small pieces of coke and coal, some cinders. Silty clay has red and brown varves. Dry. FILL MATERIAL.	575.55		8 6 18		
2.0	2.0'-4.0': Yellow brown silty clay with large rock fragments and gray mottling. Dry. Poor recovery. NATIVE.	573.85	2	15 5 9 5	14	0.0
4.0	4.0'-4.7': Yellow brown silty clay with gray and red mottling, few black blebs. Dry to moist. NATIVE.		3	14 9	20	0.0
	4.7'-6.0': Yellow brown, fine grained sand with iron red and orange mottling, some black blebs. Few rootlets. Moist. NATIVE.	571.15		11 12		
6.0	6.0'-8.0': Sample same as above. Becomes saturated at 6.75' bgs. There are no black blebs within the saturated zone but iron red blebs are prevalent. This deposit grades into a gray, fine grained sand at 7.25' bgs with yellow brown mottling and red blebs. Saturated. NATIVE.		4	8 7 5 4	12	0.0
8.0	8.0'-10.0': Interbedded zones of gray, fine grained sand (seams 0.2' to 0.5' thick) and thin seams (0.1' to 0.2') of gray silty clay. Orange mottling throughout, which appears to be staining. Black blebs observed within the silty clay seams. Saturated. NATIVE.		5	4 5 5 7	10	0.6
10.0	10.0'-12.0': Sample same as above with fewer silty clay seams - only two about 0.02' thick were observed. Orange mottling throughout sample. Saturated. NATIVE.		6	6 7 7 5	14	1.2

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 26.0 feet	Hole Designation: MW-II Date Completed: 6/4/98 Drilling Company: Maximum Technologies Drilling Method: 4 1/4" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H L I G H T
	Ground Surface	575.85				
12.0	12.0'-14.0': Medium gray, very fine grained sand with no mottling. Only one silty clay seam (0.02' thick) observed. Saturated. NATIVE.		7	1 2 2 3	4	0.0
14.0	14.0'-16.0': No recovery.		8	7 5 4 6	9	NA
16.0	16.0'-18.0': Medium gray, very fine grained sand with no mottling or silty clay seams. Some sand grains near bottom of sample are dark gray. Saturated. NATIVE.		9	3 4 5 8	9	0.0
18.0	18.0'-20.0': Interbedded zones of medium to dark gray, fine grained sand and brownish gray clay. Clay seams are 0.2' to 0.25' thick. Saturated. NATIVE.		10	5 1 2 3	3	0.0
20.0	20.0'-21.1': Sample same as above with large, round, rock fragments approximately 0.1' in diameter. Saturated. NATIVE.	Sample sent to lab	11	1 1 13 8	14	16.2
	21.1'-22.0': Gravel with a few shells. Saturated. NATIVE.	554.75				
22.0	22.0'-24.0': Reddish brown silty clay with varves, very plastic. Few pebbles observed at 22.6' bgs. Saturated. NATIVE.	553.85; Sample sent to lab	12	1 1 1 1	2	45.8
	Augered to 26.0' bgs without sampling.					
	BOH=26.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒


Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation Stratigraphic Log (Overburden)


Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 26.0 feet	Hole Designation: MW-2I Date Completed: 6/4/98 Drilling Company: Maximum Technologies Drilling Method: 4¼" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.47				
0.0	0.0'-2.0': Crushed stone and asphalt from driveway. Large rock fragment in bottom of spoon. Dry. Poor recovery. FILL MATERIAL.	575.47	1	22 10 8 7	18	2.5
2.0	2.0'-4.0': No recovery.		2	4 3 6 7	9	NA
4.0	4.0'-4.4': Yellow brown silty clay with gray and orange mottling. Rootlets. Dry to moist. NATIVE.		3	6 5 6 6	11	12.2
	4.4'-6.0': Yellow brown, fine grained sand with gray and orange mottling. Rootlets. Saturated. NATIVE.	571.07				
6.0	6.0'-8.0': Gray, fine grained sand with extensive orange mottling. Few black blebs and some iron red staining. One 0.2' thick clay seam observed at 7.6' bgs. Saturated. NATIVE.		4	4 4 3 3	7	28.8
8.0	8.0'-10.0': Sample same as above with much less staining. One 0.2' thick clay seam observed in middle of sample. Orange mottling and black blebs in this seam. Sand below clay is brown with dark gray or black grains. Saturated. NATIVE.		5	2 2 9 9	11	34.4
10.0	10.0'-12.0': Sample same as above (below clay seam). Strong petroleum odor. Saturated. NATIVE.	Sample sent to lab	6	5 7 6 6	13	27.3

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found 

Static Level 


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 26.0 feet	Hole Designation: MW-2I Date Completed: 6/4/98 Drilling Company: Maximum Technologies Drilling Method: 4¼" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.47				
12.0	12.0'-13.3': Yellow brown, fine grained sand. A clay seam 0.1' thick at 13.3' bgs. Extensive orange staining observed immediately above this clay seam. Saturated. NATIVE. 13.3'-14.0': Medium to dark gray sand with black grains. Few small clay seams. Saturated. NATIVE.		7	2 3 5 5	8	67.4
14.0	14.0'-16.0': Sample same as above (below clay seam). Odor observed but no sheen. Saturated. NATIVE.		8	5 3 3 4	6	48.4
16.0	16.0'-18.0': Interbedded zones of dark gray sand and dark gray clay. NAPL observed at 16.4' bgs and throughout remainder of sample. Saturated. NATIVE.	Sample sent to lab	9	4 4 7 7	11	3531
18.0	18.0'-20.0': Sample same as above with the sand seams containing NAPL. Both sand and clay seams are 0.1' to 0.2' thick. Saturated. NATIVE.		10	1 2 1 3	3	438
20.0	20.0'-21.0': Sample same as above with NAPL. Saturated. NATIVE. 21.0'-22.0': Reddish brown clay containing NAPL. A 0.1' thick gravel seam at 21.75' bgs. Trace NAPL below this seam. Saturated. NATIVE.	554.47	11	wor wor 9 2	9	346
22.0	22.0'-24.0': Reddish brown to brown, silty clay with varves below 23.0' bgs, very plastic. No NAPL. Saturated. NATIVE. Augered to 26.0' bgs without sampling. BOH=26.0' bgs.		12	wor wor wor wor	0	121

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 30.0 feet	Hole Designation: PW-1 Date Completed: 6/3/98 Drilling Company: Maximum Technologies Drilling Method: 4 1/4" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.50				
0.0	0.0'-2.0': Mottled clay and brown, fine grained sand with some rootlets and few small pebbles. Pieces of coal or coke near bottom of sample. Moist. FILL MATERIAL.	575.50	1	1 3 6 13	9	1.0
2.0	2.0'-4.0': No recovery.		2	5 4 4 5	8	NA
4.0	4.0'-4.75': Yellow brown silty clay with mottling. Moist. NATIVE.		3	8 6 7 7	13	9.7
	4.75'-6.0': Yellow brown, very fine grained sand with mottling. Moist. NATIVE.	570.75				
6.0	6.0'-8.0': Yellow brown, very fine grained sand with red, gray and brown mottling. Trace silt and clay. Few rootlets. Moist. NATIVE.		4	4 4 3 3	7	10.2
8.0	8.0'-8.25': Sample same as above.		5	3 3 4 8	7	20.7
	8.25'-10.0': Interbedded zones of dark gray sand and thin (0.1') seams of gray clay. Moist. NATIVE.					
10.0	10.0'-12.0': Sample same as above with fine to medium grained sand. A thin (0.02') black seam near bottom of sample. Moist to saturated. NATIVE.	Sample sent to lab	6	5 4 5 4	9	23.7
12.0	12.0'-14.0': Dark gray, fine grained sand with yellow brown mottling to 13.0' bgs. Few pebbles observed at this depth. Saturated. NATIVE.		7	3 6 4 8	10	14.4

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 30.0 feet	Hole Designation: PW-1 Date Completed: 6/3/98 Drilling Company: Maximum Technologies Drilling Method: 4¼" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	B N U
	Ground Surface	575.50				
14.0	14.0'-16.0': Sample same as above without mottling.		8	7 10 9 9	19	7.3
16.0	16.0'-18.0': Sample same as above. NAPL observed at 16.9' bgs and throughout remainder of sample. The NAPL is black with a petroleum odor. Saturated. NATIVE.		9	6 4 3 6	7	325
18.0	18.0'-20.0': Interbedded zones of dark gray, fine grained sand and dark gray clay. Sand seams contain thin layers (0.04') of NAPL perched on the clay seams. Saturated. NATIVE.	Sample sent to lab	10	wor 2 1 1	3	680
20.0	20.0'-22.0': Sample same as above with NAPL observed in the sand seams. Gravel of various sizes at bottom of sample. One clam shell observed in gravel. Saturated. NATIVE.		11	wor wor 8 16	8	672
22.0	22.0'-23.0': Dark gray, course grained sand and gravel. Sheen observed throughout sample. Few shells. No NAPL. Saturated. NATIVE.	553.50	12	4 2 2 2	4	152
	23.0'-24.0': Reddish brown silty clay with traces of gravel. No NAPL. Saturated. NATIVE.	552.50				
24.0	24.0'-26.0': Reddish brown silty clay with gray varves, very plastic. No gravel, sheen or NAPL observed. Saturated. NATIVE.		13	2 4 1 1	5	64.9

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 30.0 feet	Hole Designation: PW-1 Date Completed: 6/3/98 Drilling Company: Maximum Technologies Drilling Method: 4 1/4" Hollow Stem Augers Sampling Method: Split Spoon
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H U
	Ground Surface	575.50				
26.0	26.0'-28.0': Sample same as above.		14	1 1 1 1	2	73.8
28.0	28.0'-30.0': Sample same as above. BOH=30' bgs.		15	1 1 1 1	2	80.4

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation
Stratigraphic Log (Overburden)

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-2S
Site Number:	915171	Date Completed:	6/5/98
Location:	Tonawanda, New York	Drilling Company:	Maximum Technologies
Logged By:	Glenn M. May	Drilling Method:	4¼" Hollow Stem Augers
Total Depth:	9.0 feet	Sampling Method:	N/A

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.32				
	Boring augered to depth - not logged. BOH=9' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ○

Water Found ▽

Static Level ▼

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name:	Former Gastown MGP Site
Site Number:	915171
Location:	Tonawanda, New York
Logged By:	Glenn M. May
Total Depth:	8.5 feet

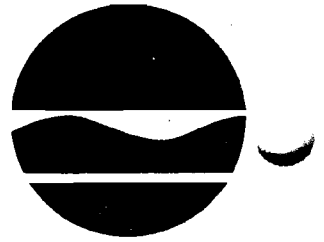
Hole Designation:	MW-3S
Date Completed:	6/5/98
Drilling Company:	Maximum Technologies
Drilling Method:	4¼" Hollow Stem Augers
Sampling Method:	N/A

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	574.91				
	Boring augered to depth - not logged. BOH=8.5' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐Water Found

Static Level ▼



MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-II
Site Number:	915171	Date Completed:	6/4/98
Location:	Tonawanda, New York	Drilling Company:	Maxim Technologies
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	2 inch	Casing Diameter:	Not Applicable
Screen Length:	20 feet	Total Depth:	26.0 feet

Top of Riser Elevation: 575.43 ft amsl

Ground Surface Elevation:
575.85 ft amsl

Top of Grout: 0.0 ft

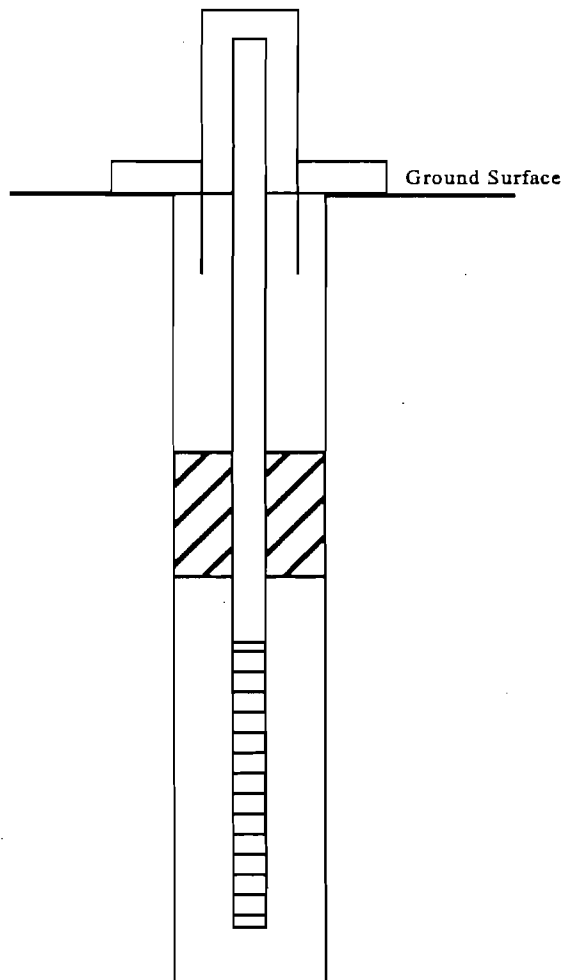
Top of Seal: 4.0 ft

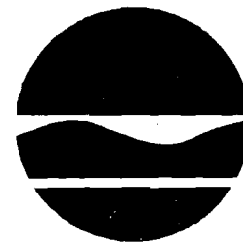
Top of Filter Pack: 5.0 ft

Top of Screen: 6.0 ft

Bottom of Screen: 26.0 ft

Bottom of Filter Pack: 26.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-2I
Site Number:	915171	Date Completed:	6/4/98
Location:	Tonawanda, New York	Drilling Company:	Maxim Technologies
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	2 inch	Casing Diameter:	Not Applicable
Screen Length:	20 feet	Total Depth:	26.0 feet

Top of Riser Elevation: 575.08 ft amsl

Ground Surface Elevation:
575.47 ft amsl

Top of Grout: 0.0 ft

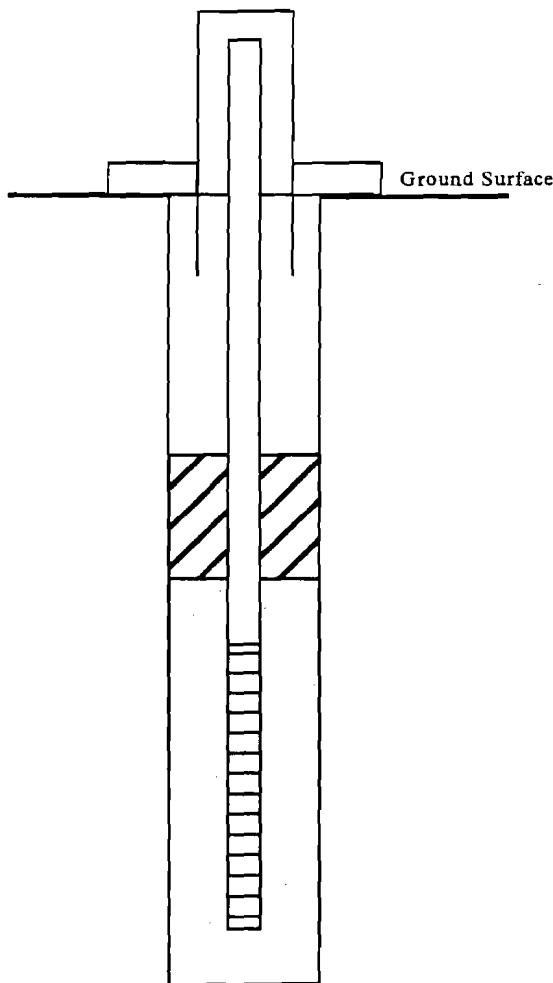
Top of Seal: 4.0 ft

Top of Filter Pack: 5.0 ft

Top of Screen: 6.0 ft

Bottom of Screen: 26.0 ft

Bottom of Filter Pack: 26.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	PW-1
Site Number:	915171	Date Completed:	6/3/98
Location:	Tonawanda, New York	Drilling Company:	Maxim Technologies
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	2 inch	Casing Diameter:	Not Applicable
Screen Length:	15 feet	Total Depth:	30.0 feet

Top of Riser Elevation: 574.58 ft amsl

Ground Surface Elevation:
575.50 ft amsl

Top of Grout: 0.0 ft

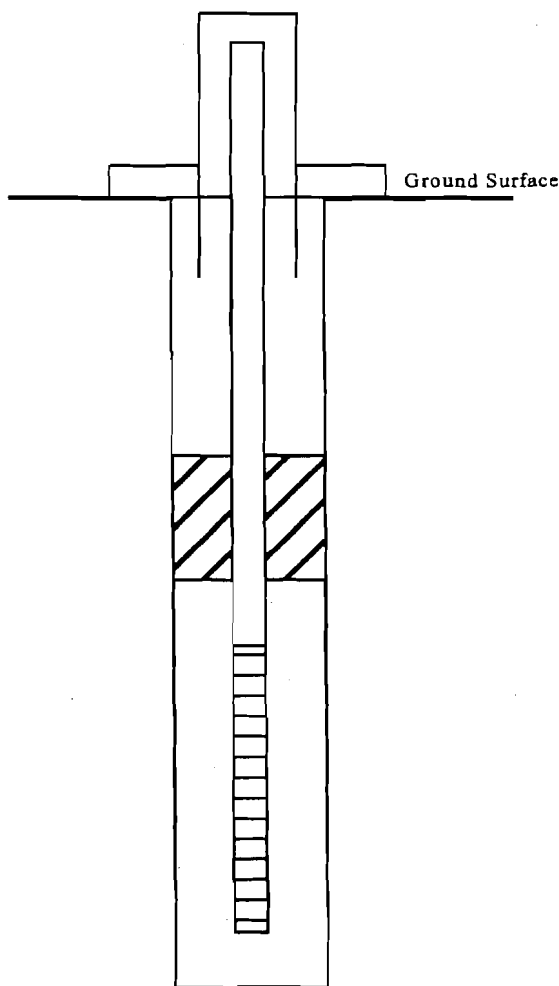
Top of Seal: 7.0 ft

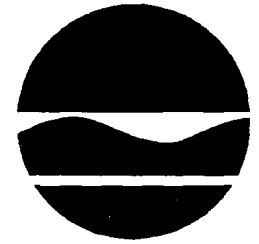
Top of Filter Pack: 8.0 ft

Top of Screen: 10.0 ft

Bottom of Screen: 25.0 ft

Bottom of Filter Pack: 25.5 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-2S
Site Number:	915171	Date Completed:	6/5/98
Location:	Tonawanda, New York	Drilling Company:	Maxim Technologies
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	2 inch	Casing Diameter:	Not Applicable
Screen Length:	5 feet	Total Depth:	9.0 feet

Top of Riser Elevation: 574.77 ft amsl

Ground Surface Elevation:
575.32 ft amsl

Top of Grout: 0.0 ft

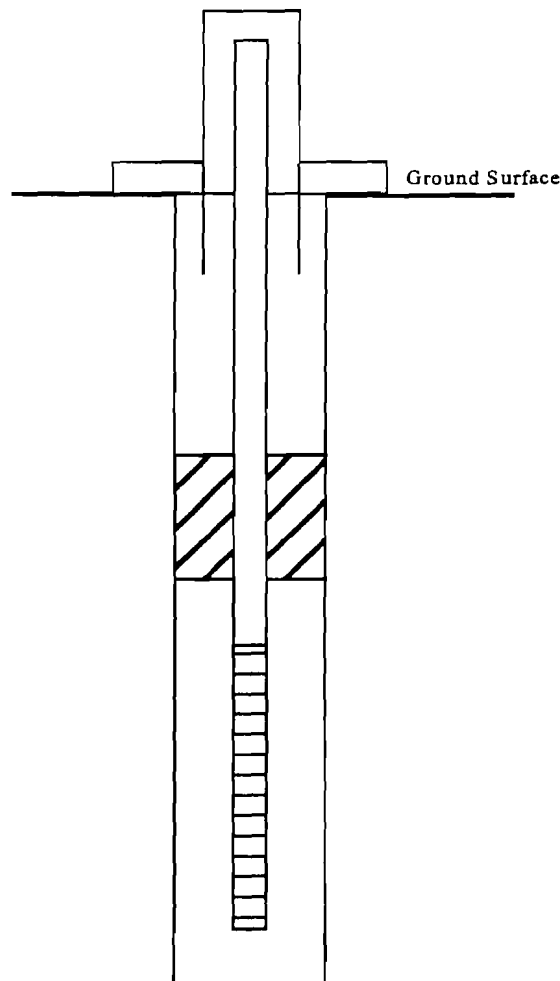
Top of Seal: 2.5 ft

Top of Filter Pack: 3.5 ft

Top of Screen: 4.0 ft

Bottom of Screen: 9.0 ft

Bottom of Filter Pack: 9.0 ft





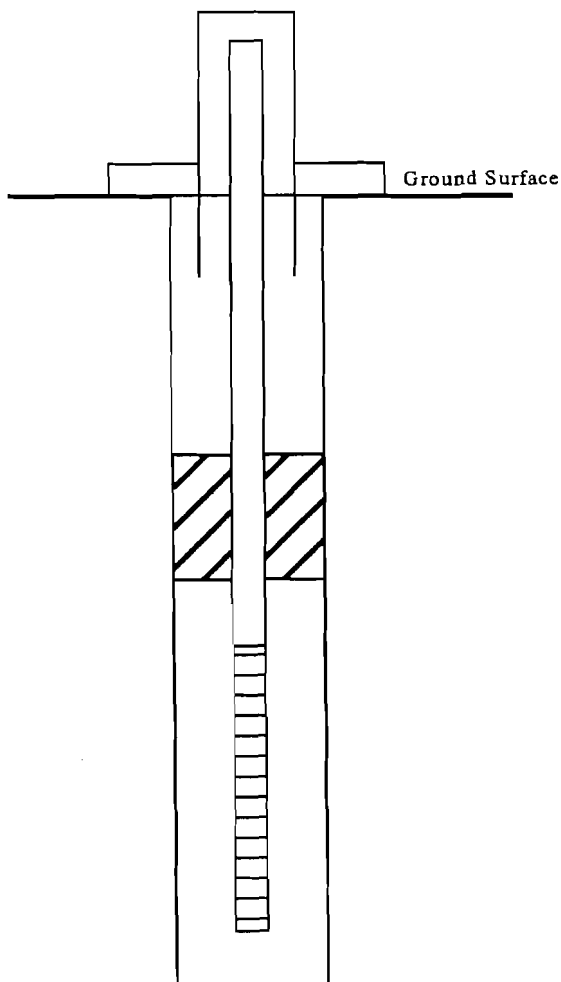
MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-3S
Site Number:	915171	Date Completed:	6/5/98
Location:	Tonawanda, New York	Drilling Company:	Maxim Technologies
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	2 inch	Casing Diameter:	Not Applicable
Screen Length:	5 feet	Total Depth:	8.5 feet

Top of Riser Elevation: 574.55 ft amsl

Ground Surface Elevation:
574.91 ft amsl

Top of Grout: 0.0 ft



Top of Seal: 2.0 ft

Top of Filter Pack: 3.0 ft

Top of Screen: 3.5 ft

Bottom of Screen: 8.5 ft

Bottom of Filter Pack: 8.5 ft

**1999 Boring Logs,
New York State Department of Environmental
Conservation**

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 28.0 feet	Hole Designation: SB-27 Date Completed: 12/7/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.27				
0.0	0.0'-1.0': Crushed stone from parking lot.	575.27	1			0.0
	1.0'-4.0': Fine grained sand with some silt, coal, brick and rock fragments. Moist. FILL MATERIAL.					
4.0	4.0'-4.4': Sample same as above.		2			0.0
	4.4'-8.0': Gray silty clay with orange mottling. Few rootlets near top of sample. Few thin, saturated sand seams. Silty clay is cohesive and slightly plastic. Moist. NATIVE.	570.87				
8.0	8.0'-11.3': Sample same as above. A gravel seam 0.1' thick at 8.8' bgs. Saturated. NATIVE.		3			0.0
	11.3'-12.0': Gray, fine grained sand, no pebbles. Saturated. NATIVE.	563.97				
12.0	12.0'-16.0': Gray brown, fine to medium grained sand grading to dark gray, fine to medium grained sand. Sample contains a few orange mottled, silty clay seams 0.2' to 0.3' thick. Saturated. NATIVE.		4			0.0
16.0	16.0'-20.0': Sample same as above with orange mottled silty clay seams 0.4' thick. Saturated. NATIVE.		5			0.0
20.0	20.0'-24.0': Sample same as above with no silty clay seams. Saturated. NATIVE.	Sample sent to lab	6			0.0
24.0	24.0'-28.0': No recovery. Reddish brown silty clay observed on outside of sampler. NATIVE.		7			0.0
	BOH=28.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-28 Date Completed: 12/7/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H
	Ground Surface	577.93				
0.0	0.0'-0.6': Brown topsoil with rootlets. Moist.		1			0.0
	0.6'-0.9': Reworked brown silty clay with many small pebbles. Moist. FILL MATERIAL.	577.33				
	0.9'-1.6': Brown, fine to medium grained sand with few rock and coke fragments, and some white ash. Dry to moist. FILL MATERIAL.					
	1.6'-4.0': Reddish brown silty clay with few pieces of coal, some ash, and many rock fragments. Dry to moist. FILL MATERIAL.					
4.0	4.0'-4.8': Sample same as above.		2			0.0
	4.8'-5.0': Slag, coal and coke mixed with brown silty clay. Moist. FILL MATERIAL.					
	5.0'-7.2': Gray silty clay mottled brown at top and orange throughout remainder of zone. Dry to moist. NATIVE.	572.93				
	7.2'-8.0': Yellow brown, fine grained sand with silt and orange mottling. Moist. NATIVE.	570.73				
8.0	8.0'-12.0': Interbedded zones of gray, fine grained sand and gray silty clay with extensive orange and yellow brown mottling. Clay seams are moist, while sand seams are saturated. NATIVE.		3			0.0
12.0	12.0'-15.0': Sample same as above.		4			0.1
	15.0'-16.0': Medium gray, fine to medium grained sand. Saturated. NATIVE.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-28 Date Completed: 12/7/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	577.93				
16.0	16.0'-20.0': Interbedded zones of medium gray, fine to medium grained sand and silty clay. Silty clay seams are only 0.05' thick. Saturated. NATIVE.		5			0.0
20.0	20.0'-23.6': Sample same as above.	Sample sent to lab	6			0.0
	23.6'-23.9': Gravel of various sizes. NAPL odor detected but no sheen or NAPL observed. NATIVE.	554.43; Sample sent to lab				13.8
	23.9'-24.0': Reddish brown silty clay. Saturated. NATIVE. BOH=24.0' bgs.	554.03				0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-29 Date Completed: 12/8/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H
	Ground Surface	575.20				
0.0	0.0'-0.2': Asphalt.	575.20	1			0.0
	0.2'-2.0': Reworked, yellow brown and reddish brown silty clay with rocks, brick, black ash, and orange and black mottling. Dry. FILL MATERIAL.					
	2.0'-4.0': Gray silty clay with orange and black mottling and few pebbles. Cohesive and dense. Dry. NATIVE.	573.20				
4.0	4.0'-5.0': Gray silty clay with orange, black and white mottling. Cohesive, dense and slightly plastic. Trace NAPL. Dry to moist. NATIVE.		2			18.0
	5.0'-8.0': Yellow brown, very fine grained sand with silt, some clay, and orange and gray mottling. NAPL observed. Dry. NATIVE.	570.20; Sample sent to lab				
8.0	8.0'-12.0': Interbedded zones of yellow brown, fine grained sand and gray silty clay. Sand seams become gray and fine to medium grained with depth. Sheen observed throughout sample but no NAPL observed. NATIVE.		3			4.3
12.0	12.0'-16.0': Sample same as above. No NAPL or sheen observed in sand but a sheen was observed in a 0.3' thick silty clay seam at bottom of sample. Saturated. NATIVE.		4			0.0
16.0	16.0'-19.8': Gray, medium grained sand. Sheen and small pockets of NAPL observed throughout sample. The bottom 0.3' of sample contains NAPL. Saturated. NATIVE.	Bottom 0.3' sent to lab	5			5.3
	19.8'-20.0': Gravel mixed with gray sand. Saturated. NATIVE.	555.40				

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-29 Date Completed: 12/8/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.20				
20.0	20.0'-24.0': Sample appears to be fall-in. Large stones in shoe suggestive of gravel zone. Reddish brown silty clay observed on outside of sampler. NATIVE. BOH=24.0' bgs.		6			NM

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 32.0 feet	Hole Designation: SB-30 Date Completed: 12/6/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H L I G H T
	Ground Surface	576.13				
0.0	0.0'-0.6': Crushed stone from parking lot.	576.13	1			0.0
	0.6'-1.8': Black ash containing coal and slag. Moist. FILL MATERIAL.					
	1.8'-4.0': Light brown silty clay with black mottling, small pebbles and a few pieces of coal. Wood (railroad tie?) at end of sample. Dry to moist. FILL MATERIAL					
4.0	4.0'-4.7': Sample same as above (1.8'-4.0' bgs).		2			0.0
	4.7'-5.0': Ash containing large pieces of coal. Moist. FILL MATERIAL.					
	5.0'-6.0': Gray clay with orange and black mottling and coal pieces near top of sample. Moist. FILL MATERIAL.					
	6.0'-6.5': Wood.					
	6.5'-8.0': Gray clayey silt with orange mottling. Layered. Moist. NATIVE.	569.63				
8.0	8.0'-11.5': Sample same as above with some zones more clayey than others. Moist. NATIVE.		3			0.0
	11.5'-12.0': Very fine grained sand with orange mottling. Dry. NATIVE.	564.63				
12.0	12.0'-16.0': Interbedded zones of gray, fine grained sand and gray clay. Clay seams are moist; sand seams are saturated. NATIVE.		4			0.0
16.0	16.0'-20.0': Sample appears to be fall-in. Poor recovery.		5			0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 32.0 feet	Hole Designation: SB-30 Date Completed: 12/6/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	B N U
	Ground Surface	576.13				
20.0	20.0'-24.0': Gray clay. Saturated. Poor recovery. NATIVE.	Sample sent to lab	6			0.0
24.0	24.0'-28.0': Brownish gray to gray clay. Bottom of sample is reddish brown to gray clay with rounded rock fragments. Saturated. Poor recovery. NATIVE.		7			0.0
28.0	28.0'-32.0': Reddish brown silty clay with many small rounded pebbles and many larger, rounded to subrounded rock fragments. Very dense. Dry. NATIVE. BOH=32.0' bgs.		8			NM

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name:	Former Gastown MGP Site	Hole Designation:	SB-31
Site Number:	915171	Date Completed:	12/6/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Logged By:	Glenn M. May	Drilling Method:	Direct Push
Total Depth:	26.0 feet	Sampling Method:	Macro Core

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H
	Ground Surface	576.21				
0.0	0.0'-0.8': Crushed stone from parking lot.	576.21	1			0.0
	0.8'-2.0': Reworked yellow brown, fine grained sand with some silt and clay, and many large, subrounded pebbles near bottom of sample. Dry. FILL MATERIAL.					
	2.0'-4.0': Yellow brown clayey silt with rusty brown and black mottling, some rootlets and a few pieces of coal (carry down?). Moist. NATIVE?	574.21				
4.0	4.0'-6.4': Yellow brown clayey silt with rusty brown, brown and black mottling near top of sample. Silty clay becomes more gray with depth and contains orange mottling. Moist. NATIVE.		2			0.0
	6.4'-8.0': Gray, fine grained sand with silt, clay and orange mottling. Moist. NATIVE.	569.81				
8.0	8.0'-12.0': Interbedded zones of gray, fine grained sand and orange mottled, gray silty clay. The sand become coarser grained at bottom of sample. Saturated. NATIVE.		3			0.0
12.0	12.0'-15.1': Gray, medium grained sand with yellow brown mottling. Grades into brown sand with gray mottling at depth. Saturated. NATIVE.		4			0.0
	15.1'-15.8': Gray, fine grained sand with some clay seams. Saturated. NATIVE.					
	15.8'-16.0': Medium gray, medium grained sand with a coal tar odor. Saturated. NATIVE.	Sample sent to lab				1.2
16.0	16.0'-20.0': Gray, medium grained sand with many pebbles and rock fragments. Bottom of sample is dark gray and contains NAPL. Saturated. NATIVE.		5			0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 26.0 feet	Hole Designation: SB-31 Date Completed: 12/6/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	B H U
	Ground Surface	576.21				
20.0	20.0'-23.4': Gray, medium grained sand. Sheen observed throughout sample but only a trace of NAPL observed. Saturated. NATIVE.		6			30.0
	23.4'-24.0': Gravel mixed with sand. Staining and NAPL observed. Saturated. NATIVE.	552.81; Sample sent to lab				1330
24.0	24.0'-24.3': Sample same as above.		7			19.8
	24.3'-26.0': Reddish brown clay with some pebbles and gray mottling. Very plastic. Saturated. Becomes less saturated, more dense and contains more pebbles at bottom of sample. NATIVE.	551.91; Sample sent to lab				
	BOH=26.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name:	Former Gastown MGP Site	Hole Designation:	SB-32
Site Number:	915171	Date Completed:	12/6/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Logged By:	Glenn M. May	Drilling Method:	Direct Push
Total Depth:	28.0 feet	Sampling Method:	Macro Core

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.32				
0.0	0.0'-0.4': Crushed stone from parking lot.	575.32	1			0.0
	0.4'-1.3': Black ash with coal and rock fragments. Moist. FILL MATERIAL.					
	1.3'-1.7': Yellow brown clayey silt with rusty brown and gray mottling. Moist. NATIVE.	574.02				
	1.7'-4.0': Gray silty clay with black mottling and some pebbles. Moist. NATIVE.					
4.0	4.0'-7.3': Interbedded zones of fine grained sand and silty clay with orange mottling. Moist. NATIVE.	571.32	2			0.0
	7.3'-8.0': Gray clay with rusty brown and dark gray mottling. Saturated. NATIVE.					
8.0	8.0'-10.0': Sample same as above.		3			0.0
	10.0'-10.6': Dark brown clayey silt with shell fragments. Dry. NATIVE.					
	10.6'-12.0': Gray clay with some dark brown and rusty brown mottling near top of sample. Slightly plastic. Moist. NATIVE.					
12.0	12.0'-16.0': Gray, fine grained sand with some clay, silt and wood. Saturated. NATIVE.		4			0.0
16.0	16.0'-20.0': Interbedded zones of gray, fine grained sand and gray clay with a few shells. Saturated. NATIVE.		5			0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found 

Static Level 

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 28.0 feet	Hole Designation: SB-32 Date Completed: 12/6/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	575.32				
20.0	20.0'-23.8': Yellow brown clay. Saturated. Poor recovery. NATIVE.	Sample sent to lab	6			0.0
	23.8'-24.0': Reddish brown and gray clay. Saturated. NATIVE.	551.52				
24.0	24.0'-28.0': Difficult to log due to poor recovery. Reddish brown silty clay observed on outside of sampler. NATIVE. BOH=28.0' bgs.		7			0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 16.0 feet	Hole Designation: SB-33 Date Completed: 12/7/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	574.03				
0.0	0.0'-0.4': Brown topsoil with rootlets and rock fragments. Moist.		1			0.0
	0.4'-0.8': Yellow brown, fine grained sand with rock and coke fragments. Moist. FILL MATERIAL.	573.63				
	0.8'-4.0': Gray brown, fine grained sand with orange mottling. Moist. NATIVE.	573.23				
4.0	4.0'-7.8': Sample same as above with silty clay seams. Becomes more gray and less mottled with depth. Moist. NATIVE.		2			0.0
	7.8'-8.0': Black clay with shells. Moist. NATIVE.					
8.0	8.0'-12.0': Sample same as above for first 0.3'. Sample then grades into a plastic, very cohesive, greenish gray clay with orange mottling. Bottom of sample becomes more brown and contains shells. Moist. NATIVE.	Sample sent to lab	3			0.1
12.0	12.0'-16.0': Gray, fine grained sand with gray clay seams. Saturated. NATIVE.		4			0.0
	BOH=16.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 20.0 feet	Hole Designation: SB-34 Date Completed: 12/8/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	574.72				
0.0	0.0'-1.0': Black topsoil with brown mottling, roots, rootlets and some coal. Moist.		1			0.0
	1.0'-4.0': Gray silty clay with extensive orange mottling and some rootlets. Dry to Moist. NATIVE.	573.72				
4.0	4.0'-5.5': Sample same as above.		2			0.0
	5.5'-8.0': Gray, fine grained sand with extensive orange mottling, some silt and clay, and a few silty clay seams. Saturated. NATIVE.					
8.0	8.0'-11.6': Interbedded zones of gray, fine to medium grained sand and gray silty clay with extensive orange mottling. Saturated. NATIVE.		3			0.0
	11.6'-12.0': Sample same as above but more medium gray in color and unmottled.					
12.0	12.0'-16.0': Gray, fine grained sand with a 0.4' seam that contains rusty orange mottling. NAPL observed in bottom 0.2' of sample. Saturated. NATIVE.	Bottom 0.2' sent to lab	4			194
16.0	16.0'-19.2': Sample same as above. Sheen observed throughout sample with small pockets of NAPL. Saturated. NATIVE.	Sample sent to lab	5			183
	19.2'-20.0': Gravel of various sizes with only a trace of NAPL. Saturated. NATIVE.	555.52				30.7
	BOH=20.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 20.0 feet	Hole Designation: SB-35 Date Completed: 12/8/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	574.52				
0.0	0.0'-0.9': Topsoil with rootlets. Glass and coal near bottom of sample. Moist. FILL MATERIAL.		1			0.0
	0.9'-3.5': Gray silty clay with extensive orange and black mottling. Moist. NATIVE.	573.62				
	3.5'-4.0': Yellow brown, very fine grained sand with clay and silt. Saturated. NATIVE.	571.02				
4.0	4.0'-8.0': Interbedded zones of yellow brown, very fine grained sand and thin (0.1') seams of gray silty clay with orange mottling. Sand seams become gray with depth and contain orange mottling. Saturated. NATIVE.		2			0.0
8.0	8.0'-11.1': Sample same as above.		3			0.0
	11.1'-12.0': Dark gray sand without mottling. Saturated. NATIVE.					
12.0	12.0'-16.0': Sample same as above with a sheen observed throughout. Trace of NAPL at 14.5' bgs with the bottom 0.4' of sample saturated with NAPL. Saturated. NATIVE.	Bottom 0.4' sent to lab	4			38.4
16.0	16.0'-19.3': Sample same as above with NAPL observed throughout. Saturated. NATIVE.	Sample sent to lab	5			321
	19.3'-20.0': Gravel of various sizes, compact, no NAPL. Saturated. NATIVE.	555.22				
	BOH=20.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 20.0 feet	Hole Designation: SB-36 Date Completed: 12/8/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I G H
	Ground Surface	574.28				
0.0	0.0'-0.3': Topsoil with rootlets. Moist.		1			0.0
	0.3'-2.0': Dark brown subsoil with orange mottling, few pebbles and some rootlets. Moist. NATIVE.					
	2.0'-4.0': Gray silty clay with extensive orange mottling. Dry to moist. NATIVE.	572.28				
4.0	4.0'-4.4': Sample same as above.		2			0.0
	4.4'-8.0': Interbedded zones of gray, fine grained sand and gray silty clay with extensive orange mottling throughout. Sand saturated; silty clay moist. NATIVE.	569.88				
8.0	8.0'-11.2': Gray, fine grained sand with extensive orange mottling. Saturated. NATIVE.		3			0.0
	11.2'-12.0': Dark gray, fine grained sand without mottling. Saturated. NATIVE.					
12.0	12.0'-16.0': Sample same as above.		4			0.0
16.0	16.0'-18.3': Brown, medium to coarse grained sand. Saturated. NATIVE.	Sample sent to lab	5			0.0
	18.3'-18.8': Gravel of various sizes, angular. Saturated. NATIVE.	555.98				
	18.8'-20.0': Reddish brown silty clay. Very plastic and cohesive. Saturated. NATIVE.	555.48				
	BOH=20.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found 

Static Level 


NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 20.0 feet	Hole Designation: SB-37 Date Completed: 12/9/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	574.69				
0.0	0.0'-0.7': Crushed stone from parking lot.	574.69	1			0.0
	0.7'-2.0': Reworked black silty clay with coke and many rocks fragments of various sizes. Dry. FILL MATERIAL.					
	2.0'-4.0': Gray silty clay with orange and dark brown mottling, few rock fragments and some rootlets. Moist. NATIVE.	572.69				
4.0	4.0'-7.6': Sample same as above with mostly orange mottling, although some white and black mottling are observed. Moist. NATIVE.		2			0.0
	7.6'-8.0': Gray, fine grained sand with extensive orange mottling. Saturated. NATIVE.	567.09				
8.0	8.0'-12.0': Interbedded zones of gray, fine grained sand and thin (0.1') seams of gray silty clay with extensive orange mottling that decreases with depth. Saturated. NATIVE.		3			0.0
12.0	12.0'-14.8': Sample same as above with fewer silty clay seams. Saturated. NATIVE.		4			0.0
	14.8'-15.8': Interbedded zones of dark gray, fine grained sand and dark gray silty clay. The silty clay seams are approximately 0.4' thick. Saturated. NATIVE.					
	15.8'-16.0': Gray gravel of various sizes. Saturated. NATIVE.	558.89				
16.0	16.0'-20.0': No recovery. Reddish brown silty clay observed on shoe of sampler. NATIVE.		5			NM
	BOH=20.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size 

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-38 Date Completed: 12/9/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	576.81				
0.0	0.0'-0.6': Crushed stone from parking lot.	576.81	1			0.0
	0.6'-1.0': Brown sand with many rock fragments of various sizes. Dry. FILL MATERIAL.					
	1.0'-1.4': Black ash with slag and coke fragments. Dry. FILL MATERIAL.					
	1.4'-1.8': Light brown, fine grained sand. Dry. FILL MATERIAL.					
	1.8'-4.0': Yellow brown silty clay with few sand seams, many rock fragments, and a few pieces of slag. Moist. FILL MATERIAL.					
4.0	4.0'-4.6': Brown, fine grained sand with slag, ash, coal and rock fragments. Dry. FILL MATERIAL.		2			0.0
	4.6'-5.2': Interbedded zones of brown to yellow brown, fine grained sand and silty clay with orange mottling. Saturated. NATIVE.					
	5.2'-8.0': Gray silty clay with extensive black and brown mottling. Cohesive and compact. Moist. NATIVE.	571.61				
8.0	8.0'-9.2': Sample same as above. Mottling decreases with depth. Saturated. NATIVE.		3			0.0
	9.2'-12.0': Interbedded zones of gray, fine grained sand and silty clay. Sand seams contain a high clay content and are moist, not saturated. NATIVE.	567.61				
12.0	12.0'-14.9': Dark gray silty clay with gravel seams. Saturated. NATIVE.		4			0.0

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-38 Date Completed: 12/9/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H N U
	Ground Surface	576.81				
12.0	14.9'-15.8': Medium gray silty clay with orange mottling. Cohesive and very plastic. Moist. NATIVE. 15.8'-16.0': Gray sand. Saturated. NATIVE.		4			0.0
16.0	16.0'-20.0': Interbedded zones of gray, fine grained sand and thin (0.1') seams of silty clay. Bottom of sample is more reddish brown in color. Saturated. NATIVE.		5			0.0
20.0	20.0'-22.7': Sample same as above (reddish brown, fine grained sand). Saturated. NATIVE.	Sample sent to lab	6			0.2
	22.7'-23.7': Gravel of various sizes. Moist but not saturated. NATIVE.	554.11				4.1
	23.7'-24.0': Reddish brown silty clay. Saturated. NATIVE. BOH=24.0' bgs.	553.11				

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-39 Date Completed: 12/9/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	H I S T O R Y
	Ground Surface	577.09				
0.0	0.0'-0.8': Crushed stone from parking lot.	577.09	1			NM
	0.8'-1.0': Brown silty clay with many rock fragments. FILL MATERIAL.					
	1.0'-1.1': Black ash with small brick fragments. Moist. FILL MATERIAL.					
	1.1'-4.0': Tan ash with brown and green mottling. Moist to Saturated (bottom of sample). FILL MATERIAL.	Sample sent to lab				0.0
4.0	4.0'-4.2': Tan ash same as above.		2			0.0
	4.2'-8.0': Gray silty clay with black mottling throughout except for a zone from 5.4' to 6.4' bgs, which is mottled orange. Petroleum contamination observed at 6.4' bgs. A sand seam observed from 7.1' to 7.4' bgs with a strong petroleum odor. A sand seam was also observed at bottom of sample. Moist. NATIVE.	572.89; Sample sent to lab (6.4'-9.0')				11.5
8.0	8.0'-11.6': Interbedded zones of gray, fine to medium grained sand and thin (0.1') seams of gray silty clay. Extensive black mottling and a strong petroleum odor to 9.0' bgs. Sheen observed throughout sample. Saturated. NATIVE.	569.09	3			40.0
	11.6'-12.0': Gray sand with brown mottling. Saturated. NATIVE.					2.9*
12.0	12.0'-15.0': Sample same as above.		4			3.6
	15.0'-16.0': Gray, medium grained sand. Saturated. NATIVE.					
	* soils below petroleum contamination zone.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒

NYSDEC - Region 9 - Division of Environmental Remediation

Stratigraphic Log (Overburden)

Project Name: Former Gastown MGP Site Site Number: 915171 Location: Tonawanda, New York Logged By: Glenn M. May Total Depth: 24.0 feet	Hole Designation: SB-39 Date Completed: 12/9/99 Drilling Company: Advanced Cleanup Tech. Drilling Method: Direct Push Sampling Method: Macro Core
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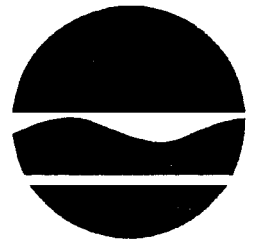
Depth (ft bgs)	Stratigraphic Description & Remarks	Elevation (ft amsl)	Sample			
			N U M B E R	C O U N T	N V A L U E	B N U
	Ground Surface	577.09				
16.0	16.0'-20.0': Sample same as above.		5			3.8
20.0	20.0'-23.1': Sample same as above.		6			NM
	23.1'-24.0': Gravel of various sizes. Saturated. NATIVE.	553.99				
	24.0': Reddish brown, silty clay observed on shoe of sampler. NATIVE.	553.09				
	BOH=24.0' bgs.					

Notes: Measuring Point Elevations May Change: Refer to Current Elevation Table

Grain Size ☐

Water Found ☒

Static Level ☒



MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-27
Site Number:	915171	Date Completed:	12/7/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	1 inch	Casing Diameter:	Not Applicable
Screen Length:	15 feet	Total Depth:	25.0 feet

Top of Riser Elevation: 575.17 ft amsl

Ground Surface Elevation:
575.27 ft amsl

Top of Grout: 0.0 ft

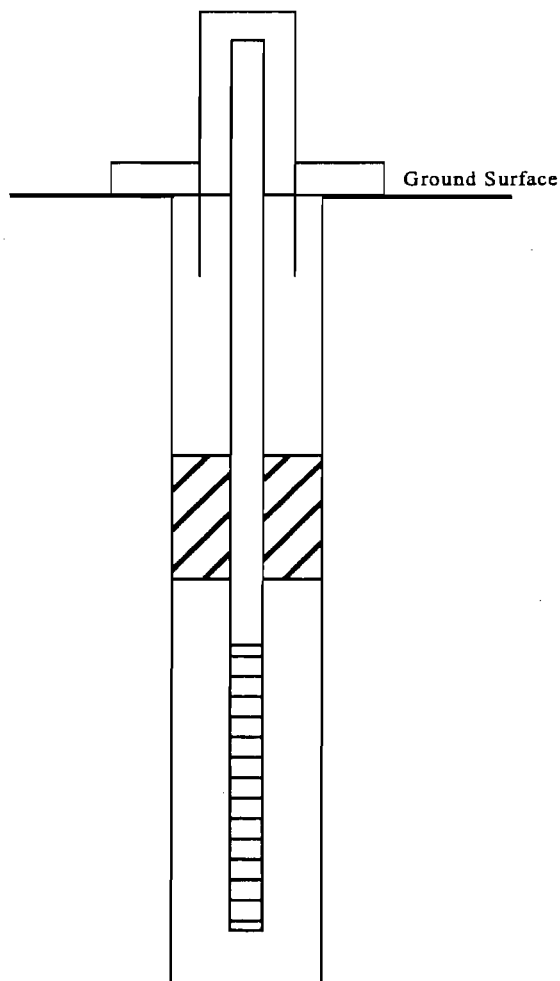
Top of Seal: 6.0 ft

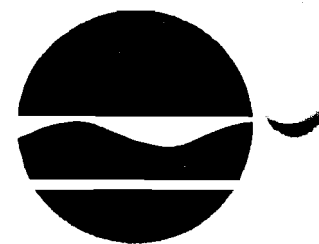
Top of Filter Pack: 8.0 ft

Top of Screen: 10.0 ft

Bottom of Screen: 25.0 ft

Bottom of Filter Pack: 25.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-34
Site Number:	915171	Date Completed:	12/8/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	1 inch	Casing Diameter:	Not Applicable
Screen Length:	15 feet	Total Depth:	20.0 feet

Top of Riser Elevation: 574.56 ft amsl

Ground Surface Elevation:
574.72 ft amsl

Top of Grout: 0.0 ft

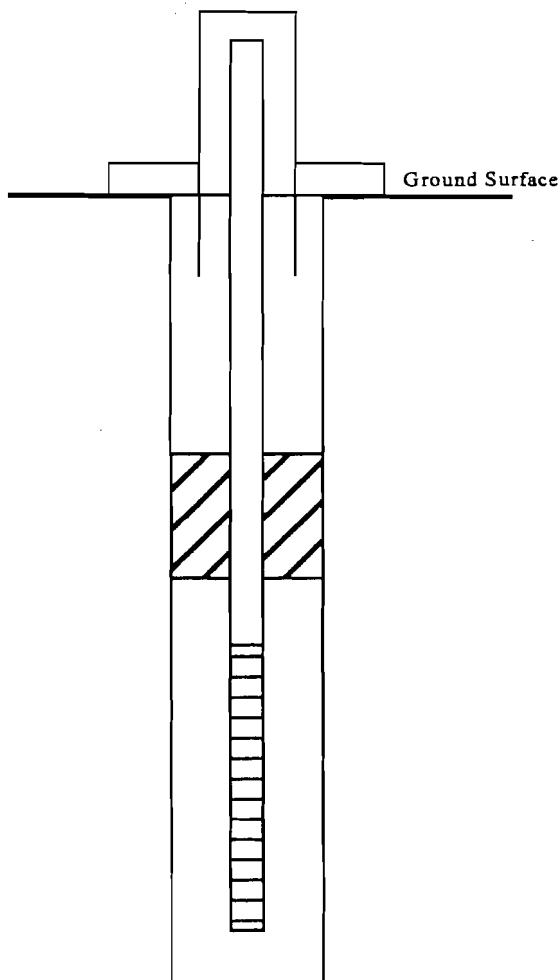
Top of Seal: 2.0 ft

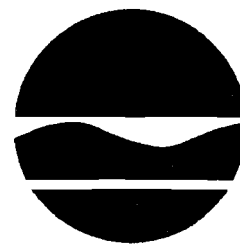
Top of Filter Pack: 3.0 ft

Top of Screen: 5.0 ft

Bottom of Screen: 20.0 ft

Bottom of Filter Pack: 20.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-35
Site Number:	915171	Date Completed:	12/8/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	1 inch	Casing Diameter:	Not Applicable
Screen Length:	15 feet	Total Depth:	20.0 feet

Top of Riser Elevation: 574.31 ft amsl

Ground Surface Elevation:
574.52 ft amsl

Top of Grout: 0.0 ft

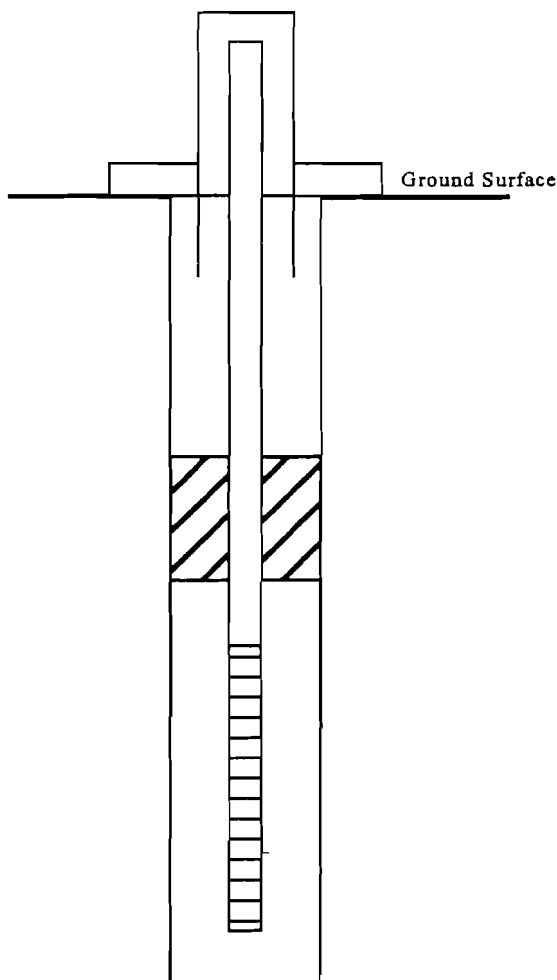
Top of Seal: 2.0 ft

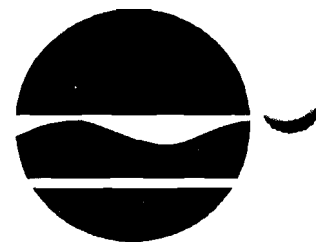
Top of Filter Pack: 3.0 ft

Top of Screen: 5.0 ft

Bottom of Screen: 20.0 ft

Bottom of Filter Pack: 20.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-36
Site Number:	915171	Date Completed:	12/8/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	1 inch	Casing Diameter:	Not Applicable
Screen Length:	15 feet	Total Depth:	20.0 feet

Top of Riser Elevation: 574.13 ft amsl

Ground Surface Elevation:
574.28 ft amsl

Top of Grout: 0.0 ft

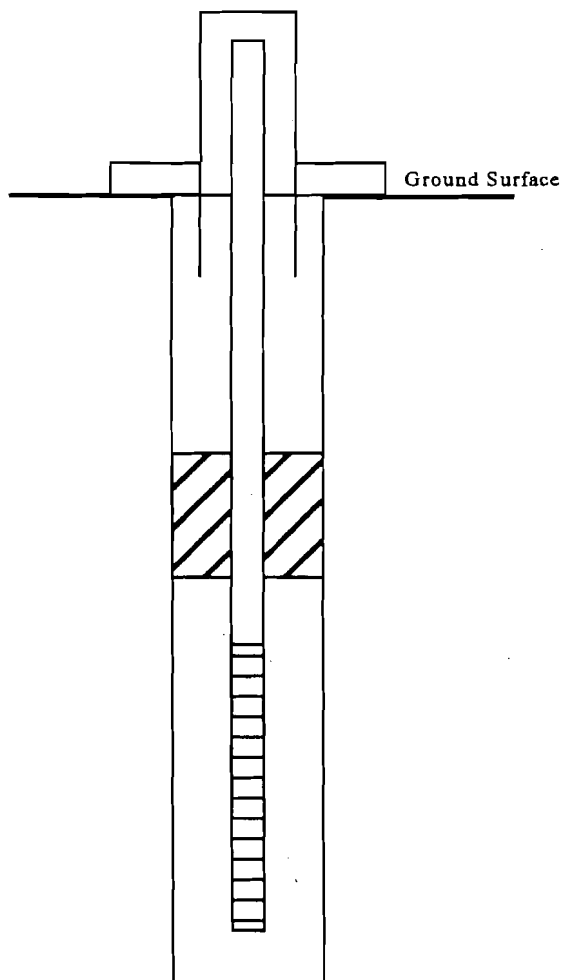
Top of Seal: 2.0 ft

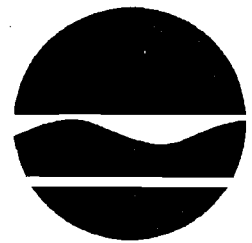
Top of Filter Pack: 3.0 ft

Top of Screen: 5.0 ft

Bottom of Screen: 20.0 ft

Bottom of Filter Pack: 20.0 ft





MONITORING WELL LOG

Project Name:	Former Gastown MGP Site	Hole Designation:	MW-39
Site Number:	915171	Date Completed:	12/9/99
Location:	Tonawanda, New York	Drilling Company:	Advanced Cleanup Tech.
Screen Type:	PVC	Casing Type:	Not Applicable
Screen Diameter:	1 inch	Casing Diameter:	Not Applicable
Screen Length:	7 feet	Total Depth:	12.0 feet

Top of Riser Elevation: 576.85 ft amsl

Ground Surface Elevation:
577.09 ft amsl

Top of Grout: 0.0 ft

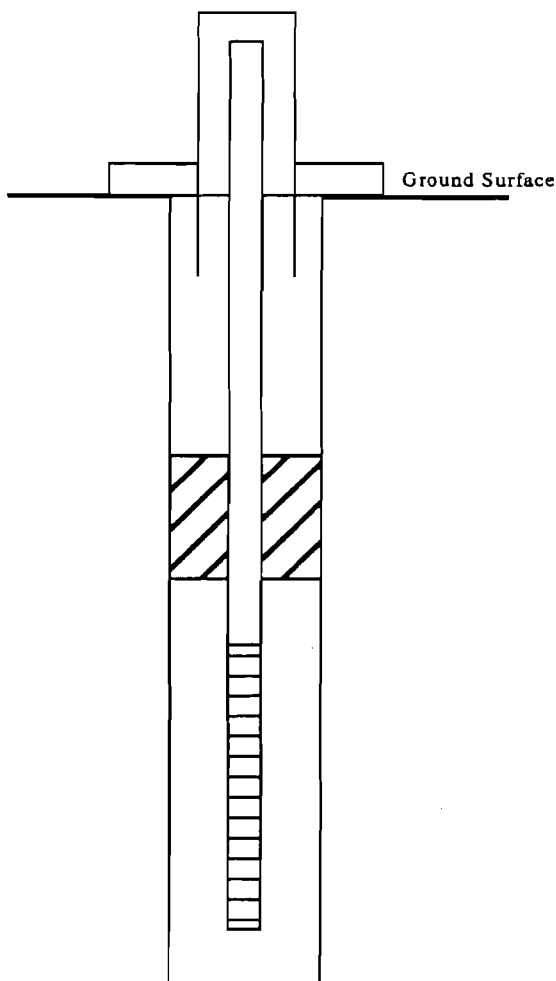
Top of Seal: 2.0 ft

Top of Filter Pack: 3.0 ft

Top of Screen: 5.0 ft

Bottom of Screen: 12.0 ft

Bottom of Filter Pack: 12.0 ft



APPENDIX C

TEST PIT LOGS AND PHOTOGRAPHS

TP-1

Outside holder:

- 0-2.5' Fill material (gravel, crushed stone, brick, sand clay) Slight odor, no PID reading.
- 2.5-6.5' Silty clay
- 6.5-8.5' Silty sand, water seepage at 8.5'

Inside holder:

- 0-3'1" Fill material (gravel, crushed stone, brick, sand clay) Slight odor, no PID reading.

Holder foundation at 1.5'

Holder Floor at 3' 1"

TP-2

- 0-3' Fill (sand, gravel, brick, asphalt, and coal). PID 30.3ppm
- 3' Thin tar seam, some water perched above.
- 3.5-5' Silty clay. Coal tar at 4'

Soil w/ fuel oil smell at 1', scattered tarry substance.

Edge of holder wall at 1.5'

TP-3

0-14" cover (sand and gravel)

14-24" Fill consists of large stone, gravel, brick and asphalt.

24"-36" Stone

36"-48" Sand

48"-60" Clay

Total depth 5', length 15'

Foundation wall at 18"

3" thick layer of coal tar found inside holder foundation

Floor under entire pit to foundation wall at 3.5 feet.

Slight sheen noticed on water coming off pile



TP-3



TP-3

TP-4

0-3'	Fill
3'-5.5'	Clay

Fill - sand and gravel, stone, asphalt pieces, cement, garbage, C&D
Water at 4 feet
Floor of holder at 5.5'
Small layer of tar on floor of holder.
Depth 5.5', length 23'

TP-5

0-1'	Fill
1'-7'	Clinker/slag fill

Curved brick wall encountered at 1'
Metal riveted tank opn inside of brick wall at 2'
Fill material inside holder mostly slag and clinker
Water at 7'
Pieces of purifier waste found inside holder (green, sulfur smell)



TP-5

TP-6

0 - 2' Sand and gravel fill
2' - 7' Clinker, slag, and waste material

Exposed brick wall at 4'

Water at 7'

Fill is mostly slag and clinker with other wastes
Retaining wall seems to extend below water table



TP-6

TP-7

0 - 1' Sand and gravel fill
1' - 3' Sandy fill
3' - 6.5' Clay with weathered coal tar (P5150004.JPG)

Pieces of coke (?), purifier waste (green, but no prominent odor),
Small amount of hardened coal tar found at 4' (P5150005.JPG)

Water at 6.5'

Found bell end of concrete pipe
coal on floor of holder.

Weathered coal tar appears to run along pipe.

TP-7a

0- 2' Fill
2' - Clinker, slag, waste material

Top of foundation at 1'

Small 2" pipe capped w/ check valve at 2'

Holder floor at 4'

Possible junction box (10' long, 4' deep)



TP-7

TP-8

0- 3.5' cinder, sand, brown to black fill
3.5 - 10' Blue-green clay
10 - 10.5' Brown silty clay
10.5-11' Blue-grey silty clay. Mottled.

Strong naphthalene odor from first scrape of bucket

No significant PID readings

2" pipe found inside wood cylinder wrapped with wire (insulator?)

TP-9

0-3.5' Dark brown to black fill. Heavy staining, strong odor, but no product.
3.5-7' Silty clay

Clay pipe found, no outlet 1.5'

Plugged pipe found 10.5' from wall of building. Top of pipe 3.5' below

Small area of possible fuel impacted oil. 45.5 ppm max on PID.

Large amount of refractory material. Yellow brick with round holes. Some thick tar remaining (50 ppm max on PID). Possible site of an old coke oven.



TP-9

TP-10

Shallow test pit to locate outer edge of large holder

TP-11

Shallow pit encountering large amounts of construction debris (Building foundation, lead pipes (3 10" pipes running to south). Smell of coal tar, but no product observed.

Lead pipe blanked off, coal tar smell, PID-11.4 ppm inside pipe.



TP-11



TP-11

TP-12

Investigation of 13' diameter tank.



TP-12

TP-13

0-1.5'	Light brown to gray fill
1.5 - 3.5'	Lime. Light gray to white
3.5 - 4'	Dark brown to black stained soil
4 - 5'	Gray mottled silty clay

Seam of semi-solid coal tar running on top of clay layer.
Strong petroleum smell (fuel oil?)



TP-13

TP-14

Deposit of naphthalene crystals at south end of pit. 6-39 ppm
Collected sample.

Investigate metal tank.

Tank appears to be 13' diameter, 10' deep
Top of tank is 1' below grade.



TP-14



TP-14

APPENDIX D

BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-1	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/12/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/12/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk Gr bk Cy\$; rts; org topsoil	Rec = 3.3' Dry
			0.8		1.6': Gr br Cy\$, t f S; mttld	
			0.8			
			0.8		2.8': Br rd \$, t f S; mttld	Damp @ 2.8'
	S-2		0.9		Rd br mf(+) S, l \$; sft; wet; sm vert seams w/ Fe stain	Rec = 4.0' Wet
5			0.9			
			0.9		6.0': Same; w/ lys of Gr br Cy\$, l f S	Faint odor @ 6.0'
			0.9			
	S-3		1.5		Gr Cy\$, l f S	Rec = 3.3' Wet
					8.2': Gr br mf(+) S, l \$, fining upward; sft wet same Fe stain	
			0.8			
10						

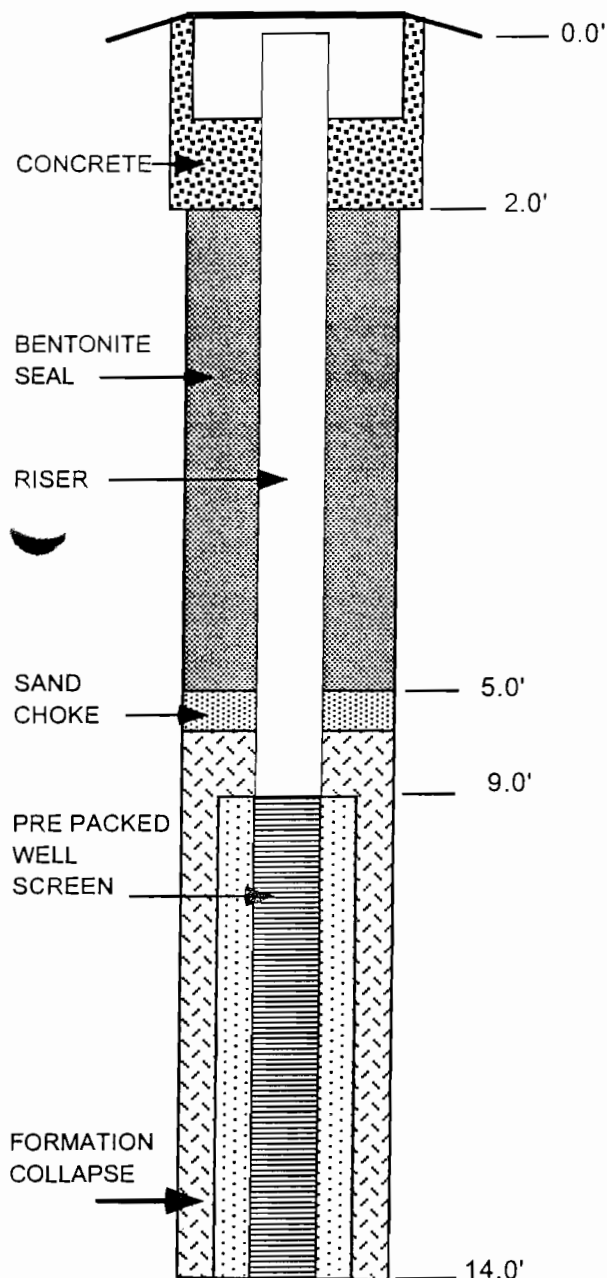
Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-1					
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2					
CLIENT: NYSDEC						Job No. 44491.02					
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks					
10	S-3		0.8		10.8': Gr br Cy\$, s f(+) S	Rec =- 2.0' Wet/Moist					
					11.2': Gr br Cy\$, t f S						
					Br mf(+) S, s \$; sft wet						
					12.4': Gr f S, s \$; faint odor, minor sheen (petrol)						
	S-4		0.8		13.9': Gr Cy\$, l f S; sft; faint odor			Rec = 3.0' Wet Lab sample 16'-17'			
15			4.5		Gr mf(+) S, t \$; sft, wet, odor						
	S-5		129		17.6': Bk mf S, t \$; NAPL saturated.						
					17.9': Br Cy\$						
					18.4'						
			21		Gr c(+) mf S, l mf G; sm odor, no sheen						
			84		20.0'						
20					Bottom of Boring						
25											

MONITORING WELL COMPLETION LOG WELL NO. DPW-1

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 9/14/01
Date Developed 10/3/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 6.18' Date 10/3/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 14.0'
Total Depth of Boring NA

Drilling Method
Type Direct Push Casing Diameter 2 1/2" O.D.
Casing None

Sampling Method
Type None Diameter NA
Weight NA Fall NA
Interval NA

Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 9.0' Joint Type Flush Joint

Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack
Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 5'-14'

Seal(s)
Type Bentonite Granules Interval 2-5'
Type Interval
Type Interval

Locking Casing ☐ Yes ☒ No

Notes:

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-2
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/12/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/12/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0					Concrete and brick rubble 0.2': Dk or topsoil	Rec = 2.6' Dry Damp at base
				0.0	Br conf S, l \$; fill, loose, dry	
	S-1			0.0	2.0': Gr br Cy\$, t f S; frm; mtl'd	
				57	Rd br Cy\$, l f S; sft mtl'd No odor	Rec = 3.1' Damp
5				0.0	5.0': Gr Cy\$, t f S; sft	
	S-2			90	5.4': Bk coal tar; sft; sm petr. sheen; NAPL blebs 6.2': Gr Cy\$; heavy sheen, NAPL blebs and stringers	
				45.0	Gr Cy\$, t f S: sft; moist; sm odor w/ NAPL blebs & sheen, sm Fe stain	Rec = 2.4' Moist
	S-3			9.0	9.0': Same w/ less blebs	
10				7.0		

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-2				
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2				
CLIENT: NYSDEC						Job No. 44491.02				
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PiD Reading (ppm)	Geologic Description	Remarks				
10	S-3			129	10.0': Br s t f S; highly org; rts; shells	Rec = 1.8' Moist				
	S-4				54		Gr C&\$; sft			
15							145		12.4': Br Gr Cy \$; rts; fnt odor, no sheen; frm	
	S-5		25	13.3': occ blebs; frm		Rec = 2.4' Wet Lab sample 16-18'				
					Gr mf(+) S a, \$; loose; wet some NAPL saturation; some pooling at base					
							16.5': Gr \$ a, f S; moist; frm some blebs			
20						20.0'	Bottom of Boring			
25										

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log			Boring No.DP-3	
PROJECT: Gastown Former MGP Site RI							Sheet 1 of 2	
CLIENT: NYSDEC							Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services							Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling							Ground Elev.: NA	
DRILLING METHOD: Direct Push				SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/12/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/12/01		
MEAS. PT.: ---		WEIGHT	---				Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---				Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0	S-1				Gr bk cmf S a, mf G; cndrs, mixed w/ lys of lt br cmf S a f G; loose fill		Rec = 2.9' Dry, damp @ base	
				0.0				
				0.0				
				1.7	2.8': Bk gr mf(+) S, l \$; stained, odor			
				8	Gr br Cy\$, t f S; rts org; mtld frm, odor		Rec = 3.4' Damp	
5	S-2			12	5.5': Bk gr f S, a Cy\$; sft: strong odor; slight sheen			
				40	7.0': Blk stains w/ sheen 7.1': Gr bk Cy\$, t mf S; frm			
				5	Blk Gr Cy\$, sft; mtld; odor		Rec = 5.3' Wet	
				30	9.4': Gr mf S, l \$; loose; wet odor, no sheen			
10		S-3						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-3		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3			0.4	Gr mf(+) S, l \$, sft; odor sheen; w/ lys Gr Cy\$ sm Fe stain	Rec = 1.5' Wet		
	S-4						Gr br f S, l \$; sft, wet No sheen	Rec = 2.0' Lab sample 17-18'
15	S-5				12.8': Gr \$ a, f S; frm no sheen; wet	Lab sample 17-18'		
				140	Gr br mf S, l \$; loose; blebs some NAPL saturation	20.0'		
				190	17.6': NAPL pooling 17.8'			
20					Gr mf S, l \$, l f G; loose			
25					Bottom of Boring			

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-4	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/12/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0	S-1				Br Cy\$ a, cmf S, l mf G; frm base fill		Rec = 2.7' Dry
				3.5	1.0': Gr br Cy\$, l f \$: frm damp; no odor; mtd Fe stain		
				4.0			
				4.8			
	S-2			5.0	Gr br Cy\$, tf S; frm mtd, no odor		Rec = 3.1' Moist/wet
5				2.4			Wet @ 5.0'
				2.4	6.0': Blk f S; granular waste		
				4.8	Gr bk Cy\$, l f S; blk staing, sm odor		Rec = 2.9' Wet
	S-3			3.4	8.8': Starting some blebs 9.2': NAPL saturated lyr (0.2' thk)		
					Gr f S, a \$ to 10'		
10							

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-4			
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2			
CLIENT: NYSDEC						Job No. 44491.02			
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks			
10	S-3			2.7	Gr \$; t f S; frm 10.5': Same, w/ NAPL blebs/stringers	Rec = 2.6' Wet Lab sample 12-13' Pool of coal tar pulled to surface w/ macro core. Rods coated w/ coal tar.			
				7.6	Gr mf(+) S, l \$; sft, loose, much staining, sheen w/ blebs; stringers of NAPL				
				4.0	14.1': Gr f S, s \$; frm; no stains				
	S-4				0.4		Dk Gr f S, s \$; fnt odor no sheen or blebs	Rec = 1.5' Wet	
15	S-5						0.4	Dk Gr f S, s \$; fnt odor no sheen or blebs	Rec = 1.5' Wet
20							Bottom of Boring		
25									

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-5	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/12/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/12/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1			0.4	Br cmf S, l \$, s mf G; base fill	Rec = 1.2' Dry
					0.7': Bk cmf S, t \$, l f G; stain cinders	
				0.4	1.3': Lyr white cmf S, l \$, t f G; lime 1.7': Lyr Bk cmf S, t \$, l f G; cinders	
				0.4	2.2': Br gr Cy\$, t f S; frm damp	
	S-2			0.0	Bk Dk gr Cy\$, l f S; stained mtd; fnt odor	Rec = 2.0' Damp
5				0.3	5.5': Gr br Cy\$, t f S; frm, fnt odor	
				3.2		
	S-3				Dk Gr bk Cy\$, t f S; sft, occ blebs stringers of coal tar w/ sheen	Rec = 1.5' Moist
					8.8': Gr Cy\$; frm w/	
					8.9': Br G fgmt	
10						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-5	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3						
	S-4			20.5	Gr mf(+) S, I \$; loose; heavy sheen, some pooling NAPL	Rec = 3.3' Wet Lab sample 12-14'	
				12.5			
				2.7			
					14.5': Lyr Cy\$, f S; frm		
15					15.0': Gr mf(+) S, I \$; loose; sheen w/ blebs		
					No Recovery	Rec = 0	
	S-5						
20					20.0'		
					Bottom of Boring		
25							

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-6	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/12/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0	S-1		0.0		Gr br bk cmf S, l \$, l f G; base fill, some cinders		Rec = 3.7' Dry
			0.0				
			0.0		2.3': Br Cy\$, l f S, t f G; cndrs coal fgmts		
			0.0		Sft dmp @ 3.0'		
			0.0		3.5': Gr br Cy\$, l f S; frm mtd, no odor		
	S-2		0.0		Same: mtd, Fe stain coarse down to Br \$, mf S;		Rec = 3.0' Damp
					5.4': Lyr Gr br Cy\$, t f S, frm, moist		
			0.0		6.0': Br mf(+) S, l \$; sft; no odor, no sheen		Wet @ 6.3'
			0.0				
5	S-3		0.0		Gr mf(+) S, l \$; sft wet; fnt odor, no sheen		Rec = 3.0' Wet
			0.0		8.9': Lyr br Cy\$; frm		Lab sample 8-10'
10							

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-6
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3		0.0		Gr br mf(+) S, l(-) \$; sft faint odor, no sheen	Rec = 1.9' Wet
	S-4		0.0		Gr mf(+) G, a cmf S, t \$; hard, no odor	
15	S-5				Gr cmf S, t f G 16.6': Gr mf G, s cmf S; Hd, sbrdd	Rec = 2.7' Wet
					Rd \$yC; occ gr varves; plastic; sft	
20					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No.DP-7
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/12/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/12/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Br Gr Cy\$, l f S, t f G	Rec = 2.6' Dry/Damp
	S-2				Sm Dk stain at 2.0', no odor	
5	S-3			0.0	Blk dk gr Cy\$, s mf(+) S, t f g, frm, moist; some odor & stains, plastic sheet at 4.2'	Rec = 1.5' Wet/Damp
	S-3			0.0	Blk Cy\$, a mf S, t f G; stained sm odor; no sheen	Rec = 3.1' Damp/Wet
10				0.0	8.5': Gr br Cy\$, t mf S; frm; mttld 9.3': Br mf S, l \$; loose; Fe stain	Lab sample 8-9'

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-7
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3					
	S-4			0.0	Br mf(+) S, l \$, sft, wet	Rec = 3.0' Wet
				0.0		
				0.0		
15	S-5				14.7': Gr mf(+) S, a Cy\$: frm no odor	
				0.0	Br mf S, l \$; loose; no odor	Rec = 2.4' Wet
				0.0	16.7': Gr mf S, t \$; no odor	
				0.0		
					18.2'	
					Gr mf(+) G, a cmf S, t \$	
20					20.0'	
					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-8
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/13/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/13/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk br cmf S s \$, l mf G, Hd, base fill	Rec = 3.1' Damp
				0.3	1.2': Gr br Cy\$, l f S; frm dense, mtl'd w/ Fe stain	
				0.3		
				0.3		
				0.0	Dk gr br Cy\$, l f S; hd; dense	
5	S-2			0.0	5.0': Lt br \$, l(-) f S; frm; mtl'd	Rec = 3.4' Damp/Moist Wet @ 6.8'
				0.0		
				0.0		
				0.0		
				0.0	Rd br Cy\$, s f S; sft; no odor; no sheen	
	S-3			0.0		Rec = 3.2' Wet
				0.0		
10				0.0	9.5': Rd br Cy\$, t f S; frm; no odor; no sheen	

Earth Tech, Inc. Albany, NY (518) 458-1313						Test Boring Log		Boring No. DP-8
PROJECT: Gastown Former MGP Site RI							Sheet 2 of 2	
CLIENT: NYSDEC							Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3				10.8': Rd br mf(+) S, a \$; frm wet, no odor or sheen			
				0.0	Gr mf(+) S, l(-) \$; fnt odor	Rec = 0.3' Damp Tube loaded w/ flowing sand		
	S-4							
15								
				0.0	Gr mf(+) S, l \$; sft, loose, fnt petrol odor, no sheen	Rec = 2.2' Wet Lab sample 16-18'		
	S-5			0.0				
				0.0				
				0.0				
20					20.0'			
					Bottom of Boring			
25								

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-9	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/13/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/13/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0	S-1			0.0	Dk br bk cmf S; l \$, l mf G; base fill; bks; cndrs		Rec = 3.6' Dry/Moist
				0.0			
				0.0	2.4': Lyr bk mf S, l \$; stain, no odor or sheen		
				0.0	2.6': Dk gr Cy\$, l f S; frm, sm odor		
				0.0	Gr rd br Cy\$, t f S; frm, wet, mtld, fnt odor		
5	S-2			0.0	5.6': Gr rd br \$, l f S, frm, wet, mtld, fnt odor		Rec = 2.6' Damp
				0.0			
				0.0			
				0.0			
				0.0	Same		
	S-3			0.0			Rec = 2.7' Wet
				0.0			
				0.0			
				0.0			
				0.0			
10							

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-9	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3			0.0	10.1': Bk mf(+) S, l \$; stained odor	Rec = 2.7' Wet	
					10.6': Gr br Cy\$, l f S, sft; lyr Br mf S at 11.4'		
				0.0	Gr mf(+) S, l \$; loose; wet		
	S-4				12.6': Gr Cy\$, t f S, sft		
				0.0	13.1': Gr mf S, l \$; loose		
				0.0			
				0.0			
15				0.0			
	S-5			0.0	Dk Gr mf S, l \$; loose; odor, NAPL sheen & blebs at 16.8'		Rec = 2.3' Wet
				0.0	17.0': Gr Cy\$, l f S; frm		Lab sample 17-18'
				0.0	17.5': Gr mf(+) S, l (-)\$; loose; odor		
				0.0	lyr NAPL saturated @ 17.8' to bottom		
				45			
20	S-6			4.5	Gr mf(+) S, l \$; sft; odor v/slt sheen	Rec = 2.6' Wet	
				47	21.0': 0.3' lyr NAPL sat		
					21.5': Gr Cy\$, l f S; sft		21.8'
				5	Rd \$yC; sft; 0.01-0.02' thk gr Cy\$ seams (varved)		
					22.4': Gr Cy\$, l f S, sft		
					24.0'		
					Bottom of Boring		
25							

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-10
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/13/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/13/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1			0.0	Blk cmf S, l \$, t f G, rts, org topsoil base fill; sm cbls	Rec = 3.2' Dry
				0.0		
				0.0		
					2.8': Rd br Cy\$, t f S; frm	
				0.0	Br rd gr Cy\$, t f S; frm: mtld; no odor	Rec = 3.5' Damp/Moist
5	S-2			0.0		
				0.0		
				0.0	6.2': Gr br Cy\$, l mf(+) S; sft no odor	Wet @ 6.2'
				0.0	6.8': Dk Gr bk Cy\$, t f S, fnt coal tar odor	
				48	Same	Rec = 2.2' Wet
	S-3				8.5': Begin blebs of coal tar NAPL	
				45	9.3': 0.3' lyr satruated w/ NAPL	
10						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-10
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3					
			40		Gr mf(+) S, l f S; blebs and sheen lyr NAPL saturated at 12.6' (0.1' thk)	Rec = 1.8' Wet Lab sample 12-14'
	S-4					
			111		13.1': Gr Cy\$, l f S; 0.05' lyr of mf S w/ NAPL satur at 13.7'	
			46			
15						
					No Recovery	Rec = 0
	S-5					
20					No Recovery	Rec = 0
	S-6					
					24.0'	
					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log			Boring No. DP-11	
PROJECT: Gastown Former MGP Site RI							Sheet 1 of 2	
CLIENT: NYSDEC							Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services							Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling							Ground Elev.: NA	
DRILLING METHOD: Direct Push				SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/13/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/13/01		
MEAS. PT.: ---		WEIGHT	---				Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---				Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0	S-1				Dk gr bk cmf S, l \$, l mf G; base fill, hard; cbls		Rec = 2.5' Dry	
	S-2			0	Dk gr bk mf(+) G, t \$, a mf S; bk stain @ 4.6'		Rec = 2.1' Moist	
					Rd brick fgmt 4.8-5.2'			
5				20	5.3': Bk cmf S, l \$, s mf(+) G; heavy blk stain, strong odor			
				30				
	S-3			5.0	Gr br \$, s mf(+) S; frm, mtd		Rec = 2.7' Wet	
10				4.5	Blk stain at 9.0-9.2', 9.4-9.7' and 10.0-10.2'; no sheen			

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-11		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3			2.5	10.3': Br gr mf(+) S t \$; sm blebs and sheen. Thin seam of NAPL saturation at 10.4'.			
					Br gr mf(+) S, l \$; frm; sheen			Rec = 1.5' Wet
	S-4			2.5				
15	S-5			40	Gr br bk mf(+) S, l \$; sft; blebs, pools of NAPL.	Rec = 2.1' Wet		
					17.0': Heavy sheen	Lab sample 17-18'		
				220	17.5'-17.8': Lyr of mf(+) S, t \$ w/ strong rd color, NAPL saturated			
20	S-6		10	Gr bk cmf(+) S, t \$, l f G; sm brick fgmts at 20.5': odor, slight sheen.	Rec = 0.8' Wet			
					22.0'			
					Bottom of Boring Probe Refusal			
25								

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-12	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/13/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/13/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0					Lt Br cmf S, l \$, l mf G, base fill, hd	Rec = 2.7' Dry
				0.0		
	S-1			1.9	1.9': Br gr Cy\$, t f S; frm mtld	
				0.2	Dk gr bk Cy\$, t f S; frm mtld, Bk staining	Rec = 3.0' Damp
				0.4		
5						
	S-2			0.8	6.2': Lyr w/ white seams and bk staining	
					Gr br Cy\$, l f S; frm; no odor, no sheen	Rec = 2.0' Moist
	S-3			0.4		
				0.2		Wet @ 9.5'
10						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-12	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3			0.3	No Recovery	Rec = 0	
	S-4			0.0			
15				0.0			
	S-5			0.0	Gr br mf(+) S, s \$, frm; mtld, no odor, no sheen	Rec = 2.7' Wet Lab sample 17-18'	
				0.0	18.4': Gr Cy\$ s f S; frm; no sheen		
20				0.0	Gr C(+) mf S, t f G	Rec = 2,8' Wet	
	S-6			10.6	Rd gr mf G, l C(+) mf S; loose; well rdd G; fnt odor	21.0' 22.1'	
					Rd gr \$yC; sft; w/ gr varves 0.01-0.03' thk	24.0'	
					Bottom of Boring		
25							

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-13	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/13/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/13/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk br \$, l mf S; rts, topsoil	Rec = 3.2' Dry/Wet
				0.0	1.0': Lt br \$, s mf(+) S; frm no odor, no sheen	
				0.0		
				0.0		Wet @ 2.6'
				0.0		
5	S-2				Rd gr br Cy\$, s(-) mf S; sft; no odor	Rec = 3.0' Wet
				0.0		
				0.0		
				0.0		
				0.0		
	S-3				Gr br Cy\$, l f S; mtd, frm; no odor or sheen	Rec = 2.2' Moist
				0.0		
				0.0		
				0.0		
10				0.0	9.7': Dk br \$, l f S; frm, org; rts; shell fgmts	

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-13
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3					
	S-4				No Recovery	Rec = 0
15	S-5				No Recovery	Rec = 0
	S-6				Gr Cy\$, l f S; frm; rts; org	Rec = 1.5'
				0.0		
					19.3': Gr mf(+) S, l(+) \$; frm	
20	S-7			0.0	Dk Gr mf(+) S, t \$; frm; no sheen; no odor	Rec = 1.0'
				0.0	20.8': Gr rdd Gravel fgmts 20.9': Rd \$yC	
					24.0'	
					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No.DP-14	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	—	—	Date Started: 6/13/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	—	—	Date Finished: 6/13/01	
MEAS. PT.: ---		WEIGHT	—			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	—			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0					Gr Gravel base fill		Rec = 2.4' Dry
				0.0	1.0': Br cmf S, l mf(+) G; fill		
				0.0			Damp @ 2.0'
					Gr br \$, l f S; frm; mtld seams; wet; rts; org		Rec = 3.2' Wet/Damp
5				0.0			
				0.0	5.6': Gr Cy\$, l f S; frm; rts; no odor; minor bk stain at 6.2'		
				0.0	6.7': Dr Gr \$, l f S; frm; shells; org; rts		
					Gr C&\$, t f S; frm; rts; org; shells;		Rec = 2.0' Damp
10							

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-14						
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2						
CLIENT: NYSDEC						Job No. 44491.02						
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks						
10	S-3				Tube filled w/ slough from upper part of hole	Rec = 0						
	S-4							Gr Cy\$, t f S; sft; no odor; no sheen	Rec = 2.9' Wet Lab sample 16-18'			
15	S-5									0.0	17.6': Gr mf(+) S, s \$; frm w/ 0.02-0.04' seams of Gr \$yC	
	S-5			0.0	18.7'							
	S-6						0.0	Gr mf G, s cmf S, t \$; frm; no odor; no sheen				
20	S-6									12	Gr cmf S, l \$, t f G; loose; wet	Rec = 2.6' Wet
	S-6			24	21.0': Gr cmf G, l cmf S; loose slt odor; Gr rdd-sbrdd							
	S-6						38	Rd \$yC; frm; w/ seams of Gr lyrs (varved)				
	S-6										24.0'	
					Bottom of Boring							
25												

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-15	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 3	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/14/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/14/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Topsoil 0-0.5'	Rec = 3.1'
		Bk dk gr cmf S, l \$, s mf G; occ brick fgmt			Dry	
	S-2				Same	Rec = 2.5'
		4.2': Rd br \$yC, l f S, t f G; frm white seam (lime) at 4.7'			Damp	
5	S-3		Rd br Cy\$, l cmf S, s mf G; Gr sbrdd (reworked, fill)	Rec = 2.4'		
			Damp			
10			9.7': Bk Gr Cy\$, l f S; G fgmt, reworked			

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-15
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 3
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3					
	S-4				Br gr CyS, l f S; frm mtlid	Rec = 2.9'
					12.4': Gr mf(+) S, s \$ frm; wet	Wet 12.0'
				0.0		
				0.0		
15	S-5					
				0.0		
				0.0		
	S-6				Br f S, s Cy\$; sft; wet; no odor	Rec = 12.0'
					16.9': Gr br f S a(+), Cy\$, mod frm	Wet
				0.0		
				0.0		
20	S-7				Gr mf(+) S, l \$; no odor, no sheen	Rec = 1.1'
						Wet
				0.0		
				0.0		
	S-7				Same	Rec = 1.0'
						Wet
				0.0		
25				0.0		

[illegible]

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-16	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 3	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/14/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/14/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Topsoil	Rec = 2.3'
					0.5': Dk br cmf S, l \$, s mf G; cndrs	Dry
				0.0	1.5': Dk Br mf(+) S, l \$, occ f G	
				0.0		
	S-2				Wh lt br Gn; limy granular waste fill	Rec = 2.3'
						Dry
5						
				0.0	5.7': Dk br cmf S, s \$, l mf G; brick fgmt @ 5.8'	
	S-3				Br cmf S, l \$, t f G	Rec = 2.2'
						Dry/Wet @ 9.5'
				0.0	9.0': Bk cmf S, l mf G; cndrs	
					9.3': Br mf(+) S, l \$, t mf G	
10				0.0	9.9': Dk gr br Cy\$, sm Bk	

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-16
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 3
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3			0.0	Stain; no odor	Rec = 2.8' Damp
	S-4			0.0	Same	
15	S-4			0.0	12.8': Br gr Cy\$, l f S, mtld	
	S-5		0.0	13.5': Gr br f S a \$: mtld; no odor		
	S-5		0.0	Gr br Cy\$, l f S; occ f S, seams (.003' thk) mtld	Rec = 2.0' Wet	
	S-5		0.0	17.4': Lt br f S, a \$		
20	S-6		0.0	Lt br mf(+) S, l \$, t f G; sft; no odor; no sheen	Rec = 3.2' Wet	
	S-6		0.0	22.5': Br f S, a \$; firm; damp; no odor		
	S-7		0.0	Dk Gr mf(+) S, l \$; massive	Rec = 2.7' Wet	
25	S-7					

Albany, NY (518) 458-1313

Boring No.DP-16

Sheet 3 of 3

Job No. 44491.02

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Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No.DP-17
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/14/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/14/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1			0.0	Dk br cmf S, l \$, s mf(+) G; base fill; Bk stain w/ tar; odor @ 1.0'; rd Fe stain @ 1.5'	Rec = 2.9' Dry/Damp
				5.0		
				2.0	2.3': Gr br Cy\$, l f S; mtld; fnt odor 2.5': Dk Gr br cmf S, t \$, l f G; loose	
				0.0		
				0.0		
5	S-2			0.0	Rd br gr Cy\$, l f S; frm 4.2': Dk Gr bk Cy\$, l f S; frm 4.6': Gr Br Cy\$, l f S; frm, no odor, mtld 5.3': Gr br f S, s(+) Cy\$; frm; mtld	Rec = 3.1' Damp
				0.0		
				0.0		
				0.0		
				0.0		
	S-3			0.0	Gr br f S, a \$; frm; mtld; fnt odor	Rec = 3.1' Wet @ 8.5'
				0.0		
				0.0		
				0.0		
				0.0		
10					9.1': 0.05' thk seam w/ bk stain/odor 9.4': Gr br mf(+) S, s \$; frm; wet SI odor, sm mtld	

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-17
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	PID Reading (ppm)	Geologic Description	Remarks
10	S-3			0.2	Dk Gr bk \$, a f S; stained odor, no sheen, no NAPL	Rec = 2.4' Wet
	S-4				Gr br mf(+) S, t \$; loose wet, faint odor, no sheen	Rec = 1.0' Wet
15	S-5				13.7': Dk Gr bk f S, a \$; frm, sm stain, fnt odor, no sheen, occ Cy\$ seams	Rec = 1.0' Wet
	S-6				Gr br f S, l \$; fnt odor, sm faint sheen	Rec = 1.0' Wet Lab sample 20-21'
20					Gr f S, l \$; sft; sheen, occ blebs; sm NAPL saturation	Rec = 1.0' Wet Lab sample 20-21'
					Rd br \$yC; w/ m G a Blk stain on sampler tip	
					Bottom of Boring	
25						

[illegible]

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-19	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/15/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/15/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0	S-1			0.0	Dk br cmf S, l \$, t mf(+) G; topsoil		Rec = 2.8' Dry/Damp
				0.0	1.2': Br gr \$ a f S; frm, damp; occ brick, glass		
				0.0			
5	S-2				Gr br Cy\$, l f S, t f G; frm; no odor; mtld		Rec = 1.9'
	S-3			2.5	Bk dk gr Cy\$, l f S, t f G; sft; stain, some NAPL blebs		Rec = 2.9' Moist
10					8.8': Lt Gr f S, a Cy\$; sft mtld, brick fgmt; sm odor, no sheen 9.4': Dk gr Cy\$, l f S, frm; org; shells		

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-19		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3				10.0': Gr S&C; frm; rts; org; faint odor	Rec = 2.1' Wet		
							Same	
							12.4': Gr Cy\$ I, f S; frm; occ shells; rts; sm odor; lyr mf S, t \$ at 13.3'	
							13.8': Gr mf(+) S, l \$; odor	
	S-4				0.0		Gr mf(+) S, l \$; massive, sm odor; slt sheen & blebs 16-18' 0.03' lyr w/ NAPL saturation at 17.9'	Rec = 2.1' Wet Lab sample 17-18'
15	S-5		0.0	Coarse Gravel fgmt w/ NAPL coating in sampler tip		19.7'		
							Bottom of Boring Probe Refusal	
20								
25								

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-20
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/15/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/15/01
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Topsoil	Rec = 2.7' Dry
				0.0	0.5': Bk dk gr cmf S, l \$, s mf G; slag, cndrs, brick	
				30	2.2': Wet w/ strong odor; lyr of sft coal tar; sticky	
	S-2				Rd br Cy\$, l f S; frm; mtld sm bk staining	Rec = 3.0' Damp/Moist
				30	5.0': Bk rd br Cy\$, s f S; NAPL saturated f S seams (0.02-0.04' thk) at 5.0', 5.1', 5.3', 5.8', 6.3', 6.4'	
				8		
				12	6.6': Gr br Cy\$, t f S, frm; sm NAPL blebs	
	S-3				Gr br bk Cy\$, l f S; sft frm; much NAPL blebs and pooling; 0.02-0.04' thk seams of NAPL sat f S at 8.3', 8.5', 9.0', 9.4', 10.0', and 10.5'	Rec = 3.1' Damp
				10		
10				15		

Earth Tech, Inc.				Test Boring Log		Boring No.DP-20			
Albany, NY (518) 458-1313									
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2			
CLIENT: NYSDEC						Job No. 44491.02			
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks			
10	S-3			25	10.8': Bk mf(+) S, I \$; NAPL saturated	Lab sample 10-11'			
	S-4					Mixture Gr br Cy\$, I f S and mf S. All probable slough from up hole. Some blebs and much heavy sheen.	Rec = 0		
15	S-5				4.6	Gr mf(+) S, s \$; sft; occ lyrs Gr Cy\$, 0.05-0.10' thk; fnt odor, no sheen	Rec = 2.7' Wet		
	S-6				0.6	18.0': Gr mf(+) S, I \$; no sheen			
20	S-6				0.4	Gr mf S, I \$; faint sheen sm rd \$yC on sampler tip	Rec = 0.4' Wet		
					24.0'				
					Bottom of Boring				
25									

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-21	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/15/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/15/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Crushed Stone	Rec = 2.5'
					0.5': Lt br tn f S, l \$	Dry
				0.0		
				0.0		
				0.0		
	S-2			0.0	Same: Perched wet seam 4.5-5.0'	Rec = 2.9'
				0.0		Dry/Wet
				0.0		
5				0.0	5.0': Rd br Cy\$, l f S; frm mtld; no odor, no sheen	Wet seam @ 5.0'
				0.0		
	S-3			0.0	Lt Gr br Cy\$, l f S; frm; mtld; no odor; some seams w/ blk stain and tar odor	Rec = 2.8'
				0.0	9.0-9.7' and 10.3-10.8'	Moist
				0.0		
				0.0		
10				0.0		

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-21		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3							
	S-4			0.0	Rd br gr Cy\$ a, f S; bk stain seam 12.5' and 13.1'; fnt odor, no sheen	Rec = 3.3' Wet		
				0.0	13.3': Lt Br mf S, t \$, no sheen fnt odor			
				0.0	14.1': Gr mf(+) S, l \$; loose; wet, no sheen, no odor			
					14.7': Gr Cy\$			
15				0.0	14.8': Gr mf(+) S, no sheen			
				14.7	Bk stained mf(+) S, l \$	Rec = 1.8' Wet		
		S-5			15	16.8': Gr Cy\$, l f S; frm, sm vert seams w/ NAPL saturation	Lab sample 16-17'	
					38	16.9': Dk Gr mf(+) S, t \$; heavy sheen NAPL saturated, sm pooling		
20	S-6				Dk br gr Cy\$, s mf(+) S; sm NAPL sheen, some blebs	Rec = 1.1' Wet		
					21.0': 0.05' lyr bk f S material			
					22.0'			
					Bottom of Boring Probe Refusal			
25								

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-22		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/15/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/15/01		
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0					Base fill crushed stone and brick fgmts to 1.2'		Rec = 2.7' Damp	
				0.0	1.2': Lt br mf(+) S, l \$; w/ occ seams & lyrs of wh limey fill and blk stains, no odor			
				0.0				
				0.0				
					Gn dk gr bk Cy\$, s f S (seams) Heavy NAPL saturation 4.4-4.7' and at 5.1'		Rec = 3.2' Damp	
5				15	5.3': Dk Gr br Cy\$, l f S; frm sm org; rts; fnt odor			
				0.0	5.7': Gr mf(+) S, l \$; frm; fnt odor; some bk stain at 6.7'			
					6.3': Gr br Cy\$, l f S, frm, mtld, fnt odor			
				250	Gr br Cy\$, l f S; frm some seams (0.01' thk) w/ NAPL saturation; occ blebs		Rec = 2.5' Damp Lab sample 8-9'	
				16	9.6': Dk br Cy\$, l f S; org			
10					9.9': Gr br C&\$; hd; sm NAPL blebs			

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-22
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3			66		
	S-4			40	Gr gn Cy\$, t f S; 0.05' thk lyr of mf(+) S, t \$ w/ NAPL sat. at 12.3' and 12.8'	Rec = 2.2' Damp
					12.9': Gr mf(+) S, t \$; no sheen	
				12	13.2': Gr Cy\$, t f S, frm	
					13.6': Gr mf(+) S, s Cy\$; frm; no sheen; sm odor	
				6		
15						
	S-5			NM	Dk Gr mf(+) S, t \$; heavy NAPL saturation	Rec = 2.9' Wet Lab sample 16-17'
				NM	17.3': Gr Cy\$, l f S; freq. seams	
					Gr mf(+) S, l \$; no visible sign of NAPL	
				NM		
20	S-6				Gr cmf S, t \$, a mf(+) G; sand grains coated w/ sheen, NAPL	Rec = 0.4' Damp
					24.0'	
					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-23	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/15/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/15/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0					Dk gr br cmf S, l \$; s mf G; loose base fill	Rec = 3.3' Dry
				0.0	1.3': Br gr bk Cy\$, l S, l f G; bricks, slag	
	S-1			0.0		
				0.0	2.8': Gr br Cy\$, l f S; frm; no odor	
				0.0	Gr br f S, a \$; frm; no odor	Rec = 3.0' Damp
				0.0	4.8': Gr br f S, l(+) \$, wet	
5				0.0	5.3': Br Cy\$, s f S; lyrs of f S, no odor, no sheen	
	S-2			0.0	6.2': Dk Gr bk Cy\$, l f S; bk stain, faint odor	
				0.0	Dk br bk Cy\$, l f S; rts; org, shells	Rec = 2.7' Wet
	S-3			0.0	8.6': Org lyr grading downward to light gr at 9.4'	
				0.0	9.4': Lt gr f S, a \$; frm; no odor	
10				0.0		

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-23	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3				10.5': Gr mf(+) S, l \$; no odor, no sheen		
	S-4			0.0	Same	Rec = 2.8' Wet	
				0.0	12.7': Lt gr Cy\$; a f S		
				0.0	13.3': Gr mf(+) S, l \$, loose; no odor, no sheen		
				0.0	14.0': Same; w/ 0.05-0.10' seams Gr Cy\$		
15	S-5			0.0	Gr Cy\$, s f S; sft; no odor, no sheen; seams of Gr mf(+) S, t \$ @ 16.5', 17.2' and 17.3'	Rec = 1.7' Wet	
				0.0			
			0.0				
				17.4'			
				Gr mf G; l cmf S; hd; very faint odor			
20	S-6			Gr cmf S, t \$, l f G; fnt odor	Rec = 2.0' Wet Lab sample 20-21'		
				20.7': Gr mf G, s cmf S; G sbrdd; fnt odor			
				21.1': Gr cmf S, l mf(+) G			
				21.5'			
				Rd \$yC; occ seams lt gr Cy\$ (varved)			
				24.0'			
				Bottom of Boring			
25							

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-24	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/18/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/18/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk Gr \$ a mf S; topsoil, rts; org	Rec = 3.3' Dry/Damp
				0.0	1.2': Gr br Cy\$, l f S, frm; mtld; no odor; rts; org	
				0.0		
				0.0		
	S-2			0.0	Same	Rec = 3.0' Damp/Wet
				0.0		
5				0.0	5.2': Gr br mf(+) S, s Cy\$; frm	
				0.0	6.0': Gr mf(+) S, l \$; wet; no odor 6.3': Gr br Cy\$, s f S; mtld damp; no odor	
	S-3			0.0	Same; seams of Gr br Cy\$, l f S	Rec = 2.6' Wet at 9.5'
				0.0		
				0.0		
10				0.0		

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-24		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3			0.0	10.0': Gr lt Gr mf(+) S, l \$; wet, no odor			
	S-4					Gr mf(+) S, l \$; sft; fnt odor	Rec = 1.6' Wet	
					1.0			
					548	13.5': Same; bottom 0.1' of sample is saturated w/ NAPL	Lab sample 13-17'	
15								
	S-5		NM	Gr mf(+) S, s \$; frm; odor	16.2'	Rec = 2.0' * Wet		
				Gr cmf G, s cmf S; hd; no odor		Bleb on bottom of tip upon extraction		
				NM		*Lost bottom foot out of tube when extracting from sampler		
20	S-6		NM	Same: Heavy sheen & odor w/ coal tar blebs, some NAPL/tar saturation at 21.0'		Rec = 1.2' Wet		
				NM		21.2'		
					Rd \$yC' sft			
						24.0'		
					Bottom of Boring			
25								

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-25	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/18/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/18/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk Gr br \$, s cmf(+) S, t f G; rts, org, topsoil	Rec = 3.0' Dry
				0.0		
				0.0	1.5': Tn lt br \$, l mf S; frm	
				0.0		
	S-2			0.0	Rd br Cy\$, l f S; sft; mtd; rts	Rec = 3.4' Moist/Wet
				0.0		
5				0.0	5.0': Gr rd br mf(+) S, s Cy\$; w/ seams; wet	
				0.0	5.9': Gr br Cy\$, s f S; frm; damp	
	S-3			0.0	6.5': Gr br mf(+) S; s Cy\$; wet	Rec = 2.7' Wet
				0.0		
				0.0	Br mf(+) S, l \$; wet; sft; no odor	
				0.0	9.0': Br gr Cy\$, l f S; frm; w/ seams gr mf S, l \$; no odor	
10				0.0		

Earth Tech, Inc.				Test Boring Log		Boring No. DP-25		
Albany, NY (518) 458-1313								
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks		
10	S-3				10.4': Gr Cy\$ a mf S; alt seams Cy\$ and mf(+) S; no odor, no sheen	Rec = 2.7' Wet		
				0.0	Br mf(+) S, l \$; sft; small shells; no odor			
				0.0				
				0.0	13.7': Gr cmf S, l Cy\$			
	S-4				14.7'			
15	S-5				Gr m G; fgmt in tube tip		Rec = 2.5' Wet	
				0.0	Gr cmf(+) S, t \$, l mf G; loose, wet; no odor			
				0.0	17.1': Gr mf(+) G, s cmf S; no odor; G sbrdd			
				0.0				
	S-6					Rec = 1.9' Wet Lab sample 20-21'		
				0.0	Gr cmf(+) G; s(-) cmf S; loose; no odor; no sheen			
				0.0				
				0.0	21.9'			
	S-6				Rd \$yC (in tube tip)			24.0'
					Bottom of Boring			
25								

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-26		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/18/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/18/01		
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0	S-1				Dk br bk cmf S, l f G, cndrs		Rec = 1.0' Dry	
	S-2			0.0	Gr br Cy\$, l f S; frm; mtld		Rec = 3.2' Damp	
					4.7': Yw br gr Cy\$, l f S; mtld; frm; no odor			
5				0.0				
				0.0	6.2': Gr mf(+) S, l Cy\$; sft; wet; w/ seams gr Cy\$, l f S			
				0.0				
	S-3			0.0	Gr br Cy\$, s f S; frm; no odor		Rec = 2.3' Wet	
10					9.5': Gr f S, a \$; frm; no odor			

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log		Boring No. DP-26				
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2				
CLIENT: NYSDEC					Job No. 44491.02				
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks			
10	S-3			0.0	Gr mf(+) S, l \$; loose; w/ seams/lyrs (0.02-0.05' thk) Gr Cy\$, l f S; no odor, no sheen 13.4': Gr Cy\$, l f S; frm	Rec = 1.6' Wet			
	S-4								
15									
	S-5				No Recovery	Rec = 0			
20					No Recovery	Rec = 0			
	S-6				No odor or PID reading in tube upon extraction.	No sample collected			
					24.0'				
					Bottom of Boring				
25									

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log			Boring No. DP-27	
PROJECT: Gastown Former MGP Site RI							Sheet 1 of 2	
CLIENT: NYSDEC							Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services							Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling							Ground Elev.: NA	
DRILLING METHOD: Direct Push				SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/18/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/18/01		
MEAS. PT.: ---		WEIGHT	---				Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---				Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0	S-1			0.0	Dk Gr cmf S, l \$, s mf G; basefill		Rec = 3.1' Dry	
				0.0	1.3': Bk same; w/ cndrs, slag			
				0.0	2.2': Bk mf S granular waste; w/ light metallic blue green color; sm wood/ fibrous material			
				0.0	2.6': Dark Bl gr cmf S, t f G; w/ wood fibrous material; odor; no PID			
				0.0	Rd br Cy\$, l f S; frm; mtld		Rec = 3.3' Damp	
5	S-2			0.0	4.7': Gr br f S, l(+) Cy\$; frm; fnt odor			
				0.0				
				0.0				
				0.0				
				0.0			Wet @ 6.3'	
	S-3			0.0	Dk Br gr Cy\$, l f S, frm; seams of f S; sm odor		Rec = 1.8' Wet	
				0.0	9.1': Br Cy\$ a f S; frm			
10								

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-27
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10	S-3					
	S-4			0.0	Gr mf(+) S, l \$; loose; wet; no odor; no sheen	Rec = 0.9' Wet Lab sample 12-13'
15	S-5			0.0		
	S-6				No Recovery No sheen, odor or evidence of NAPL on sampler or tube.	Rec = 0
20	S-6				No Recovery No evidence of NAPL or odor on sampler or tube.	Rec = 0
					24.0'	
					Bottom of Boring	
25						

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-28	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/19/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/19/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0	S-1				Dk Br \$ a cmf(+) S, l f G; rts; org; topsoil; w/ brick fgmt; occ cndrs		Rec = 2.9' Dry
				0.0			
				0.0	1.9': Gr br Cy\$, l f S; frm; no odor, mtld		
				0.0			
	S-2			0.0	Gr br \$ a f S; frm; no odor; mtld		Rec = 3.0' Moist
				0.0			
				0.0			
				0.0			
5	S-3			0.0	Gr Cy\$, s f S; frm; rts; org; mtld at 10.0-10.5'; shells at 10.5-11.5'; no odor		Rec = 2.8' Moist
				0.0			
				0.0			
				0.0			
10				0.0			

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. DP-28	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3				Dk Gr Cy\$, l(-) f S; sft; org; rts; shells; no odor	Rec = 2.8' Moist	
	S-4			0.0			
	S-4			0.0			
15	S-4		0.0				
	S-5		10.0	Same w/ wood fgmts; w/ odor 16.6': Abundant shell; peat lyr; some odor, no sheen			
	S-5		9.5				
	S-5		6.5	Gr mf G; s cmf S; t \$; loose; faint odor; G sbrdd			
20	S-6		1.3	Gr cmf(+) S, t \$; shell fgmts; odor; no sheen 20.4': Gr mf(+) G, s cmf S; loose; no odor, no sheen			
	S-6		0.0				
	S-6			22.5'	Soft pushing @ 22.5'		
	S-6			Rd \$yC (in tube tip)			
	S-6			24.0'			
	S-6			Bottom of Boring			
25							

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log				Boring No. DP-29
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2
CLIENT: NYSDEC						Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/19/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/19/01	
MEAS. PT.: ---	WEIGHT	---				Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	---				Inspector: Walt Howard
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1				Dk br \$ a mf(+) S; topsoil	Rec = 2.0'
				0.0	0.6': Gr br \$ l f S; frm; mtl'd	Damp
				0.0		
				0.0		
	S-2			0.0	Gr br Cy\$, l f S; frm; mtl'd	Rec = 3.4'
				0.0		Damp
5				0.0	5.1': Br mf(+) S, a \$; mtl'd; Alt Cy\$ & f S seams (0.01-0.04' thk)	
				0.0		
	S-3			0.0	7.0': Gr br Cy\$, l f S; sft; mtl'd	Wet @ 5.9'
				0.0		
				0.0	Gr br mf(+); s Cy\$; sft; mtl'd; no odor	Rec = 1.6'
				0.0	8.6': Gr mf S, l \$; no odor; 0.10' thk lyr Cy\$ l f S at 8.8'	Wet
10						

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No.DP-29	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3			0.0	Gr mf(+) S, a \$; sft; no odor, no sheen	Rec = 1.3' Wet	
	S-4						0.0
							0.0
							0.0
15	S-5		30	Gr mf S, l \$; sft; odor; occ NAPL blebs; NAPL sat seam (0.01') @ 16.9'	Rec = 1.4' Wet Lab sample 16-17'		
				17.0'			
				17.5'			

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. DP-30	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	Macro Core	---	---	Date Started: 6/19/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	---	---	Date Finished: 6/19/01	
MEAS. PT.: ---	WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0	S-1			0.0	Dk br bk \$ a cmf(+) S; rts; org; topsoil	Rec = 2.4 Dry
				0.0	1.1': Lt br gr Cy\$, l f S; frm; mtld, no odor	
				0.0		
	S-2			0.0	Same	Rec = 3.2' Damp
5				0.0	4.8': Gr br mf(+) S, a Cy\$; frm; no odor; mtld	
				0.0	5.5': Gr br mf(+) S, l \$; frm; no odor; mtld	Wet @ 5.4'
				0.0		
	S-3			0.0	7.1': Gr Cy\$, l f S; sft	
				0.0	Same: Br mtld 8.4-9.0'	Rec = 2.5' Damp
				0.0		
				0.0	9.0': Gr br Cy\$, a f S; frm	
10						

Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. DP-30	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks	
10	S-3			0.0	10.1': Gr \$, a f S; frm; no odor	Rec = 1.8' Wet	
				0.0	Gr f S, a \$; sft; no odor; no sheen		
				0.0	13.3': Gr Cy\$, s f S; sft; no odor; no sheen		
				0.0			
	S-4						
15					15.0' Inferred		Rec = 1.4' Wet Lab sample 16.0-17.4'
	S-5			10	Gr cmf(+) S, t \$; t f G; loose; sm odor		
				13	16.6': Lyr Gr mf G, s cmf S; odor; NAPL sat.. seam (0.01') at 16.9'.		
					17.4'		
					Rd Cy\$ (in tube tip)		
					20.0'		
20					Bottom of Boring		
25							

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. DP-31		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	Macro Core	---	---	Date Started: 6/19/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	---	---	Date Finished: 6/19/01		
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	---			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classification	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0	S-1			0.0	Dk Br \$, l f S, frm; org; rts; topsoil		Rec = 3.4' Dry	
				0.0	1.0': Gr br Cy\$, l f S; frm; mtld; occ seams gr mf(+) S			
				0.0				
				0.0				
				0.0				
	S-2			0.0	Gr br f S, s \$; frm; no odor; occ seam		Rec = 3.1' Damp Wet @ 4.6'	
				0.0	Gr br Cy\$, l f S			
				0.0				
				0.0				
				0.0				
5	S-3			0.0	Gr br Cy\$, l f S; frm; frq seams (0.01-0.05') gr f S; frm; no odor		Rec = 1.7' Wet	
				0.0				
				0.0				
				0.0				
				0.0				
10								

[illegible]

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-32	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started: 9/10/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 9/10/01	
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1				Dk br cmf S, l \$, t f G, rts; org topsoil	Rec = 3.4' Dry
					1.0': Gr rd br Cy\$, l f S; mttld	
			0.4			
			0.6		Rd gr \$, l f S; frm	Rec = 3.1' Damp
5	S-2					
			0.5			
			0.3		6.2': Gr br Cy\$, l f S; frm; no odor	
					Br mf(+) S, l \$, sft; no odor; no sheen; sm Fe stain	Rec = 2.9' Wet
	S-3					
10					9.7': Gr Cy\$, t f S; sft	

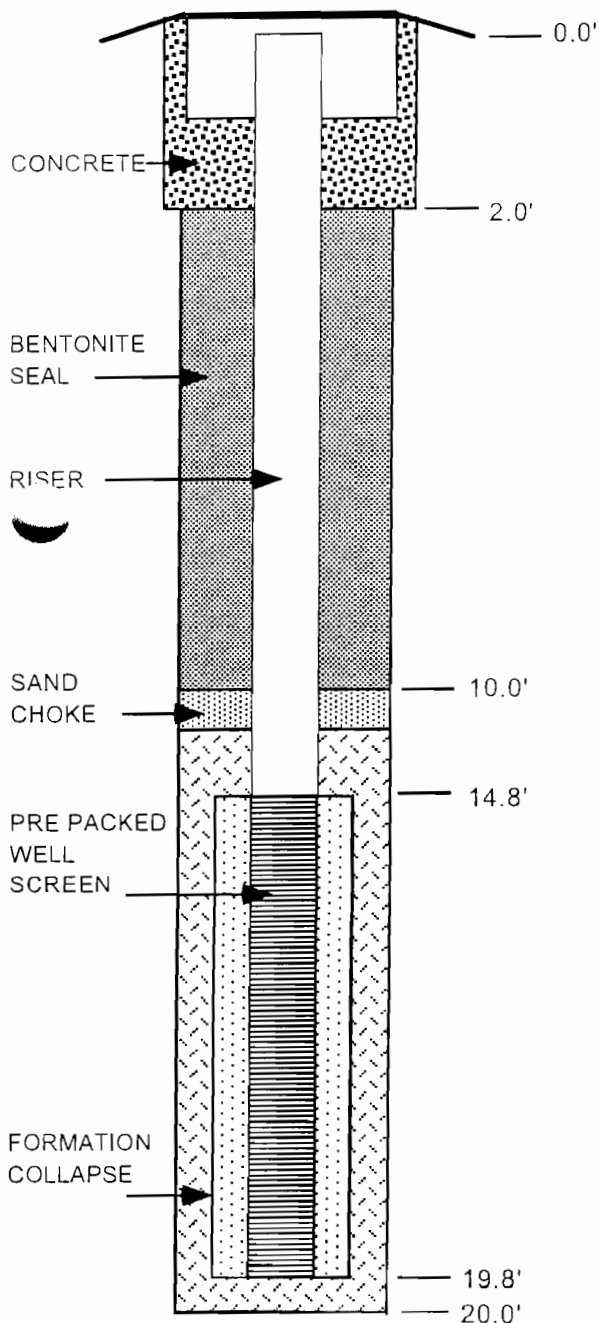
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-32
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3		0.0		10.2': Gr mf(+) S, l Cy\$; loose; no odor; no sheen	Rec = 1.6' Wet
					10.6': Gr Cy\$, l f S; frm	
	S-4		0.0		Gr mf(+) S, l \$; loose; clean, no odor or sheen	
15	S-5		0.0		Gr Cy\$, l f S; occ seams mf(+) S, l \$	Rec = 2.0' Wet
	S-5		0.0		16.9': Gr mf G, l cmf S, l \$; hd; no odor; no sheen	
	S-5		0.0		19.0': Rd \$yC; sft	
20					20.0': Bottom of Boring	
25					Install micro well DP-32 w/ 3/4" I.D. pre-pack well screen. See well construction log.	

MONITORING WELL COMPLETION LOG WELL NO. DPW-32

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 9/10/01
Date Developed 10/2/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 6.58 Date 10/2/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.8'
Total Depth of Boring 20.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 14.8' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 10-20'

Seal(s)

Type Bentonite Granules Interval 0 - 10'
Type Interval
Type Interval

Locking Casing ☐ Yes ☒ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-33	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/10/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/10/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
5	S-1		0.0		Bk Dk Gr cmf S, s \$, l f G; rts; org; some cndrs; brks		Rec = 1.0' Dry
	S-2		0.1		Gr Br Cy\$, t f S; frm; mttld	Rec = 2.6' Dry/Damp	
			0.2		5.2': Lt Br rd f S, a \$; frm		
			0.1		6.0': Rd br Cy\$, l f S; frm		
S-3		0.0	Gr br rd Cy\$, s f S; sand seams, mttld; no odor	Rec = 1.9' Moist/Wet			
		0.1	9.0': Gr br mf(+) S a Cy\$; alt seams f S a Cy\$; no odor, no sheen				
		0.1					
10							

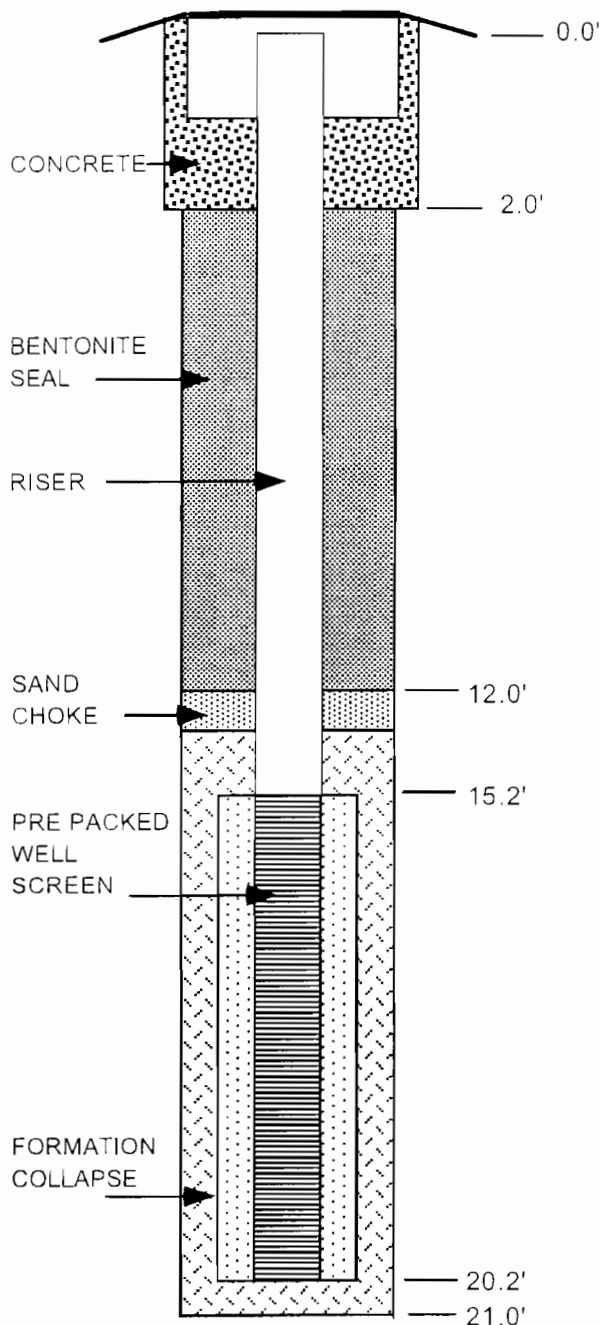
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-33
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4		0.0		Br gr c(-)mf S, l \$; massive clean sand, no odor	Rec = 2.3' Wet
			0.0			
			0.0		14.0': Gr mf(+) S; w/ seams Gr Cy\$; frm; no odor	
15	S-5		0.0		Gr mf(+) S, l \$; occ Cy\$ seams; no odor	Rec = 1.3' Wet
			0.0			
20	S-6				Gr cmf S, t \$; l f G; G sbrdd; no odor; no sheen	Rec = 0.3' Wet
					21.0': Rd \$yC in sampler tip	
25					24.0': Bottom of Boring Seal boring w/ bentonite Install DPW-33 in separate boring	

MONITORING WELL COMPLETION LOG WELL NO. DPW-33

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY-Open Bible Church Parking Lot
Project No. 44491.02
Date Drilled 9/12/01
Date Developed 10/1/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services

Type of Well Direct Push Microwell
Static Water Level 7.95' Date 10/1/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 20.2'
Total Depth of Boring 21.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 24' (Boring DP-33)

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 15.2' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 12-21'

Seal(s)

Type Bentonite Granules Interval 2 - 12'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Drilled at 5' off-set location to boring DP-33

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-34	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started: 9/11/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 9/11/01	
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1		2.0		Dk Gr cmf G, a cmf S; Base fill	Rec = 2.1' Dry/Damp
					0.5': Bk Dk Gr mf S, l f G; brks	
			2.0			
					1.5': Gr Br f S, a \$; frm; mttld	
			2.0			
	S-2		2.0		Gr br rd mf(+) S, s \$; frm; mttld; no odor	Rec = 2.9' Damp
			2.1			
			2.0			
	S-3		2.0		Same	Rec = 1.8' Moist
					8.5': Dk Gr Bk \$, l f S; v org; sm rts; wh shells; no odor	
			2.2			
			2.0			
10						

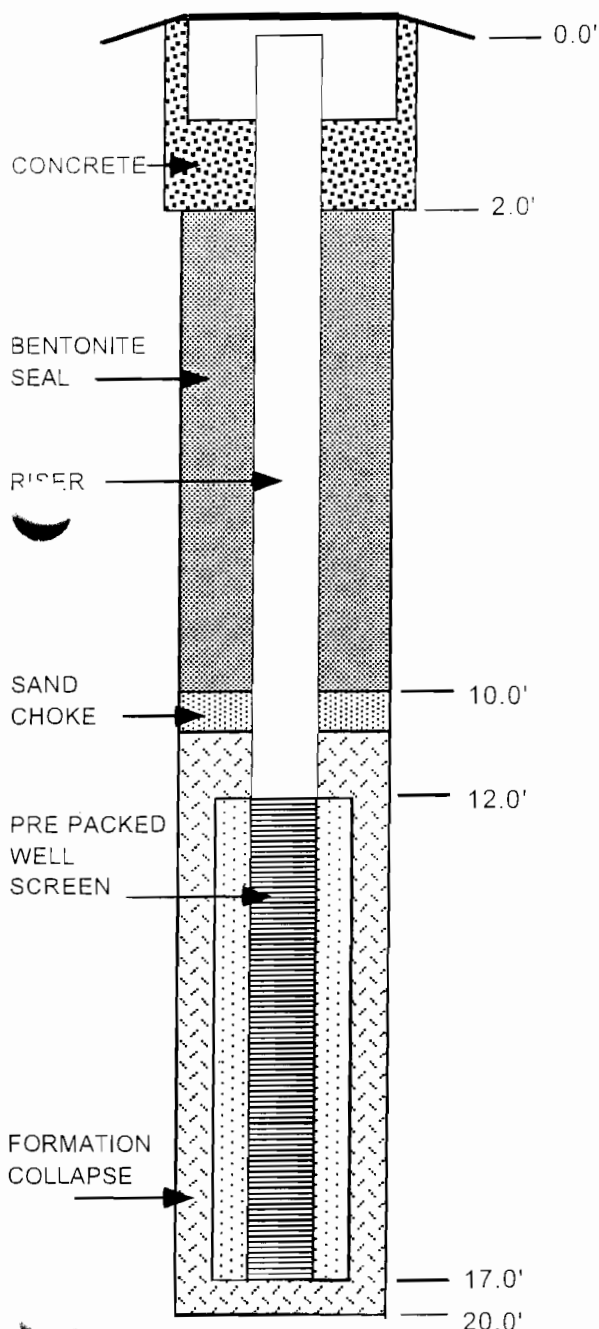
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-34
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3		2.0		Dk Gr Cy\$, l f S; frm; v org, rts; seam wh platey, decomposed shells @ 12 6'	Rec = 3.2' Wet
	S-4		2.0		13.8': Same: w/ seams f S, l \$	
15			4.0		15.0': Gr cmf(+) S, l \$, t f G; faint odor, no sheen or blebs	
	S-5		5.4		Gr mf(+) S, l \$; fining upward; sm odor, no sheen, no blebs	Rec = 1.3' Wet
					17.1': Gr mf G, l cmf S; G sbrdd, no sheen, no blebs 17.2': Rd gr \$yC (Red Clay)	
20					20.0': Bottom of Boring Install microwell DPW-34	
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-34

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 9/11/01
Date Developed 10/2/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 8.28' Date 10/2/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 17.0'
Total Depth of Boring 20.0'
Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None
Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'
Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 12' Joint Type Flush Joint
Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium
Filter Pack
Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 10-20'
Seal(s)
Type Bentonite Granules Interval 2 - 10'
Type Interval
Type Interval
Locking Casing ☐ Yes ☐ No
Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-35	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/11/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/11/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
5	S-1				Dk Br S a cmf S, t f G; rts. topsoil; cndrs		Rec = 1.8' Dry
					0.6': Rd br gr Cy\$, l f S; frm, mttld		
	S-2		2.4		Gr br rd mf(+) S, s \$; frm; mttld, alt seams f S a \$		Rec = 2.3' Damp
			2.2		5.3': Gr br Cy\$, l f S; frm, mttld		
			2.2				
S-3		2.2		Br gr mf(+) S, l \$; w/ seams Br \$ a f S; frm, no odor, no sheen		Rec = 1.4' Wet	
		2.4					
		2.2					
10							

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-35	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3		0.5		Gr mf(+) S, a \$; occ seams (0.05-0.4) Gr \$ a C; no odor, no sheen, no blebs	Rec = 1.9' Wet	
	S-4		1.3				
		1.3					
15			2.0		Gr mf S, l \$; loose; no odor, no sheen	Rec = 1.8' Wet	
	S-5		2.0		17.2': Gr mf G, s cmf S, t \$; hd; sm odor; tiny bleb near tip; G sbrdd		
20			No PID		Gr mf S, l \$; frm; strong odor; pockets of sheen	Rec = 1.7' Wet	
	S-6				20.8': Gr cmf S, t \$; (fine upward) 20.9': Gr m f (+) G, l cmf S; G sbrdd 0.1' thk coal tar sat seam at 21.2'		
					21.6': Rd Cy\$; S ft		
					Bottom of Boring @ 24.0' Seal boring w/ Bentonite		
25							

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-36		
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2		
CLIENT: NYSDEC					Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA		
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	—	--	Date Started: 9/11/01		
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 9/11/01		
MEAS. PT.: ---	WEIGHT	—			Driller: Ken Fuller		
DATE OF MEAS.: ---	FALL	—			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS	
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	5	S-2				Gr rd br mf(+) S, l(+) \$; frm; seams of Cy\$ l, f S; heavy Fe stain	Rec = 2.4' Moist
	10	S-3				Gr Cy\$, t f S; seam mf S at 8.6'; mttld, no odor	Rec = 2.9' Damp

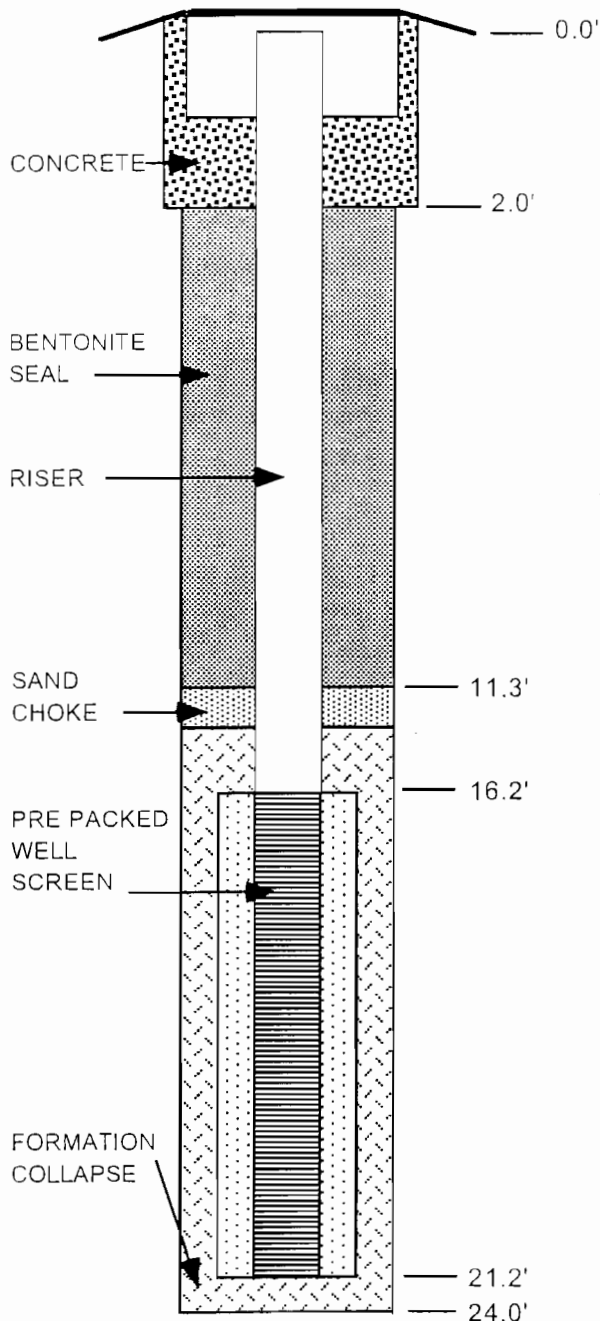
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-36
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3				10.5': Dk Br Bk Cy\$; rts; v org; occ shells; no odor	
	S-4				Dk Gr Cy\$. t f S; v. org; occ rts & shells	Rec = 2.8' Moist
					13.0': Grading to Gr mf(+) S, a \$; w/ freq seams. Gr Cy\$; frm; no odor, no sheen	
15	S-5				Gr Cy\$ s mf(+) S; alt seams Cy\$ and f S; frm; no odor	Rec = 2.0' Wet
					17.0': Gr cmf G s, cmf S; hd; Gr sbang - sbrdd; some coal tar odor; no sheen; no blebs	
20					Gr mf(+) S, l(-) \$; well srtd; sm odor	Rec = 2.5' Very hard probing
					20.6': Gr cmf S, t f G; loose; some odor, no sheen or blebs	20 - 22.4', then soft probing to 24.0'
					21.2': Gr cmf G; s cmf S; hd; some odor, no sheen or sign of NAPL	
					22.4': Rd \$yC; in tip, trace NAPL bleb	
					Bottom of Boring @ 24.0' Install Microwell DPW-36	
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-36

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY - E. Niagara St. & East Ave.
Project No. 44491.02
Date Drilled 9/11/01
Date Developed 10/1/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services

Type of Well Direct Push Microwell
Static Water Level 8.27' Date 10/1/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 21.2'
Total Depth of Boring 24.0'

Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 24'

Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 16.2' Joint Type Flush Joint

Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack
Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 11.3-24'

Seal(s)
Type Bentonite Granules Interval 2 - 11.3'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-37	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started: 9/11/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 9/11/01	
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classification	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1				Lt Gr topsoil	Rec = 2.9' Dry
					0.5': Brk fgmt	
					1.3': Bk slag; brks	
					2.4': Lt Gr Br \$ a f S; frm; mttld	
5	S-2				Gr Br \$ a, m f(+) S; frm; mttld; Fe stain; no odor	Rec = 2.6' Moist
	S-3				6.5': Gr \$ l, f S; frm; no odor	Rec = 2.6' Moist
10					Br Dk Gr \$ l(+) f S; frm; fts; v org; t shells Grading down to Dk Gr Cy\$ t, f S; v org; some shells	

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-37
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4				Dk Gr Cy\$ l, f S; frm: rts; occ shells; v org	Rec = 1.8'
					13.6': Gr G fgmt w/ sm cmfs in tip; sl coal tar odor	
15	S-5				Gr mf(+) S, t \$; frm; sm odor, no sheen; fining upward	Rec = 1.6'
					16.5': Gr cmf(+) G, l cmf S; G well rdd; strong odor	Wet
					17.3': Same; w/ NAPL blebs	
					0.10' NAPL saturation seam	
					17.4 - 17.5'	
					17.5': Rd \$yC; w/ tiny NAPL blebs	
20					Bottom of Boring @ 20.0'	
					Seal boring w/ bentonite	
25						

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-38	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/11/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/11/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Lt Gr \$ a cmf S; rts; topsoil		Rec = 3.5' Dry
					1.1': Lt Br \$ a mf S; sm brks		
					1.7': Br Gr mf(+) S, a \$; frm; mttld		
					2.9': Gr br f \$, a \$		
					Same		Rec = 2.8' Damp
5	S-2						
	S-3				6.4': Layer m f S, t \$ (0.1' thk)		
					6.5': Rd gr br Cy\$, a mf(+) S; alt seams Cy\$; mf S; frm; no odor; much Fe stain		
					Same		Rec = 2.4' Wet
10							

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-38	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3				10.0': Gr f S, s \$; seams of Gr Cy\$; frm; no odor; no sheen		
					Gr mf(+) S, l Cy\$; frm; no sheen; no odor		Rec = 0.5' Wet
					12.4': Gr cmf S, l mf G; G sbrdd		
	S-4					Gr mf G a, cmf S, l Cy\$	Rec = 1.3' Wet
					16.4': Gr cmf(+) Ga, cmf S; loose; sm faint odor; no sheen; no sign of NAPL; G sbrdd		
15							
	S-5					Gr cmf G, l cmf S; G sbrdd; no odor; no sheen	Rec = 2.0' Wet
20	S-6			21.9': Rd \$yC; sft; no odor			
				Bottom of Boring @ 24.0' Seal w/ Bentonite			
25							

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-39		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished:		
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS		
	S-1				Gravel and crushed stone and reworked Cy\$ fill.	Rec = 2.1' Dry		
	S-2				Same	Rec = 1.3' Dry		
5	S-3				Gr br rd Cy\$, t f S; occ mf(+) G fgmts; occ shells; reworked native seds; no odor	Rec = 2.4' Damp		
10								

[illegible]

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-40	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started:	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished:	
MEAS. PT.: ---		WEIGHT	--				Driller: Ken Fuller
DATE OF MEAS.: ---		FALL	--				Inspector: Walt Howard
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
5	S-1				Lt Gr cmf S, l \$, t cmf G; rts; org; topsoil; occ stone; brk; glass fill		Rec = 3.1' Dry
	S-2				1.8': Lt Gr br \$, & f S; frm; sm mttling		Rec = 3.1' Damp
S-3				Same; hard; freq mttld br & gr; sm rts; Fe stain; blk org at 5.4'		Rec = 3.1' Damp	
10	S-3				6.3': Gr br mf(+) S, l(+) \$; frm; rts; no odor		Rec = 2.2' Wet
					Br gr mf(+) S, &(+) \$; frm; mttld		Rec = 2.2' Wet
					9.0': Gr mf(+) S, l \$; frm; w/ freq seams Gr \$ a f S; no odor; no sheen		Rec = 2.2' Wet

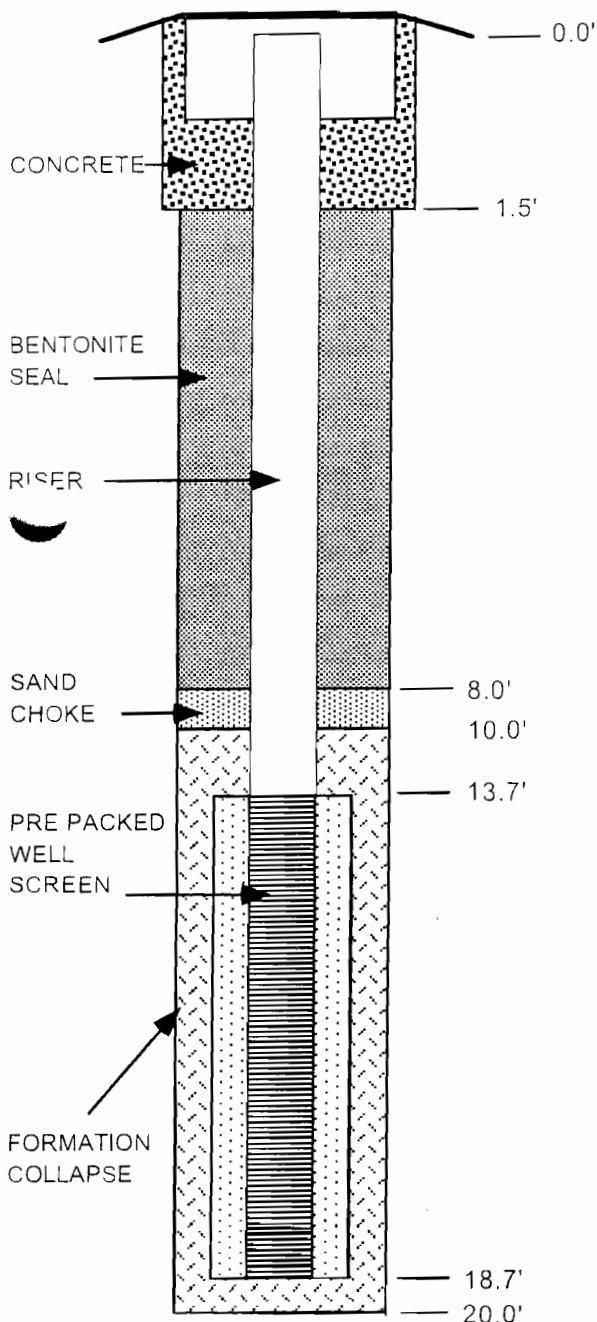
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-40							
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2							
CLIENT: NYSDEC						Job No. 44491.02							
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks							
10	S-3				Gr mf(+) S, a Cy\$; alt seams of Sand \$; sft; no sheen; no odor	Rec = 1.3' Wet							
	S-4							Gr mf(+) S, l \$; frm 16.6': Gr cmf G, l cmf S, l \$; hd; faint coal tar odor; no sheen; no blebs 16.9': Rd \$yC; no odor	Rec = 6.9' Wet				
15	S-5										Gr mf(+) S, l \$; frm 16.6': Gr cmf G, l cmf S, l \$; hd; faint coal tar odor; no sheen; no blebs 16.9': Rd \$yC; no odor	Rec = 6.9' Wet	
					Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'							
20								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @ 20.0' Install Well DPW-40				Note: Soft probing start at 19.0'				
								Bottom of Boring @ 20.0' Install Well DPW-40	Note: Soft probing start at 19.0'				
					Bottom of Boring @								

MONITORING WELL COMPLETION LOG WELL NO. DPW-40

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY - Carney Street
Project No. 44491.02
Date Drilled 9/12/01
Date Developed 10/2/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 7.61' Date 10/2/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 18.7'
Total Depth of Boring 20.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 13.7' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 10-20'

Seal(s)

Type Bentonite Granules Interval 1.5' - 8.0'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-41		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/12/01		
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS	
	S-1				Gr br cmf S, l \$, s cmf G; stoney fill w/ brks; sm reworked native fill		Rec = 1.3' Dry	
	S-2				Same: Stone; brk; cndr fill; some slag		Rec = 1.2' Dry	
S-3		Dk Gr \$ a, f S; frm; org; faint petrol odor; 2' long seam of wood fiber, poss tree root			Rec = 2.7' Moist			
10								

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log		Boring No. DP-41									
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2									
CLIENT: NYSDEC					Job No. 44491.02									
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks								
10	S-3				Bk Dk gr \$, l f S; frm; v org rts; sm shells; occ thin seamd of peat 14.0': Faint coal tar odor 14.5': Dk Gr cmf S, l \$, s mf G; t NAPL belb; sm coal tar odor Dk Gr cmf(+) G a , cmf S, t \$; loose; G sbrdd; stong odor 16.5': Freq blebs 17.0': Rd Cy\$; w Gr C and \$ varves; no NAPL	Rec = 2.7' Moist								
	S-4								Rec = 2.1' Wet					
15														
	S-5													
20												Bottom of Boring @ 20.0' Seal w/ Bentonite		
25														

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-42	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk gr \$ a, cmf(+) S, t f G; rts; org; topsoil		Rec = 3.3' Dry
					1.0': Sm brk and crush stone		
					1.9': Lt gr br \$ a, f S; frm		
5	S-2				Lt gr br f S, a \$; frm; mttld		Rec = 2.8' Dry/Damp
	S-3				7.2': Gr br Cy\$, l f S; frm; no odor; slt org; rts		Rec = 2.0' Damp
					Dk gr \$ a f S; frm; sm rts; v org; occ shells and peat		
10							

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-42	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3				Dk Gr Cy\$, l f S; frm; v org; freq shells; occ decomposed clam shell	Rec = 1.9' Damp/Moist	
	S-4				13.7': Dk Gr cmf S, t \$, l f G; loose; no odor; no visible sign of NAPL		
15	S-5		Lt Gr cmf(+) S, l \$; abdt shell fgmts 16.7': Dk Gr cmf(+) G, l cmf S; loose; no odor; no sign of NAPL 17.9': Rd \$yC; sft; no odor	Rec = 2.2' Wet			
20					Bottom of Boring @ 20.0' Seal w/ Bentonite		
25							

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-43	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Lt Gr \$, s mf S, t f G; rts; org topsoil; sm cndrs and brks		Rec = 3.3' Dry
					1.8': Lt Gr Br Cy\$, l f S; hd; mttld		
5	S-2				Br Gr mf(+) S, l \$; frm; moist; mttld; no odor		Rec = 3.2' Damp
					5.2': Gr br Cy\$ a, f S; frm; mttld		
					6.4': Gr br mf(+) S, l \$; frm		
	S-3				Br mf(+) S, l \$; loose; wet; no odor		Rec = 3.0' Wet
					9.3': Gr f S, l \$; occ Cy\$ seams; no odor; frm		
10							

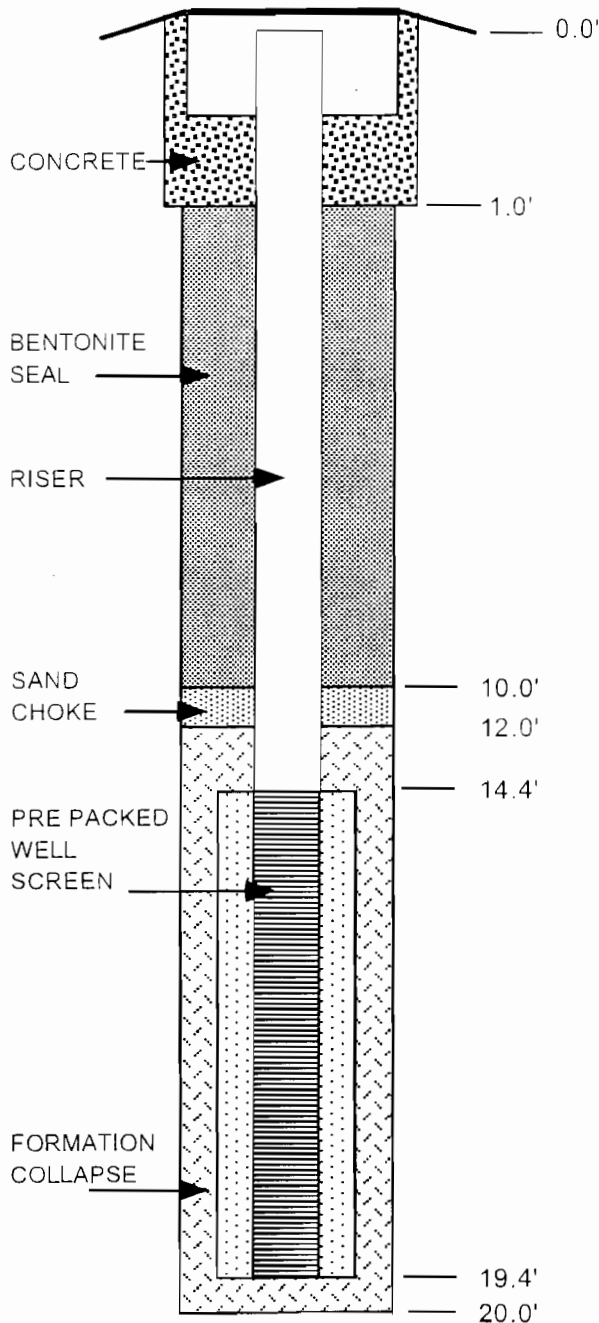
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-43
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4				Gr mf(+) S, l Cy\$; occ Cy\$ seams; no odor; no sheen	Rec = 0.7' Wet
15						
	S-5				Lt Gr mf(+) S, l \$; occ seams Gr C and \$; sft; no odor; no sheen	Rec = 1.8' Wet
					17.1': Gr mf G l, cmf S, t \$; frm; no odor; no sheen	
					17.2': Rd \$yC; sft	
20						
25					Bottom of Boring @ 20.0' Install Microwell DPW-43	

MONITORING WELL COMPLETION LOG WELL NO. DPW-43

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 9/12/01
Date Developed 10/2/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services

Type of Well Direct Push Microwell
Static Water Level 6.52' Date 10/2/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.4'
Total Depth of Boring 20.0'

Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval

Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 14.4' Joint Type Flush Joint

Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack
Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 12-20'

Seal(s)
Type Bentonite Granules Interval 1 - 10'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-44	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk Gr \$ a mf S; rts; org; topsoil		Rec = 4.0' Dry
	S-2				2.5': Lt Gr br \$ l f S; hd; tree rts; mttld		
					Same; Moist at 6.0'		Rec = 3.0' Dry/Moist
5							
	S-3				6.5': Gr br mf(+) S, & \$; occ Cy\$ seams; mttld; frm		
					Gr br mf S, l \$; sft - frm; mttld; occ Cy\$ seams		Rec = 1.3' Wet
10					9.8': Gr mf S; s \$; no odor		

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-44	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk Gr \$ a mf S; rts; org; topsoil		Rec = 4.0' Dry
	S-2				2.5': Lt Gr br \$ l f S; hd; tree rts; mttld		
					Same; Moist at 6.0'		Rec = 3.0' Dry/Moist
5							
	S-3				6.5': Gr br mf(+) S, & \$; occ Cy\$ seams; mttld; frm		
					Gr br mf S, l \$; sft - frm; mttld; occ Cy\$ seams		Rec = 1.3' Wet
10					9.8': Gr mf S; s \$; no odor		

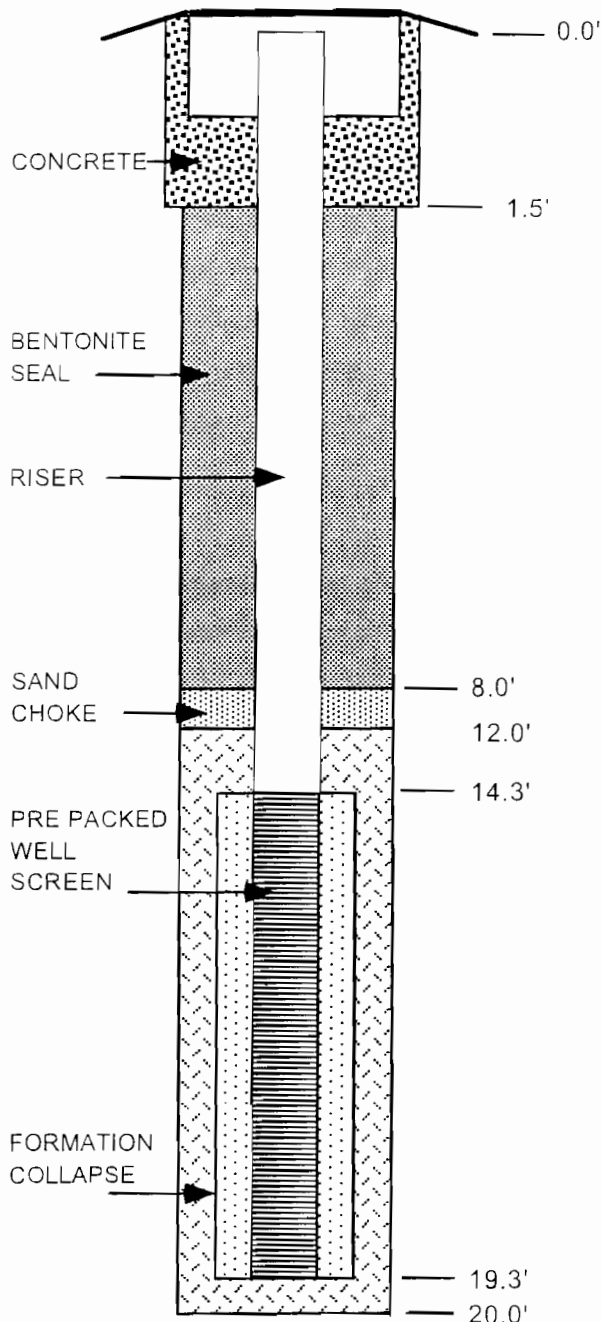
Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log		Boring No. DP-44	
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4				Gr Cy\$ a. mf(+) S; alt seam; sft; no odor; no sheen	Rec = 0.5' Wet
15	S-5				Gr mf(+) S a Cy\$; alt seams; sft; no odor	Rec = 2.0' Wet
					17.0': Gr cmf G s, cmf(+) S; hd; slt coal tar odor; no sheen or visible sign of NAPL	
					18.0': Rd \$yC; sft; no sheen; no visible sign of NAPL	
20					Bottom of Boring @ 20.0' Install Microwell DPW-44	
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-44

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 9/12/01
Date Developed 10/2/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level _____ Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.3'
Total Depth of Boring 20.0'
Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None
Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'
Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 14.3' Joint Type Flush Joint
Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium
Filter Pack
Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 12-20'
Seal(s)
Type Bentonite Granules Interval 1.5 - 8.0'
Type _____ Interval _____
Type _____ Interval _____
Locking Casing ☒ Yes ☐ No
Notes:

[illegible]

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-45
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10						
15						
	S-1				Gr cy\$ l, f S; w/ freq seams (0.02 - 0.05' thk) Gr f S, l \$; sf; no odor	Rec = 2.1' Wet
					17.6': Gr cmf(+) G l, cmf S; loose; G sbrdd; no odor; no visible NAPL	
					19.0': Top of Rd \$yC (based on probe resistance)	
20					Bottom of Boring @ 20.0' Seal w/ Bentonite	
25						

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-46
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-1				Gr mf S, s \$; freq seams Gr Cy\$; sft	Rec = 4.0' Wet
15	S-2				Gr f S, l \$; loose; no odor; no sheen 17.0': Gr Cy\$; freq seams Gr mf(+) S, l \$; sft; no odor 18.4': Dk Gr mf(+) S, s \$; no odor; no sheen	Rec = 2.6' Wet
20					Bottom of Boring @ 20.0' Seal w/ Bentonite	
25						

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-47	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 9/13/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 9/13/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk Gr \$ a cmf S, t f G; rts; org; brks; fill		Rec = 2.8' Dry
					2.0': Br gr \$ l, f S; hd; mttld		
5	S-2				Rd br \$ a f S; frm; mttld; no odor		Rec = 3.4' Damp/Moist
	S-3				Same; wet at 8.5'; no odor		Rec = 2.7' Moist/Wet
10							

Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-47	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3				10.4': Gr f S a \$; frm	Rec = 1.3' Wet	
	S-4				Gr Cy\$ s f S; sft alt seams Cy\$ and f S; no odor		
15	S-5				Gr cmf G l, cmf(+) S, l \$; tight; G sbrdd; v slight coal tar odor; no sheen; no visible sign of NAPL		
			19.0': Top of Rd \$yC (based on probe resistance)				
20			Bottom of Boring @ 20.0' Seal w/ Bentonite				
25							

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-48	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	—	—	Date Started: 9/14/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	—	—	Date Finished: 9/14/01	
MEAS. PT.: ---		WEIGHT	—			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	—			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Lt Gr \$ a cmf S, l f G; rts; org topsoil; occ brk fgmts		Rec = 3.4' Dry
	S-2				2.5': Lt Gr br \$ a, f S; hd; mttld		Rec = 3.2' Dry/Damp
5	S-2				Gr br \$ l, f S; frm		Rec = 3.2' Dry/Damp
	S-2				4.9': Dk Gr Cy\$; v org		Rec = 3.2' Dry/Damp
	S-2				5.5': Br gr \$ l f S; frm; mttld; no odor; vert root seam \$ filled		Rec = 3.2' Dry/Damp
	S-3				Gr br f s a(+) \$; frm; mttld; no odor; no sheen; sm Cy\$ seams		Rec = 2.2' Damp/Wet
10	S-3				9.3': Gr mf(+) S a Cy\$; frm; alt seams		

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log		Boring No. DP-48	
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4				Gr mf S, a cy\$; alt seams Sand and Cy\$: sft; no odor	Rec = 1.9' Wet PID HS 13-14' = 1.6 ppm
15	S-5				Gr cmf G, s cmf S, t \$; hd; G sbrdd; some coal tar odor; no visible NAPL	Rec = 0.8' Moist PID HS = 1.4 ppm Ver hard probing entire sleeve
20	S-6				Gr cmf G, l cmf S; hd; G sbrdd; sm coal tar odor; no sheen or visible sign of NAPL 21.6': Rd \$yC; sft; no odor	Rec = 1.6' Moist/Wet PID HS 21-22' = 1.5 ppm
25					Bottom of Boring @ 24.0' Seal w/ Bentonite	

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-49	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 12/10/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 12/10/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
5	S-1				Drilled 5' N of DP-42 Dk Gr \$, l f S; rts; org		Rec = 2.7' Wet
	S-2				1.7': Br gr mf(+) S, a \$; frm; org; no odor		
S-3		Rd gr \$ a, f S; frm; rts; no odor; mttld		Rec = 1.8' Moist			
10	S-3		Dk Gr bk \$ l, f S; frm; rts; shell fgmts; org		Rec = 1.3' Damp		

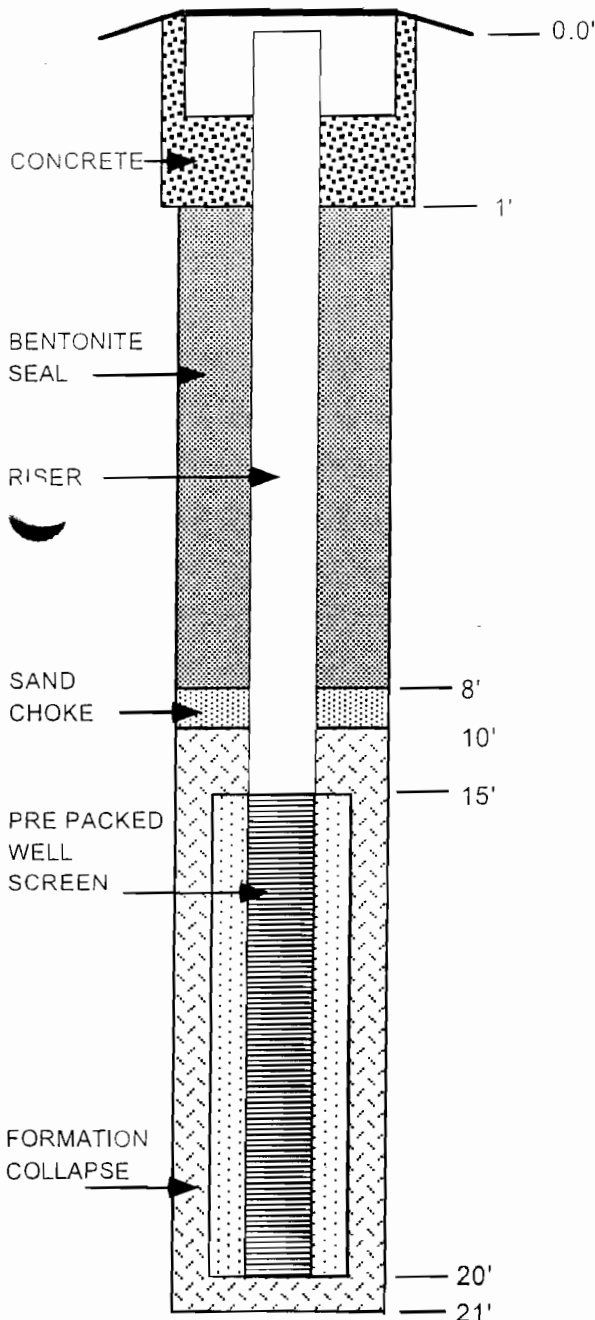
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-49	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3				Dk Gr Bk \$ I, f \$; loose; rts; shells; org	Rec = 1.9' Wet	
	S-4				13.8': Gr cmf(+) S, t \$; t f G; shells; no odor		
15	S-5		Gr cmf S, l \$, l f G; abdt shells; fnt coal tar odor 16.3': Gr cmf G, l cmf S; Gr sbrdd; fnt odor		Rec = 1.1' Wet Hard probing to 20.0'		
20	S-6		20.0': Top Rd \$yC (based on probe resistance)		Begin softer probing at 20.0'		
					Bottom of Boring @ 21.0' Install Microwell DPW-49		
25							

MONITORING WELL COMPLETION LOG WELL NO. DPW-49

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/10/01
Date Developed 12/12/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 8.11' Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 20.0'
Total Depth of Boring 21.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 21'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 15' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 10-21'

Seal(s)

Type Bentonite Granules Interval 1 - 8'
Type _____ Interval _____
Type _____ Interval _____

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-50	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	Date Started: 12/11/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	Date Finished: 12/11/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard
Depth (Feet)	Sample Number	Blow Count	Unified Classification	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
5	S-1				Dk Gr br \$ l, f S: rts; org; topsoil	Rec = 2.3' Dry
	S-2				1.0': Brk fgmt and brk cndrs	
S-3				3.0': Gr br \$ s, f S		
10	S-2				Gr br \$ a, f S; frm; mttld; rts	Rec = 3.0' Damp
S-3				6.0': Gr br Cy\$ l, f S; frm; rts; mttld; no odor		
10	S-3				Dk Gr blk Cy\$, l f S; rts; v org; sm shells; no odor	Rec = 1.9' Damp

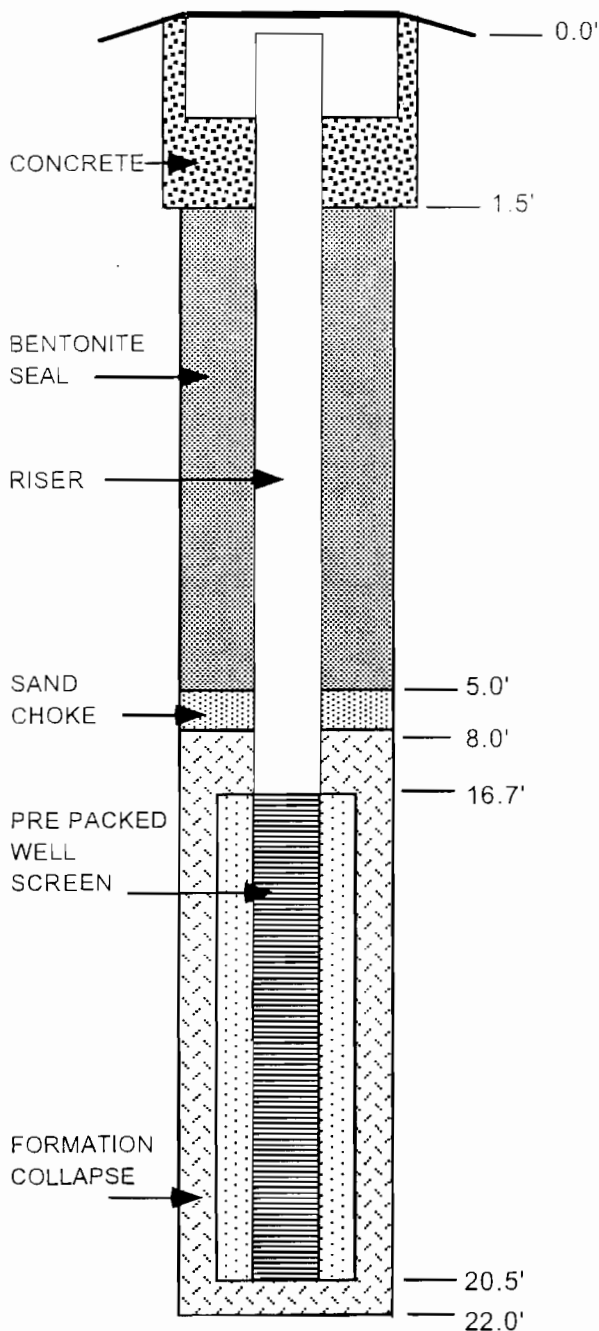
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-50
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10						
	S-3				No Recovery	Rec = 0' Wet Tube
	S-4					
15					Dk Gr \$ l, f S; frm; rts; sm shells	Rec = 2.8' Moist
	S-5				17.6': Gr cmf G, l cmf S, t \$; hd; G sbrdd-sbang; Rd Clay coated Gr at 18.0'; faint coal tar odor	
20					Gr cmf G, s cmf S; Gr rdd; faint coal tar odor	
	S-6					
						Begin soft probe at 21.7'
					Bottom of Boring @ 22.0'	
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-50

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491.02
 Date Drilled 12/11/01
 Date Developed 12/12/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Direct Push Microwell
 Static Water Level _____ Date _____
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 20.5'
 Total Depth of Boring 22.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
 Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
 Weight NA Fall NA
 Interval 0.0 - 22.0'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
 Length 16.7' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
 Slot Size 0.010 inch Length 5 feet
 Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel _____ Natural X
 Grade Pre Pack Grade 0
 Amount NA Interval Natural Collapse 8-22'

Seal(s)

Type Bentonite Granules Interval 1 - 5'
 Type _____ Interval _____
 Type _____ Interval _____

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-51	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started. 12/11/01	
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished. 12/11/01	
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1				Dk Gr br \$, l f S; rts; topsoil	Rec = 1.5' Dry
5	S-2				Br gr mf(+) S. a \$; sft; mttld, no odor	Rec = 3.1' Damp Wet @ 5.5'
	S-3				No Recovery	Rec = 0 Wet
10						

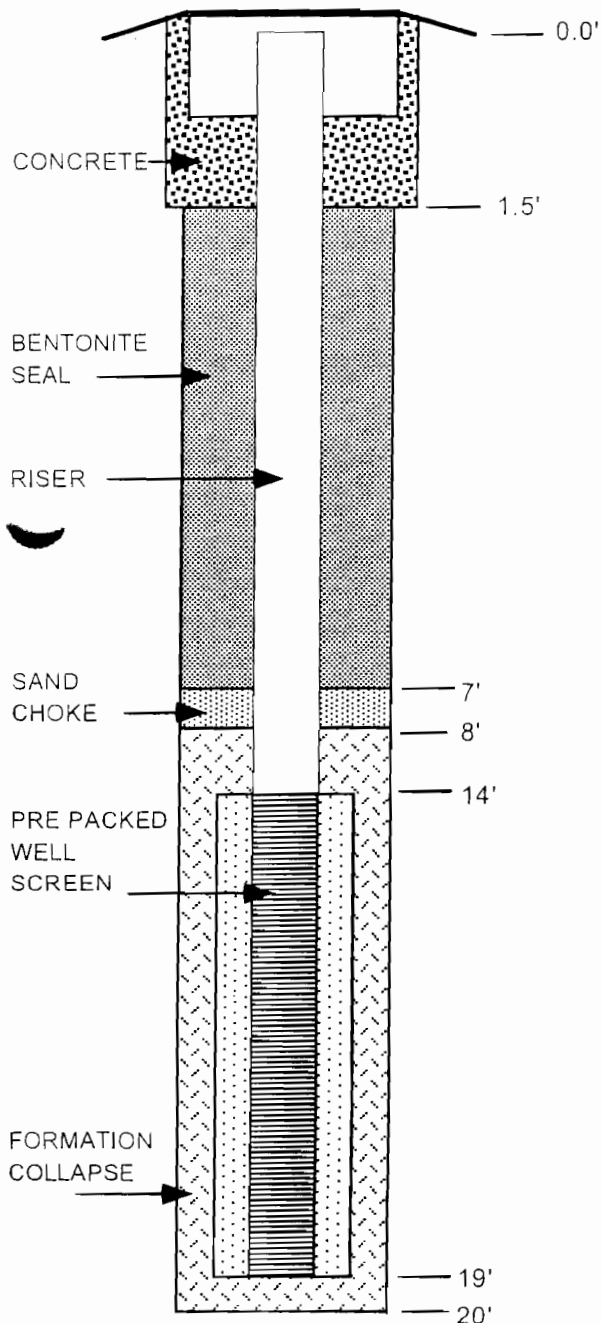
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-51	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3				Dk Gr \$ l, f S; frm; rts; sm shells; org; no odor	Rec = 2.9' Wet/Moist	
	S-4						
15	S-5				Dk Gr \$ a, f S; frm; rts 16.2': Gr mf(+) G; l cmf S; shells; faint coal tar odor; no NAPL 18.0': Rd \$yC (based on probe resistance)	Rec = 0.4' Wet Hard drilling 16 - 18' Soft probe 18 - 20'	
20					Bottom of Boring @ 20.0' Install Microwell DPW-51		
25							

MONITORING WELL COMPLETION LOG WELL NO. DPW-51

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/11/01
Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 7.37' Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19'
Total Depth of Boring 20'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 14' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 8-20'

Seal(s)

Type Bentonite Granules Interval 1 - 7'
Type _____ Interval _____
Type _____ Interval _____

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-52		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA		
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level			
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started: 12/11/01			
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 12/11/01			
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller			
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard			
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS	
	S-1				Dk Gr br cmf S, l \$, l f G; rts; org; topsoil		Rec = 1.5' Moist	
5	S-2				Gr \$ a, f S; frm; rts		Rec = 2.1' Wet	
	S-3				Gr mf(+) S, a \$; sft; occ rts; no odor		Rec = 1.8' Wet	
10								

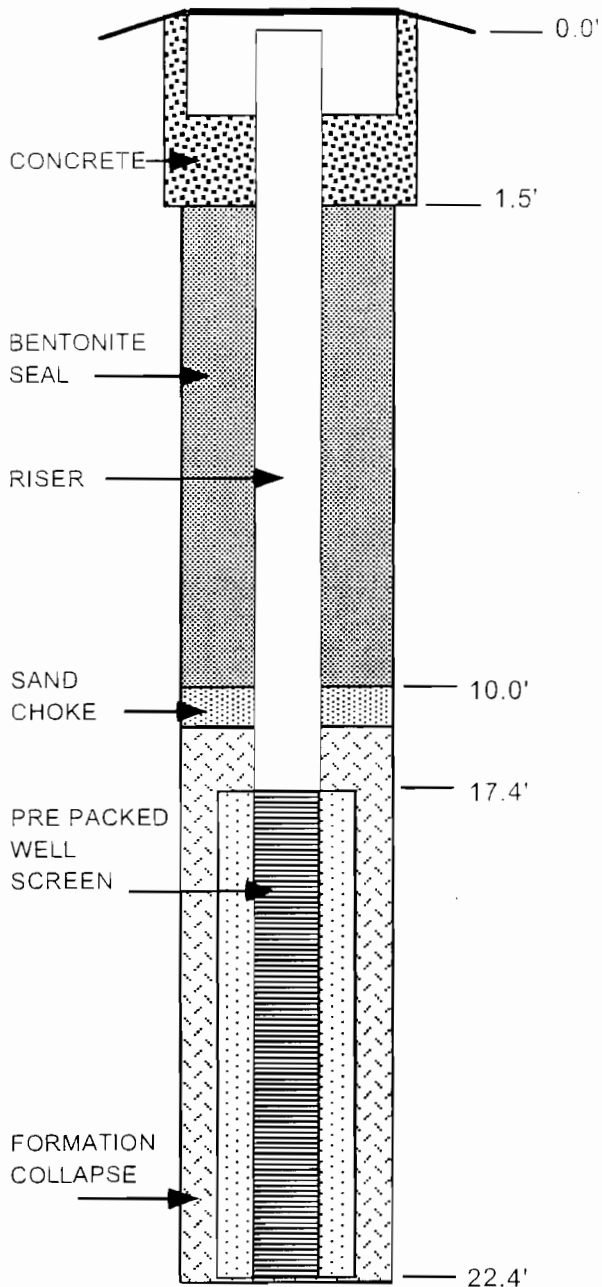
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-52				
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2				
CLIENT: NYSDEC						Job No. 44491.02				
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks				
10	S-3				Same	Rec = 0.3' Wet				
	S-4									
	S-5								Gr f S, a \$; occ rts and shells; frm; no odor	Rec = 2.2'
15	S-5								17.3': Gr cmf G s, cmf S; G sbrdd-rdd; hd; v faint coal tar odor; no NAPL	Hard probing 17 - 20'
	S-5								Gr mf G a, cmf(+) S; v faint coal tar odor; no NAPL; Rd \$yC in tip	Rec =0.7' Wet
20	S-5								22.0': Rd \$yC (inferred)	Begin soft probe at 22'
	S-5								Bottom of Boring @ 23.0' Install Microwell DPW-52	
25	S-5									

MONITORING WELL COMPLETION LOG WELL NO. DPW-52

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/11/01
Date Developed 12/12/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 7.25' Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 22.4'
Total Depth of Boring 22.4'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 23'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 17.4' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 10-22.4'

Seal(s)

Type Bentonite Granules Interval 1 - 10'
Type _____ Interval _____
Type _____ Interval _____

Locking Casing ☒ Yes ☐ No

Notes:

DPW-52 installed in blind probe boring next to DP-52.

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-53	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 12/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 12/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk Gr Br \$ a mf S; rts; org; topsoil		Rec = 3.3' Damp
	S-2				1.7': Lt Gr br \$ l, f S; frm; mttld; rts		Rec = 3.4' Moist
5	S-2				Gr br mf(+) S, l(+) \$; frm; occ rts; mttld; no odor		Wet @ 6.9'
	S-3				6.9': Gr \$ a f s; frm; no odor		Rec = 2.9' Wet/Moist
	S-3				Same		
10					8.9': Dk Gr bk \$ l; f S; rts; occ shells; v org		

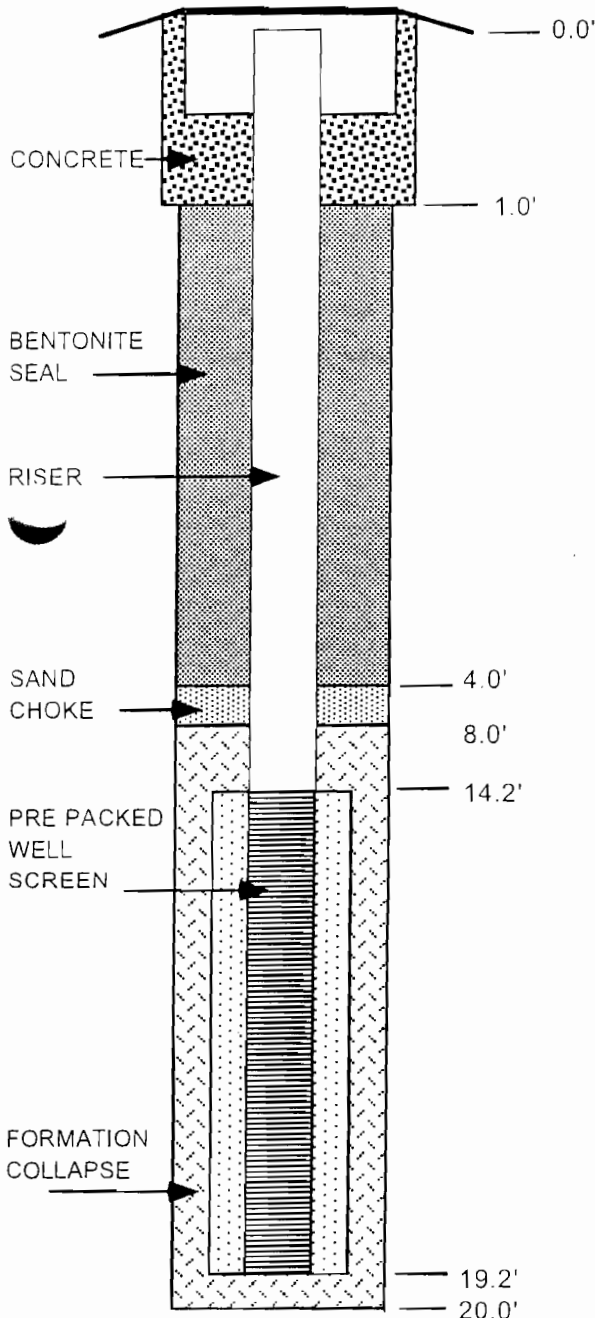
Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log		Boring No. DP-53		
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2		
CLIENT: NYSDEC					Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10	S-3						
	S-4				Same	Rec = 3.1' Wet	
					12.6': Gr f S, s \$; v loose; liquified		
					13.7': Gr Cy\$, l f S; alt seams Cy\$ a f S; occ rts; org		
15	S-5				15.1': Gr cmf S, l mf G; hd; v faint coal tar odor	Begin hard probing @ 15.5' Rec = 1.9' Wet	
					Gr cmf(+) G, a cmf S; G sbrdd- sbang; v faint coal tar odor		
					19.2': Rd \$yC (inferred)	Begin soft probe @ 19.2'	
20					Bottom of Boring @ 20.0' Install Microwell DPW-53		
25							

MONITORING WELL COMPLETION LOG WELL NO. DPW-53

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/12/01
Date Developed 12/12/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 4.86' Date 12/12/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.2'
Total Depth of Boring 20.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 14.2' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 8-20'

Seal(s)

Type Bentonite Granules Interval 1 - 4'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-54	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 3	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 12/12/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 12/12/01	
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS
	S-1				Dk Gr br \$ a, f s; rts; org; topsoil		Rec = 2.0'
					1.0': Rd brk lyr w/ subbase Gravel		Dry
5	S-2				Bk gr br f G a, cmf(+) S, s \$; frm;		Rec = 1.9'
					reworked fill; no odor		Moist
	S-3				Same		Rec = 2.3'
					8.9': Lt br wood fiber and veg matter;		Wet
					poss peat		
					9.4': Rd \$yC s, mf G; reworked		
10							

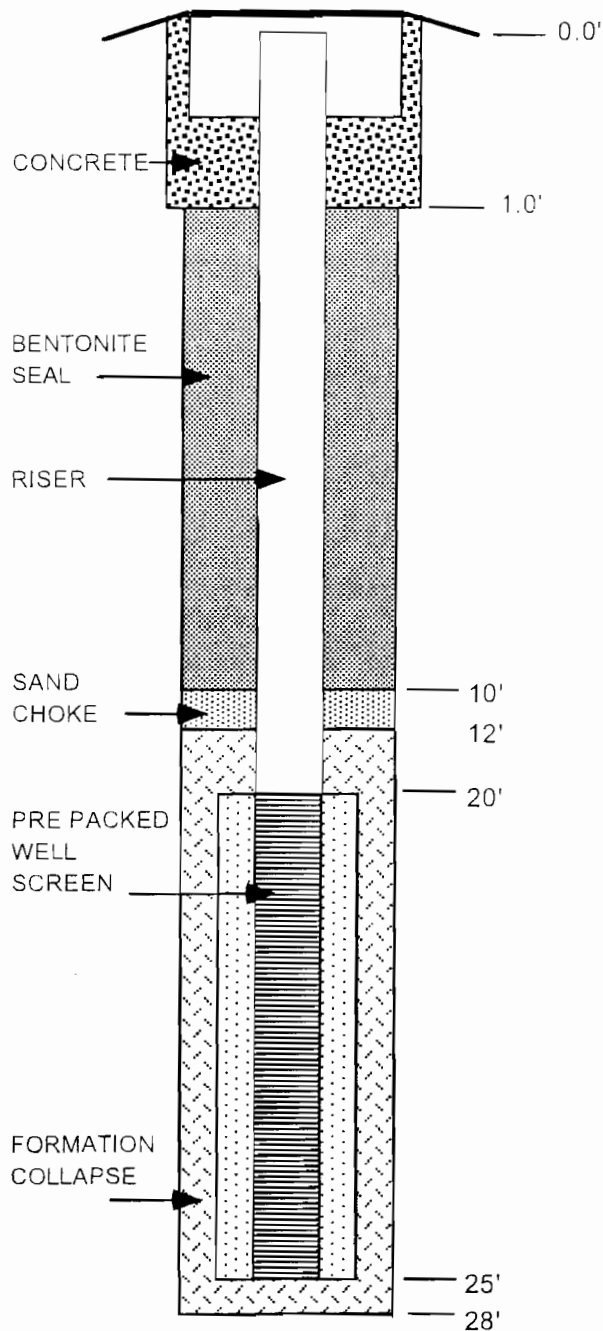
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-54
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 3
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3				10.0': Gr f S, a \$, l f G; no odor	
	S-4				Gr \$ a, f S; frm; occ shells; no odor	Rec = 1.1' Wet Note: Rd \$yC slough in tube Soft push
15	S-5				Gr \$ s, f S; occ shells; no odor	Rec = 0.3' Wet Soft push through hole tube
20	S-6				Gr \$ s, f S; occ shells	Rec = 0.2' Wet
	S-7				Gr mf(+) S, l \$; no odor	Hard probing start at 23'
					24.3': Rd br gr \$ a, f S, l f G; hd; G sbrdd (Till)	Very hard probing 24 - 28'
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-54

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/12/01
Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 7.42' Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 25'
Total Depth of Boring 28'

Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 28'

Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 20' Joint Type Flush Joint

Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack
Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 12-28'

Seal(s)
Type Bentonite Granules Interval 1 - 10'
Type _____ Interval _____
Type _____ Interval _____

Locking Casing ☐ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-55		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 12/12/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 12/12/01		
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS	
	S-1				Dk Gr br \$, s f S; rts; org; topsoil; sm cndrs; fill		Rec = 3.0' Damp	
	S-2				2.1': Gr br \$ l, f S; frm; mttld; rts			
5	S-2				Gr br \$ t, f S; frm; rts; v mttld		Rec = 3.3' Damp	
	S-3				6.3': Gr br f S, a \$; frm; mttld; no odor			
	S-3				Gr f S a, \$; sft; mttld		Rec = 2.3' Wet	
10					9.8': Gr Cy\$ s, f S; seams Cy\$; no odor			

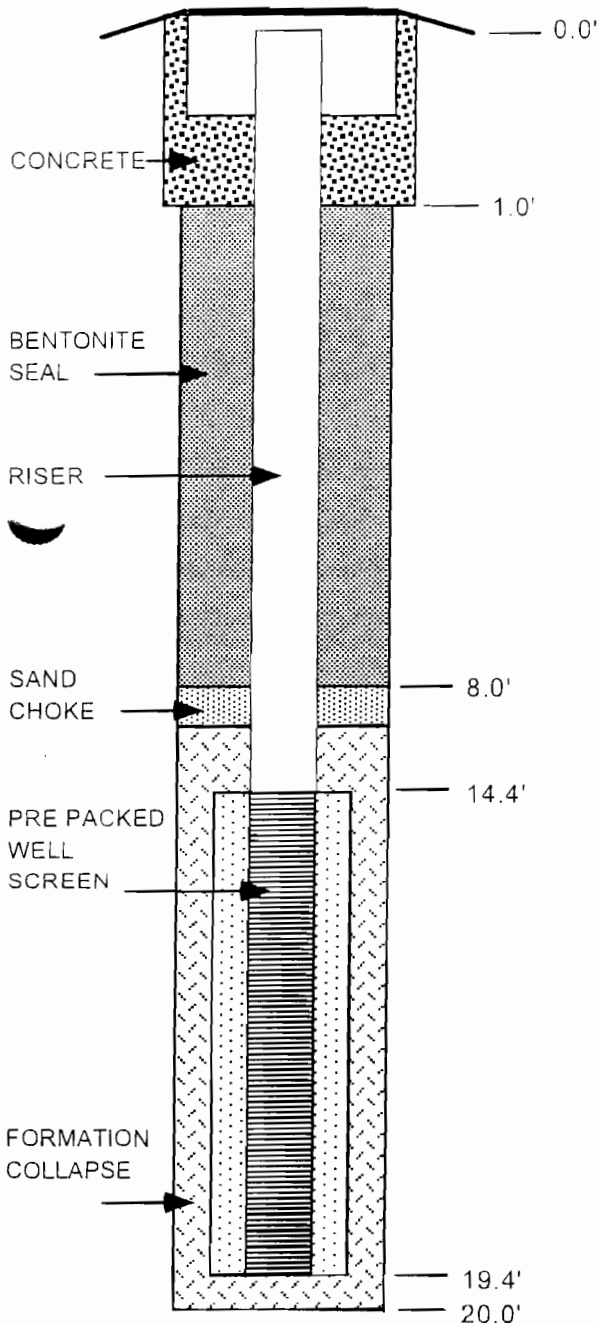
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-55		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks		
10	S-3				Dk Gr mf(+) S, l \$; w/ alt seams (0.01 - 0.15' thk) of Gr \$ l, f S; wet; sft; no odor; no sign of NAPL	Rec = 1.9' Wet		
	S-4				Gr f S, l \$; w/ alt seams (0.01 - 0.04' thk) Gr \$; s absent @ 16.6'; no odor	Rec = 2.0' Wet		
15	S-5						17.3': Gr mf(+) G a, cmf S; loose; G rdd-sbrdd; v faint coal tar odor; no sheen; no NAPL	Begin soft probing @ 19.5'
	S-5		17.8': Rd \$yC; sft					
	S-5				19.5': Rd \$yC (inferred)			
20				Bottom of Boring @ 20.0' Install DPW-55				
25								

MONITORING WELL COMPLETION LOG WELL NO. DPW-55

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/12/01
Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 5.88' Date 12/13/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.4'
Total Depth of Boring 20.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 20.0'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 14.4' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 8-20'

Seal(s)

Type Bentonite Granules Interval 1 - 8'
Type Interval
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200		Test Boring Log			Boring No. DP-56
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2
CLIENT: NYSDEC					Job No. 44491.02
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation					Ground Elev.: NA
DRILLING METHOD: Direct Push		SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE: Simco 2400	TYPE	MacroCore	--	--	Date Started: 12/12/01
GROUNDWATER DEPTH: NA	DIAM.	2" I.D.	--	--	Date Finished: 12/12/01
MEAS. PT.: ---	WEIGHT	--			Driller: Ken Fuller
DATE OF MEAS.: ---	FALL	--			Inspector: Walt Howard

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1				Asphalt	Rec = 2.3' Dry
					0.2': Br gr cmf G, a cmf S; sm cndrs; sbrdd	
					1.1': Gr br \$ i, f S; frm; rts; org; sm f G stone	
5	S-2				Br rd \$, t f S; frm; rts; mttld	Rec = 3.0' Damp
	S-3				Same	Rec = 3.2' Damp
10					9.2': Br rd f S, a \$; alt seams f S and \$; much Fe stain	

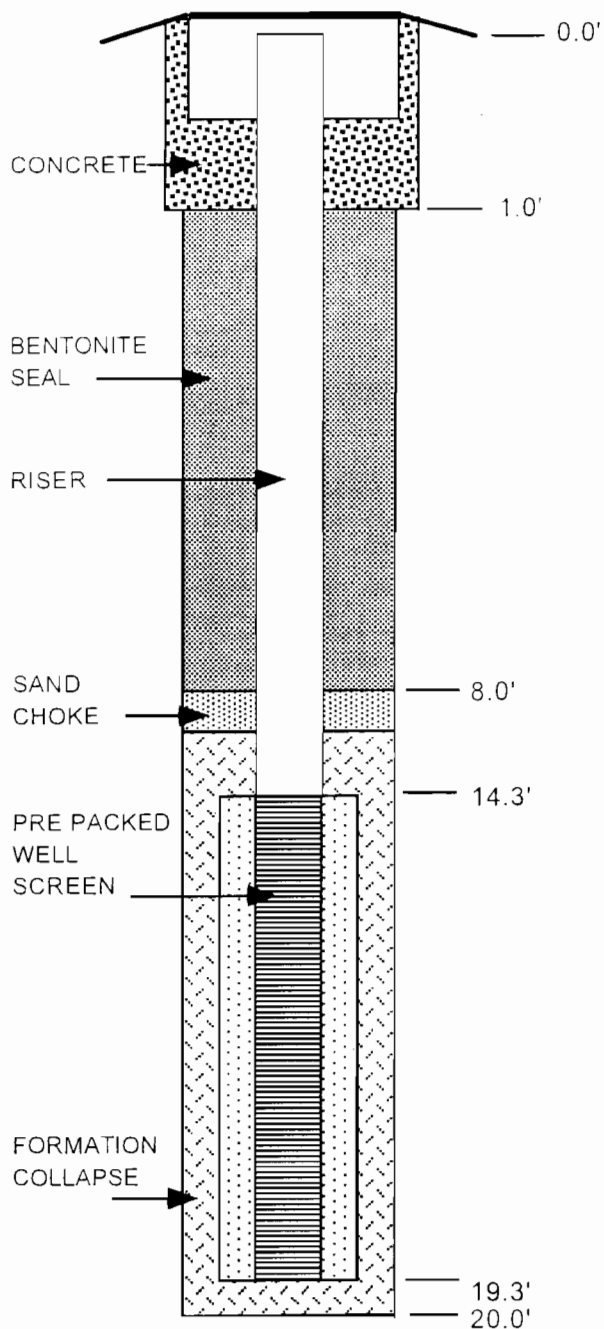
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-56
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3					
	S-4				Gr f S, l \$; sft; no odor; sm seams Gr \$	Rec = 0.5' Wet Very soft push 12 - 16'
15	S-5				Gr f S, l \$; loose; wet; no odor; no sheen	Rec = 1.4' Wet Hard probing
					16.8': Gr \$ l, f S; alt seams \$ and f S; frm; no odr	
20					Bottom of Boring @ 20.0' Install DPW-56	
25						

MONITORING WELL COMPLETION LOG WELL NO. DPW-56

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491.02
 Date Drilled 12/12/01
 Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Direct Push Microwell
 Static Water Level 8.33' Date 12/13/01
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 19.3'
 Total Depth of Boring 20.0'
 Drilling Method
 Type Direct Push Diameter 2 1/2" O.D.
 Casing None
 Sampling Method
 Type MacroCore Diameter 2 1/2" O.D.
 Weight NA Fall NA
 Interval 0 - 20'
 Riser Pipe Left in Place
 Material Sch 40 PVC Diameter 3/4" ID
 Length 14.3' Joint Type Flush Joint
 Screen
 Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
 Slot Size 0.010 inch Length 5 feet
 Stratigraphic Unit Screened Gravel/Alluvium
 Filter Pack
 Sand Pre Pack Gravel Natural X
 Grade Pre Pack Grade 0
 Amount NA Interval Natural Collapse 8-20'
 Seal(s)
 Type Bentonite Granules Interval 1 - 8'
 Type Interval
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-57	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	—	—	Date Started: 12/13/01	
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	—	—	Date Finished: 12/13/01	
MEAS. PT.: ---		WEIGHT	—			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	—			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS	
	S-1				Dk Gr \$ a, mf S; rts; org; topsoil	Rec = 3.2' Damp	
					1.1': Lt Br mf S, l \$; frm		
5	S-2				Br gr f S, s \$; frm; mttld; occ rts; no odor	Rec = 2.1' Moist	
	S-3				Br Gr \$ l, f S; frm; rts	Rec = 2.5' Damp	
					9.0': Gr Bk \$, t f S; frm; shells		
					9.6': Gr \$ & C; frm; occ rts		
10							

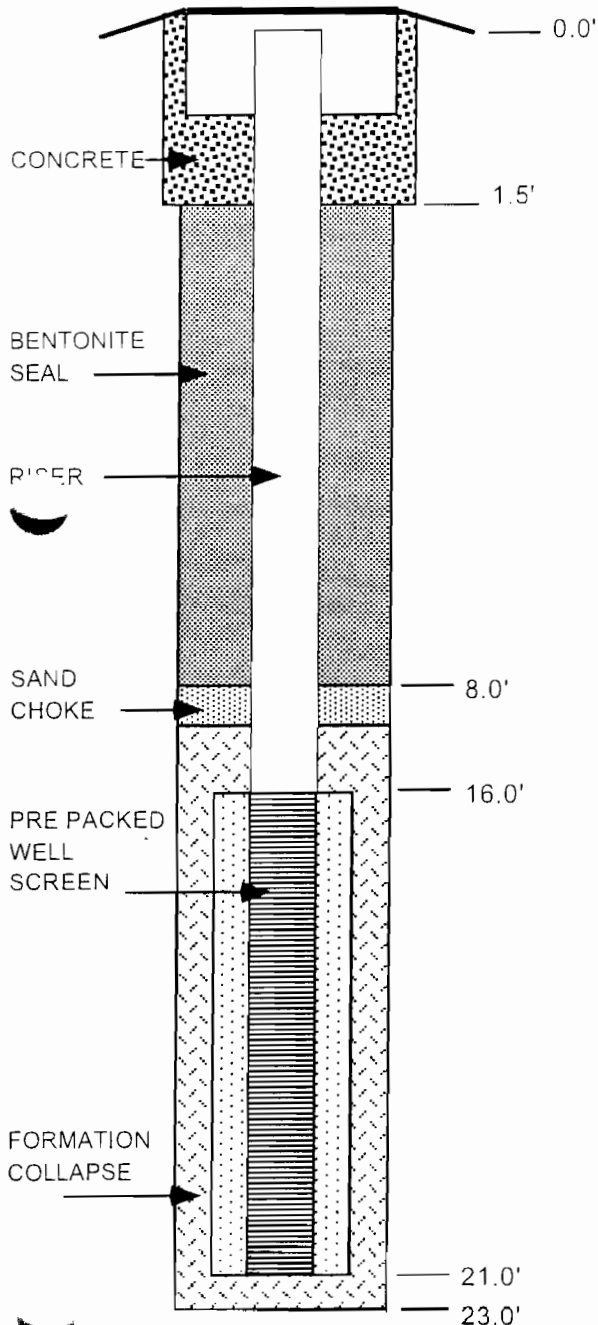
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-57				
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2				
CLIENT: NYSDEC						Job No. 44491.02				
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks				
10	S-3				Lt Gr Cy\$; t f S; frm; rts 13.0': Dk Gr seam f S, l \$ 13.1': Gr \$ t f S; w/ freq seams (0.01 - 0.05' thk) Gr f S, l \$; no odor	Rec = 3.1' Wet				
	S-4						Gr f S, l \$; massive; no odor 17.0': Gr cmf(+) G, l cmf S; hd; Gr sbrdd; v faint petrol odor, poss fuel oil	Rec = 3.0' Wet		
15	S-5								Gr cmf S, a cmf(+) G; hd; G sbrdd; v faint petrol (poss fuel oil) odor; tr Rd \$yC in tip	Rec = 1.1' Wet
	S-6		22.4': Top Rd \$yC (based on probe resistance)	Soft push start @ 22.4'						
20					Bottom of Boring @ 23.0'					
25										

MONITORING WELL COMPLETION LOG WELL NO. DPW-57

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/13/01
Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 8.01' Date 12/13/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 21.0'
Total Depth of Boring 23.0'
Drilling Method
Type Direct Push Diameter 2 1/2" O.D.
Casing None
Sampling Method
Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 23'
Riser Pipe Left in Place
Material Sch 40 PVC Diameter 3/4" ID
Length 16.0' Joint Type Flush Joint
Screen
Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium
Filter Pack
Sand Pre Pack Gravel Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 8-23'
Seal(s)
Type Bentonite Granules Interval 1 - 8'
Type Interval
Type Interval
Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Latham, NY (518) 951-2200			Test Boring Log			Boring No. DP-58		
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 3		
CLIENT: NYSDEC						Job No. 44491.02		
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA		
PURPOSE: Subsurface Soil Sampling/Monitoring Well Installation						Ground Elev.: NA		
DRILLING METHOD: Direct Push			SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: Simco 2400		TYPE	MacroCore	--	--	Date Started: 12/13/01		
GROUNDWATER DEPTH: NA		DIAM.	2" I.D.	--	--	Date Finished: 12/13/01		
MEAS. PT.: ---		WEIGHT	--			Driller: Ken Fuller		
DATE OF MEAS.: ---		FALL	--			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION		REMARKS	
	S-1				Dk Gr bk mf G a, cmf S, l \$; rts; org; topsoil/Gravel		Rec = 3.5' Damp	
					1.1': Br gr \$ l, f S; frm; rts; mttld			
	5	S-2				Br gr rd \$ l, f S; frm; occ rts; v mttld; no odor		Rec = 3.4' Damp/Moist
	S-3				Br f S, l(+) \$; loose; occ Cy\$ seams; no odor		Rec = 3.0' Damp/Wet	
10								

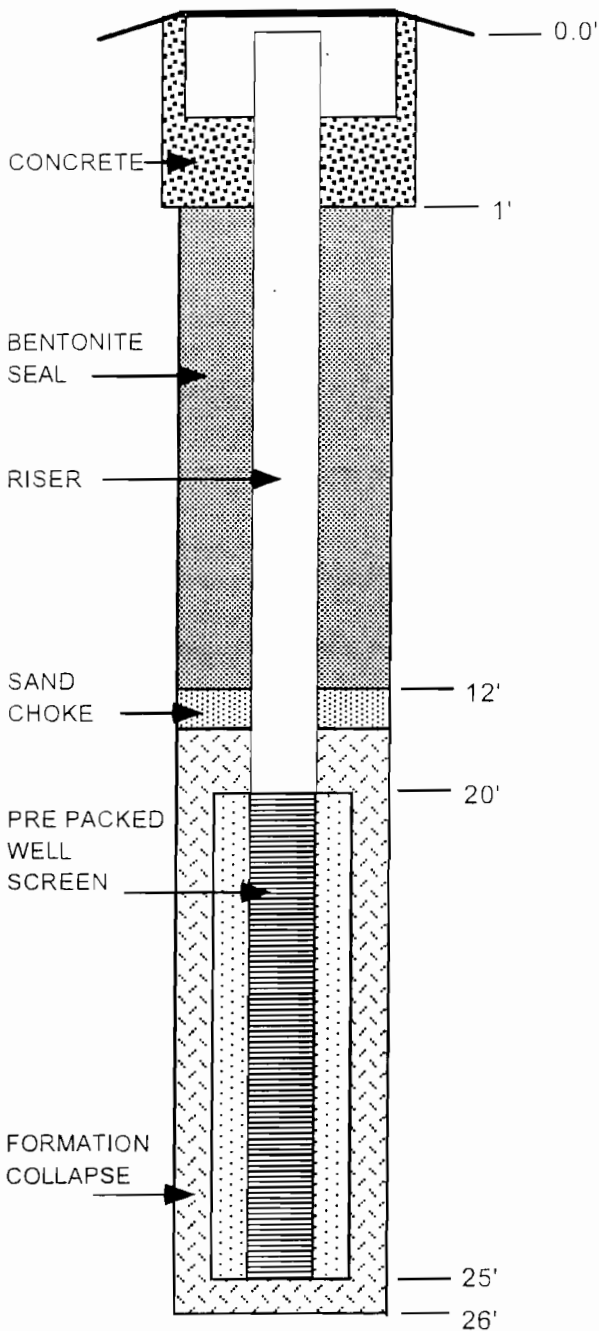
Earth Tech, Inc. Latham, NY (518) 951-2200				Test Boring Log		Boring No. DP-58		
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 3		
CLIENT: NYSDEC						Job No. 44491.02		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks		
10	S-3				10.3': Gr f S, s \$; md frm; sm coal tar odor; no sheen; no NAPL	Rec = 0.3' Wet		
	S-4				Gr f S, l \$; sft; v faint coal tar odor		Rec = 2.2' Wet	
15	S-5				Gr f S, l \$ sft; w/ alt seams (0.02 - 0.05' thk) of Gr Cy\$; no odor; no sheen			Rec = 2.4' Wet
20	S-6		Gr Cy\$; w/ seams Gr f S, l \$ 20.3': 0.3' lyr Gr f S, l \$; no sheen 20.6': Gr Cy\$, l f S; alt seams; frm; becoming more Cy\$	Rec = 0.1' Wet Soft push @ 25' bgs				
	S-7		22.4': Gr f S, l \$; loose; v faint coal tar odor; no sheen		Rec = 0.1' Wet Soft push @ 25' bgs			
25			Poor recovery, Gravel piece in tip; no odor; no sheen					

MONITORING WELL COMPLETION LOG WELL NO. DPW-58

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 12/13/01
Date Developed 12/13/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Direct Push Microwell
Static Water Level 6.20' Date _____
Measuring Point (M.P.) Top of PVC
Total Depth of Well 25.0'
Total Depth of Boring 26.0'

Drilling Method

Type Direct Push Diameter 2 1/2" O.D.
Casing None

Sampling Method

Type MacroCore Diameter 2 1/2" O.D.
Weight NA Fall NA
Interval 0 - 26'

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 3/4" ID
Length 20.0' Joint Type Flush Joint

Screen

Material SS/PVC Pre Pack Diameter 3/4" I.D./1.4" O.D.
Slot Size 0.010 inch Length 5 feet
Stratigraphic Unit Screened Gravel/Alluvium

Filter Pack

Sand Pre Pack Gravel _____ Natural X
Grade Pre Pack Grade 0
Amount NA Interval Natural Collapse 12-26'

Seal(s)

Type Bentonite Granules Interval 1 - 12'
Type _____ Interval _____
Type _____ Interval _____

Locking Casing ☐ Yes ☒ No

Notes:

NOT TO SCALE

BORING LOG

Boring No.: (DP-59)

PROJECT: Gastown Former MGP				CONTRACTOR: C&W (Dennis)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 23, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: Niagara Construction		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1			1.8	0.7	0.0 - 1.0' FILL consisting of gray fine to coarse SAND, fine to coarse GRAVEL, and pieces of Asphalt. 1.0 - 1.8' Orangish brown clayey SILT, some fine Sand,black staining, moist to wet.			
2								
3								
4					Same as above, no black staining			
5								
6			3.0	0.0				
7								
8								
9					No recovery, gravel fragments in shoe.			
10			0.0	NA				
11								
12								
13					0.0 - 2.2' Same as 0.0 to 4.0' bgs, trace black staining. 2.2 - 4.0' Gray clayey SILT, some fine Sand, saturated.			
14			4.0	0.0				
15								
16								
17					Gray fine Sandy SILT, varying amounts of Clay (from trace to some), saturated, odor.			
18			3.2	3.6				
19								
20								

BORING LOG

Boring No.: (DP-59)

PROJECT: Gastown Former MGP				CONTRACTOR: C&W (Dennis)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 23, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: Niagara Construction		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
21			2.0	0.0	0.0 - 1.0' Same as above. 1.0 - 2.0' Gray fine to coarse SAND and fine to coarse GRAVEL, saturated.			
22					Red CLAY in shoe, trace NAPL in gravel above clay.			
23								
24					Borehole depth - 24' bgs. Abandon boring with bentonite chips.			
25					Collect sample from 19 - 20' and submitted for VOC and SVOC analysis (sample ID DP591920).			
26					Per driller, GRAVEL at 21.5' bgs, CLAY at 22.5' bgs.			
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

BORING LOG

Boring No.: (DP-60)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Andy)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 1, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: Courtyard		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1			3.1	6.5	0 - 0.2' Grass and topsoil. 0.2 - 3.1' Brown and dark gray to black FILL material consisting of alternating SILTS, SANDS, and GRAVELS, black staining throughout, creosote type odor, wet bottom 1.5'.			
2								
3								
4								
5			4.0	3.0	Brownish gray fine Sandy SILT, trace medium Sand and Clay, slightly coarser bottom 1.5', black staining throughout, saturated, trace sheen, trace brown NAPL blebs, some black mottling.			
6								
7								
8								
9			4.0	1.1	0-3.5' Brownish gray Clayey SILT, some fine Sand, saturated. 3.5-4.0' Gray and Brown fine SAND, trace Silt, saturated. Black mottling and trace sheen and NAPL blebs observed over entire interval.			
10								
11								
12								
13			3.5	5.6	0.0 - 2.0' Same as above. 2.0 - 2.5' Grayish brown fine SAND, saturated. 2.5 - 3.5' Grayish brown Silty fine SAND, saturated. Trace sheen and NAPL blebs observed over entire interval.			
14								
15								
16								
17			0.0	NA	No recovery.			
18								
19								
20								

BORING LOG

Boring No.: (DP-60)

PROJECT: Gastown Former MGP			CONTRACTOR: SJB (Andy)			PAGE 2 OF 2	
PROJECT No.: 44491			SITE LOCATION: Tonawanda, New York			DATE: June 1, 2004	
SURFACE ELEVATION: NA			BORING LOCATION: Courtyard			ET GEOLOGIST: Tamara Raby	
WATER LEVELS			DRILLING AND SAMPLING				
DATE	TIME	DEPTH	CASING		SAMPLER	CORE	TUBE
--	--	--	TYPE	--	DPT	--	--
--	--	--	I.D.	--	2 inch	--	--
--	--	--	WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
21			3.8	10.6	0.0-2.2' Gray Silty fine SAND, saturated, odor, sheen, trace NAPL blebs.		
22					2.2-3.6' Red to gray fine to medium SAND and GRAVEL, saturated.		
23					3.6-3.8' Red CLAY, wet.		
24					Trace NAPL blebs observed to 0.0' - 3.0'.		
25					Borehole depth - 24' bgs.		
26					Abandon boring with bentonite chips.		
27					Collect sample from 21.2 - 22.2' (plus duplicate) and 22.2-22.7' and submitted for VOC and SVOC analysis (sample IDs DP602122, DUP1, and DP602223).		
28					Per driller, gravel at 21.1' bgs, clay at 23.8' bgs.		
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG

Boring No.: (DP-61)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Andy)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 1, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: DL Moore		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1			2.0	29	0.0 - 0.5' - Concrete			
2					0.5 - 2.5' Brown FILL material, brick, slag, fine to coarse SAND, wet, black staining at bottom 0.4' with odor.			
3								
4								
5			4.0	51	0.0 - 0.4' Sluff			
6					0.4 - 1.5' Gray with iron and black mottling Silty CLAY, moist.			
7					1.5 - 4.0' Gray fine Sandy SILT, some Clay, black staining. 2.5 -3.3 observed to be moist w/ odor, grayish brown w/ rust mottles.			
8								
9			4.0	40.6	0.0 - 1.1' Sluff			
10					1.1 - 1.9' Same as above.			
11					1.9 - 2.1' Black fine SAND, trace Silt, moist to wet.			
12					2.1 - 2.9' Gray with rust and black mottling Clayey SILT, moist to wet.			
13					2.9 - 4.0' Gray with rust mottling fine Sandy SILT, saturated.			
14					Entire interval has an odor and slight sheen.			
15			4.0	55	0.0 - 1.0' Sluff			
16					1.0 - 3.0' Gray with rust mottling Sandy SILT, trace black staining.			
17					3.0 - 3.5 Gray and tan fine SAND grading to gray Clayey SILT at 3.5', saturated, odor.			
18					Entire interval has slight sheen.			
19			4.0	14.1	0.0 - 1.8' Gray Silty fine SAND, saturated, very soft.			
20					1.8 - 4.0' Gray with black staining Silty CLAY, some very fine Sand, trace medium Sand, saturated, oror.			
					Entire interval has slight sheen.			

BORING LOG

Boring No.: (DP-61)

PROJECT: Gastown Former MGP			CONTRACTOR: SJB (Andy)			PAGE 2 OF 2	
PROJECT No.: 44491			SITE LOCATION: Tonawanda, New York			DATE: June 1, 2004	
SURFACE ELEVATION: NA			BORING LOCATION: DL Moore			ET GEOLOGIST: Tamara Raby	
WATER LEVELS			DRILLING AND SAMPLING				
DATE	TIME	DEPTH	CASING		SAMPLER	CORE	TUBE
--	--	--	TYPE	--	DPT	--	--
--	--	--	I.D.	--	2 inch	--	--
--	--	--	WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
21					0.0 - 2.0' Sluff		
22			4.0	240	2.0 - 2.6' Gray Silty very fine SAND, saturated, NAPL saturation observed.		
23					2.6 - 3.1' Gray Clayey SILT, trace fine Sand, saturated, odor.		
24					3.4 - 4.0 Gray fine to coarse SAND and GRAVEL, saturated, slight odor.		
25					Gravel at 21.5' bgs and Clay at 23' bgs, per driller.		
26					Borehole depth - 24' bgs.		
27					Abandon boring with bentonite chips.		
28					Collect sample from 15 - 16' (plus MS/MSD) and submitted for VOC and SVOC analysis (sample IDs DP611516 and DP611516MS/MSD).		
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG

Boring No.: (DP-62)

PROJECT: Gastown Former MGP	CONTRACTOR: C&W Environmental (Dennis)	PAGE 1 OF 2
PROJECT No.: 44491	SITE LOCATION: Tonawanda, New York	DATE: June 23, 2004
SURFACE ELEVATION: NA	BORING LOCATION: Acme Grinding	ET GEOLOGIST: Tamara Raby

WATER LEVELS			DRILLING AND SAMPLING				
DATE	TIME	DEPTH	CASING	SAMPLER	CORE	TUBE	
--	--	--	TYPE	--	DPT	--	--
--	--	--	I.D.	--	2 inch	--	--
--	--	--	WT./Fall	--	--	--	--

Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
1			1.6	0	0.3' Concrete 0.3 - 1.2' Black cinders, slag and other FILL material. 1.2 - 1.6' White ash material, moist. Tip - Brown fine Sandy SILT, moist.
2					
3					
4					
5			3.2	0	Brown with rust mottling fine Sandy SILT, moist to wet.
6					
7					
8					
9			3.6	0	0.0 - 0.2' - Same as above. 0.2 - 3.6' Blackish gray grading to dark gray Silty CLAY, trace shell fragments, moist.
10					
11					
12					
13			2.5	0	Grayish brown Silty fine SAND, saturated.
14					
15					
16					
17			3.8	0	Gray same as above, alternating w/ Clayey Silt.
18					
19					
20					

BORING LOG

Boring No.: (DP-62)

PROJECT: Gastown Former MGP				CONTRACTOR: C&W Environmental (Dennis)		PAGE 2 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 23, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: Acme Grinding		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
21					0.0 - 2.0' Same as above.			
22			3.6	0.0 in Silt, 9.4 in gravel	2.0 - 3.6 Gray medium to coarse SAND and Find to Coarse GRAVEL, saturated, odor, NAPL.			
23								
24								
25			3	230	0.0 - 1.5' Sluff 1.5 - 3.0' Same as above, NAPL throughout. NAPL saturation in Gravel above Clay.			
26					Red CLAY in shoe, soft, wet.			
27					Borehole depth - 26' bgs. Abandon boring with bentonite chips.			
28					Collect samples from 12-13' and 20-21' bgs and submit for VOC and SVOC analysis (sample IDs DP621213 and DP622021).			
29								
30					Gravel at 21.5' and Clay at 25' bgs, per driller.			
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

BORING LOG

Boring No.: (DP-63)

PROJECT: Gastown Former MGP				CONTRACTOR: C&W Environmental (Dennis)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 23, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: Niagara Construction (East Boring)		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1			1.2	1.1	0.5' Concrete 0.5 - 1.6' Tan/Brown SLAG material.			
2								
3								
4								
5			2	4.8	Brown FILL material (fine to coarse SAND and fine to coarse GRAVEL). In shoe - Dark Gray organic Silty CLAY, trace coarse sand and fine Gravel, wet, trace NAPL.			
6								
7								
8								
9			1.8	24.8	Dark gray organic Silty CLAY, trace shell fragments, trace NAPL blebs, NAPL observed in preferential pathways.			
10								
11								
12								
13			3.0	40.6	Gray fine Sandy SILT, trace to little Clay, NAPL observed in preferential pathways, NAPL saturated fine SAND seam at 1.8'.			
14								
15								
16								
17			3.6	20.8	Gray same as above, alternating w/ Silty CLAY, saturated, trace NAPL blebs throughout.			
18								
19								
20								

BORING LOG

Boring No.: (DP-63)

PROJECT: Gastown Former MGP				CONTRACTOR: C&W Environmental (Dennis)		PAGE 2 OF 2	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 23, 2004	
SURFACE ELEVATION: NA				BORING LOCATION: Niagara Construction (East Boring)		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	DPT	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
21			1.6	15.6	Brownish gray fine to coarse SAND and fine to coarse GRAVEL, grading to gray bottom 0.8'. NAPL Observed in the to 0.8' only.		
22							
23					Borehole depth - 23' bgs. Abandon boring with bentonite chips. Gravel at 21.5' and Clay at 22' bgs, per driller. No analytical samples collected from this location.		
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-40	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: CME-750	TYPE	SS	—	HSA	Date Started: 6/14/01		
GROUNDWATER DEPTH: NA	DIAM.	2" O.D.	—	8 1/4" I.D.	Date Finished: 6/14/01		
MEAS. PT.: ---	WEIGHT	140#			Driller: Ken Fuller		
DATE OF MEAS.: ---	FALL	30"			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0					No samples collected 0 - 18'. For geologic description, see log for adjacent soil boring DP-4.		
5							
10							

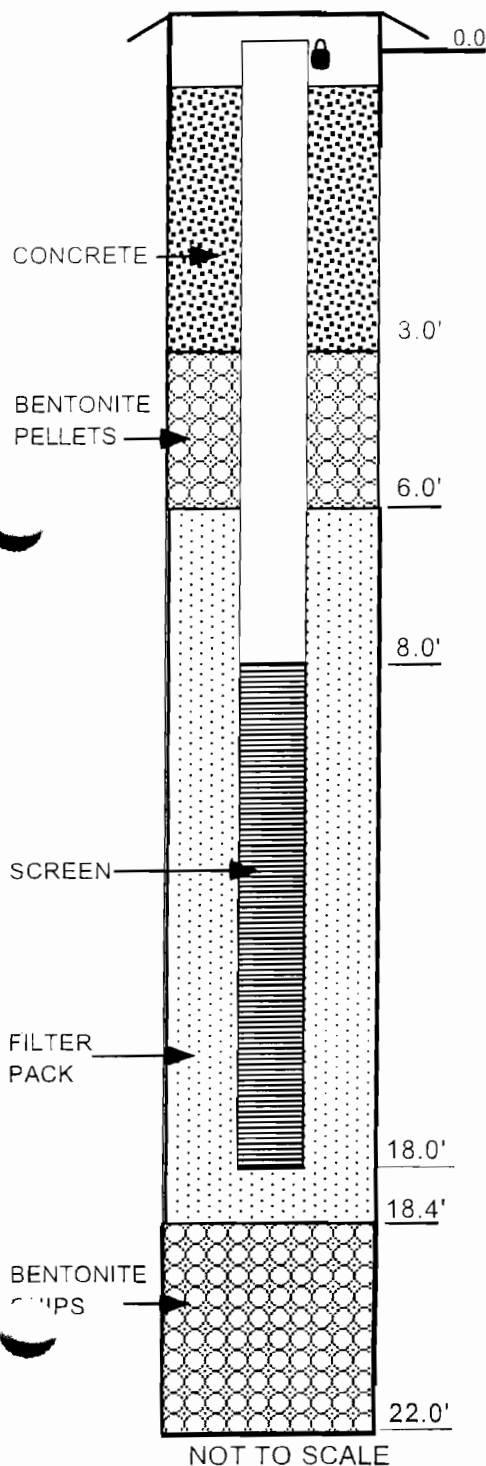
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MONITORING WELL COMPLETION LOG WELL NO. MW-40

Earth Tech, Inc.
40 British American Blvd.
Latham NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 6/14/01
Date Developed 7/11/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Groundwater Monitoring
Static Water Level 6.74 Date 7/11/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 18.0'
Total Depth of Boring 22.0'
Drilling Method
Type HSA Diameter 8 1/4" I.D.
Casing None
Sampling Method
Type Split Spoon Diameter 2" O.D.
Weight 140# Fall 30"
Interval 18.0' - 22.0'
Riser Pipe Left in Place
Material Sch. 40 PVC Diameter 2" I.D.
Length 8.0' Joint Type Flush Thread
Screen
Material Sch. 40 PVC Diameter 2" I.D.
Slot Size 0.020 inch Length 10.0'
Stratigraphic Unit Screened Alluvium
Filter Pack
Sand X Gravel Natural
Grade US Silica Grade 0
Amount 600 lbs Interval 6.0' - 18.4'
Seal(s)
Type Pellets 100 lbs Interval 3.0' - 6.0'
Type Pellets 50 lbs Interval 18.4' - 22.0'
Type Interval
Locking Casing ☒ Yes ☐ No
Notes: Flush Mount Casing

Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-41	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 1	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-750	TYPE	None	--	HSA	Date Started: 6/19/01		
GROUNDWATER DEPTH: NA	DIAM.	---	---	8 1/4" I.D.	Date Finished: 6/20/01		
MEAS. PT.: ---	WEIGHT	---				Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	---				Inspector: S. Chioniere	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0					No samples collectd in this borehole. For geologic description, see log for adjacent soil boring DP-14.		
5							
10							

MONITORING WELL COMPLETION LOG WELL NO. MW-41

Earth Tech, Inc.
40 British American Blvd.
Latham NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI

Client NYSDEC

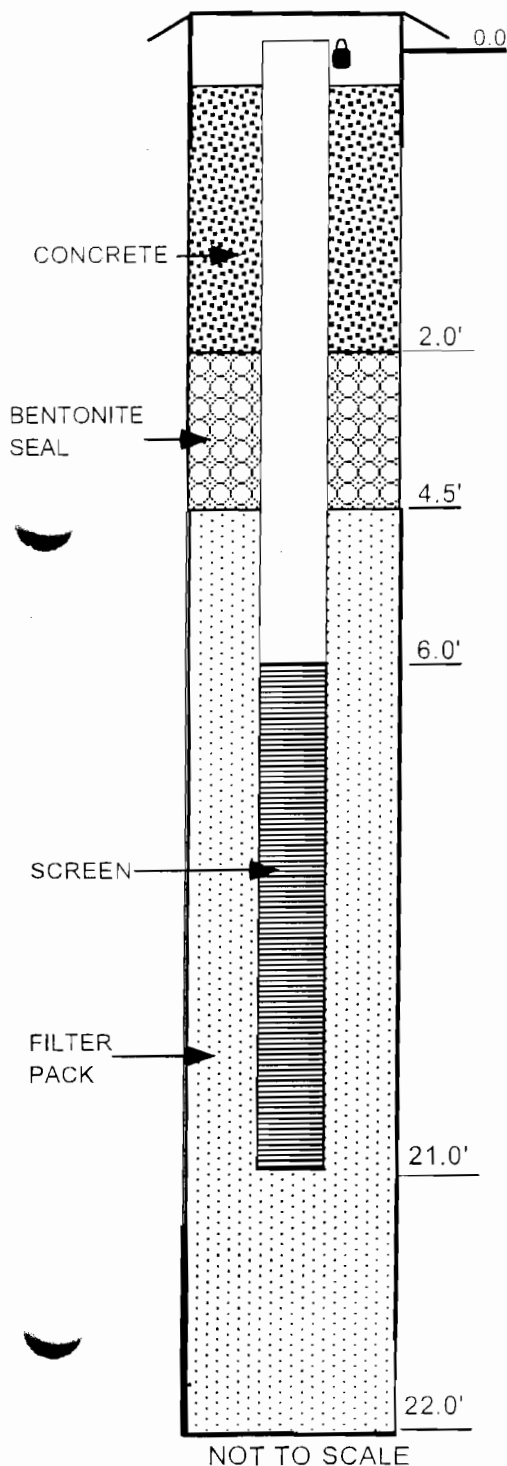
Location Tonawanda, NY

Project No. 44491.02

Date Drilled 6/19/01-6/20/01

Date Developed 7/10/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Stephen Choiniere

Drilling Contractor SJB Drilling Services

Type of Well Groundwater Monitoring

Static Water Level 6.11' Date 12/11/01

Measuring Point (M.P.) Top of PVC

Total Depth of Well 21.0'

Total Depth of Boring 22.0'

Drilling Method

Type HSA Diameter 8 1/4" I.D.

Casing None

Sampling Method

Type SS Diameter 2" O.D.

Weight 140# Fall 30"

Interval 19.5' - 21.5'

Riser Pipe Left in Place

Material Sch. 40 PVC Diameter 2" I.D.

Length 6.0' Joint Type Flush Thread

Screen

Material Sch/ 40 Prepack Diameter 2" I.D.

Slot Size 0.020" Length 15.0'

Stratigraphic Unit Screened Alluvium and Gravel

Filter Pack

Sand X Gravel Natural

Grade US Silica Grade 0

Amount 1000# Interval 4.5' - 21.0'

Seal(s)

Type Pellets 125+# Interval 2.0' - 4.5'

Type Interval

Type Interval

Locking Casing ☒ Yes ☐ No

Notes: Flush-mount completion

Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log			Boring No. MW-42	
PROJECT: Gastown Former MGP Site RI							Sheet 1 of 2	
CLIENT: NYSDEC							Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services							Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation							Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level			
DRILL RIG TYPE: CME-750	TYPE	SS	—	HSA	Date Started: 6/20/01			
GROUNDWATER DEPTH: NA	DIAM.	2" O.D.	—	8 1/4" I.D.	Date Finished: 6/20/01			
MEAS. PT.: ---	WEIGHT	140#				Driller: Ken Fuller		
DATE OF MEAS.: ---	FALL	30"				Inspector: S. Choiniere		
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS	
0					No samples collected 0 - 14.0'. For geologic description, see log for adjacent soil boring DP-26.			
5								
10								

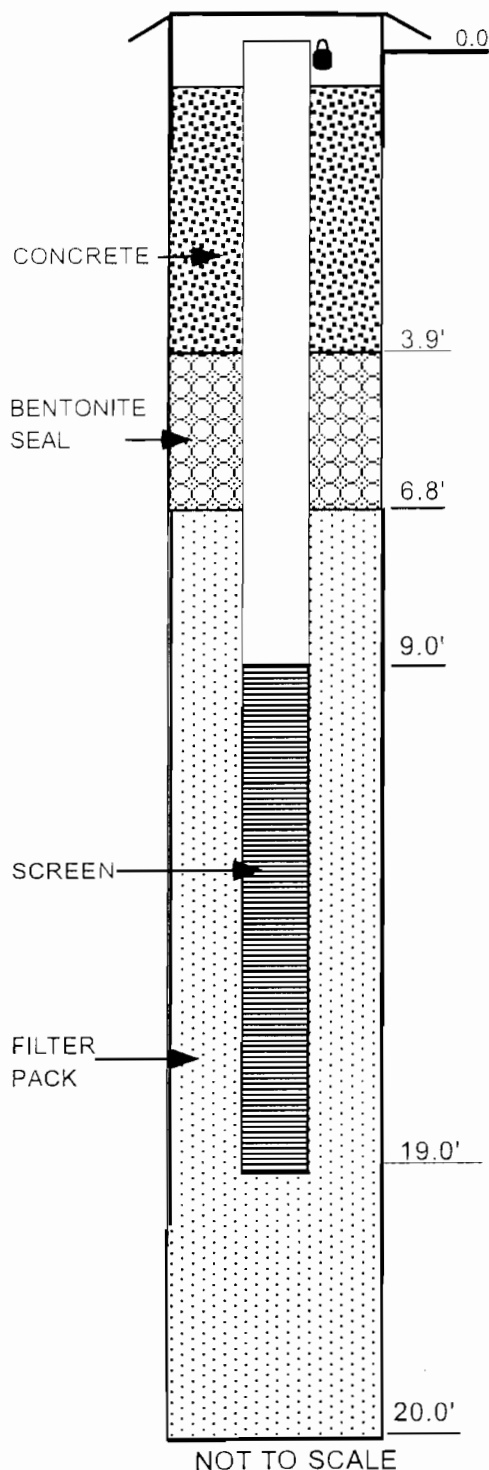
Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-42
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10						
				0.0	Gr Cy\$, t f S; no odor	Rec = 0.3' Wet
15	S-1	1				
		1				
		1				
		1				
				0.0	Gr Cy\$, t f S	Rec = 1.3' Moist
	S-2	1			16.8': Gr \$, s f S	
		1			16.9': Gr Cy\$, t f S; no odor	
		1				
		1				
				0.0	Gr Cy\$	Rec = 0.3' Wet
	S-3	1				
		WOR			Gr cmf S, a mf(+) G; no odor	
		1				
		1				
20				0.0	Gr cmf S, a mf(+) G; no odor	Rec = 2.0' Wet
	S-4	1			20.15': Rd br \$yC	
		WOR				
		1				
		WOR				
					22.0'	
					Bottom of Boring Augered only to 20.0'	
25						

MONITORING WELL COMPLETION LOG WELL NO. MW-42

Earth Tech, Inc.
40 British American Blvd.
Latham NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491.02
 Date Drilled 6/20/01
 Date Developed 7/11/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Stephen Choiniere
 Drilling Contractor SJB Drilling Services
 Type of Well Groundwater Monitoring
 Static Water Level 5.01 Date 12/11/01
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 19.0'
 Total Depth of Boring 20.0'
 Drilling Method
 Type HSA Diameter 8 1/4" I.D.
 Casing None
 Sampling Method
 Type SS Diameter 2" O.D.
 Weight 140# Fall 30"
 Interval 14.0' - 22.0'
 Riser Pipe Left in Place
 Material Sch. 40 PVC Diameter 2" I.D.
 Length 9.0' Joint Type Flush Thread
 Screen
 Material Sch. 40 Prepack Diameter 2" I.D.
 Slot Size 0.020" Length 10.0'
 Stratigraphic Unit Screened Alluvium
 Filter Pack
 Sand X Gravel Natural
 Grade US Silica Grade 0
 Amount 500# Interval 6.8' - 19.0'
 Seal(s)
 Type 75# pellets & 50# granular Interval 3.9' - 6.8'
 Type Interval
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes: Flush-mount completion

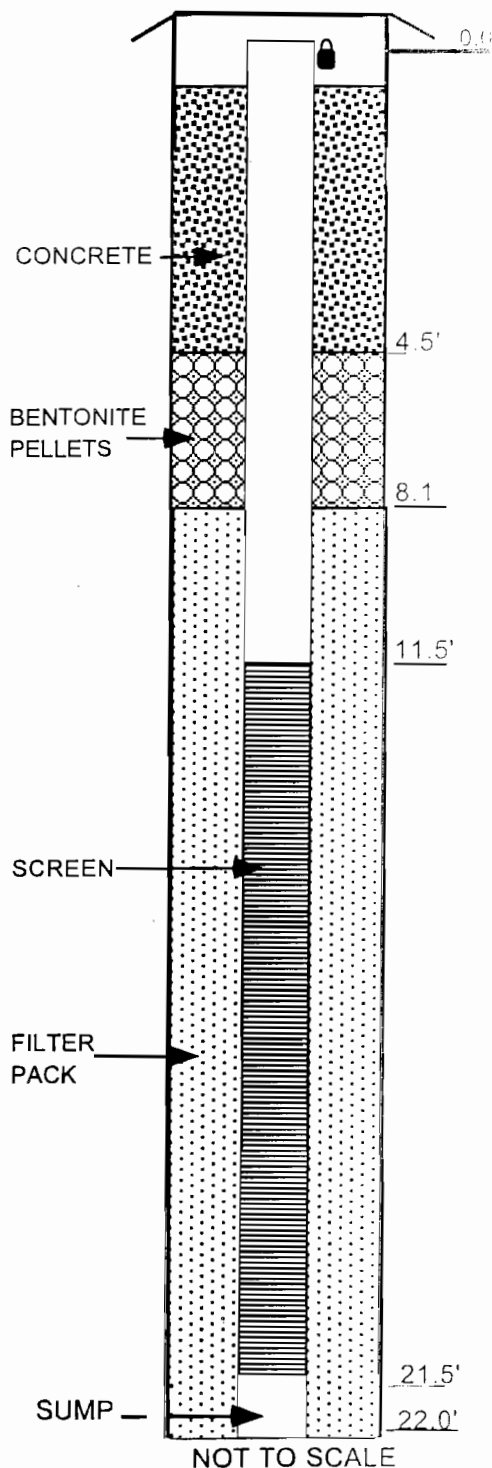
Earth Tech, Inc. Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-43	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 1	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-750		TYPE	None	---	HSA	Date Started: 6/20/01	
GROUNDWATER DEPTH: NA		DIAM.	---	---	8 1/4" I.D.	Date Finished: 6/21/01	
MEAS. PT.: ---		WEIGHT	---			Driller: Ken Fuller	
DATE OF MEAS.: ---		FALL	---			Inspector: S. Choiniere	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION		REMARKS
0					No samples collected in this bore- hole. For geologic description, see log for adjacent soil boring DP-11.		
5							
10							

MONITORING WELL COMPLETION LOG WELL NO. MW-43

Earth Tech, Inc.
40 British American Blvd.
Latham NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491.02
 Date Drilled 6/20/01-6/21/01
 Date Developed 7/11/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Stephen Choiniere
 Drilling Contractor SJB Drilling Services
 Type of Well Groundwater Monitoring
 Static Water Level 7.66 Date 7/11/01
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 22.0'
 Total Depth of Boring 22.0'
 Drilling Method
 Type HSA Diameter 8 1/4" I.D.
 Casing None
 Sampling Method
 Type None Diameter —
 Weight — Fall —
 Interval —
 Riser Pipe Left in Place
 Material Sch. 40 PVC Diameter 2" I.D.
 Length 12.0' Joint Type Flush Thread
 Screen
 Material Sch. 40 Prepack Diameter 2" I.D.
 Slot Size 0.020" Length 10.0'
 Stratigraphic Unit Screened Fill
 Filter Pack
 Sand X Gravel — Natural —
 Grade US Silica Grade 0
 Amount 500# Interval 8.1' - 22.0'
 Seal(s)
 Type Pellets 150# Interval 4.5' - 8.1'
 Type — Interval —
 Type — Interval —
 Locking Casing ☒ Yes ☐ No
 Notes: Flush-mount completion

Earth Tech, Inc. Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-44	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-750	TYPE	SS	—	HSA	Date Started: 6/21/01	
GROUNDWATER DEPTH: NA	DIAM.	2" O.D.	—	8 1/4" I.D.	Date Finished: 6/21/01	
MEAS. PT.: ---	WEIGHT	140#			Driller: Ken Fuller	
DATE OF MEAS.: ---	FALL	30"			Inspector: S. Choiniere	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	PID Reading (ppm)	GEOLOGIC DESCRIPTION	REMARKS
0					No samples collected 0 - 16.0'. For geologic description, see log for adjacent soil boring DP-1.	
5						
10						

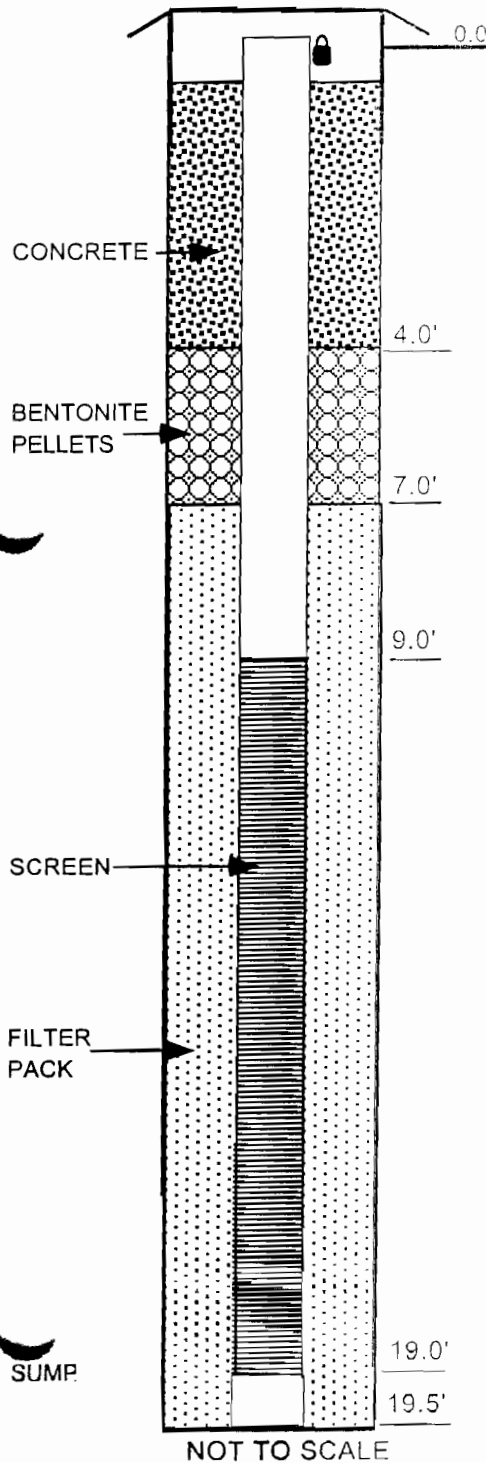
Earth Tech, Inc. Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-44
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	PID Reading (ppm)	Geologic Description	Remarks
10						
15						
	S-1	WOR		251	Gr mf(+) S, t \$; sft; odor; 1/2" thk NAPL sat seam @ 16.3'; seams w/out NAPL @ 16.5', 17.1' and 17.8'	Rec = 1.5' Moist
		WOR				
		1		30.7		
		1				
	S-2	5		12.4	Gr cmf S; sm odor	Rec = 1.5' Wet
		27			18.6': Gr m(+) f G; G fgmts; sm odor	
		24		2.7		
		19			20.0'	
20					Bottom of Boring Augered to 19.5'	
25						

MONITORING WELL COMPLETION LOG WELL NO. MW-44

Earth Tech, Inc.
40 British American Blvd.
Latham NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491.02
Date Drilled 6/21/01
Date Developed 7/11/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Stephen Choiniere
Drilling Contractor SJB Drilling Services
Type of Well Groundwater Monitoring
Static Water Level 6.62 Date 7/11/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 19.5'
Total Depth of Boring 19.5'
Drilling Method
Type HSA Diameter 8 1/4" I.D.
Casing None
Sampling Method
Type SS Diameter 2" O.D.
Weight 140# Fall 0"
Interval 16.0' - 20.0'
Riser Pipe Left in Place
Material Sch. 40 PVC Diameter 2" I.D.
Length 9.5' Joint Type Flush Thread
Screen
Material Sch. 40 Prepack Diameter 2" I.D.
Slot Size 0.020" Length 10.0'
Stratigraphic Unit Screened Alluvium and Gravel
Filter Pack
Sand X Gravel Natural
Grade US Silica Grade 0
Amount 650# Interval 7.0' - 19.5'
Seal(s)
Type Pellets 150# Interval 4.0'-7.0'
Type Interval
Type Interval
Locking Casing ☒ Yes ☐ No
Notes: Flush-mount completion

Earth Tech, Inc. Albany, NY (518) 951-2200			Test Boring Log			Boring No. MW-45				
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2				
CLIENT: NYSDEC						Job No. 44491.02				
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA				
PURPOSE: Monitoring Well Installation						Ground Elev.: NA				
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level					
DRILL RIG TYPE: CME-75	TYPE	SS	-	HSA	Date Started: 3/25/02					
GROUNDWATER DEPTH:	DIAM.	2" O.D.	-	4 1/4" I.D.	Date Finished: 3/25/02					
MEAS. PT.:	WEIGHT	140#				Driller: Tony Jakubczak				
DATE OF MEAS.:	FALL	30"				Inspector: Walt Howard				
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS				
5	S-1	2			Wood fragments only	Rec=0.8' Damp				
	S-2	4			Dr Gr Bk \$ a, cmf S; sft; wd chips; glass; cntrs		Rec=0.6' Moist			
10										

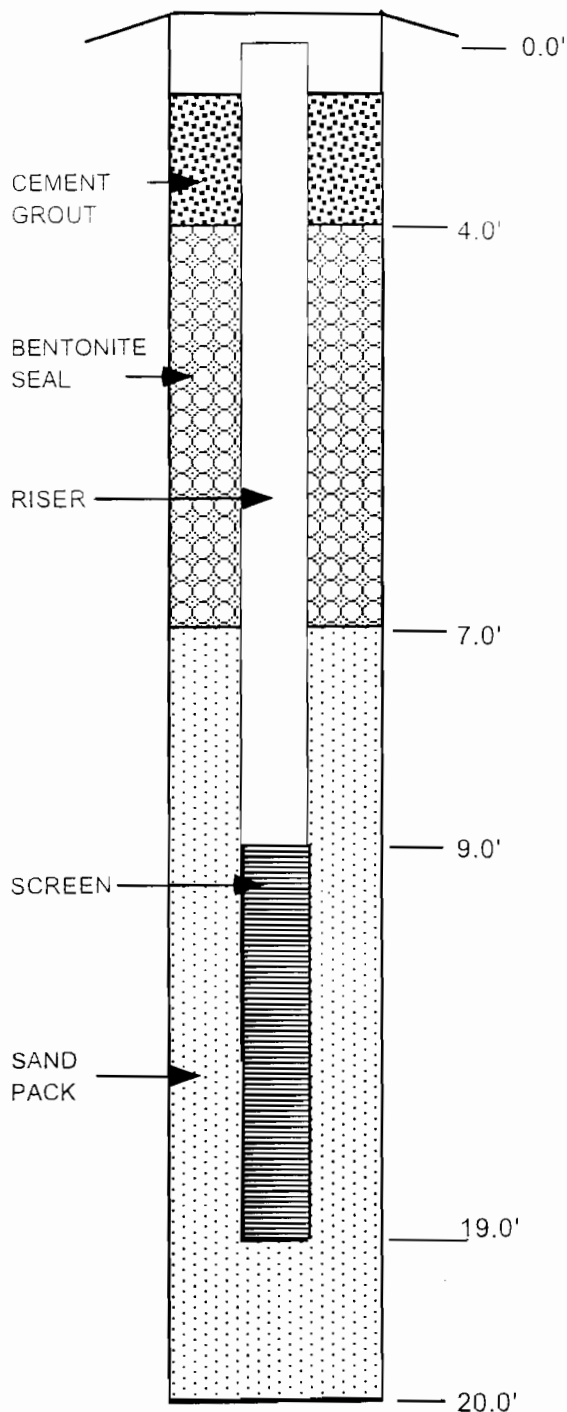
Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. MW-45
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3	1			Dk Gr br \$ l, mf (+) S; sft; sl mttld	Rec= 1.7' Damp
		WH			11.1': Gr Cy\$ l, fS, frm, sm shells	Rec=1.0' Moist
		1				
		1				
	S-4	WH			Gr \$ a, fS; sft-frm; occ shells; rts: org; No Odor	
		WH				
		WH				
		WH			Gr Cy\$ l, fS; occ peat seams; sft; sm coal tar odor	Rec=1.9' Damp
	S-5	WH				
15		WH				
		WH				
		WH				
	S-6	2			Same	Rec=2.0' Damp-very
		5			16.6': Gr cmf S, t \$, l mf G; freq shells; strong odor; no sheen;	PID Screen=
		16			no vis sign of NAPL	>20 ppm
		24				
	S-7	19			Gr mf G S, cmf S; loose Gr sbrdd- sbang; sm odor	Rec= 0.8' Wet
		16			19.0': Rd \$yC; sm Gr Cy\$ seams;	
		5			soft	
		4				
20					20.0': Bottom of Boring Auger to 19'	
25						

MONITORING WELL COMPLETION LOG WELL NO. MW-45

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491
 Date Drilled 3/25/02-3/26/02
 Date Developed 4/2/02

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Monitoring Well
 Static Water Level 5.83' Date 4/2/02
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 19.0'
 Total Depth of Boring 20.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 1/4" I.D.
 Casing None
 Sampling Method
 Type Split Spoon Diameter 2" O.D.
 Weight 140# Fall 30"
 Interval 5.0 - 20.0'
 Riser Pipe Left in Place
 Material Sch 40 PVC Diameter 2" I.D.
 Length 9.0' Joint Type Flush Thread
 Screen
 Material Sch 40 PVC Diameter 2" I.D.
 Slot Size 0.020 inch Length 10.0'
 Stratigraphic Unit Screened Alluvium/Gravel
 Filter Pack
 Sand X Gravel Natural
 Grade Filpro "0"
 Amount 300 LBS Interval 7.0 - 20.0'
 Seal(s)
 Type Bentonite Chips Interval 4.0 - 7.0'
 Type Cement/Bent Grout Interval 0.0'-4.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Albany, NY (518) 951-2200			Test Boring Log			Boring No. MW-46	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-75		TYPE	SS	-	HSA	Date Started: 3/26/02	
GROUNDWATER DEPTH:		DIAM.	2" O.D.	--	4 1/4" I.D.	Date Finished: 3/26/02	
MEAS. PT.:		WEIGHT	140#			Driller: Tony Jakubczak	
DATE OF MEAS.:		FALL	30"			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS	
5	S-1	5			Gr br mf (+) S, s\$; frm; mttld; sm rts; no odor	Rec=1.8' Wet	
		2					
		3					
		2					
10							

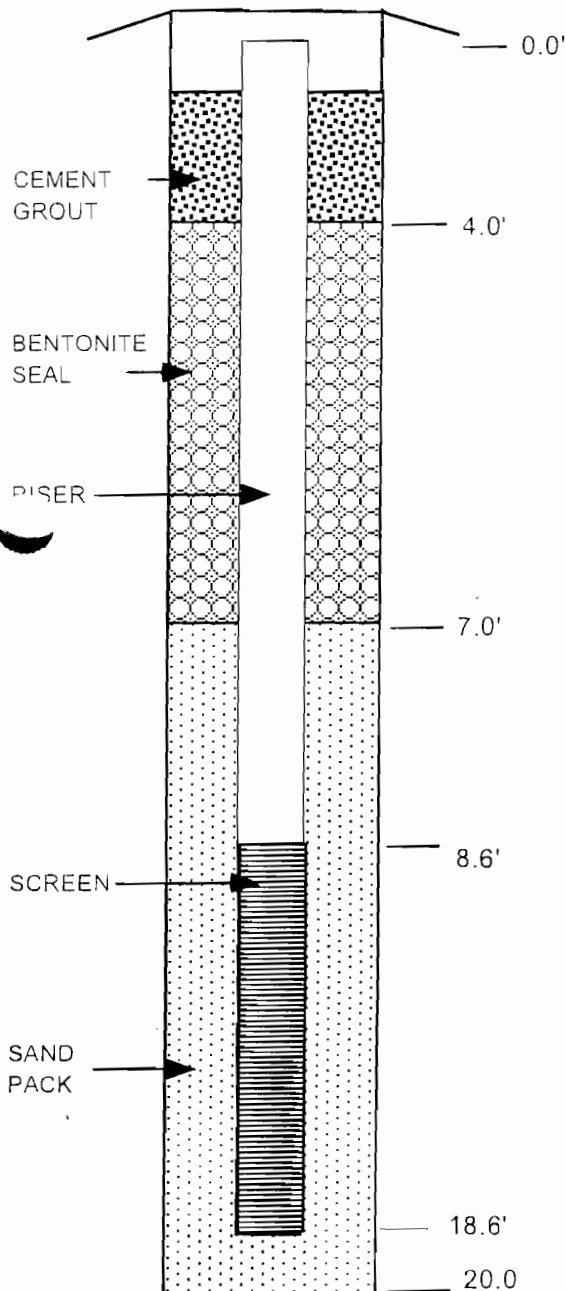
Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. MW-46
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10	S-2	5			Dk Gr f S, a \$; frm; sm shells; rts; org	Rec=1.0' Wet
		4				
		2				
		2				
	S-3	2			Dk Gr Cy\$ a, f S; frm; sm ahells; org; no odor	Rec= 1.0' Moist PID HS= 0 ppm
		3				
		WH				
		1				
	S-4	2			Same; w/seams of peat at 15.1'-15.4'; sm coal tar odor; no sheen	Rec=1.4' Moist PID HS= 4.2 ppm
15		1				
		1				
		1				
	S-5	5			Gr Cy\$, l f S; frm; org; leaf and peat seams; sm odor 16.3': Gr m fG s, cmf S, t \$; loose; G sbrdd; coal tar odor	Rec=0.8' Wet PID HS= 10 ppm
		13				
		22				
		35				
	S-6	5			Gr cmf S, t \$, l mf G; loose; sm odor; No NAPL 18.7': Rd \$yC; occ Gr in top	Rec=1.3' Wet PID HS=5 ppm
		7				
		2				
		1				
20					20.0': Bottom of Boring Auger to 20'	
25						

MONITORING WELL COMPLETION LOG WELL NO. MW-46

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 3/26/02
Date Developed 4/1/02

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Monitoring Well
Static Water Level 4.40' Date 4/1/02
Measuring Point (M.P.) Top of PVC
Total Depth of Well 18.6'
Total Depth of Boring 20.0'

Drilling Method
Type Hollow Stem Auger Diameter 4 1/4" I.D.
Casing None

Sampling Method
Type Split Spoon Diameter 2" O.D.
Weight 140# Fall 30"
Interval 5.0'-20.0'

Riser Pipe Left in Place
Material Sch 40 PVC Diameter 2" I.D.
Length 8.6' Joint Type Flush Thread

Screen
Material Sch 40 PVC Diameter 2" I.D.
Slot Size 0.020 inch Length 10.0'
Stratigraphic Unit Screened Alluvium/Gravel

Filter Pack
Sand X Gravel Natural
Grade Filpro "0"
Amount 250 # Interval 7.0'-20.0'

Seal(s)
Type Bentonite Pellets Interval 4.0'-7.0'
Type Cement/Bent Grout Interval 0.0'-4.0'
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

BORING LOG

Boring No.: (MW-46B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 3		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 9-15, 2004		
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE		Split Spoon	--	--
--	--	--		I.D.		2 inch	--	--
--	--	--		WT./Fall		140 lbs	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1					Auger to 10' bgs.			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	1	1 1 1 1	1.6	1.9	Dark gray fine Sandy SILT, some Clay, trace shells and wood fibers, saturated, spongy texture.			
12		4			No recovery.			
13	2	5 5 4	0	NA				
14		WOH			Same as above. Fine SAND seam (3/4" thick) at 1.7'. Increasing shells with depth.			
15	3	WOH WOH 3	1.9	8.5				
16		16			0.0 - 0.3' Same as above. 0.3 - 0.8' Gray fine to coarse SAND and fine to coarse GRAVEL, saturated, slight odor.			
17	4	50/0.4 - -	0.8	6.8				
18		2			0.0 - 0.4' Same as above. 0.4 - 0.8' Red and gray Silty CLAY, soft, pliable, plastic, saturated, slight odor.			
19	5	5 WOH WOH	0.8	6.0				
20								

BORING LOG

Boring No.: (MW-46B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 2 OF 3		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 9-15, 2004		
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE		Split Spoon	--	--
--	--	--		I.D.		2 inch	--	--
--	--	--		WT./Fall		140 lbs	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
21	6	2 3 3 4	0.3	5.6	Red Clayey SILT, trace fine to coarse Sand, less wet and more stiff than above.			
22		5			Same as above with trace fine gravel.			
23	7	7 7 7 11	1.0	3.9				
24		1			0.0 - 1.1' Same as above.			
25	8	16 22 24	1.8	5.4	1.1 - 1.8' Red very fine SAND, trace Gravel and medium to coarse Sand, saturated.			
26		26			0.0 - 1.0' Sluff			
27	9	31 50/0.1	2.0	2.1	1.0 - 1.4' Same as above.			
28		-			1.4 - 2.0' Reddish brown SILT, trace Clay, fine to coarse Sand, fine Gravel, tight, moist (TILL).			
29	10	16 31 33 48	2.0	0.0	Same as above.			
30		31			Same as above.			
31	11	50/0.3 - -	0.5	1.3				
32		14			0.0 - 0.5' Same as above.			
33	12	17 20 23	1.0	1.6	0.5 - 1.0' Weathered bedrock pieces.			
34		3			0.0 - 0.3' Sluff.			
35	13	6 22 33	0.8	4.1	0.3 - 0.5' Same as above (TILL)			
36		36			0.5 - 0.8 Very weathered bedrock.			
37	14	40 50/0.3	1.0	2.5	Weathered bedrock.			
38		-			Same as above.			
39	15	1 3 19 50/0	0.8	1.5				
40								

BORING LOG

Boring No.: (MW-46B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 3 OF 3	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 9-15, 2004	
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
41 42 43 44 45	RUN 1				RUN 1 - 39.5 - 45.5' bgs Run length 6.0' Recovery 6.0' RQD 73%		
46 47 48 49 50 51 52 53 54	RUN 2				RUN 2 - 45.5 - 54.8' bgs Run length 9.3' Recovery 7.4' RQD 34% Very broken bottom 2.4'		
55 56 57 58 59 60					End of boring at 54.8' bgs. Set 2-inch diameter, Schedule 40 PVC, 10-slot screen from 44.0 - 54.0' bgs.		

MONITORING WELL COMPLETION LOG

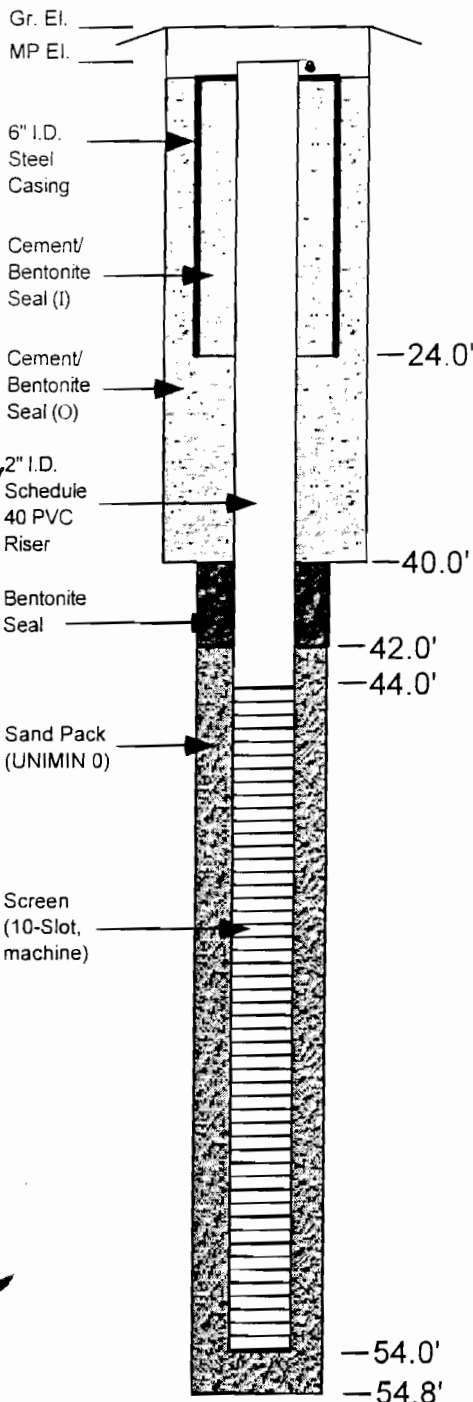
Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. MW - 46B

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/9/04 - 6/15/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL

INSPECTION NOTES



NOT TO SCALE

Inspector Tamara Raby
Drilling Contractor SJB
Type of Well Monitoring
Static Water Level 5.84' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 54.0' bg
Total Depth of Boring 54.7' bg
Drilling Method
Type HSA Diameter 8.25\" dia. to 24' bg
Casing Permanent 6\" steel to 24' (grouted)
Type Temp NW Drive and Wash (24' to 39.5' bg)
Type HQ Core (39.5' to 54.8' bg)
Sampling Method
Type split spoon / HQ core Diameter 2\"
Weight 140 lb Fall 30\"
Interval 2' from 0-40' bg, then HQ core from 40' to 54.8' bg
Riser Pipe Left in Place
Material PVC Diameter 2\"
Length _____ Joint Type flush thread
Screen
Material PVC Diameter 2\"
Slot Size 10 Length 10'
Stratigraphic Unit Screened bedrock
Filter Pack
Sand X Gravel _____ Natural _____
Grade #0
Amount _____ Interval _____
Seal(s)
Type bentonite Interval 40' - 42' bg
Type grout Interval 0 - 40' bg
Type _____ Interval _____
Locking Casing ☒ Yes ☐ No
Notes:

Earth Tech, Inc. Albany, NY (518) 951-2200		Test Boring Log			Boring No. MW-47	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation					Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-75	TYPE	SS	--	HSA	Date Started: 3/26/02	
GROUNDWATER DEPTH:	DIAM.	2" O.D.	--	4 1/4" I.D.	Date Finished: 3/26/02	
MEAS. PT.:	WEIGHT	140#	Driller: Tony Jakubezak			
DATE OF MEAS.:	FALL	30"	Inspector: Walt Howard			

Depth (Feet)	Sample Number	Blow Count	Unified Classification	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
	S-1	WH			Dk Gr Bk \$ a, cmf S; t Gr fgmts; brks; rts	Rec= 0.8' Damp
		1				
		2				
		2				
	S-2	2			Wh Lt gr mf S, l \$, l f G; sft; much lime; v/ faint coal tar odor	Rec=1.1' Moist PID HS= 7 ppm
		2				
		3				
		2				
5	S-3	2			Bk fs; loose; no odor; stain lyr wh fs, l \$ (lime) 4.5': Gr br \$, t f S; frm; rts; mttld	Rec=1.5' Damp PID HS= 1.5 ppm
		2				
		4				
		5				
	S-4	10			Br f S, s \$; frm; grade down 6.4': Gr br \$ l, f S; frm; sm bk staining; fuel oil odor 6.8': Bk gr f S, a \$; alt seams; strong petrol (fuel oil) odor and staining	Rec=1.6' Damp Collect poss lab sample No PID
		9				
		10				
		10				
10	S-5	3			Gr br f S a \$; mod frm; freq bk stain; mod petrol odor; no sheen	Rec=1.3' Wet No PID
		3				
		4				
		3				

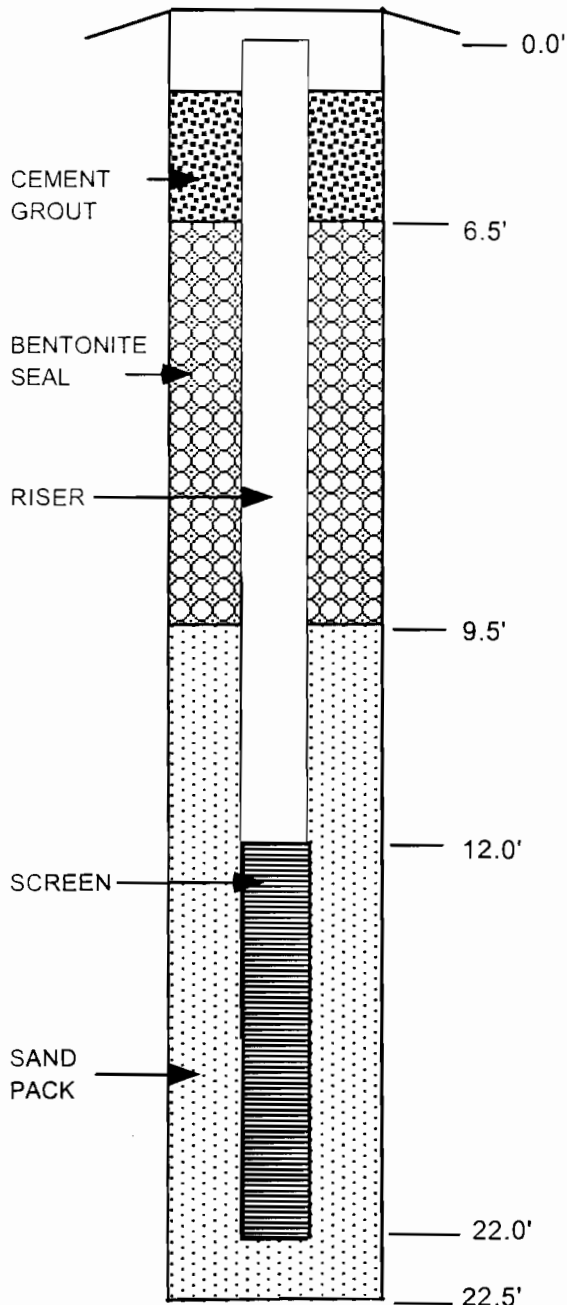
Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. MW-47
PROJECT: Gastown Former MGP Site RI					Sheet 2 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-6	3			Br gr \$ a, f S; frm; mttld fuel oil odor; wet w/ tr blebs and sheen at 11.4'.	Rec= 1.4' Damp PID HS=7 ppm
		4				
		4				
		5				
	S-7	4			Gr br mf (+)S, l \$; loose; v/ faint odor; sm sheen in slough on top of sampler	Rec= 0.8' Wet PID HS=1.5 ppm
		4				
		4				
		3				
	S-8	1			Gr dkgr f S a \$; sft; w/ occ seams/ lys (0.01'-0.05') gr Cy\$; no odor; no sheen	Rec= 1.1' Wet PID HS= 0.4 ppm
15		1				
		1				
		2				
	S-9	1			Gr f S a , Cy\$; sft; no odor; no sheen	Rec= 0.7' Wet PID HS= 0.6 ppm
		1				
		1				
		1				
	S-10	WH			Gr \$ a, f S; sft; freq Cy\$ seams; occ fs seams; no odor	Rec= 0.8' Wet PID HS=0.6 ppm
		WH				
		WH				
		1				
20	S-11	WH			Gr Cy\$, l f S; sft; alt seams; no odor; sft 20.9': Gr cmf S, t \$, s mf G; G sbrdd; no odor; no sheen 21.1': Rddsh gr \$yC	Rec=1.3' Wet PID HS=0.8 ppm
		WH				
		3				
		5				
	S-12	WH			Rd \$yC; sft; no odor	Rec=0.8' Wet
		1				
		WH				
		WH				
25					24.0': Bottom of Boring Auger to 22.5'	

MONITORING WELL COMPLETION LOG WELL NO. MW-47

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 3/27/02
Date Developed 4/2/02

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Monitoring Well
Static Water Level 5.70' Date 4/2/02
Measuring Point (M.P.) Top of PVC
Total Depth of Well 22.0'
Total Depth of Boring 22.5'

Drilling Method

Type Hollow Stem Auger Diameter 4 1/4" I.D.
Casing None

Sampling Method

Type Split Spoon Diameter 2" O.D.
Weight 140# Fall 30"
Interval 0.0-24.0

Riser Pipe Left in Place

Material Sch 40 PVC Diameter 2" I.D.
Length 12.0' Joint Type Flush Thread

Screen

Material Sch 40 PVC Diameter 2" I.D.
Slot Size 0.020 inch Length 10.0'
Stratigraphic Unit Screened Alluvium/Gravel

Filter Pack

Sand X Gravel Natural
Grade Filpro "0"
Amount 250 # Interval 9.5'-22.5'

Seal(s)

Type Bentonite Pellets Interval 6.5'-9.5'
Type Cement/Bent Grout Interval 0.0'-6.5'
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Albany, NY (518) 951-2200			Test Boring Log			Boring No. MW-48	
PROJECT: Gastown Former MGP Site RI						Sheet 1 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services						Meas. Pt. Elev.: NA	
PURPOSE: Monitoring Well Installation						Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level		
DRILL RIG TYPE: CME-75	TYPE	SS	-	HSA	Date Started: 3/27/02		
GROUNDWATER DEPTH:	DIAM.	2" O.D.	--	4 1/4" I.D.	Date Finished: 3/27/02		
MEAS. PT.:	WEIGHT	140#			Driller: Tony Jakubezak		
DATE OF MEAS.:	FALL	30"			Inspector: Walt Howard		
Depth (Feet)	Sample Number	Blow Count	Unified Classification	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS	
					No samples, sugar to 5'		
5	S-1	2			Bk dk gr Cy\$ l, fS; frm; coal stained; fnt odor	Rec=1.1' Damp PID HS= 4.8 ppm	
		1					
		3					
		4					
	S-2	5			Same- w. thin wh seams at 8.0'	Rec= 1.4' Damp PID HS= 1.4 ppm	
		4					
		7					
		9					
10							

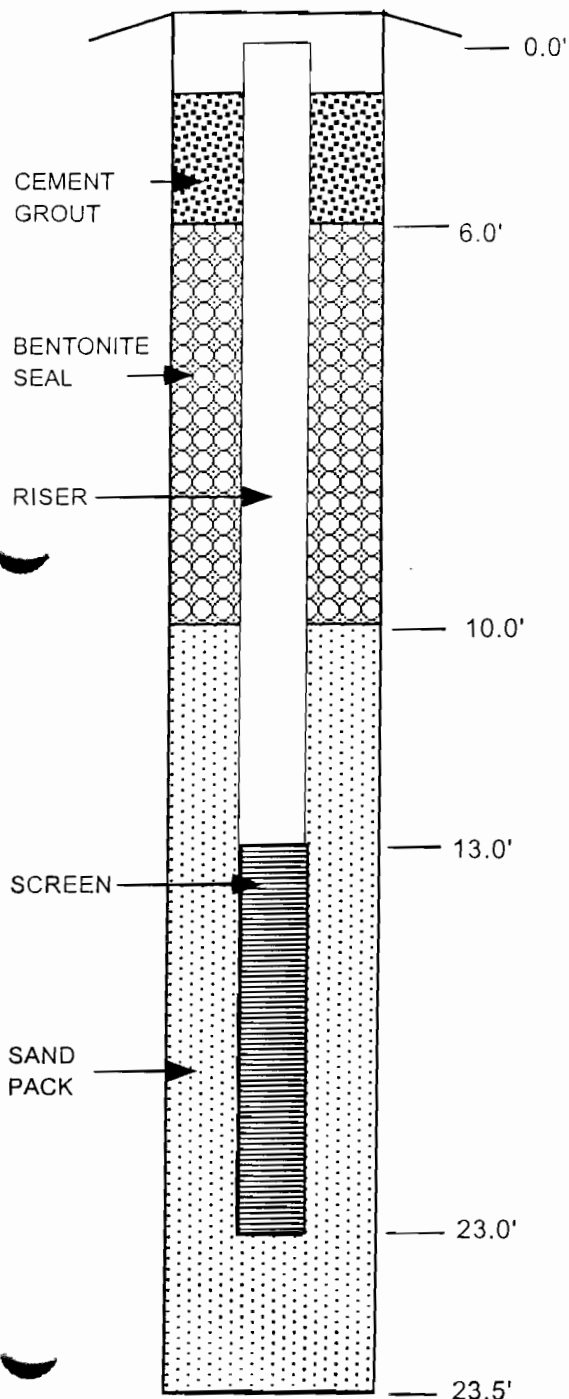
Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. MW-48
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3	1			Bk gr Cy\$ l, fS; fr.; stained wet seam @ 10.9'	Rec=1.3'
		1			11.1': Gr br bk Cy\$ l, fS; frm; mttld	Damp
		2				PID HS=0.2 ppm
		3				
	S-4	5			Same	Rec= 1.0'
		6			12.2': Bk dk gr mf (+)S, s\$; sft; sm coal tar odor; no sheen	Wet
		5			12.9': Gr br mf (+) S, l\$; frm	PID HS= 0.6 ppm
		5				
	S-5	3			Lt Gr \$s, fS; sft; freq alt seams (0.01-0.03' thk) of Cy\$ and fS; v/ fnt odor; no sheen	Rec= 1.1'
		2				Wet
15		1				PID HS=0.2 ppm
		1				
	S-6	WH			Gr Cy\$ t, fS; sft; no odor	Rec= 1.4'
		WH				Wet
		2			16.9': Gr fS, s\$; sft; alt seams \$ and fS; no odor; no sheen	PID HS=0.2 ppm
		1				
	S-7	WH			Gr Cy\$; sft; w/ freq alt seams/lyrs (0.02-0.1' thk) of fS, l\$; no odor; v/sft; no sheen	Rec=1.5'
		WH				Wet
		WH				PID HS=0.2 ppm
		WH				
20	S-8	WH			Same: w/ alt seams; no odor	Rec=1.7'
		WH			21.2': 0.04' thk seam mf(+)s	Wet
		1			21.5': Gr cmf S, t\$, smfG; hd; G sbrdd; v/ fnt coal tar odor; no sheen	PID HS=0.4 ppm
		22				
	S-9	14			Gr cmfS, s,f (+)G; G ang-sbrdd; v/ fnt coal tar odor; no sign of NAPL	Rec= 1.2'
		12			23.0': Rd \$yC; sft; w/ sm G fgmts; No Odor	Wet
		3				PID HS=16.2 ppm
		3				
25					24.0': Bottom of Boring Auger to 23.5'	

MONITORING WELL COMPLETION LOG WELL NO. MW-48

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491
 Date Drilled 3/23/02
 Date Developed 3/29/02

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Monitoring Well
 Static Water Level 7.0 Date 3/29/02
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 23.0'
 Total Depth of Boring 23.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 1/4" I.D.
 Casing None
 Sampling Method
 Type Split Spoon Diameter 2" O.D.
 Weight 140# Fall 30"
 Interval 5.0'-24.0'
 Riser Pipe Left in Place
 Material Sch 40 PVC Diameter 2" I.D.
 Length Joint Type Flush Thread
 Screen
 Material Sch 40 PVC Diameter 2" I.D.
 Slot Size 0.020 inch Length 10.0'
 Stratigraphic Unit Screened Alluvium/Gravel
 Filter Pack
 Sand X Gravel Natural
 Grade Filpro "0"
 Amount 200 LBS Interval 10.0'-23.5'
 Seal(s)
 Type Bentonite Chips Interval 6.0'-10.0'
 Type Cement/Bent Grout Interval 0.0'-6.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No

Notes:

BORING LOG

Boring No.: (MW-49)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 2		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 2, 2004		
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--	--
--	--	--		I.D.	--	2 inch	--	--
--	--	--		WT./Fall	--	140 lbs	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
1	1	2 3 5	1.6	2.3	0.0 - 1.2' Gray to black fine to coarse SAND and fine GRAVEL, trace Silt, dry.			
2		7			1.2 - 1.6' Tan Clayey SILT, trace medium to coarse Sand and fine Gravel, dry.			
3	2	3 2 2	1.4	2.3	0.0 - 0.3' Same as above.			
4		2			0.3 - 1.0 Tan fine SAND, iron mottling, moist to wet.			
5	3	4 7 10 10	1.9	3.9	1.0 - 1.4 Brown Clayey SILT, trace medium Sand and organics (rootlets), iron mottling, moist.			
6					0.0 - 0.4' Sluff			
7	4	6 8 8 10	2.0	2.7	0.4 - 0.8' Same as above.			
8					0.8 - 2.0' Tan fine SAND, iron mottling, wet.			
9	5	3 4 4 5	1.8	4.1	Same as above, saturated.			
10					Same as above, trace clay at 1.6'.			
11	6	1 1 1 1	1.8	5.4	0.0 - 0.4' Same as above.			
12					0.4 - 1.8 Gray fine SAND, trace medium Sand, Silt, and Clay, saturated.			
13	7	7 14 20 22	2.0	3.2	0.0 - 1.6' Same as above.			
14					1.6 - 2.0' Gray angular fine to coarse GRAVEL, trace fine to coarse Sand and Silt, saturated.			
15	8	48 47 12 5	1.0	3.2	0.0 - 0.3' Sluff.			
16					0.3 - 0.5' Same as above.			
17	9	3 4 3 3	0.8	10.8	0.5 - 1.0 Red Silty CLAY, stiff, plastic, saturated.			
18					Sluff			
19					End of boring at 18' bgs.			
20					Set 2-inch diameter, Schedule 40 PVC, 10-slot screen from 4.5 to 14.5' bgs.			

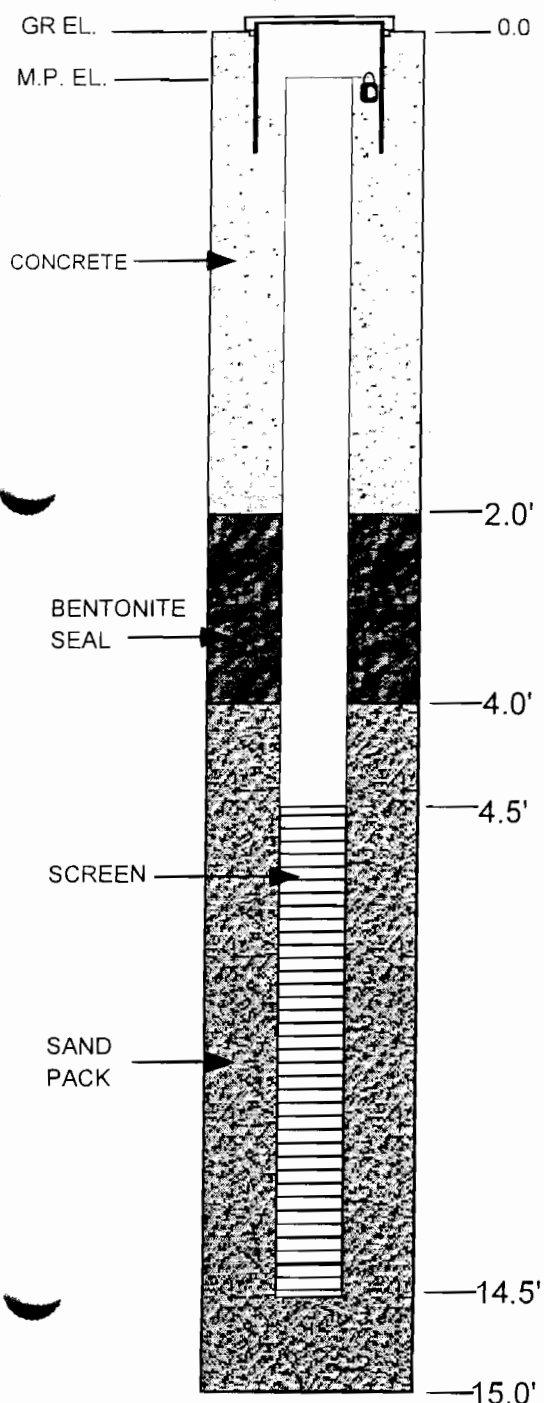
MONITORING WELL COMPLETION LOG

Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. MW-49

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/2/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Tamara Raby
Drilling Contractor SJB
Type of Well Monitoring
Static Water Level 5.94' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 14.5' bg
Total Depth of Boring 15.0' bg
Drilling Method
Type HSA Diameter 4.25"
Casing N/A
Sampling Method
Type split spoon Diameter 2"
Weight 140 lb Fall 30"
Interval 2' from 0 - 18' bg
Riser Pipe Left in Place
Material PVC Diameter 2"
Length Joint Type flush thread
Screen
Material PVC Diameter 2"
Slot Size 10 Length 10'
Stratigraphic Unit Screened overburden
Filter Pack
Sand X Gravel Natural
Grade #0
Amount Interval 4'-15' bg
Seal(s)
Type Bentonite Interval 2' - 4' bg
Type Concrete Interval 0 - 2' bg
Type Interval
Locking Casing ☒ Yes ☐ No
Notes:

BORING LOG

Boring No.: (MW-49B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 4	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 2-4, 2004	
SURFACE ELEVATION: NA				BORING LOCATION: West of DL Moore.		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
1	1	2 3 5 7	1.6	2.3	0.0 - 1.2' Gray to black fine to coarse SAND and fine GRAVEL, trace Silt, dry. 1.2 - 1.6' Tan Clayey SILT, trace medium to coarse Sand and fine Gravel, dry.		
2		3			0.0 - 0.3' Same as above.		
3	2	2 2 2	1.4	2.3	0.3 - 1.0 Tan fine SAND, iron mottling, moist to wet. 1.0 - 1.4 Brown Clayey SILT, trace medium Sand and organics (rootlets), iron mottling, moist.		
4		4			0.0 - 0.4' Sluff		
5	3	7 10 10	1.9	3.9	0.4 - 0.8' Same as above. 0.8 - 2.0' Tan fine SAND, iron mottling, wet.		
6		6			Same as above, saturated.		
7	4	8 8 10	2.0	2.7			
8		3			Same as above, trace clay at 1.6'.		
9	5	4 4 5	1.8	4.1			
10		1			0.0 - 0.4' Same as above.		
11	6	1 1 1	1.8	5.4	0.4 - 1.8 Gray fine SAND, trace medium Sand, Silt, and Clay, saturated.		
12		7			0.0 - 1.6' Same as above.		
13	7	14 20 22	2.0	3.2	1.6 - 2.0' Gray angular fine to coarse GRAVEL, trace fine to coarse Sand and Silt, saturated.		
14		48			0.0 - 0.3' Sluff.		
15	8	47 12 5	1.0	3.2	0.3 - 0.5' Same as above. 0.5 - 1.0 Red Silty Clay, stiff, plastic, saturated.		
16		2			Grayish and Red CLAY, plastic, medium stiff, wet.		
17	9	3 3 5	0.8	0			
18		2			Same as above, soft.		
19	10	1 1 2	2.0	0			
20							

BORING LOG

Boring No.: (MW-49B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 2 OF 4		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 2-4, 2004		
SURFACE ELEVATION: NA				BORING LOCATION: West of DL Moore.		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE		Split Spoon	--	--
--	--	--		I.D.		2 inch	--	--
--	--	--		WT./Fall		140 lbs	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
21	11	1 1 1 1	2.0	0	Same as above, soft.			
22								
23	12	WOH WOH WOH 1	2.0	0	Same as above, very soft.			
24								
25	13	WOH WOH WOH WOH	2.0	0	Same as above, very soft.			
26								
27	14	WOH WOH WOH WOH	2.0	0	Same as above, very soft.			
28								
29	15	WOR WOR WOR WOH	2.0	0	Same as above, very soft.			
30								
31	16	2 4 6 9	1.4	0.4	0.0 - 0.8' Same as above. 0.8 - 1.4' Red Clayey SILT, trace to little fine to coarse Sand and fine to medium Gravel, moist.			
32								
33	17	12 22 22 24	2.0	0	Red SILT, trace Clay, fine to coarse Sand, and fine to coarse Gravel, dry, very stiff.			
34								
35	18	50/4" - - -	0	NA	No recovery, stone in shoe of splitspoon, spoon is wet.			
36								
37	19	36 46 48 44	0	NA	No recovery, stone in shoe of splitspoon, spoon is wet.			
38								
39	20	28 33 36 39	0	NA	No recovery, stone in shoe of splitspoon, spoon is wet.			
40								



BORING LOG

Boring No.: (MW-49B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 3 OF 4	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 2-4, 2004	
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
41	21	7 13 19	1.8	2.3	Same as 32 - 34' bgs, moist to wet, medium SAND seam at 1.7' (approximately 0.5" thick).		
42		22					
43	22	17 19 21	2.0	2.3	Same as above, soft, areas with increased amounts of medium Sand, moist to wet.		
44		27					
45	23	12 17 19	1.7	3.9	Grayish red fine Sandy SILT, little medium to coarse Sand and fine to coarse Gravel, trace Silt, wet, medium sand stringers observed throughout.		
46		38					
47	24	27 38 50/5"	1.0	2.7	Same as above, greater Silt content, very stiff, moist to wet.		
48		-					
49	25	22 42 50/3"	0.3	4.1	Sluff, weathered bedrock in shoe of splitspoon.		
50		-					
51	26	15 24 50/3"	1.0	5.4	Gray fine to medium SAND, some coarse Sand and fine to coarse Gravel, little Silt (potentially weathered bedrock).		
52	27	50/0"	0.0	3.2	Weathered bedrock in shoe of splitspoon.		
53	RUN 1				RUN 1 - 52.7 - 56.2' bgs		
54					Run length 3.5'		
55					Recovery 3.1'		
56					RQD 58%		
57	RUN 2				RUN 2 - 56.2 - 61.7' bgs		
58					Run length 5.5'		
59					Recovery 5.5'		
60					RQD 13%		

BORING LOG

Boring No.: (MW-49B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 4 OF 4	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 2-4, 2004	
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
61	RUN 2 Cont'd						
62					RUN 3 - 61.7 - 68.2' bgs		
63					Run length 6.5'		
64					Recovery 6.2'		
65	RUN 3				RQD 48%		
66							
67							
68							
69					End of boring at 68.2' bgs.		
70					Set 2-inch diameter, Schedule 40 PVC, 10-slot screen from 57.3 -		
71					67.3' bgs.		
72							
73							
74							
75							
76							
77							
78							
79							
80							

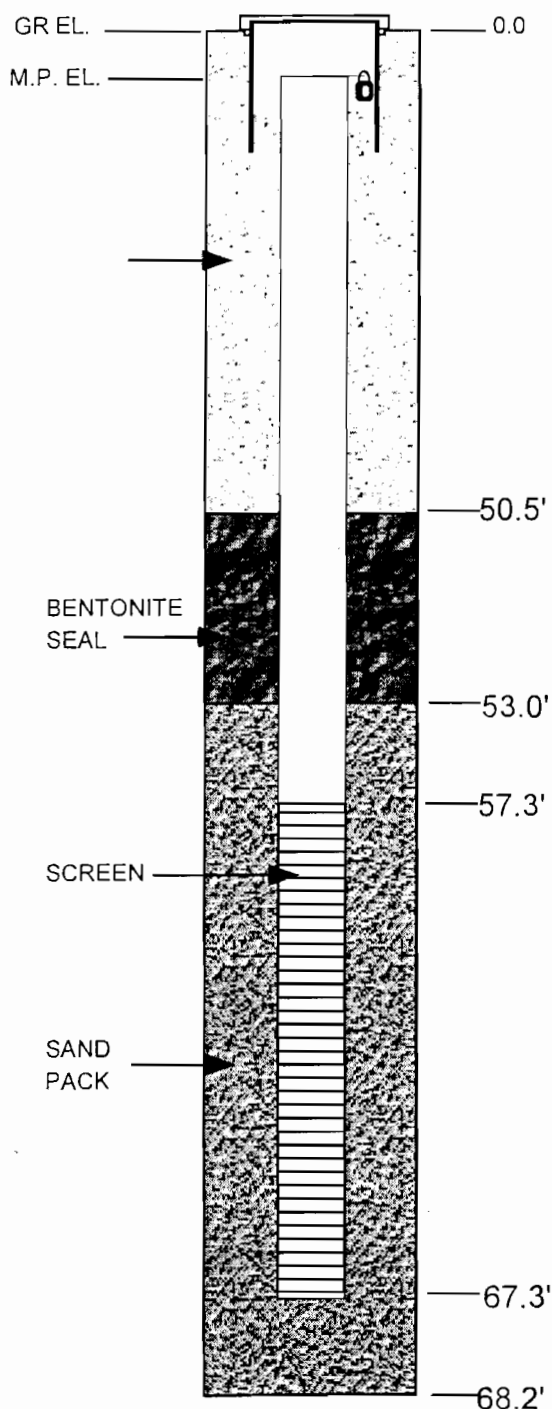
MONITORING WELL COMPLETION LOG

Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. MW-49B

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/3/04 - 6/7/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Tamara Raby
Drilling Contractor SJB
Type of Well Monitoring
Static Water Level 8.88' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 67.3' bg
Total Depth of Boring 68.2' bg

Drilling Method
Type HSA / HQ Core Diameter 4.25"
Casing Auger to 52.7' bg, HQ Core from 52.7' to 68.2' bg

Sampling Method
Type split spoon Diameter 2"
Weight 140 lb Fall 30"
Interval 2' from 16' to 54' bg

Riser Pipe Left in Place
Material PVC Diameter 2"
Length Joint Type flush thread

Screen
Material PVC Diameter 2"
Slot Size 10 Length 10'
Stratigraphic Unit Screened bedrock

Filter Pack
Sand X Gravel Natural
Grade #0
Amount Interval 53' - 68.2' bg

Seal(s)
Type Bentonite Interval 50.5' - 53.0' bg
Type Grout Interval 0 - 50.5' bg
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

BORING LOG

Boring No.: (MW-50B)

PROJECT: Gastown Former MGP			CONTRACTOR: SJB (Tony)			PAGE 1 OF 3	
PROJECT No.: 44491			SITE LOCATION: Tonawanda, New York			DATE: June 8-11, 2004	
SURFACE ELEVATION: NA			BORING LOCATION: West of DL Moore.			ET GEOLOGIST: Tamara Raby	
WATER LEVELS			DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
1					Auger to 10' bgs.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	1	1 WOH WOH WOH	0.5	6.5	Olive gray orgnaic fine Sandy SILT, trace medium Sand and Clay, saturated.		
12							
13	2	WOH WOH WOH WOH	1.0	4.5	Olive gray organic SILT, some Clay, trace fine Sand, shells, and wood fragments, saturated		
14							
15	3	1 WOH 1 WOH	0.8	0.9	Same as above.		
16							
17	4	3 14 16 18	0.3	5.9	Dark gray fine to coarse SAND and fine to coarse GRAVEL, loose, saturated.		
18							
19	5	6 9 11 7	0.8	1.4	Same as above.		
20							

BORING LOG

Boring No.: (MW-50B)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 2 OF 3		
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 8-11, 2004		
SURFACE ELEVATION: NA				BORING LOCATION:		ET GEOLOGIST: Tamara Raby		
WATER LEVELS				DRILLING AND SAMPLING				
DATE	TIME	DEPTH		CASING		SAMPLER	CORE	TUBE
--	--	--		TYPE		Split Spoon	--	--
--	--	--		I.D.		2 inch	--	--
--	--	--		WT./Fall		140 lbs	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES			
21	6	WOH WOH WOH WOH	0.0	NA	No recovery. Tip of split spoon has gravel pieces w/ reddish brown CLAY.			
22								
23	7	WOH WOH WOH WOH	0.0	NA	No recovery.			
24								
25	8	WOH WOH WOH 18	1.4	4.5	0.0 - 0.6 Reddish brown Silty CLAY, trace Gravel, very soft, saturated. 0.6 - 1.4' Reddish brown fine to coarse Sandy Clayey SILT, trace Fine Gravel, soft, saturated.			
26								
27	9	7 14 12 11	2.0	4.0	Same as above, grading to firm, less moisture with depth (TILL?)			
28								
29	10	14 50/0.4' - -	0.8	0.3	Pinkish gray fine Sandy SILT, trace medium to coarse Sand, moist, very stiff.			
30								
31	11	31 46 48 23	1.5	0	Pinkish gray SILT, trace medium to coarse Sand, moist, very stiff.			
32								
33	12	21 27 30 33	2.0	2.6	0.0 - 1.0' Sluff from above. 1.0 - 1.4' Same as above. 1.4 - 2.0' Fine Sandy SILT, saturated bottom 0.3 feet.			
34								
35	13	48 50/0.3' - -	1.5	1.6	0.0 - 0.3' Sluff from above. 0.3 - 0.8' Same as above. 0.8 - 1.5' Weathered bedrock			
36								
37					RUN 1 - 36.0 - 45.5' bgs Run length 9.5' Recovery 8.85' RQD 40%			
38	RUN 1							
39					Very broken from 2.4 - 2.9'			
40								

BORING LOG

Boring No.: (MW-50B)

PROJECT: Gastown Former MGP			CONTRACTOR: SJB (Tony)			PAGE 3 OF 3	
PROJECT No.: 44491			SITE LOCATION: Tonawanda, New York			DATE: June 8-11, 2004	
SURFACE ELEVATION: NA			BORING LOCATION:			ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
41 42 43 44 45	RUN 1 CONT				See previous page.		
46 47 48 49 50	RUN 2				RUN 2 - 45.5 - 51.0' bgs Run length 5.5' Recovery 4.2' RQD 24% Very broken 0.8 - 1.6'		
51 52 53 54 55 56					End of boring at 51.0' bgs. Set 2-inch diameter, Schedule 40 PVC, 10-slot screen from 40.0 - 50.0' bgs.		
57 58 59 60							

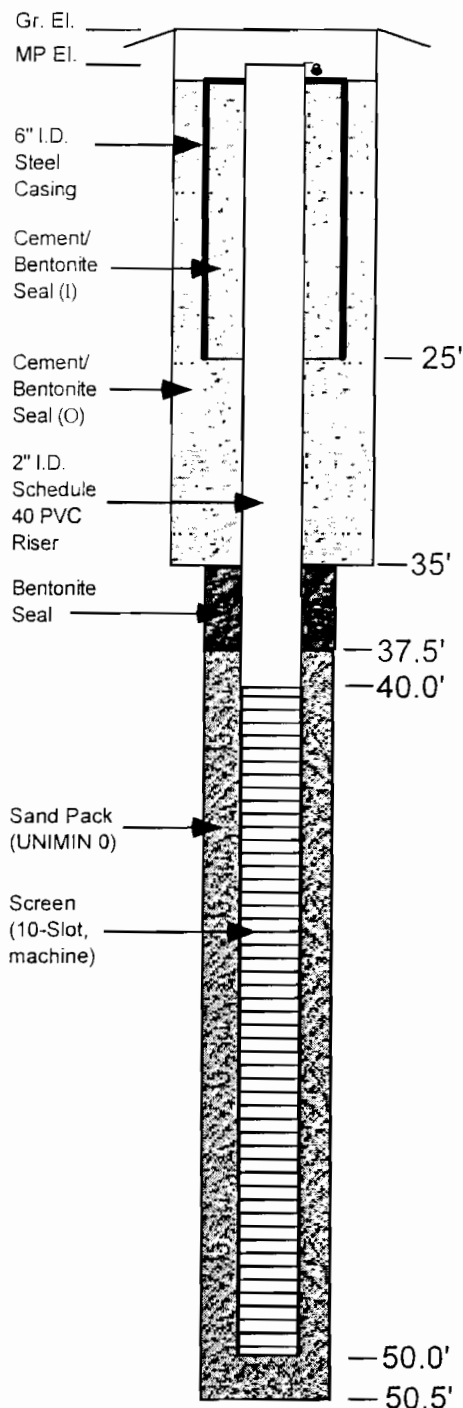
MONITORING WELL COMPLETION LOG

Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. MW-50B

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/8/04 - 6/11/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Tamara Raby
Drilling Contractor SJB
Type of Well Monitoring
Static Water Level 6.88' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 50.0' bg
Total Depth of Boring 50.5' bg
Drilling Method
Type HSA Diameter 8.25" dia. to 25' bg
Casing Permanent 6" steel to 25' (grouted)
Type Temp NW Drive and Wash (25' to 36' bg)
Type HQ Core (36' to 51' bg)
Sampling Method
Type split spoon / HQ core Diameter 2"
Weight 140 lb Fall 30"
Interval 2' from 0-36' bg, then HQ core from 36' to 51' bg
Riser Pipe Left in Place
Material PVC Diameter 2"
Length _____ Joint Type flush thread
Screen
Material PVC Diameter 2"
Slot Size 10 Length 10'
Stratigraphic Unit Screened bedrock
Filter Pack
Sand X Gravel _____ Natural _____
Grade #0
Amount _____ Interval _____
Seal(s)
Type bentonite Interval 35' - 37.5' bg
Type grout Interval 0 - 35' bg
Type _____ Interval _____
Locking Casing ☒ Yes ☐ No

Notes:

BORING LOG

Boring No.: (TW-1)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 2	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 16, 2004	
SURFACE ELEVATION: NA				BORING LOCATION: East of Niagara Construction.		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
1	1	21 24 10	1.4	1.2	0.0 - 0.3' Black SLAG (fine to coarse SAND), dry. 0.3 - 0.5' Weathered concrete, dry. 0.5 - 1.2' Brick fragments, dry. 1.2 - 1.4' Brown with rust mottles SILT, trace fine sand, moist.		
2		5					
3	2	4 2	1.5	1.8	Brown fine Sandy SILT, rust mottles, black staining, wet bottom 0.1'.		
4		4					
5	3	5 2	1.2	34.7	0.0 to 0.6' FILL material. 0.6 to 0.8' Same as 2.0 - 4.0' bgs. 0.8 - 1.2' Black fine to medium SAND, saturated with NAPL.		
6		2					
7	4	1 1 2	1.8	35.6	Dark gray Clayey SILT, rust and black mottling, trace NAPL. Fine to medium SAND seam at 0.8' saturated with NAPL.		
8		2					
9	5	7 1 1	1.8	28.7	Olive gray Clayey SILT, little fine Sand from 0.4 - 1.0' and 1.5 - 1.8' (has NAPL blebs), rust mottles, saturated.		
10		2					
11	6	3 3 5	0.8	17.1	Dark gray CLAY, trace Silt, rust mottles, moist, pliable, trace black staining.		
12		6					
13	7	8 7 8	2.0	140	Olive gray Silty CLAY, rust mottles, NAPL observed in prefferential pathways, black staining 0.5 - 1.2' , moist.		
14		1					
15	8	2 WOH	1.6	229	0.0 - 0.6' Olive gray Silty fine SAND, trace NAPL, rust mottles. 0.6 - 1.4' Trace to little Clay.		
16		2					
17	9	1 4 7	2.0	39.5	1.4 - 1.8' Olive gray Silty fine SAND, no NAPL, trace black staining. 0.0 - 1.0' Dark gray Silty fine SAND, soft, saturated, trace NAPL, heavy sheen. 1.0 - 1.8' Dark gray Clayey SILT, trace black staining. 1.8 - 2.0' Fine SAND, sautrated with NAPL.		
18		4					
19	10	WOH 3 5	0.2	13.9	0.0 - 0.1' Gray Clayey SILT, soft, trace black staining, saturated. 0.1 - 0.2' Black wood fragments.		
20							

BORING LOG

Boring No.: (TW-1)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 2	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 16, 2004	
SURFACE ELEVATION: NA				BORING LOCATION: East of Niagara Construction.		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	--	--
--	--	--		I.D.	--	--	--
--	--	--		WT./Fail	--	--	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
21	11	2 WOH 11 20	2.0	0.0	Gray fine to coarse SAND and fine to medium GRAVEL, saturated, trace NAPL top 0.2'.		
22		19					
23	12	1 1 1	2.0	1.2	Gray fine to coarse SAND and fine to coarse Gravel, slight sheen, saturated. Tip of spoon has reddish brown CLAY, very soft, saturated.		
24					End of boring at 24' bgs, auger to 23.5' bgs.		
25							
26					Set 6-inch diameter, 30-slot, Schedule 80 PVC screen from 8'9" to 23' bgs (sump bottom 7.5").		
27							
28							
29							
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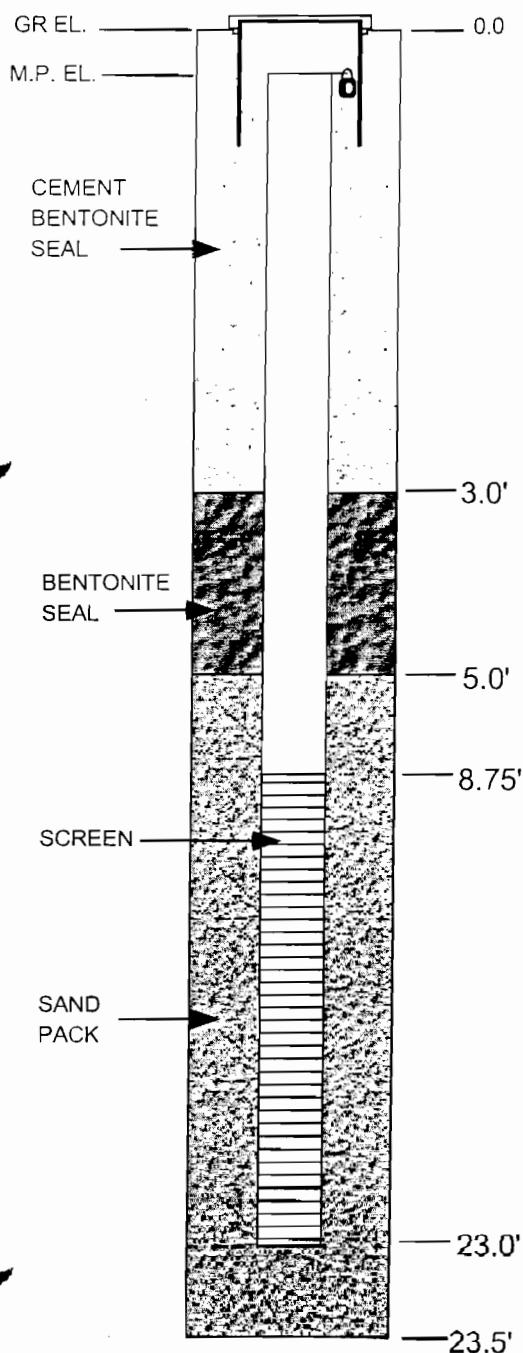
MONITORING WELL COMPLETION LOG

Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. TW-1

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/16/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Tamara Raby
Drilling Contractor SJB

Type of Well Extraction/Recovery
Static Water Level 7.25' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 23.0' bg
Total Depth of Boring 23.5' bg

Drilling Method
Type HSA Diameter 8.25"
Casing N/A

Sampling Method
Type split spoon Diameter 2"
Weight 140 lb Fall 30"
Interval 2' from 0-24' bg

Riser Pipe Left in Place
Material PVC (Sch 80) Diameter 6.0"
Length Joint Type flush thread

Screen
Material PVC (Sch 80) Diameter 6.0"
Slot Size 30 Length 13.63' w/ 0.63' sump
Stratigraphic Unit Screened overburden

Filter Pack
Sand X Gravel Natural
Grade #2
Amount Interval 5' - 23.5' bg

Seal(s)
Type Bentonite Interval 3' - 5' bg
Type Grout Interval 0 - 3' bg
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

BORING LOG

Boring No.: (TW-2)

PROJECT: Gastown Former MGP				CONTRACTOR: SJB (Tony)		PAGE 1 OF 2	
PROJECT No.: 44491				SITE LOCATION: Tonawanda, New York		DATE: June 17, 2004	
SURFACE ELEVATION: NA				BORING LOCATION: West of DL Moore.		ET GEOLOGIST: Tamara Raby	
WATER LEVELS				DRILLING AND SAMPLING			
DATE	TIME	DEPTH		CASING	SAMPLER	CORE	TUBE
--	--	--		TYPE	--	Split Spoon	--
--	--	--		I.D.	--	2 inch	--
--	--	--		WT./Fall	--	140 lbs	--
Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES		
1	1	4 3 3 2	0.5	2.3	FILL material (black fine to coarse SAND, slag, cinders), dry.		
2		1			Same as above, saturated.		
3	2	1 17 7	0.2	2.3			
4		1			Brownish gray Clayey SILT, trace wood fragments, rust and black mottles, sheen, black staining.		
5	3	3 4 5	1.8	3.9			
6		1			Black/dark gray organic Clayey Silt, moist, sheen.		
7	4	1 1 1 1	2.0	2.7			
8		WOH			Olive gray same as above, tan cinders, sheen, saturated (may be sluff from above).		
9	5	WOH 2 2	2.0	4.1			
10		1			Dark gray alternating Clayey SILT and fine Sandy Silt, saturated.		
11	6	1 2 3	2.0	5.4			
12		3			Gray fine Sandy SILT, some to trace clay, rust and black mottling that decreases with depth, saturated.		
13	7	3 2 2	2.0	3.2			
14		WOH			Dark gray fine Sandy SILT, some to trace Clay, black mottling, saturated.		
15	8	WOH 1 1	2.0	3.2			
16		WOH			Same as above with trace medium Gravel at 1.6'.		
17	9	WOH 1 2	1.5	10.8			
18		WOH			Same as above, no black mottling.		
19	10	WOH WOH WOH WOH	2.0	19.3			
20							

BORING LOG

Boring No.: (TW-2)

PROJECT: Gastown Former MGP	CONTRACTOR: SJB (Tony)	PAGE 1 OF 2
PROJECT No.: 44491	SITE LOCATION: Tonawanda, New York	DATE: June 17, 2004
SURFACE ELEVATION: NA	BORING LOCATION: West of DL Moore.	ET GEOLOGIST: Tamara Raby

WATER LEVELS			DRILLING AND SAMPLING			
DATE	TIME	DEPTH	CASING	SAMPLER	CORE	TUBE
--	--	--	TYPE	--	Split Spoon	--
--	--	--	I.D.	--	2 inch	--
--	--	--	WT./Fall	--	140 lbs	--

Depth (ft)	Sample Number & Time	Blows per/6"	Rec. (feet)	HNu Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
21	11	WOH 17 21 18	2.0	29.1	0.0 - 1.1' Same as above. 1.1 - 2.0 Gray fine to coarse SAND and fine to coarse GRAVEL, saturated.
22					
23	12	40 40 31 25	1.5	61.4	Same as above.
24					
25	13	1 1 1 1	1.5	172	0.0 - 0.2 Gray fine to coarse GRAVEL, saturated, heavy sheen, NAPL 0.2 -1.5 Red CLAY, saturated, NAPL blebs throughout, NAPL heavy bottom 0.2'
26					
27	14	WOH WOH WOH WOH	2.0	200	Red CLAY,. Little coarse Sand and fine Gravel. Does not appear that NAPL is in the CLAY (pulled down from above).
28					End of boring at 26' bgs, auger to 25.5' bgs.
29					
30					
31					Set 6-inch diameter, 30-slot, Schedule 80 PVC screen from 10'9" to 25' bgs (sump bottom 7.5").
32					
33					
34					
35					
36					
37					
38					
39					
40					

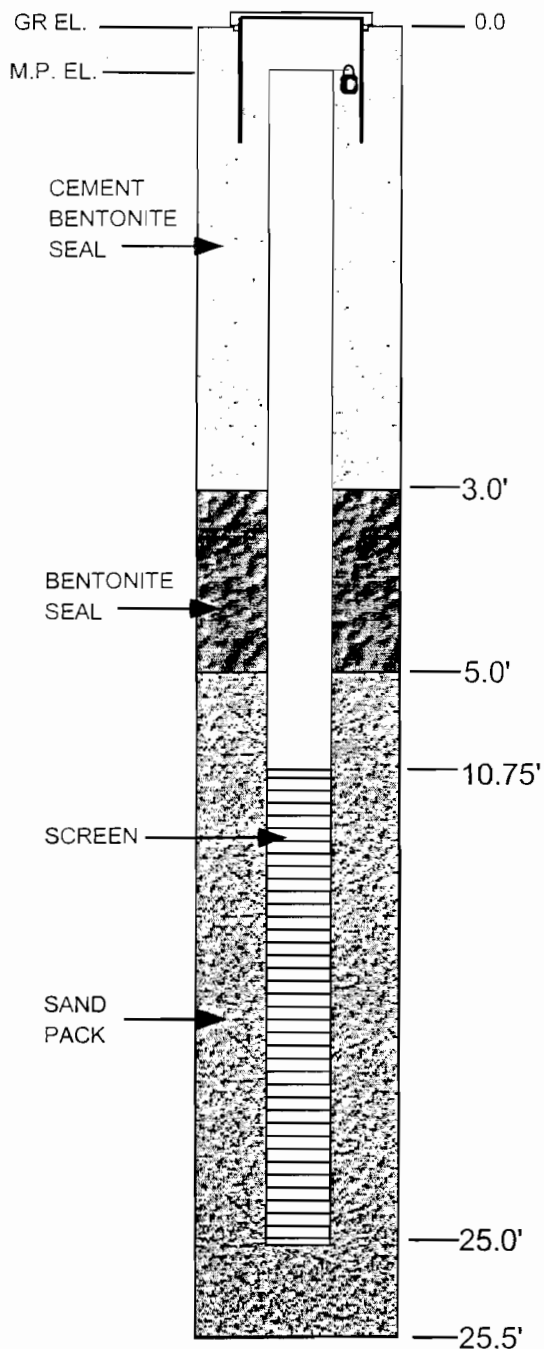
MONITORING WELL COMPLETION LOG

Earth Tech, Inc.
40 British American Blvd.
Latham, NY 12110
(518)951-2200

WELL NO. TW-2

Project Gastown
Client NYSDEC
Location Tonawanda, NY
Project No. 44491
Date Drilled 6/17/04
Date Developed 6/22/04

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Tamara Raby
Drilling Contractor SJB
Type of Well Extraction/Recovery
Static Water Level 6.44' Date 7/12/04
Measuring Point (M.P.) Top of Inner Casing
Total Depth of Well 25' bg
Total Depth of Boring 25.5' bg

Drilling Method
Type HSA Diameter 8.25"
Casing N/A

Sampling Method
Type split spoon Diameter 2"
Weight 140 lb Fall 30"
Interval 2' from 0 to 28' bg

Riser Pipe Left in Place
Material PVC (Sch 80) Diameter 6.0"
Length Joint Type flush thread

Screen
Material PVC (Sch 80) Diameter 6.0"
Slot Size Length 13.63' w/ 0.63' sump
Stratigraphic Unit Screened overburden

Filter Pack
Sand X Gravel Natural
Grade #2
Amount Interval 5'-25.5' bg

Seal(s)
Type Bentonite Interval 3' - 5' bg
Type Grout Interval 0 - 3' bg
Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Albany, NY (518) 951-2200		Test Boring Log			Boring No. VW-1	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 2	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Vibratory Well Installation					Ground Elev.: NA	
DRILLING METHOD:			SAMPLE	CORE	CASING	Datum: Ground Level
DRILL RIG TYPE:		TYPE				Date Started: 9/13/01
GROUNDWATER DEPTH:		DIAM.				Date Finished: 9/13/01
MEAS. PT.:		WEIGHT				Driller: Tony J.
DATE OF MEAS.:		FALL				Inspector: Walt Howard
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
5	S-1	17			Lt Gr br \$ a. cmf S, l f G; base fill	Rec = 1.5'
		15				Dry
		12			1.0': Bk cndrs, brks; slag	PID = 0.0
		10				
	S-2	4			Bk cndrs, brks, slag	Rec = 1.0'
		4			2.4': Rd Cy\$ l, mf(+) S; frm; no odor	Dry
		3				PID = 0.0
		4				
	S-3	2			Gr br \$, l f S; frm; mttld; no odor	Rec =
		2				PID = 0.4 ppm
		3				
		2				
S-4	2	Gr br \$ s, f S; frm; mttld; occ seams	Rec = 1.7'			
	1	gr f S l \$; sm Fe stain	Damp/Moist			
	2		PID = 0.4 ppm			
	2					
S-5	1	Same	Rec = 1.4'			
	2		Moist			
	4	8.9': Br mf(+) S, s \$; frm; no odor	PID = 0.8 ppm			
	5					
10						

Earth Tech, Inc.				Test Boring Log		Boring No. VW-1
Albany, NY (518) 951-2200						
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-6	2			Br Gr f S, a \$; frm; occ seams gr Cy\$	Rec = 0.8' Wet PID = 0.8 ppm
		2				
		2				
		1				
	S-7	WH			Dk Gr mf(+) S, l \$; w/ freq seams (0.02 - 0.05' thk) of Gr Cy\$; sm coal tar odor at tip	Rec = 1.2' Wet PID = 0.2 ppm
		WH				
		WH				
		2				
	S-8	1			Gr f S a \$; sft; freq seam Gr Cy\$	Rec = 1.2' Wet PID = 0.0
15		1				
		WH				
		1				
	S-9	1			Dk Gr rddsh mf(+) S, l \$; loose; strong odor; full coal tar NAPL saturation	Rec = 1.8' Wet PID = 70 ppm
		1				
		1				
		1				
	S-10	WH			Same 18.3': Freq seams Bk and Gr Cy\$ (0.05' thk) w/ seams of mf(+) S, l \$ 19.2': Gr f S seam (0.05' thk) saturated w/ coal tar NAPL	Rec = 1.4' Wet
		WH				
		WH				
		2				
20	S-11	2			Same; w/ NAPL saturation 20.2': Gr Cy\$ a f S; sft; freq seams f S, a \$ 20.7': Dk Gr cmf S, s mf(+) G; loose G sbrdd, trace NAPL bleb in tip; sl odor	Rec = 1.1' Wet PID = 1350 ppm lower PID in Gravel
		2				
		4				
		17				
	S-12	3			Same; freq NAPL blebs 22.5': Rd \$yC; w/ sm Gr \$ and C vvs; no visible coal tar; some coal tar odor	Rec = 1.0' Wet
		1				
		WH				
		WH				
25					Bottom of Boring @ 24.0' Auger to 22.0'	

MONITORING WELL COMPLETION LOG WELL NO. VW-1

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI

Client NYSDEC

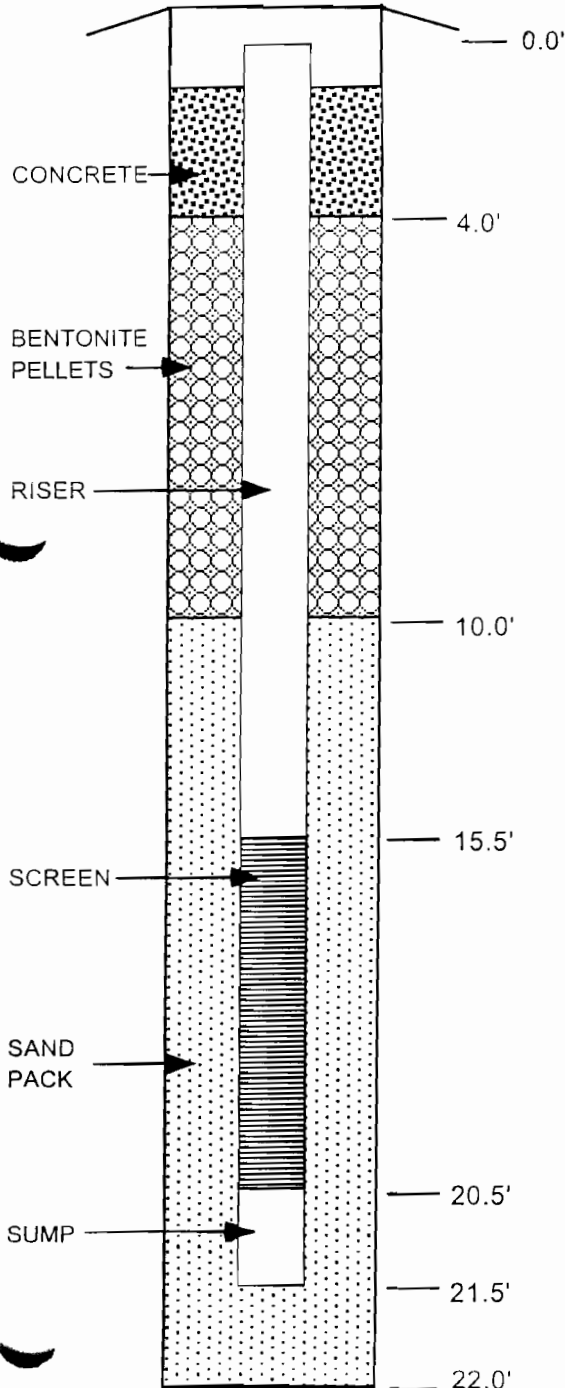
Location Sportsman Club Parking Lot

Project No. 44491

Date Drilled 9/13/01

Date Developed 10/4/01

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector Walt Howard

Drilling Contractor SJB Drilling Services

Type of Well Experimental Vibratory Well

Static Water Level 7.82' Date 10/4/01

Measuring Point (M.P.) Top of PVC

Total Depth of Well 21.5'

Total Depth of Boring 22.0'

Drilling Method

Type Hollow Stem Auger Diameter 4 1/4" I.D.

Casing None

Sampling Method

Type Split Spoon Diameter 2" O.D.

Weight 140# Fall 30"

Interval 0.0 - 24.0'

Riser Pipe Left in Place

Material Sch 80 PVC Diameter 1 7/8" I.D.

Length 15.5' Joint Type Flush Thread

Screen

Material Sch 80 PVC Diameter 1 7/8" I.D.

Slot Size 0.010 inch Length 5.0'

Stratigraphic Unit Screened Alluvium/Gravel

Filter Pack

Sand X Gravel Natural

Grade Filpro #1 Silica Sand

Amount 300 lbs Interval 10.0 - 22.0'

Seal(s)

Type Bentonite Chips Interval 4.0 - 10.0'

Type Interval

Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

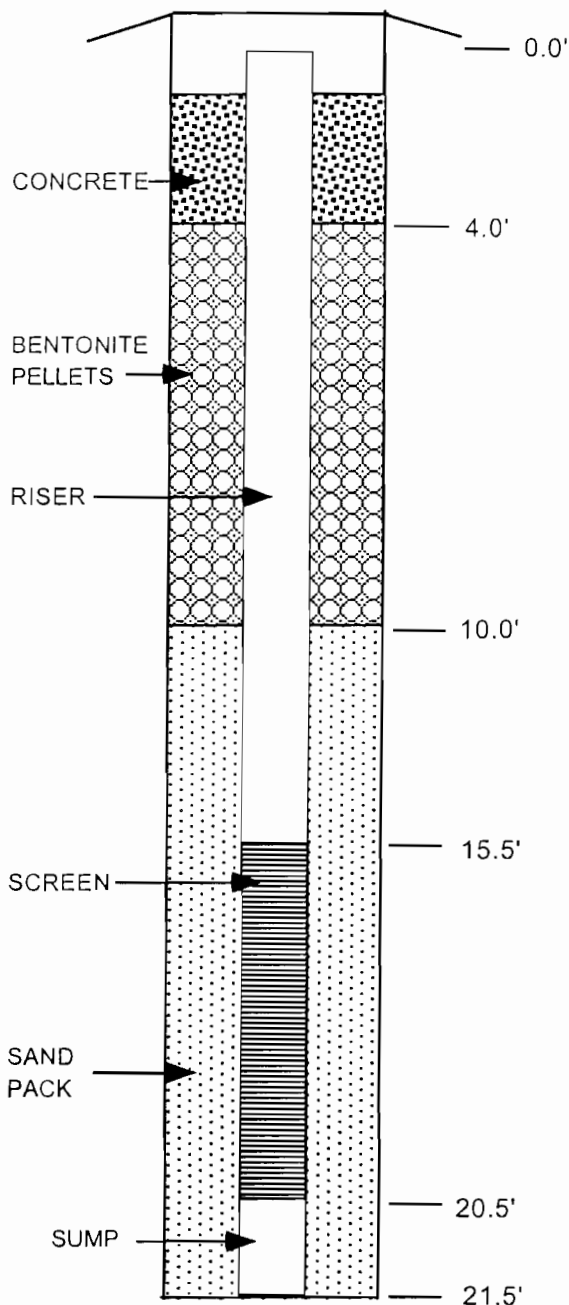
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MONITORING WELL COMPLETION LOG WELL NO. VW-2

Earth Tech, Inc.
 40 British American Boulevard
 Latham, NY 12110
 (518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Sportsman Club Parking Lot
 Project No. 44491
 Date Drilled 9/13/01 - 9/14/01
 Date Developed 10/4/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Experimental Vibratory Well
 Static Water Level 7.75' Date 10/4/01
 Measuring Point (M.P.) Top of PVC
 Total Depth of Well 21.5'
 Total Depth of Boring 21.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 1/4" I.D.
 Casing None
 Sampling Method
 Type Split Spoon Diameter 2" O.D. / 3" O.D.
 Weight 140# Fall 30"
 Interval 0.0 - 6.0', 15.0 - 23.0'
 Riser Pipe Left in Place
 Material Sch 80 PVC Diameter 1 7/8" I.D.
 Length 15.5' Joint Type Flush Thread
 Screen
 Material Sch 80 PVC Diameter 1 7/8" I.D.
 Slot Size 0.010 inch Length 5.0'
 Stratigraphic Unit Screened Alluvium/Gravel
 Filter Pack
 Sand X Gravel Natural
 Grade Filpro #1 Silica Sand
 Amount 300 lbs Interval 10.0 - 21.5'
 Seal(s)
 Type Bentonite Pellets Interval 4.0 - 10.0'
 Type Interval
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes:

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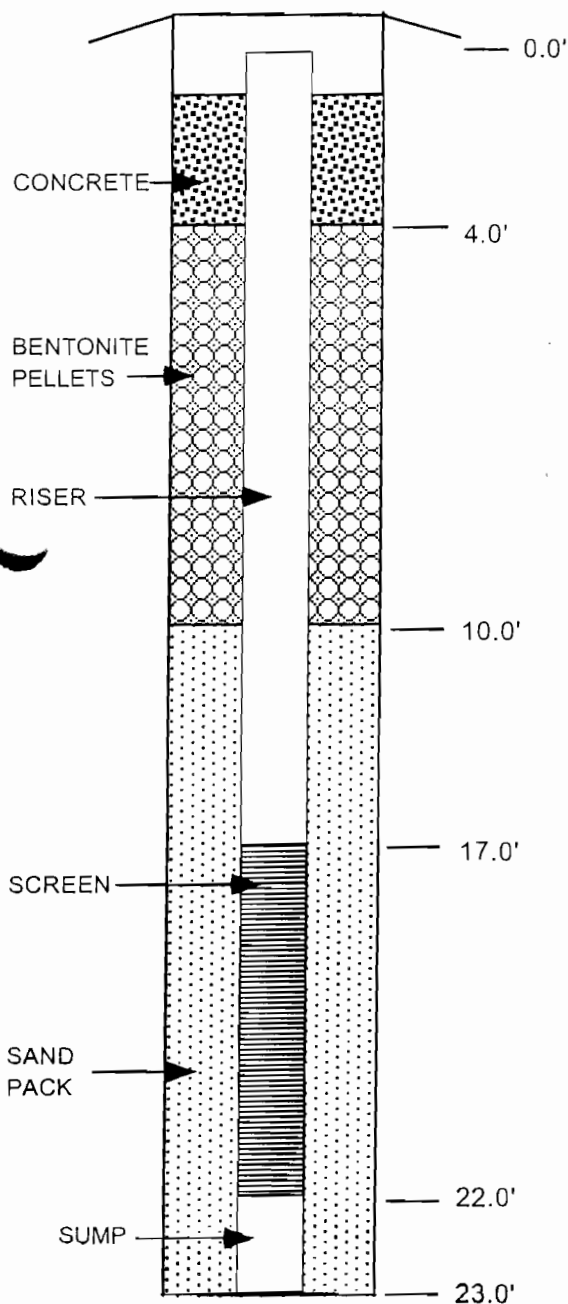
Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. VW-3	
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 2	
CLIENT: NYSDEC						Job No. 44491.02	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
10							
15							
	S-4			3" Spoon	Gr f S, s \$; sm coal tar odor; no sheen; no blebs 15.3': Dk Gr Bk Cy\$ seam; org 15.35': Dk Gr mf(+) S, s \$; some coal tar odor; no visible sign of coal tar NAPL	Rec = 11' Wet	
	S-5				Dk Gr mf S; freq dk gr Cy\$ seams; freq NAPL blebs to 17.6' 17.6': Dk Gr mf(+) S, l \$; NAPL saturated	Rec = 0.9' Wet	
	S-6	WH			Approx 2" sbrdd G fgmt at top of recovery w/ NAPL sat Gr Cy\$ l f S; w/ occ f S seams; occ NAPL blebs	Rec = 1.3' Wet	
		WH					
20		9			19.8': Gr f S a \$; occ Cy\$ seams; no blebs 20.3': Gr cmf G, s cmf S; G sbrdd; occ blebs		
		15					
	S-7	27			Gr cmf G, l cmf S; hl; sm cbl fgmts; G sbrdd; NAPL large bleb at 21.5'	Rec = 1.4' Wet	
		20					
		11					
		9					
25					Bottom of Boring @ 23.0' Auger to 23.0'		

MONITORING WELL COMPLETION LOG WELL NO. VW-3

Earth Tech, Inc.
40 British American Boulevard
Latham, NY 12110
(518) 951-2200

Project Gastown Former MGP Site RI
Client NYSDEC
Location Sportsman Club Parking Lot
Project No. 44491
Date Drilled 9/13/01
Date Developed 10/4/01

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector Walt Howard
Drilling Contractor SJB Drilling Services
Type of Well Experimental Vibratory Well
Static Water Level 8.0' Date 10/4/01
Measuring Point (M.P.) Top of PVC
Total Depth of Well 23.0'
Total Depth of Boring 23.0'
Drilling Method
Type Hollow Stem Auger Diameter 4 1/4" I.D.
Casing None
Sampling Method
Type Split Spoon Diameter 2" O.D.
Weight 140# Fall 30"
Interval 0 - 6', 15 - 23'
Riser Pipe Left in Place
Material Sch 80 PVC Diameter 1 1/7" I.D.
Length 17' Joint Type Flush Thread
Screen
Material Sch 80 PVC Diameter 1 7/8" I.D.
Slot Size 0.010 inch Length 5.0'
Stratigraphic Unit Screened Alluvium/Gravel
Filter Pack
Sand X Gravel Natural
Grade Filpro #1 Silica Sand
Amount 300 lbs Interval
Seal(s)
Type Bentonite Pellets Interval 4.0 - 10.0'
Type Interval
Type Interval
Locking Casing ☒ Yes ☐ No

Notes:

Earth Tech, Inc. Albany, NY (518) 951-2200		Test Boring Log			Boring No. PPW-1	
PROJECT: Gastown Former MGP Site RI					Sheet 1 of 3	
CLIENT: NYSDEC					Job No. 44491.02	
DRILLING CONTRACTOR: SJB Drilling Services					Meas. Pt. Elev.: NA	
PURPOSE: Pressure Pulse Test Well Installation					Ground Elev.: NA	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum: Ground Level	
DRILL RIG TYPE: CME-75	TYPE	SS	--	HSA	Date Started: 3/28/02	
GROUNDWATER DEPTH: 7.0'	DIAM.	2"00	--	8 1/4" I.D.	Date Finished: 3/28/02	
MEAS. PT.: Ground Level	WEIGHT	140#			Driller: Tony Jakubczak	
DATE OF MEAS.: 4/3/02	FALL	30"			Inspector: Walt Howard	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	Graphic Log	GEOLOGIC DESCRIPTION	REMARKS
					No Sampling 0-5'	
5	S-1	2			Gr br bk \$ l f S; frm; mttld; reworked; sm bk stain; fnt coal tar odor	Rec=1.4' Damp PID HS= 3.5 ppm
		3				
		5				
		7				
	S-2	4			Same; sm petrol odor	Rec=0.2' Damp PID HS=7.8 ppm
		4				
		4				
		4				
10						

Earth Tech, Inc. Albany, NY (518) 951-2200				Test Boring Log		Boring No. PPW-1
PROJECT: Gastown Former MGP Site RI						Sheet 2 of 3
CLIENT: NYSDEC						Job No. 44491.02
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-3	1			Gr br bk \$ l f S; frm; stained	Rec=1.5'
		1			10.3': Gr br fs l \$; wet; no sheen;	Moist/Wet
		2			w/seams Gr Cy\$	PID HS=1.2 ppm
		2			11.1': Gr br \$, t f S; frm; mttld	
	S-4	3			Same; w/ bk stained fs seam at	Rec=1.5'
		4			12.2'-12.3'	Wet
		4			12.8': Dk Gr mf(+)S, l-\$; loose;	PID HS=1.2 ppm
		5			fnt coal tar odor; no sheen; no	
	S-5	WH			Gr fS l\$: loose; w/ freq seams	Rec=0.9'
		1			(0.02-0.04') Cy\$; No sheen; No	Wet
15		2			NAPL	PID HS=12 ppm
		1				
	S-6	WH			Gr Cy\$; w/ fS seams	Rec=0.6'
		WH			16.4': Bk dk gr fs, l \$; loose;	Wet
		2			No odor	PID HS= 420 ppm
		4				
	S-7	WR			Bk mf(+)S, l\$; sft; hvy coal tar	Rec=0.8'
		WR			sheen; freq blebs @ 18.1'-18.8'	Wet
		WH				PID HS=240 ppm
		WH				
20	S-8	WH			Gr fS; 0.05' seams; w/ alt seams	Rec= 1.2'
		1			Gr Cy\$; sand seams NAPL sat.	Wet
		2			20.7': Bk mf(+)S, l\$, NAPL sat	PID HS=750 ppm
		2			to sample bottom	
	S-9	12			Gr Cy\$, (+)fS, smfG; No NAPL	Rec=0.8'
		24			22.2': Gr cmf S, t f G; loose	Wet
		14			No NAPL; No sheen	PID HS=350 ppm
		12			22.5': Gr cmf G l, cmfS; loose;	
	S-10	1			Rd \$yC; frm; w/ freq GrCy\$	Rec= 1.8'
		1			varves; frm; No odors	Moist
25		1			PID HS= 70 ppm	

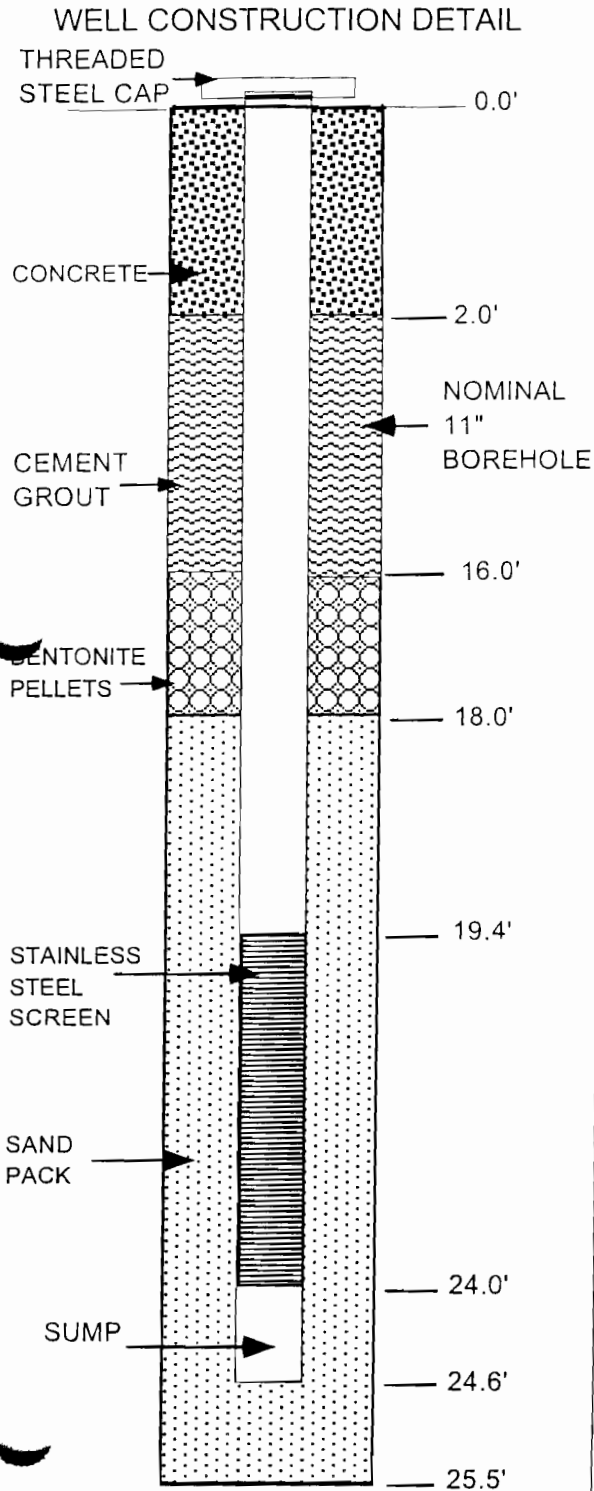
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MONITORING WELL COMPLETION LOG WELL NO. PPW-1

Earth Tech, Inc.
 40 British American Boulevard
 Latham, NY 12110
 (518) 951-2200

Project Gastown Former MGP Site RI
 Client NYSDEC
 Location Tonawanda, NY
 Project No. 44491
 Date Drilled 3/28/02
 Date Developed 4/3/02

INSPECTION NOTES



NOT TO SCALE

Inspector Walt Howard
 Drilling Contractor SJB Drilling Services
 Type of Well Pressure Pulse Test Well
 Static Water Level 7.0' Date 4/3/02
 Measuring Point (M.P.) Top of Well Casing
 Total Depth of Well 24.6'
 Total Depth of Boring 25.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 8 1/4" I.D.
 Casing None
 Sampling Method
 Type Split Spoon Diameter 2" O.D.
 Weight 140# Fall 30"
 Interval 5.0' - 26.0'
 Riser Pipe Left in Place
 Material Black Steel Diameter 6" I.D.
 Length 19.6' Joint Type Welded
 Screen
 Material Stainless Steel Diameter 6" I.D.
 Slot Size 0.050 inch Length 5.2'
 Stratigraphic Unit Screened Alluvium/Gravel
 Filter Pack
 Sand X Gravel Natural
 Grade #4 Silica
 Amount 200 lbs Interval 18.0 - 25.5'
 Seal(s)
 Type Bentonite Chips Interval 18.0' - 16.0'
 Type Cement Grout Interval 16.0'-0.0'
 Type Interval
 Locking Casing ☐ Yes ☒ No

Notes:

APPENDIX E

MONITORING WELL DEVELOPMENT LOGS

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-1 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	14 feet
2. Measured Total Well Depth (TOC):	13.28 feet
3. Sand/Silt Accumulation:	_____ feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	6.18 feet
6. C = Column of Water in Casing (L-W):	7.1 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.16 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	835	845	850	855	900	905	910
Water Level	Feet							
Gallons Purged	Gal	0.25	2	3	3.5	4	4.5	5
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	497	147	174	94	12	25
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.41	1.37	1.34	1.32	1.31	1.3	1.29
pH (+/- 0.1)	pH unit	7.24	7.15	7.09	7.08	7.09	7.05	7.05
Temp	C	14	13.9	13.8	13.8	13.8	13.8	13.8
Color		Dark Gray	Light Gray	Gray-clear	Gray-clear	Gray-clear	Clear	Clear
Odor		Very Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-32 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	19.8 feet
2. Measured Total Well Depth (TOC):	19.39 feet
3. Sand/Silt Accumulation:	0.41 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	6.58 feet
6. C = Column of Water in Casing (L-W):	12.81 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.29 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1005	1015	1022	1030	1035	1042	1048
Water Level	Feet							
Gallons Purged	Gal	0.1	0.75	1.25	1.5	2	2.5	3
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	645	218	126	25	70
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	0.995	1.27	1.27	1.27	1.27	1.27	1.27
pH (+/- 0.1)	pH unit	7.07	7.11	7.07	7.08	7.06	7.03	7.02
Temp	C	15.4	14.4	14.5	15.5	14.6	15	15.5
Color		Dark Gray	Light Gray	Light Gray	Light Gray	Gray-Clear	Clear	Semi-clear
Odor		Very Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Faint Coal Tar	Very Faint Coal Tar	Very Faint Coal Tar

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-32 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	19.8 feet
2. Measured Total Well Depth (TOC):	19.39 feet
3. Sand/Silt Accumulation:	0.41 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	6.58 feet
6. C = Column of Water in Casing (L-W):	12.81 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.29 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1050	1055					
Water Level	Feet							
Gallons Purged	Gal	3.25	3.5					
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	36	21					
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.27	1.27					
pH (+/- 0.1)	pH unit	6.99	6.98					
Temp	C	14.9	14.7					
Color		Clear	Clear					
Odor		Very Faint Coal Tar	Very Faint Coal Tar					

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-33 Date: 10/1/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	20.2 feet
2. Measured Total Well Depth (TOC):	19.35 feet
3. Sand/Silt Accumulation:	0.85 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	7.95 feet
6. C = Column of Water in Casing (L-W):	11.4 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.26 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1600	1605	1610	1615	1622	1625	1628
Water Level	Feet							
Gallons Purged	Gal	0.5	1	1.5	2	3	3.5	4
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	574*	999	683	166
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.33	1.54	1.58	1.59	1.59	1.61	1.61
pH (+/- 0.1)	pH unit	6.74	6.74	6.7	6.74	6.75	6.76	6.76
Temp	C	17.9	17.2	16.8	16.4	16	16	15.9
Color		Dark Brown/Black	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Gary/Clear
Odor		None	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar

Comments: *- Pulled tubing up further in water column

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-33 Date: 10/1/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground): 20.2 feet

2. Measured Total Well Depth (TOC): 19.35 feet

3. Sand/Silt Accumulation: 0.85 feet

4. D = Casing Diameter (I.D.): 0.75 inches

5. W = Static Depth to Water (TOC): 7.95 feet

6. C = Column of Water in Casing (L-W): 11.4 feet

Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.26 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1632	1635	1640				
Water Level	Feet							
Gallons Purged	Gal	4.5	5	5.5				
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	77	51	34				
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.62	1.63	1.63				
pH (+/- 0.1)	pH unit	6.75	6.76	6.8				
Temp	C	16	15.9	15.8				
Color		Clear	Clear	Clear				
Odor		Slight Coal Tar	Slight Coal Tar	Slight Coal Tar				

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-34 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	17 feet
2. Measured Total Well Depth (TOC):	16.1 feet
3. Sand/Silt Accumulation:	0.9 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	8.28 feet
6. C = Column of Water in Casing (L-W):	7.82 feet
Well Volume = C(3.14159)(0.5D ²)(7.48)	0.18 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	730	750	1125	1145	1153		
Water Level	Feet							
Gallons Purged	Gal	0.1	0.75	0.85	1	1.25		
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	66	2		
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	3.08	3.5	3.47	3.52	3.48		
pH (+/- 0.1)	pH unit	6.23	7.07	7.21	7.22	7.23		
Temp	C	16.1	14.4	17.3	18.8	18.6		
Color		Dark Gray	Dark Gray	Dark Gray	Clear	Clear		
Odor		None	Very Faint Coal Tar	Very Faint Coal Tar	Very Faint Coal Tar	Very Faint Coal Tar		

Comments: Well ran dry, let set for a few hours-returned at 1100
Purged dry again, turned pump to very low flow rate and achieved a semi continuous flow rate

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-36 Date: 10/1/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic Pump

1. L = Constructed Total Well Depth (ground): 21.2 feet
 2. Measured Total Well Depth (TOC): 20.36 feet
 3. Sand/Silt Accumulation: 0.84 feet
 4. D = Casing Diameter (I.D.): 0.75 inches
 5. W = Static Depth to Water (TOC): 8.27 feet
 6. C = Column of Water in Casing (L-W): 12.09 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.28 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1415	1425	1435	1440	1445	1450	1455
Water Level	Feet							
Gallons Purged	Gal	1	2	3	4	5	6	7
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	141	146	144	999	931	101
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	0.93	0.705	0.777	0.8	0.828	0.835	0.84
pH (+/- 0.1)	pH unit	6.61	6.93	6.94	6.98	6.96	6.92	6.97
Temp	C	16.3	15.5	15	14.6	14.3	14.3	14.7
Color		Brown	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray	Lighter Gray
Odor		Coal Tar Like	Coal Tar Like	Coal Tar Like	Coal Tar Like	Coal Tar Like	Coal Tar Like	Coal Tar Like

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-36 Date: 10/1/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic Pump

1. L = Constructed Total Well Depth (ground):	21.2 feet
2. Measured Total Well Depth (TOC):	20.36 feet
3. Sand/Silt Accumulation:	0.84 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	8.27 feet
6. C = Column of Water in Casing (L-W):	12.09 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.28 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1500	1505	1510	1515			
Water Level	Feet							
Gallons Purged	Gal	8	9	9.5	10			
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	103	86	52	51			
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	0.85	0.855	0.855	0.856			
pH (+/- 0.1)	pH unit	6.93	6.89	6.9	6.92			
Temp	C	14.7	14.6	14.6	14.6			
Color		Lighter Gray						
Odor		Coal Tar Like						

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-40 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	18.7	feet
2. Measured Total Well Depth (TOC):	18.36	feet
3. Sand/Silt Accumulation:	0.34	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	7.61	feet
6. C = Column of Water in Casing (L-W):	10.75	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.25	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1350	1410	1415	1420	1425	1430	1445
Water Level	Feet							
Gallons Purged	Gal	0.1	1.5	1.75	2	2.25	2.5	3
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	346	207	176	162	177
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	0.693	0.702	0.711	0.714	0.714	0.711	0.712
pH (+/- 0.1)	pH unit	7.42	7.37	7.32	7.3	7.3	7.26	7.3
Temp	C	16.3	15.9	15.7	15.6	15.5	15.7	15.6
Color		Black/Gray	Gray	Light Gray	Gray/Clear	Gray/Clear	Gray/Clear	Gray/Clear
Odor		Coal Tar	Coal Tar	Coal Tar	Coal Tar	Coal Tar	Coal Tar	Coal Tar

Comments: 1352-Well went dry, allowed it to recharge and lowered the flow rate on the pump
1435- Turbidity 177

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-43 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	19.6	feet
2. Measured Total Well Depth (TOC):	19	feet
3. Sand/Silt Accumulation:	0.6	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	6.52	feet
6. C = Column of Water in Casing (L-W):	12.48	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.29	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1515	1525	1530	1535	1540	1545	1550
Water Level	Feet							
Gallons Purged	Gal	0.25	1.5	2.75	3.25	4	4.5	4.75
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	164	86	130	78	79
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.34	1.43	1.43	1.44	1.43	1.44	1.44
pH (+/- 0.1)	pH unit	7.29	7.34	7.13	7.15	7.22	7.16	7.22
Temp	C	17.7	16.5	16.4	16.3	16.1	16.1	16.2
Color		Black/Gray	Light Gray	Gray/Clear	Clear	Clear	Clear	Clear
Odor		Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar	Slight Coal Tar

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-43 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	19.6 feet
2. Measured Total Well Depth (TOC):	19 feet
3. Sand/Silt Accumulation:	0.6 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	6.52 feet
6. C = Column of Water in Casing (L-W):	12.48 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.29 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1600						
Water Level	Feet							
Gallons Purged	Gal	5.25						
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	82						
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.43						
pH (+/- 0.1)	pH unit	7.17						
Temp	C	16						
Color								
Odor								

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-44 Date: 10/2/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic

1. L = Constructed Total Well Depth (ground):	19.3 feet
2. Measured Total Well Depth (TOC):	18.82 feet
3. Sand/Silt Accumulation:	0.48 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	6.94 feet
6. C = Column of Water in Casing (L-W):	11.88 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.27 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1625	1640	1645	1650	1657	1702	
Water Level	Feet							
Gallons Purged	Gal	0.1	1.5	2.25	2.75	3.5	4	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	379	171	46	56	37	
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.41	1.39	1.43	1.42	1.43	1.42	
pH (+/- 0.1)	pH unit	7.42	7.33	7.28	7.33	7.2	7.2	
Temp	C	15.4	13.8	14	13.6	13.7	13.6	
Color		Black/Gray	Light Gray	Clear	Clear	Clear		
Odor		Faint Coal Tar	None	None	None	None		

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-49 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	20 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	8.11 feet
6. C = Column of Water in Casing (L-W):	11.89 feet
Well Volume = C(3.14159)(0.5D ²)(7.48)	0.27 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1100	1105	1108	1115	1119	1122	1125
Water Level	Feet							
Gallons Purged	Gal	1	1.5	2	2.75	3	3.5	4
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	216	92.4	147	43.2	27.5	22.5
Diss. Oxygen (+/- 10%)	%	19.1	4	3.6	3.7	3.2	2.8	2.9
Eh/ORP (+/- 10%)	MeV	-362.2	-328.2	-333.7	-319	-287.1	-300	-300
Conductivity (+/- 3%)	ms/cm	4915	4970	4985	4793	4792	4793	4794
pH (+/- 0.1)	pH unit	6.91	6.87	6.88	6.86	6.86	6.85	6.86
Temp	C	12.42	12.63	12.64	12.63	12.62	12.6	12.61
Color		Light Brown	Cloudy	Slightly Cloudy	Slightly Cloudy	Clear	Clear	Clear
Odor		None	Slight	Slight	None	Slight	Slight	Slight

Comments: Tubing is just above the bottom

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-50 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 20.5 feet
 2. Measured Total Well Depth (TOC): 0 feet
 3. Sand/Silt Accumulation: 0 feet
 4. D = Casing Diameter (I.D.): 0.75 inches
 5. W = Static Depth to Water (TOC): 6.2 feet
 6. C = Column of Water in Casing (L-W): 14.3 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.33 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1225	1230	1235	1240	1245	1250	1255
Water Level	Feet							
Gallons Purged	Gal	1	1.5	2	2.25	2.5	3	4
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	999	883	717
Diss. Oxygen (+/- 10%)	%	4.7	3	6.9	2.9	2.4	2.3	2.2
Eh/ORP (+/- 10%)	MeV	-542.9	-531.5	-480	-502.4	-499.1	-491.4	-486.3
Conductivity (+/- 3%)	umhos	4179	4211	4180	4140	4147	4045	4057
pH (+/- 0.1)	pH unit	6.85	6.82	6.8	6.78	6.79	6.78	6.77
Temp	C	12.54	12.86	12.48	12.47	12.46	12.46	12.46
Color		Dark Brown	Dark Brown	Dark Brown	Brown	Brown	Brown	Cloudy
Odor		None	None	Nonw	Slight	Slight	None	None

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-50 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 20.5 feet
 2. Measured Total Well Depth (TOC): 0 feet
 3. Sand/Silt Accumulation: 0 feet
 4. D = Casing Diameter (I.D.): 0.75 inches
 5. W = Static Depth to Water (TOC): 6.2 feet
 6. C = Column of Water in Casing (L-W): 14.3 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.33 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1300						
Water Level	Feet							
Gallons Purged	Gal	4.5						
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	773						
Diss. Oxygen (+/- 10%)	%	2						
Eh/ORP (+/- 10%)	MeV	-474.9						
Conductivity (+/- 3%)	umhos	3989						
pH (+/- 0.1)	pH unit	6.77						
Temp	C	12.44						
Color		Cloudy						
Odor		Slight						

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-51 Date: 12/13/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	7.37	feet
6. C = Column of Water in Casing (L-W):	11.63	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.27	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	800	807	814	821			
Water Level	Feet							
Gallons Purged	Gal	0.5	0.6	0.7	0.75			
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	132	69.6	46.7	39.1			
Diss. Oxygen (+/- 10%)	%	87.8	90.4	90.5	90.7			
Eh/ORP (+/- 10%)	MeV	-61.1	-67.2	-69	-75.1			
Conductivity (+/- 3%)	umhos	5724	5706	5662	5630			
pH (+/- 0.1)	pH unit	7.14	7.18	7.17	7.2			
Temp	C	11.87	12.1	12.16	12.17			
Color		Cloudy	Cloudy	Cloudy	Cloudy			
Odor		None	None	None	None			

Comments: Bailer got stuck on 12/12
 Removed 12/13, used 12/12 water level
 Tubing placed just above the bottom
 Let pump for 25 minutes before first reading
 Low producing well
 Many air bubbles in the flow through cell

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-52 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	0	feet
2. Measured Total Well Depth (TOC):	22.4	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	7.25	feet
6. C = Column of Water in Casing (L-W):	15.15	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.35	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1530	1537	1544	1551	1558	1605	
Water Level	Feet							
Gallons Purged	Gal	1	2	2.5	3	3.75	4.5	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	724	136	77.4	73.8	54.8	50.6	
Diss. Oxygen (+/- 10%)	%	30.8	6.7	3.8	3.3	3	2.8	
Eh/ORP (+/- 10%)	MeV	-289	<-345	-373	-388.4	-374	-353.6	
Conductivity (+/- 3%)	umhos	6380	6714	6689	6634	6623	6598	
pH (+/- 0.1)	pH unit	6.68	6.63	6.63	6.62	6.62	6.63	
Temp	C	13.09	12.95	12.91	12.88	12.87	12.88	
Color		Murky Gray	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy	
Odor		None	None	None	None	None	None	

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-53 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 19.5 feet
 2. Measured Total Well Depth (TOC): 0 feet
 3. Sand/Silt Accumulation: 0 feet
 4. D = Casing Diameter (I.D.): 0.75 inches
 5. W = Static Depth to Water (TOC): 4.86 feet
 6. C = Column of Water in Casing (L-W): 14.64 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.34 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1655	1702	1709	1716	1723	1730	1737
Water Level	Feet							
Gallons Purged	Gal	0.5	1	1.5	2	2.5	3	3.25
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	80.4	62	52.4	58.6	47.2	43.9
Diss. Oxygen (+/- 10%)	%	38.8	28.6	20	16.1	16.3	17.7	17.7
Eh/ORP (+/- 10%)	MeV	-260	-293.9	-322.9	-333	-313.5	-301.7	-283.6
Conductivity (+/- 3%)	umhos	5164	4926	4697	4501	4370	4280	4159
pH (+/- 0.1)	pH unit	6.95	6.88	6.84	6.83	6.83	6.83	6.83
Temp	C	13.01	13.02	13.05	13.07	13.04	13.08	13.06
Color		Brown	Clear	Clear	Clear	Clear	Clear	Clear
Odor		None	None	None	Slight	None	None	None

Comments:
 Tubing is just above the bottom
 Let pump for 15 minutes before taking first reading
 Flow dropped at 1730

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-53 Date: 12/12/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19.5 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	4.86 feet
6. C = Column of Water in Casing (L-W):	14.64 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.34 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1744						
Water Level	Feet							
Gallons Purged	Gal	3.5						
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	38.8						
Diss. Oxygen (+/- 10%)	%	18.9						
Eh/ORP (+/- 10%)	MeV	-260.3						
Conductivity (+/- 3%)	umhos	4101						
pH (+/- 0.1)	pH unit	6.81						
Temp	C	13.07						
Color		Clear						
Odor		None						

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-54 Date: 12/13/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	25	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	7.42	feet
6. C = Column of Water in Casing (L-W):	17.58	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.40	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	900	910	920	930	940	950	1000
Water Level	Feet							
Gallons Purged	Gal	0.5	0.6	0.75	1	1.5	2.25	2.5
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	81.8	48.5	31.1	16.4	20.9	10.83	8.89
Diss. Oxygen (+/- 10%)	%	80.8	82.8	82.1	86.7	87.2	87.8	88.4
Eh/ORP (+/- 10%)	MeV	-63.7	-69.5	-72.4	-80.3	-83.5	-86.6	-90.5
Conductivity (+/- 3%)	umhos	2038	2040	2047	2043	2045	2047	2045
pH (+/- 0.1)	pH unit	7.02	7.12	7.12	7.16	7.17	7.18	7.2
Temp	C	12.04	12.1	12.15	12.13	12.19	12.24	12.24
Color		Cloudy	Cloudy	Cloudy	Cloudy	Clear	Clear	Clear
Odor		None	None	None	None	None	None	

Comments: Tubing is just above the bottom
 Let pump for 15 minutes before taking first reading
 Slow flow rate, many air bubbles in flow through cell

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-55 Date: 12/13/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19.4 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	0.75 inches
5. W = Static Depth to Water (TOC):	5.88 feet
6. C = Column of Water in Casing (L-W):	13.52 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.31 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1315	1320	1325	1330	1335		
Water Level	Feet							
Gallons Purged	Gal	1.25	2	3	3.5	4		
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	159	119	45.7	58	59.5		
Diss. Oxygen (+/- 10%)	%	11.4	4.4	3.1	3.2	3.5		
Eh/ORP (+/- 10%)	MeV	-299	-460.2	-460.5	-445.4	-436.2		
Conductivity (+/- 3%)	umhos	1678	1719	1721	1718	1716		
pH (+/- 0.1)	pH unit	6.85	6.83	6.82	6.82	6.82		
Temp	C	13.97	14	13.99	13.98	13.97		
Color		Cloudy	Cloudy	Cloudy	Cloudy	Cloudy		
Odor		None	None	None	None	None		

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-56 Date: 12/13/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19.3	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	8.33	feet
6. C = Column of Water in Casing (L-W):	10.97	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.25	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1050	1105	1115	1125	1135	1150	
Water Level	Feet							
Gallons Purged	Gal	0.5	0.75	0.85	1	1.25	1.5	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	635	445	455	999	983	508	
Diss. Oxygen (+/- 10%)	%	91.9	92.3	92.2	90	88.6	86.7	
Eh/ORP (+/- 10%)	MeV	-87.6	-90.7	-95	-96	-94.4	-96.9	
Conductivity (+/- 3%)	umhos	1451	1455	1449	1433	1424	1417	
pH (+/- 0.1)	pH unit	7.62	7.61	7.57	7.45	7.43	7.38	
Temp	C	13.08	13.19	13.34	13.43	13.44	13.45	
Color		Gray	Gray	Gray	Gray	Gray	Gray	
Odor		None	None	None	None	None	None	

Comments: Tubing is just above the bottom
 Let pump for 15 minutes before taking first reading
 Low flow rate

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-57 Date: 12/13/2001

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 21 feet
 2. Measured Total Well Depth (TOC): 0 feet
 3. Sand/Silt Accumulation: 0 feet
 4. D = Casing Diameter (I.D.): 0.75 inches
 5. W = Static Depth to Water (TOC): 8.01 feet
 6. C = Column of Water in Casing (L-W): 12.99 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 0.30 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units	1520	1525	1530	1535	1540	1545	1550
Time	24 hr							
Water Level	Feet							
Gallons Purged	Gal	1	2	2.25	2.5	3.25	4	5
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	1074	824	999
Diss. Oxygen (+/- 10%)	%	10	3.5	2.7	2.2	2.3	2	1.8
Eh/ORP (+/- 10%)	MeV	-438.3	-447.1	-487.1	-491.6	-443.7	-415.6	-465.2
Conductivity (+/- 3%)	umhos	1322	1345	1346	1341	1336	1333	1317
pH (+/- 0.1)	pH unit	6.91	6.93	6.93	6.93	6.92	6.91	6.91
Temp	C	13.74	13.83	13.83	13.83	13.84	13.83	13.83
Color		Brown	Brown	Brown	Brown	Brown	Brown	Brown
Odor		None	None	None	None	None	None	None

Comments: Tubing is just above the bottom
Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: DPW-58 Date: 12/13/2001

Samplers: Amy Tillman and Walt Howard

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	25	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	0.75	inches
5. W = Static Depth to Water (TOC):	6.2	feet
6. C = Column of Water in Casing (L-W):	18.8	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	0.43	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1415	1420	1425	1430	1435	1440	
Water Level	Feet							
Gallons Purged	Gal	1.5	2.25	3	3.75	4.5	5	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	12	15	9.26	7.91	6.65	5.06	
Diss. Oxygen (+/- 10%)	%	17.3	4.6	3.3	2.9	2.7	2.4	
Eh/ORP (+/- 10%)	MeV	-187.9	-238	-260.2	-254	-256.6	-220	
Conductivity (+/- 3%)	umhos	1688	1744	1742	1741	1739	1738	
pH (+/- 0.1)	pH unit	6.74	6.72	6.71	6.71	6.71	6.71	
Temp	C	12.6	12.5	12.49	12.49	12.49	12.48	
Color		Clear	Clear	Clear	Clear	Clear	Clear	
Odor		Slight	Slight	Slight	Slight	Slight	Slight	

Comments: Tubing is just above the bottom
 Let pump for 15 minutes before taking first reading

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-40 Date: 7/11/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	17.3 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	6.74 feet
6. C = Column of Water in Casing (L-W):	10.56 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	1.72 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	856	907	914	920	932	940	
Water Level	Feet							
Gallons Purged	Gal	2	5	7.5	10	15	18	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	20	850	999	999	999	999	
Diss. Oxygen (+/- 10%)	mg/l	0	0	0	0	0	0	
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.35	1.33	1.4	1.39	1.37	1.32	
pH (+/- 0.1)	pH unit	6.48	7	6.88	6.8	6.75	6.86	
Temp	C							
Color								
Odor								

Comments: Water has bright sheen and strong odor of coal tar/NAPL, very silty and gray water

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-41 Date: 7/10/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	20.2	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	2	inches
5. W = Static Depth to Water (TOC):	6.11	feet
6. C = Column of Water in Casing (L-W):	14.09	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.30	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1438	1444	1452	1459	1530	1536	1543
Water Level	Feet							
Gallons Purged	Gal	2.5	5	7.5	10	12.5	15	17.5
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	999	999	999
Diss. Oxygen (+/- 10%)	mg/l	0.01	0.01	0.01	0	0.01	0.02	0.02
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	2.05	1.43	1.48	1.53	2.12	1.55	1.53
pH (+/- 0.1)	pH unit	6.06	6.44	6.03	6.63	6.99	7.4	7.5
Temp	C	15.4	14.4	14.1	12.6	15.1	14.2	14.9
Color								
Odor								

Comments: Water is gray and silty with faint NAPL odor
No NAPL present and no sheens noted

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-41 Date: 7/10/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	20.2 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	6.11 feet
6. C = Column of Water in Casing (L-W):	14.09 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.30 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1549	1617					
Water Level	Feet							
Gallons Purged	Gal	20	25					
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999					
Diss. Oxygen (+/- 10%)	%	0.03	0.04					
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	umhos	1.53	1.53					
pH (+/- 0.1)	pH unit	7.68	7.15					
Temp	C	12.9	13.7					
Color								
Odor								

Comments:

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-42 Date: 7/11/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19.3	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	2	inches
5. W = Static Depth to Water (TOC):	6.49	feet
6. C = Column of Water in Casing (L-W):	12.81	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.09	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1049	1055	1104	1115	1120	1126	
Water Level	Feet							
Gallons Purged	Gal	2	6	10	14	17	20	
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	899	786	999	332	982	999	
Diss. Oxygen (+/- 10%)	mg/l	0.08	0.2	0.23	0.16	0.19	0.19	
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.57	1.48	1.58	0.786	0.803	0.892	
pH (+/- 0.1)	pH unit	7.21	7.06	7.37	6.51	6.68	6.89	
Temp	C	13.4	12.9	12.6	12.1	12.7	12.7	
Color								
Odor								

Comments: Gray, moderate silt, no sheens or odors

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-43 Date: 7/11/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 22 feet
 2. Measured Total Well Depth (TOC): 0 feet
 3. Sand/Silt Accumulation: 0 feet
 4. D = Casing Diameter (I.D.): 2 inches
 5. W = Static Depth to Water (TOC): 7.66 feet
 6. C = Column of Water in Casing (L-W): 14.34 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 2.34 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1416	1428	1437	1452	1500		
Water Level	Feet							
Gallons Purged	Gal	2.5	5	10	15	20		
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	999		
Diss. Oxygen (+/- 10%)	mg/l	0.16	0.41	0.27	0.32	0.38		
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.93	0.943	0.969	2.63	1.96		
pH (+/- 0.1)	pH unit	8.23	8.45	8.57	8.52	8.21		
Temp	C	14	15.1	14.2	13.7	13.3		
Color								
Odor								

Comments: Water is black, silty, and has surface sheen and odor of DNAPL

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-44 Date: 7/11/2001

Samplers: Patrick Armstrong

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	2	inches
5. W = Static Depth to Water (TOC):	6.62	feet
6. C = Column of Water in Casing (L-W):	12.38	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.02	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1240	1250	1257	1308	1317		
Water Level	Feet							
Gallons Purged	Gal	2	5	10	15	20		
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	999		
Diss. Oxygen (+/- 10%)	mg/l	0.19	0.2	0.17	0.19	0.18		
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	0.97	1	0.99	0.99	1.01		
pH (+/- 0.1)	pH unit	7.54	7.36	7.31	7.03	7.18		
Temp	C	13.4	12.5	12.7	13	12.6		
Color								
Odor								

Comments: Gray, very silty water with sheen and DNAPL odor

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-45 Date: 4/2/2002

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	19 feet
2. Measured Total Well Depth (TOC):	18.6 feet
3. Sand/Silt Accumulation:	0.4 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	5.83 feet
6. C = Column of Water in Casing (L-W):	12.77 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.08 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	930	943	1000	1010			
Water Level	Feet							
Gallons Purged	Gal	5	10	15	20			
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999			
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	2.33	2.37	2.35	2.36			
pH (+/- 0.1)	pH unit	>6.35	<6.81	6.82	6.8			
Temp	C	9.6	9.2	9.6	9.6			
Color		Gray	Gray	Gray	Gray			
Odor		Tar	Tar	Tar	Tar			

Comments: PID Reading-469

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-46 Date: 4/1/2002

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground):	18.6 feet
2. Measured Total Well Depth (TOC):	18.25 feet
3. Sand/Silt Accumulation:	0.35 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	4.4 feet
6. C = Column of Water in Casing (L-W):	13.85 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.26 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1552	1600	1615	1622			
Water Level	Feet							
Gallons Purged	Gal	5	10	15	20			
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	10	10	10	10			
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.45	1.45	1.43	1.44			
pH (+/- 0.1)	pH unit	6.22	6.63	6.73	6.69			
Temp	C	9.7	9.7	9.8	9.7			
Color		Gray	Gray	Gray	Gray			
Odor		Tar	Tar	Tar	Tar			

Comments: PID Reading-164

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-47 Date: 4/2/2002

Samplers: Amy Tillman

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Constructed Total Well Depth (ground): 22 feet
 2. Measured Total Well Depth (TOC): 21.63 feet
 3. Sand/Silt Accumulation: 0.37 feet
 4. D = Casing Diameter (I.D.): 2 inches
 5. W = Static Depth to Water (TOC): 5.7 feet
 6. C = Column of Water in Casing (L-W): 15.93 feet
 Well Volume = $C(3.14159)(0.5D^2)(7.48)$ 2.60 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1053	1103	1113	1123	1133		
Water Level	Feet							
Gallons Purged	Gal	5	10	15	20	25		
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	999	999	999	999		
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	2.2	2.11	1.96	1.89	1.9		
pH (+/- 0.1)	pH unit	<7.11	7.02	6.96	6.96	6.91		
Temp	C	8.4	9.6	9.6	9.4	7.6		
Color		Brown	Brown	Brown	Brown	Brown		
Odor		Slight Tar	Slight Tar	Slight Tar	Slight Tar	Slight Tar		

Comments: PID Reading-0.6

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: MW-48 Date: 3/29/2002

Samplers: Walt Howard

Sample Number: NA QA/QC Collected? NA

Purging / Sampling Method: 1 1/2" Poly Bailer

1. L = Constructed Total Well Depth (ground):	23	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	2	inches
5. W = Static Depth to Water (TOC):	7	feet
6. C = Column of Water in Casing (L-W):	16	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.61	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	1300	1400					
Water Level	Feet	7	NM					
Gallons Purged	Gal	1	26					
Flow Rate	mL/min	NA	NA					
Turbidity (+/- 10%)	NTU	Very	Moderate					
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm							
pH (+/- 0.1)	pH unit							
Temp	C							
Color		Gray/Brown	Gray/Brown					
Odor		None	None					

Comments: NM-Not Measured
NA-Not Available due to the use of a bailer

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: PPW-1 Date: 3/29/2002 and 4/3/02

Samplers: Walt Howard

Sample Number: NA QA/QC Collected? NA

Purging / Sampling Method: 12 volt DC cent. Pump & Bailer on 3/29, Whale sub pump on 4/3

1. L = Constructed Total Well Depth (ground):	24.6	feet
2. Measured Total Well Depth (TOC):	22.8	feet
3. Sand/Silt Accumulation:	1.8	feet
4. D = Casing Diameter (I.D.):	6	inches
5. W = Static Depth to Water (TOC):	7	feet
6. C = Column of Water in Casing (L-W):	17.6	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	26.40	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units	3/29/2002		4/3/2002				
Time	24 hr	1200	1500	1000	1800			
Water Level	Feet	7	10	7	15			
Gallons Purged	Gal	1	30	Start	260			
Flow Rate	gal/min	1	<0.5	1.5	1			
Turbidity (+/- 10%)	NTU	Very	Very	Very	Moderate			
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm							
pH (+/- 0.1)	pH unit							
Temp	C							
Color		Gray/Brown	Gray/Brown	Gray/Brown	Light Brown			
Odor		Strong	Strong	Strong	Strong			

Comments: Initial cent. Pump failed on 3/29
 Approx 1 foot of DNAPL appears accumulated on bottom of well(on silt) at start of purge
 slugs of DNAPL continued entering well during entire purge event
 Purged total of approx. 260 gallons, used dropping bit fabricated on site to churn up
 silt from the bottom of the well, removed significant volume of silt, but still coming into
 bottom of well at end of purge

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: VW-1 Date: 10/4/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Watera Pump/Bailer

1. L = Constructed Total Well Depth (ground):	21.5 feet
2. Measured Total Well Depth (TOC):	21.48 feet
3. Sand/Silt Accumulation:	0.02 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	7.82 feet
6. C = Column of Water in Casing (L-W):	13.66 feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.22 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	4	6	8	10	12		
Water Level	Feet							
Gallons Purged	Gal							
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	79	136	106	108	145		
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	1.79	1.81	1.78	1.79	1.79		
pH (+/- 0.1)	pH unit	6.67	6.2	6.68	6.71	6.7		
Temp	C	16.9	16.5	16.7	16.6	16.7		
Color		Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray		
Odor		Coal Tar	Coal Tar	Coal Tar	Coal Tar	Coal Tar		

Comments: Encountered DNAPL at 4.5v

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: VW-2 Date: 10/4/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Watera Pump/Bailer

1. L = Constructed Total Well Depth (ground):	21.5 feet
2. Measured Total Well Depth (TOC):	0 feet
3. Sand/Silt Accumulation:	0 feet
4. D = Casing Diameter (I.D.):	2 inches
5. W = Static Depth to Water (TOC):	7.75 feet
6. C = Column of Water in Casing (L-W):	13.75 feet
Well Volume = C(3.14159)(0.5D ²)(7.48)	2.24 gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	4	6	8	10	12		
Water Level	Feet							
Gallons Purged	Gal							
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	147	125	373	164	140		
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	2.14	2.1	2.11	2.12	2.08		
pH (+/- 0.1)	pH unit	6.23	6.53	6.67	6.7	6.73		
Temp	C	15.6	15.4	15.4	15.3	15.2		
Color		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown		
Odor		Strong Coal Tar	Strong Coal Tar	Strong Coal Tar	Strong Coal Tar	Strong Coal Tar		

Comments: Heavy sheen on water

Monitoring Well Development Form

Project Name and Number: NYSDEC Gastown Former MGP Site RI #44491

Monitoring Well Number: VW-3 Date: 10/4/2001

Samplers: Paul Wheeler

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Bailer

1. L = Constructed Total Well Depth (ground):	23	feet
2. Measured Total Well Depth (TOC):	0	feet
3. Sand/Silt Accumulation:	0	feet
4. D = Casing Diameter (I.D.):	2	inches
5. W = Static Depth to Water (TOC):	8	feet
6. C = Column of Water in Casing (L-W):	15	feet
Well Volume = $C(3.14159)(0.5D^2)(7.48)$	2.45	gal

Multiplier for Casing Diameter

Well ID	3/4-inch	1-inch	2-inch	3-inch	4-inch
Vol. (gal/ft)	0.023	0.041	0.163	0.37	0.65

Field Parameter Measurements and Observations During Well Purging

Parameter	Units							
Time	24 hr	4	8	10	12	14		
Water Level	Feet							
Gallons Purged	Gal							
Flow Rate	mL/min							
Turbidity (+/- 10%)	NTU	999	285	816	825	782		
Diss. Oxygen (+/- 10%)	mg/l							
Eh/ORP (+/- 10%)	MeV							
Conductivity (+/- 3%)	ms/cm	2.01	1.94	1.96	1.97	1.95		
pH (+/- 0.1)	pH unit	7.16	7.02	6.92	6.9	6.85		
Temp	C	14.7	14.5	14.1	14.2	14.2		
Color		Dark Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray		
Odor		Coal Tar	Coal Tar	Coal Tar	Coal Tar	Coal Tar		

Comments: No DNAPL encountered

APPENDIX F

SURVEYING DATA

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors				Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP
DP-1	1101248.40	1071688.40	574.40	AT GROUND	Use Gr Elev of DPW-1 = 573.32'	MP Elev.
DP-2	1101322.90	1071465.30	576.55	AT GROUND		
DP-3	1101177.40	1071384.90	575.82	AT GROUND		
DP-4	1101143.00	1071329.40	575.74	AT GROUND		
DP-5	1101243.60	1071364.10	576.13	AT GROUND		
DP-6	1100994.40	1071534.10	576.07	AT GROUND		
DP-7	1101153.10	1071495.60	576.10	AT GROUND		
DP-8	1101080.70	1071397.80	576.45	AT GROUND		
DP-9	1101157.10	1071396.90	575.97	AT GROUND		
DP-10	1101187.30	1071304.70	575.22	AT GROUND		
DP-11	1101203.50	1071487.80	577.07	AT GROUND		
DP-12	1101261.40	1071549.50	576.35	AT GROUND		
DP-13	1101302.30	1071367.90	576.15	AT GROUND		
DP-14	1101250.80	1071249.00	574.03	AT GROUND		
DP-15	1101021.40	1071645.30	582.65	AT GROUND		
DP-16	1101122.90	1071606.10	584.05	AT GROUND		
DP-17	1101180.40	1071442.90	576.64	AT GROUND		
DP-18	1101356.30	1071489.10	574.55	AT GROUND		
DP-19	1101326.00	1071426.20	576.01	AT GROUND		
DP-20	1101116.60	1071390.00	575.64	AT GROUND		
DP-21	1101202.70	1071517.40	577.08	AT GROUND		
DP-22	1101285.20	1071484.40	576.98	AT GROUND		
DP-23	1101227.10	1071292.80	575.05	AT GROUND		
DP-24	1101118.50	1071182.20	573.33	AT GROUND		
DP-25	1101013.30	1071238.40	574.67	AT GROUND		
DP-26	1101289.80	1071660.80	574.10	AT GROUND		
DP-27	1101118.20	1071449.30	576.02	AT GROUND		

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors				Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	MP Elev.
DP-28	1101315.10	1071218.10	573.37	AT GROUND		
DP-29	1101254.50	1071739.50	573.95	AT GROUND		
DP-30	1101305.50	1071804.40	573.80	AT GROUND		
DP-31	1101335.00	1071900.80	573.48	AT GROUND		
DP-35	1101090.60	1071034.00	574.93	AT GROUND		
DP-37	1101249.40	1071078.70	573.15	AT GROUND	Note: On most DPW wells, surveyed "riser" elevation was a 2" pvc conductor pipe, not actual well. Actual well riser and measuring point (MP) for water levels is a 3/4" pvc pipe inside and below the 2" conductor pipe. Earth Tech measurements and corrected MP Elevations provided below. Also below is Earth Tech corrected MP Elevation for MW-40 to reflect raising the protective well casing/riser after survey.	
DP-38	1101032.40	1071137.50	574.82	AT GROUND		
DP-39	1101245.10	1070962.80	572.22	AT GROUND		
DP-41	1101298.70	1071141.90	571.51	AT GROUND		
DP-42	1101456.30	1071605.00	572.90	AT GROUND		
DP-45	1101432.60	1071808.80	573.26	AT GROUND		
DP-46	1101381.80	1072119.90	573.81	AT GROUND		
DP-47	1100960.80	1070951.10	575.44	AT GROUND		
DP-48	1101484.80	1072138.90	572.79	AT GROUND		
DPW-1	1101247.60	1071687.50	573.32	AT GROUND		
			573.33	AT CASING		
			573.10	AT RISER	2" conductor	-0.3
DPW-32	1101177.80	1071710.00	572.78	AT GROUND		
			572.77	AT CASING		
			572.48	AT RISER	no change, no 2" conductor	572.48
DPW-33	1101001.50	1070908.30	574.34	AT GROUND		
			574.35	AT CASING		
			574.06	AT RISER	2" conductor	-0.07
DPW-34	1101389.60	1071426.90	573.11	AT GROUND		
			573.13	AT CASING		
			572.87	AT RISER	2" conductor	-0.07
DPW-36	1101146.50	1070971.00	574.81	AT GROUND		572.80

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors				Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP
			574.83	AT CASING		
			574.60	AT RISER	2" conductor	-0.25
DPW-40	1101390.70	10711824.40	572.27	AT GROUND		
			572.25	AT CASING		
			572.09	AT RISER	2" conductor	-0.12
DPW-43	1101235.50	10711880.20	572.57	AT GROUND		
			572.56	AT CASING		
			572.29	AT RISER	2" conductor	-0.15
DPW-44	1101431.00	1072154.90	572.33	AT GROUND		
			572.30	AT CASING		
			571.96	AT RISER	2" conductor	-0.13
DPW-49	1101457.80	10711603.40	572.00	AT GROUND		
			572.03	AT CASING		
			571.82	AT RISER	2" conductor	-0.09
DPW-50	1101523.30	10711774.40	571.40	AT GROUND		
			571.37	AT CASING		
			571.15	AT RISER	2" conductor	-0.15
DPW-51	1101567.70	10711948.40	571.02	AT GROUND		
			571.03	AT CASING		
			570.82	AT RISER	2" conductor	-0.11
DPW-52	1101585.30	1072160.30	571.24	AT GROUND		
			571.30	AT CASING		
			571.07	AT RISER	2" conductor	-0.11
DPW-53	1101543.70	1072448.70	570.98	AT GROUND		
			571.03	AT CASING		
			570.84	AT RISER	2" conductor	-0.13
DPW-54	1101215.10	1070931.90	571.81	AT GROUND		

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors					Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP	MP Elev.
			571.88	AT CASING			
			571.56	AT RISER	2" conductor	-0.11	571.45
DPW-55	1101047.90	1071073.20	573.97	AT GROUND			
			573.96	AT CASING			
			573.72	AT RISER	2" conductor	-0.07	573.65
DPW-56	1101014.90	1070951.70	574.63	AT GROUND			
			574.63	AT CASING			
			574.40	AT RISER	AT RISER	no 2" conductor	574.40
DPW-57	1101108.50	1070874.40	574.84	AT GROUND			
			574.83	AT CASING			
			574.63	AT RISER	2" conductor	-0.11	574.52
DPW-58	1101079.10	1071400.60	575.57	AT GROUND			
			575.63	AT CASING			
			575.23	AT RISER	2" conductor	-0.06	575.17
MM-11	1071630.94	1101182.17	574.59	AT CASING			
			574.18	AT RISER			
MM-21	1071606.83	1101238.45	574.25	AT CASING			
			573.85	AT RISER			
MM-25	1071608.50	1101276.27	574.07	AT CASING			
			573.54	AT RISER			
MM-35	1071582.87	1101341.16	573.67	AT CASING			
			573.30	AT RISER			
MM-13	1071595.94	1101190.54	575.10	AT CASING			
			574.88	AT RISER			
MM-17	1071541.34	1101240.63	575.87	AT CASING			
			575.77	AT RISER			
MM-23	1071458.73	1101323.46	575.61	AT CASING			

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors				Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP
			575.50	AT RISER		
MW-27	1071585.38	1101293.88	574.12	AT CASING		
			573.93	AT RISER		
MW-34	1071681.86	1101264.62	573.50	AT CASING		
			573.33	AT RISER		
MW-35	1071696.97	1101228.84	573.26	AT CASING		
			573.08	AT RISER		
MW-36	1071666.64	1101165.83	573.01	AT CASING		
			572.91	AT RISER		
MW-40	1101150.60	1071336.70	574.60	AT GROUND		
			574.82	AT CASING		
			574.64	AT RISER		
MW-41	1101251.50	1071252.50	573.07	AT GROUND		
			573.09	AT CASING		
			572.81	AT RISER		
MW-42	1101292.50	1071666.40	573.49	AT GROUND		
			573.51	AT CASING		
			573.05	AT RISER		
MW-43	1101194.60	1071486.70	576.28	AT GROUND		
			576.35	AT CASING		
			575.97	AT RISER		
MW-44	1101243.50	1071674.90	573.46	AT GROUND		
			573.52	AT CASING		
			573.00	AT RISER		
MW-45	1101317.50	1071192.20	571.37	AT GROUND		
			571.52	AT CASING		
			571.13	AT RISER		

Note: replaced MW-40 casing and extended riser 0.16' upward on 6/6/02. New MP elev provided below, but new "casing" elevation not surveyed.

not resurveyed > 574.82

raised 0.16

574.77

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors					Elevation Modifications by Earth Tech		
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP	MP Elev.
MW-46	1101268.50	1071087.20	571.50	AT GROUND			
			571.56	AT CASING			
			571.26	AT RISER			
MW-47	1101149.20	1071572.40	576.27	AT GROUND			
			576.31	AT CASING			
			575.95	AT RISER			
MW-48	1101267.90	1071530.00	575.70	AT GROUND			
			575.63	AT CASING			
			575.17	AT RISER			
PPW-1	1101209.40	1071544.10	576.24	AT GROUND			
			576.38	AT CASING			
				NO RISER			
VW-1	1101230.60	1071582.10	574.91	AT GROUND			
			574.92	AT CASING			
			574.63	AT RISER			
VW-2	1101219.40	1071609.80	574.39	AT GROUND			
			574.45	AT CASING			
			574.15	AT RISER			
VW-3	1101210.10	1071598.90	574.89	AT GROUND			
			574.87	AT CASING			
			574.37	AT RISER			
SG1	1101331.90	1071171.80	570.96	AT RISER			
WELLS LOCATED AS OF 9-8-04							
MW-50B	1101424.338	1071465.346	573.37	AT GROUND			
			573.43	AT CASING			

Summary of Survey Data and Elevation Modifications

Former Gastown MGP Site
NYSDEC Site No. 9-15-171

Survey Data from Popli Consulting Engineers & Surveyors				Elevation Modifications by Earth Tech			
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	DESCRIPTION	distance To MP	MP Elev.
			572.98	AT RISER			
DP-59	1101289.691	1071379.892	576.99	AT GROUND			
DP-63	1101292.15	1071432.818	577.07	AT GROUND			
TW-1	1101285.157	1071474.015	577.05	AT GROUND			
			577.10	AT CASING			
			576.68	AT RISER			
MW-46B	1101265.547	1071078.235	572.48	AT GROUND			
			572.59	AT CASING			
			571.84	AT RISER			
MW-49	1100973.158	1071561.367	576.00	AT GROUND			
			576.25	AT CASING			
			576.02	AT RISER			
MW-49B	1100968.567	1071571.444	576.03	AT GROUND			
			576.14	AT CASING			
			575.39	AT RISER			
DP-61	1101197.879	1071429.436	577.06	AT GROUND			
DP-60	1101241.199	1071416.646	576.72	AT GROUND			
TW-2	1101221.474	1071370.613	575.81	AT GROUND			
			575.84	AT CASING			
			575.11	AT RISER			
DP-62	1101259.249	1071327.509	576.08	AT GROUND			



APPENDIX G

**NYSDEC SEDIMENT SAMPLING LOGS AND LABORATORY
ANALYTICAL RESULTS**

Sediment Boring Logs—Collected on October 9 and 10, 2001, logged on
October 10

Gastown MGP Site; North Tonawanda, NY

General Notes: Surprisingly little evidence of MGP contamination, given proximity to the site and evidence that tar transport reaches the banks of Tonawanda Creek, immediately west of the RR drawbridge. Unless otherwise noted, there were no sheens or odors, other than the kind ordinarily detected in slightly anoxic sediments—no H₂S and no clear MGP odors either.

<u>Boring</u>	<u>Time Extruded</u>	<u>Recovery (in)</u>	<u>Observations</u>
3	10:00	9	0-4 Medium olive gray, loose silty clay, some organic debris 4-6 Slightly plastic organic clay, color a/a, 1 cm mussel shell @6 Thin (1/4 inch) gravelly clay seam 6-9 Olive gray clay, plastic, some organic fibers
5	12:10	6	Mottled/streaked gray-brown clay, some silt, trace leaf litter. Uniform throughout. No odors or sheen, but sampled for Category B deliverables.
6	11:08	21	0-12 Medium olive gray clay, some silt, some organic fibers, moderately loose @12 Thin (1/2 inch) sand seam, medium-coarse sand, some silt and clay, olive brown 12-18 Dark gray organic silty clay, shorter organic fibers (all less than 5 mm)

			18-20 Dark gray medium-coarse sand, some gravel, moderately rounded, lithic
			20-21 Olive brown fine sand, trace silt
6A	3:55	15	0-2 Dark olive gray silt and clay, trace fine sand, trace gravel
			2-7 Dark gray to black silty clay, trace fine sand. Slight odor, seems like petroleum to Bill Ottaway, seems ordinary sed odor to GWC
			7-9 Dark gray fine-coarse sand, poorly sorted, some silt and clay, loose.
			9-15 Dark gray silt and clay, some fine to coarse sand, trace gravel. No sorting. Very faint petroleum odor.
7	10:30	30	0-6 Dark gray-black organic clay and silt, some fibrous organics. Loose
			6-10 a/a, but slightly stiffer, organic fibers shorter
			10-11 Olive brown clay and silt with fine sand, 1-inch rounded gravel piece
			11-14 a/a, but less fine sand at top, coarsening downward to clay and silt with fine sand
			@14 Thin seam (1/4 inch) clean medium-coarse fine sand, some gravel, no sheens or odor
			14-24 Two coarsening downward cycles: olive fine sand and silt @ bottoms, fining to dark gray fibrous organic silty clay @top.

24-30 Medium gray-brown silt with clay, darker and more fibrous than above. Slight petroleum odor (not evidently MGP) No sheens.

7A	1:30	23	0-4 Mottled/streaked gray/brown clay, trace fine sand, some silt. Very loose 4-12 a/a, but medium olive brown, slightly more firm, some organic fibers 12-14 Gray fine-coarse sand and silt, slight spots of sheen. No detectable odor (GWC's nose) Sampled for analysis 14-23 Dark gray brown silt and clay, some fine sand, some short organic fibers. No odor or sheen.
9	4:07	21	0-2 Medium olive gray clay, some silt, very loose 2-21 Dark olive gray clay, some silt, firmer than above, some organic fibers, anoxic sediment odor. One seam of brownish silt 12-13
10	11:00	6	0-6 Dark gray fibrous silty clay, loose, no odor or sheen
11	11:30	4	0-4 Dark gray clay, some silt, no organic fibers, loose
12B	4:20	16	0-2 Medium olive gray clay and silt, trace fine sand, trace organic fibers, very loose and sloppy. 2-11 a/a, but firmer (med loose), trace gravel 11-13 Olive brown fine sand, some silt.

12B

13-16 Medium olive brown silt and clay, trace fine sand, trace gravel.

13 4:30 30

Medium olive gray silt and clay, trace fine sand, trace gravel. Largely uniform throughout, but slightly firmer near bottom.

14 10:52 21

0-9 Mottled/streaked gray/brown silty clay, loose, long organic fibers

9-11 Mostly organic fibers, some clay and silt, one 2-inch wood piece

11-21 Dark olive brown silt and fine sand, some organic fibers

16 4:40 6

Medium olive gray clay, plastic, some silt, no sand. No sheen or odor.

17 (1?) 10:15 17

0-9 Medium olive gray clay, some organics, slight anoxic sed odor

9-17 Slightly darker gray clay, trace silt, more organics, grading to slightly stiff silt, some clay at bottom.

Apparent confusion in core labeling—core was originally identified as core number 1, ID revised in consultation with Doug MacNeal, who collected the samples.

19 12:00 18

Dark gray clay and silt, some organic fibers, trace gravel. Uniform throughout

One spot of sheen @12, very weak, this spot included in sample from 10-14

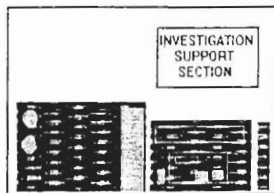
20 11:45 22

Medium to dark gray silty clay, some

organic fibers. Uniform throughout,
except slightly more silt 12-14

21	11:52	9	0-2 Medium dark gray clay, some organics at bottom, one green plant fragment. Very loose, sloppy
			2-9 Light olive brown clay and silt, several white 5 mm clam shells
22	11:37	17	0-3 Mottled/streaked gray/brown silty clay, very loose
			3-11 Dark gray silt and clay, some organic fibers throughout, longer near top. Moderately loose. Single 1 1/2 inch rounded gravel piece at bottom.
			11-17 a/a, but slightly stiffer, lighter olive brown

ID	DEPTH OF WATER	PUSH	RECOVERY (FT)	OBSERVATIONS	SAMPLE DEPTH	PAHS
1	13	0.5	0.00	s. sheen	0-6"	1,980
3	10	1.0	0.70	clean	0-6"	3,150
5	0	0.0	0.00	clean	0-6"	4,012
6	10	5.0	2.00	clean	0-6"	4,092
6	10	5.0	2.00	odor?	0-6", 20"-22"	45,710
6A	12	2.0	1.25	odor	0-6"	40,920
7	7	3.5	2.30	clean	12"-14"	244,800
9	6	2.5	2.00	clean	0-6"	19,440
10	3	1.0	0.80	clean	0-6"	1,430
11	8	3.6	0.40	clean	0-4"	0
12	6	2.5	1.60	clean	0-6"	4,260
13	11	3.0	3.00	clean	0-6"	8,970
14	9	4.0	1.90	clean	0-6"	10,120
16	10	1.0	0.70	clean	0-6"	10,160
19	7	3.5	1.50	clean	10"-14"	16,820
20	7	3.5	2.50	clean	0-6"	7,470
21	4	1.5	1.00	clean	0-6"	6,070
22	9	2.0	1.50	clean	0-6"	14,290



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171

SED-1

Matrix: (soil/water) SOIL
Sample wt/vol: 12.98 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 52 decanted: (Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SDG No.: 285-01

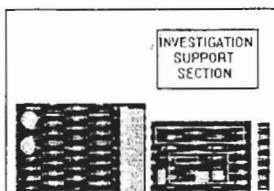
Lab Sample ID: 901-285-01
Lab File ID: 01F0596A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/18/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3200	U	
95-57-8	2-Chlorophenol	3200	U	
111-44-4	bis(2-Chloroethyl)ether	3200	U	
541-73-1	1,3-Dichlorobenzene	3200	U	
106-46-7	1,4-Dichlorobenzene	3200	U	
95-50-1	1,2-Dichlorobenzene	3200	U	
100-51-6	Benzyl alcohol	3200	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3200	U	
95-48-7	2-Methylphenol	3200	U	
67-72-1	Hexachloroethane	3200	U	
621-64-7	N-Nitroso-di-n-propylamine	3200	U	
106-44-5	4-Methylphenol	3200	U	
98-95-3	Nitrobenzene	3200	U	
78-59-1	Isophorone	3200	U	
88-75-5	2-Nitrophenol	3200	U	
105-67-9	2,4-Dimethylphenol	3200	U	
111-91-1	bis(2-Chloroethoxy)methane	3200	U	
120-83-2	2,4-Dichlorophenol	3200	U	
120-82-1	1,2,4-Trichlorobenzene	3200	U	
91-20-3	Naphthalene	3200	U	
106-47-8	4-Chloroaniline	3200	U	
87-68-3	Hexachlorobutadiene	3200	U	
59-50-7	4-Chloro-3-methylphenol	3200	U	
91-57-6	2-Methylnaphthalene	3200	U	
77-47-4	Hexachlorocyclopentadiene	3200	U	
88-06-2	2,4,6-Trichlorophenol	3200	U	
95-95-4	2,4,5-Trichlorophenol	3200	U	
91-58-7	2-Chloronaphthalene	3200	U	
88-74-4	2-Nitroaniline	6400	U	
208-96-8	Acenaphthylene	3200	U	
31-11-3	Dimethylphthalate	3200	U	
96-20-2	2,6-Dinitrotoluene	3200	U	
83-32-9	Acenaphthene	3200	U	
99-09-2	3-Nitroaniline	6400	U	

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	6400	U	
132-64-9	Dibenzofuran	3200	U	
100-02-7	4-Nitrophenol	6400	U	
121-14-2	2,4-Dinitrotoluene	3200	U	
86-73-7	Fluorene	3200	U	
7005-72-3	4-Chlorophenyl-phenylether	3200	U	
84-66-2	Diethylphthalate	3200	U	
100-01-6	4-Nitroaniline	6400	U	
534-52-1	4,6-Dinitro-2-methylphenol	6400	U	
86-30-6	n-Nitrosodiphenylamine	3200	U	
101-55-3	4-Bromophenyl-phenylether	3200	U	
118-74-1	Hexachlorobenzene	3200	U	
87-86-5	Pentachlorophenol	6400	U	
85-01-8	Phenanthrene	3200	U	
120-12-7	Anthracene	3200	U	
86-74-8	Carbazole	3200	U	
84-74-2	Di-n-butylphthalate	3200	U	
206-44-0	Fluoranthene	670	J	
129-00-0	Pyrene	470	J	
85-68-7	Butylbenzylphthalate	3200	U	
56-55-3	Benzo[a]anthracene	3200	U	
218-01-9	Chrysene	350	J	
91-94-1	3,3'-Dichlorobenzidine	3200	U	
117-81-7	bis(2-Ethylhexyl)phthalate	410	J	
117-84-0	Di-n-octylphthalate	3200	U	
205-99-2	Benzo[b]fluoranthene	490	J	
207-08-9	Benzo[k]fluoranthene	3200	U	
50-32-8	Benzo[a]pyrene	3200	U	
193-39-5	Indeno[1,2,3-cd]pyrene	3200	U	
53-70-3	Dibenz[a,h]anthracene	3200	U	
191-24-2	Benzo[g,h,i]perylene	3200	U	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171

SED-6@0-6

Matrix: (soil/water) SOIL
Sample wt/vol: 12.23 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 58 decanted:(Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SDG No.: 285-01

Lab Sample ID: 901-285-03
Lab File ID: 01F0598A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/18/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

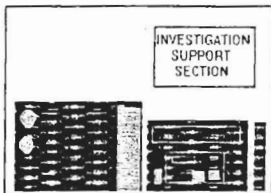
CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2	Phenol	3900	U
95-57-8	2-Chlorophenol	3900	U
111-44-4	bis(2-Chloroethyl)ether	3900	U
541-73-1	1,3-Dichlorobenzene	3900	U
106-46-7	1,4-Dichlorobenzene	3900	U
95-50-1	1,2-Dichlorobenzene	3900	U
100-51-6	Benzyl alcohol	3900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3900	U
95-48-7	2-Methylphenol	3900	U
67-72-1	Hexachloroethane	3900	U
621-64-7	N-Nitroso-di-n-propylamine	3900	U
106-44-5	4-Methylphenol	3900	U
98-95-3	Nitrobenzene	3900	U
78-59-1	Isophorone	3900	U
88-75-5	2-Nitrophenol	3900	U
105-67-9	2,4-Dimethylphenol	3900	U
111-91-1	bis(2-Chloroethoxy)methane	3900	U
120-83-2	2,4-Dichlorophenol	3900	U
120-82-1	1,2,4-Trichlorobenzene	3900	U
91-20-3	Naphthalene	3900	U
106-47-8	4-Chloroaniline	3900	U
87-68-3	Hexachlorobutadiene	3900	U
59-50-7	4-Chloro-3-methylphenol	3900	U
91-57-6	2-Methylnaphthalene	3900	U
77-47-4	Hexachlorocyclopentadiene	3900	U
88-06-2	2,4,6-Trichlorophenol	3900	U
95-95-4	2,4,5-Trichlorophenol	3900	U
91-58-7	2-Chloronaphthalene	3900	U
88-74-4	2-Nitroaniline	7800	U
208-96-8	Acenaphthylene	3900	U
131-11-3	Dimethylphthalate	3900	U
606-20-2	2,6-Dinitrotoluene	3900	U
83-32-9	Acenaphthene	3900	U
99-09-2	3-Nitroaniline	7800	U

51-28-5	2,4-Dinitrophenol	7800	U
132-64-9	Dibenzofuran	3900	U
100-02-7	4-Nitrophenol	7800	U
121-14-2	2,4-Dinitrotoluene	3900	U
86-73-7	Fluorene	3900	U
7005-72-3	4-Chlorophenyl-phenylether	3900	U
84-66-2	Diethylphthalate	3900	U
100-01-6	4-Nitroaniline	7800	U
534-52-1	4,6-Dinitro-2-methylphenol	7800	U
86-30-6	n-Nitrosodiphenylamine	3900	U
101-55-3	4-Bromophenyl-phenylether	3900	U
118-74-1	Hexachlorobenzene	3900	U
87-86-5	Pentachlorophenol	7800	U
85-01-8	Phenanthrene	1400	J
120-12-7	Anthracene	450	J
86-74-8	Carbazole	3900	U
84-74-2	Di-n-butylphthalate	3900	U
206-44-0	Fluoranthene	2200	J
129-00-0	Pyrene	1600	J
85-68-7	Butylbenzylphthalate	3900	U
56-55-3	Benzo[a]anthracene	850	J
218-01-9	Chrysene	1000	J
91-94-1	3,3'-Dichlorobenzidine	3900	U
117-81-7	bis(2-Ethylhexyl)phthalate	820	J
117-84-0	Di-n-octylphthalate	3900	U
205-99-2	Benzo[b]fluoranthene	1200	J
207-08-9	Benzo[k]fluoranthene	490	J
50-32-8	Benzo[a]pyrene	870	J
193-39-5	Indeno[1,2,3-cd]pyrene	600	J
53-70-3	Dibenz[a,h]anthracene	3900	U
191-24-2	Benzo[g,h,i]perylene	680	J



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.29 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 55 decanted:(Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SED-6A

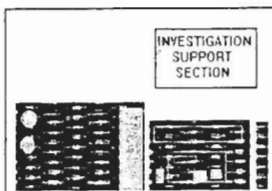
SDG No.: 285-01
Lab Sample ID: 901-285-05
Lab File ID: 01F0599A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/18/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3600	U	
95-57-8	2-Chlorophenol	3600	U	
111-44-4	bis(2-Chloroethyl)ether	3600	U	
541-73-1	1,3-Dichlorobenzene	3600	U	
106-46-7	1,4-Dichlorobenzene	3600	U	
95-50-1	1,2-Dichlorobenzene	3600	U	
100-51-6	Benzyl alcohol	3600	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3600	U	
95-48-7	2-Methylphenol	3600	U	
67-72-1	Hexachloroethane	3600	U	
621-64-7	N-Nitroso-di-n-propylamine	3600	U	
106-44-5	4-Methylphenol	3600	U	
98-95-3	Nitrobenzene	3600	U	
78-59-1	Isophorone	3600	U	
88-75-5	2-Nitrophenol	3600	U	
105-67-9	2,4-Dimethylphenol	3600	U	
111-91-1	bis(2-Chloroethoxy)methane	3600	U	
120-83-2	2,4-Dichlorophenol	3600	U	
120-82-1	1,2,4-Trichlorobenzene	3600	U	
91-20-3	Naphthalene	640	J	
106-47-8	4-Chloroaniline	3600	U	
87-68-3	Hexachlorobutadiene	3600	U	
59-50-7	4-Chloro-3-methylphenol	3600	U	
91-57-6	2-Methylnaphthalene	6200		
77-47-4	Hexachlorocyclopentadiene	3600	U	
88-06-2	2,4,6-Trichlorophenol	3600	U	
95-95-4	2,4,5-Trichlorophenol	3600	U	
91-58-7	2-Chloronaphthalene	3600	U	
88-74-4	2-Nitroaniline	7200	U	
208-96-8	Acenaphthylene	380	J	
131-11-3	Dimethylphthalate	3600	U	
106-20-2	2,6-Dinitrotoluene	3600	U	
83-32-9	Acenaphthene	7100		
99-09-2	3-Nitroaniline	7200	U	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	7200	U	
132-64-9	Dibenzofuran	420	J	
100-02-7	4-Nitrophenol	7200	U	
121-14-2	2,4-Dinitrotoluene	3600	U	
86-73-7	Fluorene	2300	J	
7005-72-3	4-Chlorophenyl-phenylether	3600	U	
84-66-2	Diethylphthalate	3600	U	
100-01-6	4-Nitroaniline	7200	U	
534-52-1	4,6-Dinitro-2-methylphenol	7200	U	
86-30-6	n-Nitrosodiphenylamine	3600	U	
101-55-3	4-Bromophenyl-phenylether	3600	U	
118-74-1	Hexachlorobenzene	3600	U	
87-86-5	Pentachlorophenol	7200	U	
85-01-8	Phenanthrene	6900		
120-12-7	Anthracene	1500	J	
86-74-8	Carbazole	490	J	
84-74-2	Di-n-butylphthalate	400	J	
206-44-0	Fluoranthene	4700		
129-00-0	Pyrene	4500		
85-68-7	Butylbenzylphthalate	3600	U	
56-55-3	Benzo[a]anthracene	2200	J	
218-01-9	Chrysene	2200	J	
91-94-1	3,3'-Dichlorobenzidine	3600	U	
117-81-7	bis(2-Ethylhexyl)phthalate	3600	U	
117-84-0	Di-n-octylphthalate	3600	U	
205-99-2	Benzo[b]fluoranthene	2100	J	
207-08-9	Benzo[k]fluoranthene	1100	J	
50-32-8	Benzo[a]pyrene	2500	J	
193-39-5	Indeno[1,2,3-cd]pyrene	1300	J	
53-70-3	Dibenz[a,h]anthracene	3600	U	
191-24-2	Benzo[g,h,i]perylene	1500	J	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.43 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 49 decanted:(Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SDG No.: 285-01

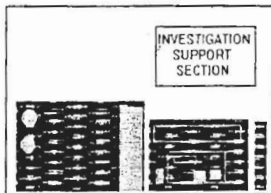
Lab Sample ID: 901-285-07
Lab File ID: 01F0628A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/23/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3200	U	
95-57-8	2-Chlorophenol	3200	U	
111-44-4	bis(2-Chloroethyl)ether	3200	U	
541-73-1	1,3-Dichlorobenzene	3200	U	
106-46-7	1,4-Dichlorobenzene	3200	U	
95-50-1	1,2-Dichlorobenzene	3200	U	
100-51-6	Benzyl alcohol	3200	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3200	U	
95-48-7	2-Methylphenol	3200	U	
67-72-1	Hexachloroethane	3200	U	
621-64-7	N-Nitroso-di-n-propylamine	3200	U	
106-44-5	4-Methylphenol	3200	U	
98-95-3	Nitrobenzene	3200	U	
78-59-1	Isophorone	3200	U	
88-75-5	2-Nitrophenol	3200	U	
105-67-9	2,4-Dimethylphenol	3200	U	
111-91-1	bis(2-Chloroethoxy)methane	3200	U	
120-83-2	2,4-Dichlorophenol	3200	U	
120-82-1	1,2,4-Trichlorobenzene	3200	U	
91-20-3	Naphthalene	3200	U	
106-47-8	4-Chloroaniline	3200	U	
87-68-3	Hexachlorobutadiene	3200	U	
59-50-7	4-Chloro-3-methylphenol	3200	U	
91-57-6	2-Methylnaphthalene	3200	U	
77-47-4	Hexachlorocyclopentadiene	3200	U	
88-06-2	2,4,6-Trichlorophenol	3200	U	
95-95-4	2,4,5-Trichlorophenol	3200	U	
91-58-7	2-Chloronaphthalene	3200	U	
88-74-4	2-Nitroaniline	6300	U	
208-96-8	Acenaphthylene	3200	U	
131-11-3	Dimethylphthalate	3200	U	
606-20-2	2,6-Dinitrotoluene	3200	U	
83-32-9	Acenaphthene	470	J	
99-09-2	3-Nitroaniline	6300	U	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	6300	U	
132-64-9	Dibenzofuran	3200	U	
100-02-7	4-Nitrophenol	6300	U	
121-14-2	2,4-Dinitrotoluene	3200	U	
86-73-7	Fluorene	3200	U	
7005-72-3	4-Chlorophenyl-phenylether	3200	U	
84-66-2	Diethylphthalate	3200	U	
100-01-6	4-Nitroaniline	6300	U	
534-52-1	4,6-Dinitro-2-methylphenol	6300	U	
86-30-6	n-Nitrosodiphenylamine	3200	U	
101-55-3	4-Bromophenyl-phenylether	3200	U	
118-74-1	Hexachlorobenzene	3200	U	
87-86-5	Pentachlorophenol	6300	U	
85-01-8	Phenanthrene	1700	J	
120-12-7	Anthracene	490	J	
86-74-8	Carbazole	3200	U	
84-74-2	Di-n-butylphthalate	370	J	
206-44-0	Fluoranthene	3500		
129-00-0	Pyrene	2900	J	
85-68-7	Butylbenzylphthalate	3200	U	
56-55-3	Benzo[a]anthracene	1900	J	
218-01-9	Chrysene	1800	J	
91-94-1	3,3'-Dichlorobenzidine	3200	U	
117-81-7	bis(2-Ethylhexyl)phthalate	3200	U	
117-84-0	Di-n-octylphthalate	3200	U	
205-99-2	Benzo[b]fluoranthene	1900	J	
207-08-9	Benzo[k]fluoranthene	720	J	
50-32-8	Benzo[a]pyrene	1700	J	
193-39-5	Indeno[1,2,3-cd]pyrene	930	J	
53-70-3	Dibenz[a,h]anthracene	330	J	
191-24-2	Benzo[g,h,i]perylene	1100	J	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.23 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 58 decanted:(Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SED-11

SDG No.: 285-01

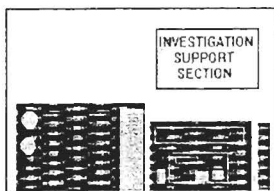
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Lab File ID: 01F0602A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/18/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3900	U	
95-57-8	2-Chlorophenol	3900	U	
111-44-4	bis(2-Chloroethyl)ether	3900	U	
541-73-1	1,3-Dichlorobenzene	3900	U	
106-46-7	1,4-Dichlorobenzene	3900	U	
95-50-1	1,2-Dichlorobenzene	3900	U	
100-51-6	Benzyl alcohol	3900	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3900	U	
95-48-7	2-Methylphenol	3900	U	
67-72-1	Hexachloroethane	3900	U	
621-64-7	N-Nitroso-di-n-propylamine	3900	U	
106-44-5	4-Methylphenol	3900	U	
98-95-3	Nitrobenzene	3900	U	
78-59-1	Isophorone	3900	U	
88-75-5	2-Nitrophenol	3900	U	
105-67-9	2,4-Dimethylphenol	3900	U	
111-91-1	bis(2-Chloroethoxy)methane	3900	U	
120-83-2	2,4-Dichlorophenol	3900	U	
120-82-1	1,2,4-Trichlorobenzene	3900	U	
91-20-3	Naphthalene	3900	U	
106-47-8	4-Chloroaniline	3900	U	
87-68-3	Hexachlorobutadiene	3900	U	
59-50-7	4-Chloro-3-methylphenol	3900	U	
91-57-6	2-Methylnaphthalene	3900	U	
77-47-4	Hexachlorocyclopentadiene	3900	U	
88-06-2	2,4,6-Trichlorophenol	3900	U	
95-95-4	2,4,5-Trichlorophenol	3900	U	
91-58-7	2-Chloronaphthalene	3900	U	
88-74-4	2-Nitroaniline	7800	U	
208-96-8	Acenaphthylene	3900	U	
131-11-3	Dimethylphthalate	3900	U	
106-20-2	2,6-Dinitrotoluene	3900	U	
83-32-9	Acenaphthene	3900	U	
99-09-2	3-Nitroaniline	7800	U	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	7800	U	
132-64-9	Dibenzofuran	3900	U	
100-02-7	4-Nitrophenol	7800	U	
121-14-2	2,4-Dinitrotoluene	3900	U	
86-73-7	Fluorene	3900	U	
7005-72-3	4-Chlorophenyl-phenylether	3900	U	
84-66-2	Diethylphthalate	3900	U	
100-01-6	4-Nitroaniline	7800	U	
534-52-1	4,6-Dinitro-2-methylphenol	7800	U	
86-30-6	n-Nitrosodiphenylamine	3900	U	
101-55-3	4-Bromophenyl-phenylether	3900	U	
118-74-1	Hexachlorobenzene	3900	U	
87-86-5	Pentachlorophenol	7800	U	
85-01-8	Phenanthrene	3900	U	
120-12-7	Anthracene	3900	U	
86-74-8	Carbazole	3900	U	
84-74-2	Di-n-butylphthalate	3900	U	
206-44-0	Fluoranthene	3900	U	
129-00-0	Pyrene	3900	U	
85-68-7	Butylbenzylphthalate	3900	U	
56-55-3	Benzo[a]anthracene	3900	U	
218-01-9	Chrysene	3900	U	
91-94-1	3,3'-Dichlorobenzidine	3900	U	
117-81-7	bis(2-Ethylhexyl)phthalate	3900	U	
117-84-0	Di-n-octylphthalate	3900	U	
205-99-2	Benzo[b]fluoranthene	3900	U	
207-08-9	Benzo[k]fluoranthene	3900	U	
50-32-8	Benzo[a]pyrene	3900	U	
193-39-5	Indeno[1,2,3-cd]pyrene	3900	U	
53-70-3	Dibenz[a,h]anthracene	3900	U	
191-24-2	Benzo[g,h,i]perylene	3900	U	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.68 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 53 decanted:(Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SED-13

SDG No.: 285-01
Lab Sample ID: 901-285-11
Lab File ID: 01F0604A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/19/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3400	U	
95-57-8	2-Chlorophenol	3400	U	
111-44-4	bis(2-Chloroethyl)ether	3400	U	
541-73-1	1,3-Dichlorobenzene	3400	U	
106-46-7	1,4-Dichlorobenzene	3400	U	
95-50-1	1,2-Dichlorobenzene	3400	U	
100-51-6	Benzyl alcohol	3400	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3400	U	
95-48-7	2-Methylphenol	3400	U	
67-72-1	Hexachloroethane	3400	U	
621-64-7	N-Nitroso-di-n-propylamine	3400	U	
106-44-5	4-Methylphenol	3400	U	
98-95-3	Nitrobenzene	3400	U	
78-59-1	Isophorone	3400	U	
88-75-5	2-Nitrophenol	3400	U	
105-67-9	2,4-Dimethylphenol	3400	U	
111-91-1	bis(2-Chloroethoxy)methane	3400	U	
120-83-2	2,4-Dichlorophenol	3400	U	
120-82-1	1,2,4-Trichlorobenzene	3400	U	
91-20-3	Naphthalene	3400	U	
106-47-8	4-Chloroaniline	3400	U	
87-68-3	Hexachlorobutadiene	3400	U	
59-50-7	4-Chloro-3-methylphenol	3400	U	
91-57-6	2-Methylnaphthalene	3400	U	
77-47-4	Hexachlorocyclopentadiene	3400	U	
88-06-2	2,4,6-Trichlorophenol	3400	U	
95-95-4	2,4,5-Trichlorophenol	3400	U	
91-58-7	2-Chloronaphthalene	3400	U	
88-74-4	2-Nitroaniline	6700	U	
208-96-8	Acenaphthylene	3400	U	
131-11-3	Dimethylphthalate	3400	U	
606-20-2	2,6-Dinitrotoluene	3400	U	
83-32-9	Acenaphthene	3400	U	
99-09-2	3-Nitroaniline	6700	U	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	6700	U	
132-64-9	Dibenzofuran	3400	U	
100-02-7	4-Nitrophenol	6700	U	
121-14-2	2,4-Dinitrotoluene	3400	U	
86-73-7	Fluorene	3400	U	
7005-72-3	4-Chlorophenyl-phenylether	3400	U	
84-66-2	Diethylphthalate	3400	U	
100-01-6	4-Nitroaniline	6700	U	
534-52-1	4,6-Dinitro-2-methylphenol	6700	U	
86-30-6	n-Nitrosodiphenylamine	3400	U	
101-55-3	4-Bromophenyl-phenylether	3400	U	
118-74-1	Hexachlorobenzene	3400	U	
87-86-5	Pentachlorophenol	6700	U	
85-01-8	Phenanthrene	520	J	
120-12-7	Anthracene	3400	U	
86-74-8	Carbazole	3400	U	
84-74-2	Di-n-butylphthalate	3400	U	
206-44-0	Fluoranthene	1600	J	
129-00-0	Pyrene	1200	J	
85-68-7	Butylbenzylphthalate	3400	U	
56-55-3	Benzo[a]anthracene	700	J	
218-01-9	Chrysene	840	J	
91-94-1	3,3'-Dichlorobenzidine	3400	U	
117-81-7	bis(2-Ethylhexyl)phthalate	910	J	
117-84-0	Di-n-octylphthalate	3400	U	
205-99-2	Benzo[b]fluoranthene	1300	J	
207-08-9	Benzo[k]fluoranthene	430	J	
50-32-8	Benzo[a]pyrene	920	J	
193-39-5	Indeno[1,2,3-cd]pyrene	660	J	
53-70-3	Dibenz[a,h]anthracene	3400	U	
191-24-2	Benzo[g,h,i]perylene	800	J	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171

SED-16

Matrix: (soil/water) SOIL
Sample wt/vol: 12.32 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 61 decanted: (Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SDG No.: 285-01

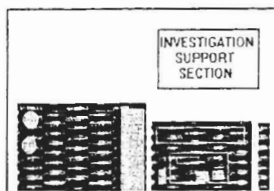
Lab Sample ID: 901-285-13
Lab File ID: 01F0609A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/19/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	4200	U	
95-57-8	2-Chlorophenol	4200	U	
111-44-4	bis(2-Chloroethyl)ether	4200	U	
541-73-1	1,3-Dichlorobenzene	4200	U	
106-46-7	1,4-Dichlorobenzene	4200	U	
95-50-1	1,2-Dichlorobenzene	4200	U	
100-51-6	Benzyl alcohol	4200	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	4200	U	
95-48-7	2-Methylphenol	4200	U	
67-72-1	Hexachloroethane	4200	U	
621-64-7	N-Nitroso-di-n-propylamine	4200	U	
106-44-5	4-Methylphenol	4200	U	
98-95-3	Nitrobenzene	4200	U	
78-59-1	Isophorone	4200	U	
88-75-5	2-Nitrophenol	4200	U	
105-67-9	2,4-Dimethylphenol	4200	U	
111-91-1	bis(2-Chloroethoxy)methane	4200	U	
120-83-2	2,4-Dichlorophenol	4200	U	
120-82-1	1,2,4-Trichlorobenzene	4200	U	
91-20-3	Naphthalene	4200	U	
106-47-8	4-Chloroaniline	4200	U	
87-68-3	Hexachlorobutadiene	4200	U	
59-50-7	4-Chloro-3-methylphenol	4200	U	
91-57-6	2-Methylnaphthalene	4200	U	
77-47-4	Hexachlorocyclopentadiene	4200	U	
88-06-2	2,4,6-Trichlorophenol	4200	U	
95-95-4	2,4,5-Trichlorophenol	4200	U	
91-58-7	2-Chloronaphthalene	4200	U	
88-74-4	2-Nitroaniline	8300	U	
208-96-8	Acenaphthylene	4200	U	
31-11-3	Dimethylphthalate	4200	U	
106-20-2	2,6-Dinitrotoluene	4200	U	
83-32-9	Acenaphthene	4200	U	
99-09-2	3-Nitroaniline	8300	U	

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	8300	U	
132-64-9	Dibenzofuran	4200	U	
100-02-7	4-Nitrophenol	8300	U	
121-14-2	2,4-Dinitrotoluene	4200	U	
86-73-7	Fluorene	4200	U	
7005-72-3	4-Chlorophenyl-phenylether	4200	U	
84-66-2	Diethylphthalate	4200	U	
100-01-6	4-Nitroaniline	8300	U	
534-52-1	4,6-Dinitro-2-methylphenol	8300	U	
86-30-6	n-Nitrosodiphenylamine	4200	U	
101-55-3	4-Bromophenyl-phenylether	4200	U	
118-74-1	Hexachlorobenzene	4200	U	
87-86-5	Pentachlorophenol	8300	U	
85-01-8	Phenanthrene	620	J	
120-12-7	Anthracene	4200	U	
86-74-8	Carbazole	4200	U	
84-74-2	Di-n-butylphthalate	4200	U	
206-44-0	Fluoranthene	1900	J	
129-00-0	Pyrene	1400	J	
85-68-7	Butylbenzylphthalate	4200	U	
56-55-3	Benzo[a]anthracene	620	J	
218-01-9	Chrysene	1000	J	
91-94-1	3,3'-Dichlorobenzidine	4200	U	
117-81-7	bis(2-Ethylhexyl)phthalate	1600	J	
117-84-0	Di-n-octylphthalate	4200	U	
205-99-2	Benzo[b]fluoranthene	1500	J	
207-08-9	Benzo[k]fluoranthene	600	J	
50-32-8	Benzo[a]pyrene	920	J	
193-39-5	Indeno[1,2,3-cd]pyrene	730	J	
53-70-3	Dibenz[a,h]anthracene	4200	U	
191-24-2	Benzo[g,h,i]perylene	870	J	



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.75 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 54 decanted: (Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SED-20

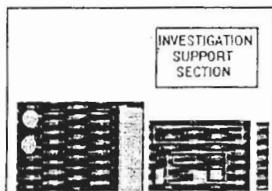
SDG No.: 285-01
Lab Sample ID: 901-285-15
Lab File ID: 01F0611A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/19/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol		3400	U
95-57-8	2-Chlorophenol		3400	U
111-44-4	bis(2-Chloroethyl)ether		3400	U
541-73-1	1,3-Dichlorobenzene		3400	U
106-46-7	1,4-Dichlorobenzene		3400	U
95-50-1	1,2-Dichlorobenzene		3400	U
100-51-6	Benzyl alcohol		3400	U
108-60-1	2,2'-Oxybis(1-chloropropane)		3400	U
95-48-7	2-Methylphenol		3400	U
67-72-1	Hexachloroethane		3400	U
621-64-7	N-Nitroso-di-n-propylamine		3400	U
106-44-5	4-Methylphenol		3400	U
98-95-3	Nitrobenzene		3400	U
78-59-1	Isophorone		3400	U
88-75-5	2-Nitrophenol		3400	U
105-67-9	2,4-Dimethylphenol		3400	U
111-91-1	bis(2-Chloroethoxy)methane		3400	U
120-83-2	2,4-Dichlorophenol		3400	U
120-82-1	1,2,4-Trichlorobenzene		3400	U
91-20-3	Naphthalene		3400	U
106-47-8	4-Chloroaniline		3400	U
87-68-3	Hexachlorobutadiene		3400	U
59-50-7	4-Chloro-3-methylphenol		3400	U
91-57-6	2-Methylnaphthalene		3400	U
77-47-4	Hexachlorocyclopentadiene		3400	U
88-06-2	2,4,6-Trichlorophenol		3400	U
95-95-4	2,4,5-Trichlorophenol		3400	U
91-58-7	2-Chloronaphthalene		3400	U
88-74-4	2-Nitroaniline		6800	U
208-96-8	Acenaphthylene		3400	U
131-11-3	Dimethylphthalate		3400	U
606-20-2	2,6-Dinitrotoluene		3400	U
83-32-9	Acenaphthene		3400	U
99-09-2	3-Nitroaniline		6800	U

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol		6800	U
132-64-9	Dibenzofuran		3400	U
100-02-7	4-Nitrophenol		6800	U
121-14-2	2,4-Dinitrotoluene		3400	U
86-73-7	Fluorene		3400	U
7005-72-3	4-Chlorophenyl-phenylether		3400	U
84-66-2	Diethylphthalate		3400	U
100-01-6	4-Nitroaniline		6800	U
534-52-1	4,6-Dinitro-2-methylphenol		6800	U
86-30-6	n-Nitrosodiphenylamine		3400	U
101-55-3	4-Bromophenyl-phenylether		3400	U
118-74-1	Hexachlorobenzene		3400	U
87-86-5	Pentachlorophenol		6800	U
85-01-8	Phenanthrene		350	J
120-12-7	Anthracene		3400	U
86-74-8	Carbazole		3400	U
84-74-2	Di-n-butylphthalate		3400	U
206-44-0	Fluoranthene		1400	J
129-00-0	Pyrene		1100	J
85-68-7	Butylbenzylphthalate		3400	U
56-55-3	Benzo[a]anthracene		530	J
218-01-9	Chrysene		700	J
91-94-1	3,3'-Dichlorobenzidine		3400	U
117-81-7	bis(2-Ethylhexyl)phthalate		880	J
117-84-0	Di-n-octylphthalate		3400	U
205-99-2	Benzo[b]fluoranthene		1200	J
207-08-9	Benzo[k]fluoranthene		350	J
50-32-8	Benzo[a]pyrene		720	J
193-39-5	Indeno[1,2,3-cd]pyrene		530	J
53-70-3	Dibenz[a,h]anthracene		3400	U
191-24-2	Benzo[g,h,i]perylene		590	J



NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
LABORATORY ANALYTICAL REPORT

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD SAMPLE ID:

Site Name: Gastown
Site Code: 915171
Matrix: (soil/water) SOIL
Sample wt/vol: 12.58 (g/ml) G
Level: (low/med) LOW
Extraction: (SepF/Cont/Sonc/SPE/ASE) SONC
% Moisture: 56 decanted: (Y/N) N
Concentrated Extract Volume: 2000 (uL)
Injection Volume: 2.0 (uL) pH:
GPC Cleanup: (Y/N) Y

SED-22

SDG No.: 285-01
Lab Sample ID: 901-285-17
Lab File ID: 01F0616A.D
Date Received: 10/12/01
Date Extracted: 10/15/01
Date Analyzed: 10/19/01
Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	3600	U	
95-57-8	2-Chlorophenol	3600	U	
111-44-4	bis(2-Chloroethyl)ether	3600	U	
541-73-1	1,3-Dichlorobenzene	3600	U	
106-46-7	1,4-Dichlorobenzene	3600	U	
95-50-1	1,2-Dichlorobenzene	3600	U	
100-51-6	Benzyl alcohol	3600	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	3600	U	
95-48-7	2-Methylphenol	3600	U	
67-72-1	Hexachloroethane	3600	U	
621-64-7	N-Nitroso-di-n-propylamine	3600	U	
106-44-5	4-Methylphenol	3600	U	
98-95-3	Nitrobenzene	3600	U	
78-59-1	Isophorone	3600	U	
88-75-5	2-Nitrophenol	3600	U	
105-67-9	2,4-Dimethylphenol	3600	U	
111-91-1	bis(2-Chloroethoxy)methane	3600	U	
120-83-2	2,4-Dichlorophenol	3600	U	
120-82-1	1,2,4-Trichlorobenzene	3600	U	
91-20-3	Naphthalene	3600	U	
106-47-8	4-Chloroaniline	3600	U	
87-68-3	Hexachlorobutadiene	3600	U	
59-50-7	4-Chloro-3-methylphenol	3600	U	
91-57-6	2-Methylnaphthalene	3600	U	
77-47-4	Hexachlorocyclopentadiene	3600	U	
88-06-2	2,4,6-Trichlorophenol	3600	U	
95-95-4	2,4,5-Trichlorophenol	3600	U	
91-58-7	2-Chloronaphthalene	3600	U	
88-74-4	2-Nitroaniline	7200	U	
208-96-8	Acenaphthylene	3600	U	
131-11-3	Dimethylphthalate	3600	U	
106-20-2	2,6-Dinitrotoluene	3600	U	
83-32-9	Acenaphthene	450	J	
99-09-2	3-Nitroaniline	7200	U	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
51-28-5	2,4-Dinitrophenol	7200	U	
132-64-9	Dibenzofuran	3600	U	
100-02-7	4-Nitrophenol	7200	U	
121-14-2	2,4-Dinitrotoluene	3600	U	
86-73-7	Fluorene	3600	U	
7005-72-3	4-Chlorophenyl-phenylether	3600	U	
84-66-2	Diethylphthalate	3600	U	
100-01-6	4-Nitroaniline	7200	U	
534-52-1	4,6-Dinitro-2-methylphenol	7200	U	
86-30-6	n-Nitrosodiphenylamine	3600	U	
101-55-3	4-Bromophenyl-phenylether	3600	U	
118-74-1	Hexachlorobenzene	3600	U	
87-86-5	Pentachlorophenol	7200	U	
85-01-8	Phenanthrene	370	J	
120-12-7	Anthracene	3600	U	
86-74-8	Carbazole	3600	U	
84-74-2	Di-n-butylphthalate	3600	U	
206-44-0	Fluoranthene	2100	J	
129-00-0	Pyrene	2300	J	
85-68-7	Butylbenzylphthalate	3600	U	
56-55-3	Benzo[a]anthracene	1600	J	
218-01-9	Chrysene	1700	J	
91-94-1	3,3'-Dichlorobenzidine	3600	U	
117-81-7	bis(2-Ethylhexyl)phthalate	3600	U	
117-84-0	Di-n-octylphthalate	3600	U	
205-99-2	Benzo[b]fluoranthene	1900	J	
207-08-9	Benzo[k]fluoranthene	690	J	
50-32-8	Benzo[a]pyrene	1400	J	
193-39-5	Indeno[1,2,3-cd]pyrene	870	J	
53-70-3	Dibenz[a,h]anthracene	3600	U	
191-24-2	Benzo[g,h,i]perylene	910	J	