

APPENDIX A

TEST TRENCH EXCAVATION LOGS AND FIELD NOTES

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-1

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse rounded gravel and trace non-plastic fines		2.1		
				0.8		
	-4.0 4.0	Fill Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few bricks, and trace non-plastic fines, dense in place, perched water coming from SE bricks		0.6		
5.0				0.9		
	-8.0 8.0	Lean Clay Brown, moist, medium plasticity fines with trace gravel, medium stiff		4.0		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		0.7		
				2.1		
15.0				0.4		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company

Length: 10'

Depth to Water: Perched at 8'

Excavator Type: John Deere 690ELC

Width: 3'

Visual Impacts: None

Excavation Date(s): 8-14-12

Depth: 16'

Olfactory Observations: None

Comments:

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-2
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		Fill Black, moist, fine to coarse sand with few fine to coarse gravel and little brick, moderate odor (2-12'), dense in place		23.8 495.0 287.0 344.0 453.0 465.0		
15.0	-12.0 12.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor		327.0 359.0		
20.0	-16.0 16.0	End of Test Pit				

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-13-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Moderate odor 2-16'
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-3
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
0.9		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		0.9		
91.5				91.5		
6.0				6.0		
5.0						
-6.0 6.0	-6.0 6.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few, low plastic fines, dense		8.0		
-8.0 8.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		10.0		
74.8				74.8		
7.8				7.8		
101.0				101.0		
15.0						
-16.0 16.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-4 Logged By: BMG Checked By: BCH
--	---

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		4.8		
	-2.0 2.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		10.6		
5.0				85.4		
				83.6		
10.0				80.5		
	-12.0 12.0	End of Test Pit		58.6		
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments:	Length: 10' Width: 3' Depth: 12'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-5 Logged By: BMG Checked By: BCH
--	---

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse rounded gravel and trace non-plastic fines, various size pipes		0.4		
				0.2		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		1.2		
5.0				24.8		
				3.5		
10.0				23.6		
				126.0		
15.0				116.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-6
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
2.7		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place, few pipes	[Cross-hatched symbol]	2.7		
1.2				1.2		
0.8				0.8		
5.0				5.0		
8.6				8.6		
-8.0 8.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, 6 inch pipe at 10'	[Dotted symbol]	8.6		
24.8				24.8		
10.0				10.0		
24.2				24.2		
-12.0 12.0	-12.0 12.0	End of Test Pit				
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments: Stopped at 12' due to limited access from pipe and concrete	Length: 40' Width: 3' Depth: 12'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-7
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
3.8		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place, slight odor 4-6'	[Cross-hatched symbol]	3.8		
67.0				67.0		
128.0				128.0		
5.0						
-6.0 6.0	-6.0 6.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with few fine rounded gravel, few low plastic fines, dense, slight odor	[Dotted symbol]	155.0		
-8.0 8.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	104.0		
110.0				110.0		
100.0				100.0		
15.0						
-16.0 16.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-15-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 4-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-8 Logged By: BMG Checked By: BCH
--	---

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		1.2		
	-3.0 3.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.9		
5.0				0.5		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		1.2		
10.0				1.4		
	-16.0 16.0	End of Test Pit		21.1		
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-15-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-9 Logged By: BMG Checked By: BCH
--	---

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		1.5		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.3		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Brown to gray (12'), moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 14-16'		1.4		
5.0				1.3		
				2.3		
10.0				1.7		
				11.2		
15.0				514.7	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-14-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bags 12-16' Olfactory Observations: Slight odor 14-16'
--	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-10
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
0.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		0.8		
5.0				0.6		
5.0				0.8		
5.0				0.8		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		152.0		
10.0				212.0		
15.0	-14.0 14.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments:	Length: 10' Width: 3' Depth: 14'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 10-14'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-11
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		1.4		
	-3.0 3.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		0.6		
5.0				1.3		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		59.6		
10.0				77.1		
	-16.0 16.0	End of Test Pit		265.0	Sampled 12-15'	
15.0				300.0		
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-15-12	Depth: 16'	Olfactory Observations: Slight odor 3-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-12 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		1.2		
				0.5		
5.0				0.9		
	-6.0 6.0	Lean Clay Brown, moist, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff				
				11.3		
10.0				18.5		
	-12.0 12.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		42.0		
15.0				48.9		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-15-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 0-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-13 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
0.0		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.6 0.0 0.2 0.6 1.8		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Brown, moist, fine to coarse sand with some fine to coarse fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		269.0 500.0 522.5		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-6-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bag 10-16' Olfactory Observations: Slight odor 10-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-14 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
8.8		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		8.8		
11.1				11.1		
9.2				9.2		
9.0				9.0		
-8.0 8.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Brown, moist to wet 10', fine to coarse sand with some fine to coarse fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		378.0		
10.0				546.0	Sampled 10-12'	
15.0				440.8		
16.0	-16.0 16.0	End of Test Pit		331.7		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-6-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: 15' Visual Impacts: Product in sample bag 10-16' Olfactory Observations: Slight odor 8-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-15

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs ppm 0 1000 2000	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface				
	-1.0 1.0	<p>Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place</p> <p>Lean Clay Brown and black, moist, medium plasticity fines with trace gravel, medium stiff</p>		16.4 1.8 3.2		
5.0	-6.0 6.0	<p>Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, pipe at 7', slight odor</p>		78.6 90.2 172.9 198.8		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company

Excavator Type: John Deere 690ELC

Excavation Date(s): 8-22-12

Comments:

Length: 10'

Width: 3'

Depth: 16'

Depth to Water: None

Visual Impacts: None

Olfactory Observations: Slight odor 6-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-16
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		0.8		
	-2.0 2.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.6		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		10.2		
				37.7		
				45.2		
10.0				109.0		
				89.4		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-14-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 5-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-17
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few bricks, and trace non-plastic fines, dense in place		0.0		
	-2.0 2.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, few pipes		0.0		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Brown to gray (8'), moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		0.5		
				0.1		
				0.3		
10.0				0.2		
				8.3		
15.0				13.8		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-15-12	Depth: 16'	Olfactory Observations: None
Comments: Product and water found during backfill on S sidewall (4-6')		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-18

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place, slight odor, one inch thick black tar like layer (solid almost brittle) at 3'	[Cross-hatched pattern]	29.9 22.4 20.5		
10.0	-6.0 6.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor	[Dotted pattern]	63.1 178.0		
15.0	-12.0 12.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted pattern]	122.0 186.0		
20.0	-16.0 16.0	End of Test Pit				

Excavated By: Todd Company
Excavator Type: John Deere 690ELC
Excavation Date(s): 8-15-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Slight odor 1-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-19

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		1.4 1.1		
5.0	-4.0 4.0	Well Graded Sand with Silt and Gravel Reddish brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		1.0		
10.0				0.6		
		Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		26.8 172.0		
15.0	-12.0 12.0			385.9	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company

Length: 10'

Depth to Water: None

Excavator Type: John Deere 690ELC

Width: 3'

Visual Impacts: None

Excavation Date(s): 8-21-12

Depth: 16'

Olfactory Observations: Slight odor 12-16'

Comments: Moved location 40' east of proposed location due to H2S exposure

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-20
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.6 45.8		
5.0	-4.0 4.0	Silty Sand with Gravel Black, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		2.5		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Reddish brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		1.5		
15.0	-12.0 12.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		68.8 69.5		
20.0	-16.0 16.0	End of Test Pit				

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-20-12	Depth: 16'	Olfactory Observations: None
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-21
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		1.1		
	-3.0 3.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		26.1		
5.0				69.5		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight to moderate odor		333.3		
10.0				0.0		
	-15.0 15.0	End of Test Pit		501.0	Sampled 13-15'	
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-22-12 Comments:	Length: 10' Width: 3' Depth: 15'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight to moderate odor (8-15')
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-22
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatched symbol]	6.2 8.9 4.8		
10.0	-6.0 6.0	Well Graded Sand with Silt and Gravel Brown, moist to wet (8'), fine to coarse sand with some fine to coarse gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	88.7 913.0 1023.0 568.2 1230.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-6-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bag 8-14' Olfactory Observations: Slight odor 6-16'
---	---	---

Sheet: 1 of 1

TT-23 NOT DONE

TT-24 NOT DONE

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-25
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		61.5 65.3		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 12-16'		2.9 3.8 35.2 672.0		
15.0	-16.0 16.0	End of Test Pit			Sampled 14-16'	
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-21-12	Depth: 16'	Olfactory Observations: Slight odor 12-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-26
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		8.9		
				85.2		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 8-16'		117.9		
5.0				30.3		
				222.4		
10.0				668.4		
					Sampled 12-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-21-12	Depth: 16'	Olfactory Observations: Slight odor 8-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-27

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.6 0.5		
	-4.0 4.0	Silty Sand with Gravel Reddish brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		1.2		
5.0	-6.0 6.0	Well Graded Sand with Silt and Gravel Reddish brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, refusal on large rock		1.6 0.5		
10.0	-10.0 10.0	End of Test Pit				
15.0						
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 690ELC
Excavation Date(s): 8-21-12
Comments: Refusal on large rock

Length: 10'
Width: 3'
Depth: 10'

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

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-28 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
2.4		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick and metal, dense in place, slight odor 4-12'	[Cross-hatched symbol]	2.4		
63.5				63.5		
786.5				786.5		
-12.0 12.0	-12.0 12.0	End of Test Pit				
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-10-12 Comments: Stopped at 12' due to cave in	Length: 10' Width: 3' Depth: 12'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 4-12'
--	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-29 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
4.6		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor		4.6		
9.9				9.9		
54.2				54.2		
75.6				75.6		
89.3				89.3		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor		442.0		
15.0				374.0		
16.0	-16.0 16.0	End of Test Pit		432.0		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-12-12 Comments: Located 115' west of GPS location	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bag 10-16', Olfactory Observations: Slight 8-10', moderate 10-16'
--	---	---

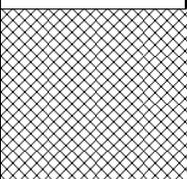
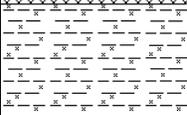
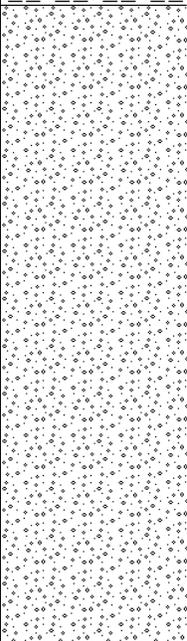
Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-30 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.4		
	-3.0 3.0	Lean Clay Brown, moist, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff		10.6		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		1.8		
				2.7		
10.0				1.6		
				20.8		
15.0				68.7		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-22-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-31
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.5		
	-3.0 3.0	Silty Sand with Gravel Black and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.8		
5.0				4.8		
	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		389.0		
10.0				681.0		
15.0				743.0	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-21-12	Depth: 16'	Olfactory Observations: Slight odor 6-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-32 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.6		
	-3.0 3.0	Silty Sand with Gravel Black and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.8		
5.0				18.7		
	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 10-16'		6.8		
10.0				47.7		
				117.3		
15.0				142.2		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-21-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 10-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-33

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatched symbol]	46.4 27.2 12.8 58.7 28.0		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	139.3 157.8 238.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 9-12-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Slight odor 10-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-34
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor	[Cross-hatched symbol]	28.0 123.0 165.0		
6.0	-6.0 6.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, moderate odor	[Dotted symbol]	389.0		
8.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Brown, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor	[Dotted symbol]	393.0		
10.0				1304.0		
14.0	-14.0 14.0	End of Test Pit		1264.0		
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-10-12 Comments:	Length: 10' Width: 3' Depth: 14'	Depth to Water: None Visual Impacts: Product in sample bag 10-14' Olfactory Observations: Slight odor 2-6', moderate odor 6-14'
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-36
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor		254.8		
	-2.0 2.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		131.7		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		299.3		
5.0				191.6		
				285.1		
10.0				374.1		
				220.0		
15.0				200.2		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-6-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 0-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-37 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface				
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place, moderate odor		171.0		
	-2.0 2.0	Lean Clay Yellowish brown, moist, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff, moderate odor		280.0		
	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor		218.0		
				214.0		
				383.0		
				321.0		
				313.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-21-12 Comments: Located 30' west and 60' south of proposed location due to utilities	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Moderate odor
--	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-38 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown and black, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		0.7		
	-3.0 3.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		1.2		
5.0				0.7		
				10.0		
10.0				0.8		
	-14.0 14.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		6.5		
15.0	-16.0 16.0	End of Test Pit		50.7		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-21-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 14-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-39

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor		1.9		
		Lean Clay Gray, moist, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff, moderate odor		207.0		
	-4.0 4.0			523.0		
5.0				902.0		
		Well Graded Sand with Silt and Gravel Brown, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor		730.0		
	-10.0 10.0			541.0		
10.0				575.0		
		End of Test Pit		508.0		
	-16.0 16.0					
15.0						
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 9-10-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Moderate odor 4-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-40

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatch symbol]	8.9		
				5.8		
	-4.0 4.0	Lean Clay Gray, moist, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff, slight odor	[Horizontal line symbol]	252.0		
5.0				317.0		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Brown, moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	326.0		
10.0				1268.0		
				337.0		
15.0				408.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 9-7-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

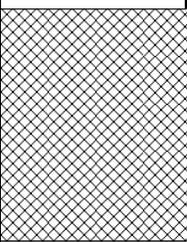
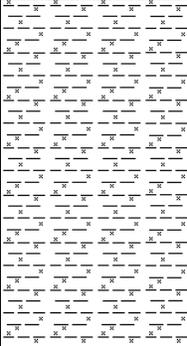
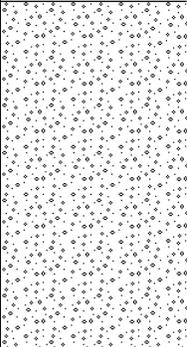
Depth to Water: None
Visual Impacts: Product in sample bag 10-16'
Olfactory Observations: Slight odor 4-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-41 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
0.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		2.9 4.3		
5.0	-4.0 4.0	Lean Clay Gray, moist to wet (8'), medium plasticity fines with trace fine to coarse rounded gravel, medium stiff, slight odor 8-10'		10.1 172.6 88.7		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Brown, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		152.8 384.0 366.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-6-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-42 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Silty Sand with Gravel Brown and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		11.2 12.4 17.7 60.7		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray and black, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		83.7 104.6 98.6 199.6		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-4-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-43 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor 4-6'	[Cross-hatched symbol]	5.8 7.4 393.0		
6.0	-6.0 6.0	Lean Clay Gray, wet, medium plasticity fines with trace fine to coarse rounded gravel, medium stiff, slight odor	[Horizontal line symbol]	335.0		
10.0	-9.0 9.0	Well Graded Sand with Silt and Gravel Brown, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	400.2 366.7 656.0		
15.0	-16.0 16.0	End of Test Pit		356.0		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-7-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bag 6-16' Olfactory Observations: Slight odor 4-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-44
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs ppm 0 1000 2000	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface				
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, cinders, and ash, dense in place, slight odor 4-6'		1.7		
5.0				8.8		
		Silty Sand with Gravel Brown and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		537.2		
	-6.0 6.0			570.2		
		Well Graded Sand with Silt and Gravel Gray and black, moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		1122.0		
10.0	-8.0 8.0			1823.0		
				1523.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 160 G	Width: 3'	Visual Impacts: Product in sample bags 12-16'
Excavation Date(s): 9-4-12	Depth: 16'	Olfactory Observations: Slight odor 4-16'
Comments:		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-45 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		27.2		
	-2.0 2.0	Silty Sand with Gravel Brown and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		11.6		
	-4.0 4.0	Well Graded Sand with Silt and Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		9.4		
5.0				9.7		
10.0				14.4		
				14.5		
15.0				12.9		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-4-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-46
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 3000 5000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatched symbol]	6.8		
	-3.0 3.0	Silty Sand with Gravel Brown and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor 6-8'	[Dotted symbol]	6.5		
5.0				359.9		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray and black, moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor	[Dotted symbol]	500.0		
10.0				2859.0		
	-15.0 15.0			1741.0		
15.0				4187.0	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-4-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Product in sample bags 6-12' Olfactory Observations: Slight 6-10', moderate 10-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-47 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place, slight odor 6-10', possible black product 6-10'		0.1		
				0.3		
5.0				89.2		
				179.6		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		25.8		
				17.8		
15.0				23.8		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-23-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Black staining Olfactory Observations: Slight odor 6-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-48
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place	[Cross-hatched symbol]	0.6 0.9 48.9 2.7		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	119.6 396.3		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-23-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-49
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		3.8 21.3 36.8		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		78.7 531.8 740.0	Sampled 12-14"	
15.0	-16.0 16.0	End of Test Pit		130.9		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-23-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-50 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 3000 5000 ppm		
		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, moderate odor 4-6'	[Symbol: Sand with Gravel]	259.7		
				1.2		
5.0				2726.0	Sampled 4-6'	
	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor	[Symbol: Sand with Silt and Gravel]	2358.0		
				2618.0		
10.0				1894.0		
				1238.0		
15.0				1891.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Moderate odor 4-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-51 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense	[Symbol: Sand with Gravel]	1.3		
				3.6		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Symbol: Sand with Silt and Gravel]	54.1		
				147.0		
				282.0		
10.0				181.4		
				246.2		
15.0	-16.0 16.0	End of Test Pit		365.5		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 5-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-52 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		10.1 10.1 12.5 21.6		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		740.3 1063.0 740.0 1568.0	Sampled 10-12'	
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-27-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-53
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor 6-8'	[Dotted Pattern]	2.1 6.2 8.2 539.1		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted Pattern]	602.1 1548.0 1213.0		
15.0	-16.0 16.0	End of Test Pit		1053.0		
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-27-12	Depth: 16'	Olfactory Observations: Slight odor 6-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-54
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		<p>Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, pipe at 6'</p>	[Dotted pattern]	16.0 150.2 204.3		
10.0	-6.0 6.0	<p>Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor</p>	[Dotted pattern]	473.3 386.3 583.1		
15.0	-16.0 16.0	End of Test Pit		1238.0 1347.0	Sampled 14-16'	
20.0						

<p>Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-27-12 Comments:</p>	<p>Length: 10' Width: 3' Depth: 16'</p>	<p>Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 6-16'</p>
--	--	---

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-55
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 3000 5000 ppm		
5.0		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		6.1 7.9 6.7 14.8		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		2154.0 381.3 1415.0 1201.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-27-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-56

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
		<p>Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place</p>	[Cross-hatched symbol]	6.6 171.9		
5.0	-4.0 4.0	<p>Silty Sand with Gravel Brown, moist to wet (6'), fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor</p>	[Dotted symbol]	162.0 167.7		
10.0	-8.0 8.0	<p>Well Graded Sand with Silt and Gravel Gray and black, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor</p>	[Dotted symbol]	144.7 58.3		
15.0	-14.0 14.0			142.9 148.6		
16.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 8-30-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: Product in sample bags 4-12'
Olfactory Observations: Slight odor 4-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-57 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
5.0		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place, moderate odor	[Cross-hatched symbol]	47.7 416.9 567.1		
10.0	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor	[Dotted symbol]	773.0 1366.0		
15.0	-16.0 16.0	End of Test Pit		1025.0 1391.0	Sampled 14-16'	
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-23-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Moderate odor
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-58

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs ppm 0 1000 2000	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface				
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatched symbol]	7.9		
				83.9		
	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense	[Dotted symbol]	51.5		
5.0				876.0		
	-7.0 7.0	Well Graded Sand with Silt and Gravel Gray and black, moist to wet (8'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor	[Dotted symbol]	885.2		
10.0				870.7		
				1167.0		
15.0				1248.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 8-30-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Moderate odor 7-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-59 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place		1.3		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor 4-6'		1.7		
5.0				288.4		
	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		688.6		
10.0				268.9		
				161.0		
15.0				10.4		
	-16.0 16.0	End of Test Pit		226.5		
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 4-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-60
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, trace bricks, and trace non-plastic fines, dense in place, slight odor	[Cross-hatched symbol]	259.7		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor	[Dotted symbol]	477.1		
	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	634.0		
10.0				120.0		
				114.7		
				124.7		
				237.0		
15.0				273.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-61

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor		59.6		
	-4.0 4.0	Lean Clay Brown, moist, low plasticity fines with some fine to coarse sand, few fine to coarse rounded gravel, medium stiff, slight odor		655.7		
5.0				668.1		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, moderate odor		734.7		
10.0				1257.0		
	-16.0 16.0	End of Test Pit		605.3		
15.0				1220.0		
20.0				1219.0		

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 8-30-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: Product in sample bags 10-14'
Olfactory Observations: Slight odor 0-8', moderate odor 8-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-62
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 3000 5000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		0.8		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		179.6		
5.0				168.7		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray and black, moist to wet (10'), fine to coarse sand with some fine to fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor, moderate odor 12-16'		286.7		
10.0				356.1		
				1256.0		
				2499.0		
15.0				4189.0	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 8-31-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight 4-12', moderate 12-16'
--	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-63
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place	[Cross-hatched symbol]	3.7		
	-3.0 3.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense	[Dotted symbol]	10.8		
5.0				21.6		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor	[Dotted symbol]	4.7		
10.0				373.3		
				1287.0		
15.0				1801.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-29-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 8-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-64

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		4.8		
				25.7		
	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		266.0		
5.0				1013.0		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor, product in sample bag (8-16')		678.0		
10.0				637.0		
				925.0		
15.0				906.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 690ELC
Excavation Date(s): 8-28-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Slight odor 4-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-65 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		11.0 11.6 20.4 16.6		
10.0	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		12.6 12.6 7.2		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-27-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-66 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		5.5		
				6.6		
	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		7.4		
5.0				4.6		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 10-16'		3.4		
				489.1		
10.0				579.7		
				580.7		
15.0						
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 8-30-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 10-16'
--	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-67
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		0.6		
				0.9		
	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		1.0		
5.0				1.7		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place		0.9		
10.0				1.4		
				1.4		
15.0				1.4		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-29-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: None
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-68 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		1.2		
				17.8		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist to wet (8'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		679.2		
				901.7		
10.0				1163.0		
				612.7		
				902.6		
15.0	-16.0 16.0	End of Test Pit			Sampled 14-16'	
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-29-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 5-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-69 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		10.5		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		0.0		
5.0	-5.0 5.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor (12-16')		16.4		
				7.7		
				90.9		
10.0				622.0		
				1152.0	Sampled 12-14'	
15.0				359.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-28-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 12-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-70
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
5.0		<p>Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor 4-8'</p>				
10.0	-8.0 8.0	<p>Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor</p>				
15.0	-14.0 14.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-29-12 Comments:	Length: 10' Width: 3' Depth: 14'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 4-14'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-71 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000 1000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, strong odor		1018.0		
	-2.0 2.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, strong odor		1033.0		
5.0				1197.0		
	-6.0 6.0	End of Test Pit				
10.0						
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-28-12 Comments: Stopped test pit due to strong odors	Length: 10' Width: 3' Depth: 6'	Depth to Water: None Visual Impacts: None Olfactory Observations: Strong odor 0-6+'
--	--	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-72

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs ppm 0 1000 2000	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface				
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor 2-4'		3.0		
				293.0		
	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		187.0		
5.0				543.0		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor, product in sample bag (10-16')		485.0		
10.0				875.0		
				920.0		
15.0				958.0	Sampled 14-16'	
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 690ELC
Excavation Date(s): 8-28-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: Product in sample bags 10-16'
Olfactory Observations: Slight odor 2-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001 Project: Olean Redevelopment Site Client: Olean Gateway, LLC Site Location: 1400 Buffalo Street, Olean, NY	Test Pit I.D.: TT-73 Logged By: BMG Checked By: BCH
--	--

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense	[Symbol: Sand with Gravel]	67.4 66.6		
5.0	-4.0 4.0	Well Graded Sand with Silt and Gravel Gray, moist to wet 8', fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor, product in sample bags 8-10'	[Symbol: Sand with Silt and Gravel]	102.1 807.9		
10.0				393.6		
	-12.0 12.0	End of Test Pit				
15.0						
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-29-12 Comments:	Length: 10' Width: 3' Depth: 12'	Depth to Water: None Visual Impacts: Product in sample bags 6-10' Olfactory Observations: Slight odor 4-12'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-74

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place, slight odor 2-4'		1.8		
				198.0		
	-4.0 4.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor		176.0		
5.0				369.0		
	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		280.0		
10.0				365.0		
				442.0		
15.0				255.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 690ELC
Excavation Date(s): 8-28-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: None
Olfactory Observations: Slight odor 2-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-75
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		2.1		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense, slight odor 4-6'		31.8		
5.0				139.0		
	-6.0 6.0	Well Graded Sand with Silt and Gravel Gray, moist to wet (8'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		216.0		
				337.0		
10.0				190.0		
				452.0		
15.0				481.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company	Length: 10'	Depth to Water: None
Excavator Type: John Deere 690ELC	Width: 3'	Visual Impacts: None
Excavation Date(s): 8-28-12	Depth: 16'	Olfactory Observations: Slight odor 4-16'
Comments:		

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-76
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 1000 2000 ppm		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		11.2		
	-2.0 2.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		13.1		
5.0				21.8		
				20.7		
	-9.0 9.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor (10-16'), product in sample bag (10-14')		32.8		
10.0				85.6		
				35.7		
15.0				248.0		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 690ELC Excavation Date(s): 8-28-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Olfactory Observations: Slight odor 10-16'
---	---	--

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-77
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 2000		
10.7		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, cinders, and ash, dense in place	[Cross-hatched symbol]	10.7		
10.5				10.5		
12.5				12.5		
13.7	-6.0 6.0	Silty Sand with Gravel Brown and gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense	[Dotted symbol]	13.7		
16.2	-8.0 8.0	Well Graded Sand with Silt and Gravel Gray and black, moist to wet (10'), fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor 14-16'	[Dotted symbol]	16.2		
11.2				11.2		
22.7				22.7		
103.7				103.7		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-4-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 14-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-78
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		0.9 2.3		
5.0	-4.0 4.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		1.6 2.4		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, wet, fine to coarse sand with some fine to coarse rounded gravel, little non-plastic fines, dense in place, slight odor		3.1 34.7 50.7 67.0		
15.0	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 9-11-12 Comments: Located SW of TT-46	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: None Olfactory Observations: Slight odor 10-16'
Sheet: 1 of 1		

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001

Test Pit I.D.: TT-79

Project: Olean Redevelopment Site

Logged By: BMG

Client: Olean Gateway, LLC

Checked By: BCH

Site Location: 1400 Buffalo Street, Olean, NY

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
		Fill Brown, moist, fine to coarse sand with some fine to coarse gravel, few brick, dense in place		3.6		
				5.3		
	-4.0 4.0	Silty Sand with Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few low plastic fines, dense		5.6		
5.0				5.0		
	-6.0 6.0	Well Graded Sand with Silt and Gravel Brown, moist to wet (10'), fine to coarse sand with some fine to coarse gravel, little non-plastic fines, dense in place, slight odor 10-16'		2.8		
10.0				261.2	Sampled 10-12'	
				248.3		
15.0				145.2		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company
Excavator Type: John Deere 160 G
Excavation Date(s): 9-13-12
Comments:

Length: 10'
Width: 3'
Depth: 16'

Depth to Water: None
Visual Impacts: Product in sample bags 10-16'
Olfactory Observations: Slight odor 10-16'

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-80
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0 ppm 1000 2000		
4.4		Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little low plasticity fines, dense	[Dotted pattern]	4.4		
96.0				96.0		
16.6				16.6		
5.0	-6.0 6.0	Well Graded Sand with Silt and Gravel		194.0		
		Gray and black, moist, fine to coarse sand with some fine to coarse rounded gravel, few non-plastic fines, dense, slight odor	[Dotted pattern]	389.7		
10.0				751.8		
				464.8		
15.0				427.0		
-16.0 16.0		End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 10-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Olfactory Observations: Slight odor 6-16'
---	---	---

Sheet: 1 of 1

TEST PIT EXCAVATION LOG



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

Project No: 0250-012-001	Test Pit I.D.: TT-81
Project: Olean Redevelopment Site	Logged By: BMG
Client: Olean Gateway, LLC	Checked By: BCH
Site Location: 1400 Buffalo Street, Olean, NY	

SUBSURFACE PROFILE				PID VOCs	Lab Sample	Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol			
0.0	0.0 0.0	Ground Surface		0		
		Fill Black, moist, cinders and ash with few wood pieces, dense, slight odor 6-8'		0.8		
				27.5		
5.0				332.5		
	-6.0 6.0	Silty Sand with Gravel Brown, moist, fine to coarse sand with some fine to coarse rounded gravel, little low plasticity fines, dense		20.1		
				80.3		
10.0	-10.0 10.0	Well Graded Sand with Silt and Gravel Gray, moist, fine to coarse sand with some fine to coarse rounded gravel, few non-plastic fines, dense, moderate odor		203.3		
				124.6		
15.0				137.8		
	-16.0 16.0	End of Test Pit				
20.0						

Excavated By: Todd Company Excavator Type: John Deere 160 G Excavation Date(s): 10-24-12 Comments:	Length: 10' Width: 3' Depth: 16'	Depth to Water: None Visual Impacts: Olfactory Observations: Slight odor 10-16'
---	---	--

Sheet: 1 of 1



TEST PIT LOG

ID NO. TP-1

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/17/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
	0-0.5	0.0	NA	Grass, Roots, Organic Material	Moist	Backfilled with excavated material
	0.5-2	0.0	NA	Dark Brown SILT, trace Organic Material		
2	2-3	0.0	NA	Light Tan Yellow SILT, trace Organic Material		
	3-4	0.0	NA	Brown Tan Red Mottled Fine to Coarse GRAVEL, some Cobbles		
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TP-2/W-14

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1426.6 feet	TOTAL DEPTH: 28 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: 1428.67 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: J. Vinci/ R. Sickler/ E. Popken	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/17/08; 7/28/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.9	NA	Topsoil, Grass, Roots, trace Cobble	Dry	See attached Monitoring Well Design Plan for well construction details.
2	0.5-2	26.0	NA	Gray SILT, some medium Gravel	Moist	
4	2-4	1.8	NA	Gray Coarse GRAVEL		
6	4-6	8.6	1.2 / 1.0	Brown Fine to Coarse SAND, little fine to coarse Gravel, trace Silt	Dry to Moist	
8	6-8	9.6	1.3 / 1.0	Brown Fine to Coarse SAND and fine to coarse GRAVEL, trace Silt		
10	8-10	9.9	1.3 / 0.5		Moist	
12	10-12	6.1	1.5 / 1.5			
14	12-14	6.1	0.8 / 1.5	Brown SILT, some to little fine to coarse Sand, trace fine to coarse Gravel and Clay	Wet	
16	14-16	186	1.2 / 1.25	Gray Fine to Coarse SAND, some to little fine to coarse Gravel, trace Silt	ST = Neg	
18	16-18	NA	NR	No Recovery; Rock lodged in tip of Spoon		
20	18-20	118	1.5 / 0.75	Gray Fine to Coarse GRAVEL, little fine to coarse Sand	Saturated, SPH Blebs noted, ST = Neg	
22	20-22	163	1.8 / 0.5		Moist, SPH Blebs noted, ST = Neg	
24	22-24	246	1.7 / 0.5	Gray Fine to Coarse SAND and Fine to Coarse GRAVEL	Saturated, SPH noted, ST = Pos	
26	24-26	208	1.0 / 0.5	Gray Fine to Coarse SAND and Fine to Coarse GRAVEL, trace Silt	Wet, SPH Blebs noted, ST = Neg	
28	26-28	199	1.2 / 0.5	Gray Fine to Coarse GRAVEL, little fine to coarse Sand	SPH Blebs noted, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 28 feet, bedrock not encountered.
 ST = Shake Test, N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TP-3/SB-57/W-12

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1431.9 Feet	TOTAL DEPTH: 34 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 22 feet	CASING EL.: 1433.72 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: J. Vinci/J. Simms/E. Popken	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/18/08; 6/25/08; 7/31/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parrott Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.1	NA	Grass, Topsoil, Roots, some coarse Gravel	Moist to Dry	See attached Monitoring Well Design Plan for well construction details.
2	0.5-2	0.0	NA	FILL; Bricks, Rebar, Concrete, some brown fine to medium Sand, trace medium Gravel and Ash	Dry	
4	2-4	0.0	NA	FILL; Bricks, Concrete, some brown fine to medium Sand and medium Gravel		
6	4-6	1.9	0.8 / 0.5	FILL; Brown Fine to Medium SAND, some Gravel and Silt, trace Clay		
8	6-8	NA	NR	No Recovery; Concrete		
10	8-10	1.8	1.2 / 0.75	Brown Fine to Coarse SAND and GRAVEL, some Silt, trace Clay		
12	10-12	0.0	1.5 / 1.0	Brown Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Moist	
14	12-14	0.0	1.2 / 1.25	Brown Fine to Medium SAND and GRAVEL, some Silt		
16	14-16	0.0	1.4 / 0.5	Brown Fine to Medium SAND and GRAVEL, trace Silt	Dry	
18	16-18	0.0	1.3 / 1.0	Brown Fine to Coarse SAND and GRAVEL, trace Silt	Moist	
20	18-20	0.0	1.0 / 0.5	Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Wet	
22	20-22	0.0	1.0 / 1.5	Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Saturated	
24	22-24	17.4	1.5 / 0.5	Gray Fine to Coarse SAND and GRAVEL, trace Silt		
26	24-26	253	1.0 / 1.25	Gray Fine to Coarse SAND and Fine to Coarse GRAVEL, trace Silt	Sheen, SPH Blebs noted, ST = Neg	
28	26-28	113	1.0 / 1.0	Gray Fine to Coarse SAND, little fine to coarse Gravel, trace Silt	Loose, ST = Neg	
30	28-30	50.5	1.0 / 3.0	Gray Fine to Coarse SAND, little fine to coarse Gravel, trace Silt and Clay	Wet, Loose	
32	30-32	40.8	1.5 / 1.75	Gray Fine to Coarse GRAVEL, some to little fine to coarse Sand, trace Silt	Loose	
34	32-34	60.2	1.8 / 2.0	Gray Fine to Coarse SAND, some fine to coarse Gravel, trace Silt and Clay	Saturated, Compact	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 34 feet, bedrock not encountered.
ST = Shake Test, N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-4**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/13/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	6.2		Brown Fine to Medium SAND, some coarse Gravel		Backfilled with excavated material
	0.5-2	8.1		Dark Brown Fine to Medium SAND, some Silt and coarse Gravel		
2	2-4	7.5		Brown SILT, some Clay and coarse Gravel		
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-5**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	12.1		FILL; Brown Fine to Medium SAND, some coarse Gravel		
	0.5-2	10.0		FILL; Dark Brown Fine to Coarse SAND, som slag and coal pieces, trace coarse Gravel		Backfilled with excavated material
2					Moist	
	2-4	8.0		Brown Fine to Medium SAND, some coarse Gravel, trace Silt		
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-6**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Brown Fine SAND, some Silt and Slag, trace coarse Gravel		
	0-2		12.9			Backfilled with excavated material
2				Brown Coarse SAND and Coarse GRAVEL		
	2-4		16.6			
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-7

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	24.0		Dark Brown Fine SAND and SILT, trace coarse Gravel		Backfilled with excavated material
	0.5-2	7.5		Brown SILT, some Clay, trace Gravel		
2	2-4	16.3		Brown SILT and Coarse GRAVEL, trace Clay		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-8

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Brown Fine to Medium SAND, some coarse Gravel and SILT		
	0-2		10.2	Tan Fine SAND and SILT		Backfilled with excavated material
2				Gray SILT, some Clay and coarse Gravel		
	2-4		6.3	Gray Coarse SAND and GRAVEL	Moist	
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-9**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: V. Maresco	Drilling Method: Excavator
Dates Drilled: 6/6/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Top Soil		
				FILL; Black ash, metal pieces, cinders		
0-2	28.7			FILL; Brown cinders, ash, GRAVEL, SAND, trace Silt	Iron stained layer at 13 - 15 inches	Backfilled with excavated material
2-4	7.5			Brown Gray CLAY and SILT, some fine Gravel, trace Sand	Dry	
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-10

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	6.1		Brown Fine to Medium SAND and GRAVEL, trace Silt		
	0.5-2	6.8		Tan Medium to Coarse SAND and Coarse GRAVEL		Backfilled with excavated material
2				Tan Coarse SAND, trace Gravel	Moist	
	2-4	1.7				
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.
2 pipes identified on east side of TP; one running N/S, second running NE/SW

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-11

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 5 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/11/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL: Brown Fine to Medium SAND, GRAVEL and COBBLE		
	0-2	112		FILL: Dark Gray Fine to Medium SAND	Odor Shake Test negative	Backfilled with excavated material
2				FILL: Dark Gray Fine to Medium SAND, fiberglass pieces	Moist	
	2-4	154			Shake Test negative	
4				Coarse GRAVEL, some Cobble and fine Sand		
	4-6	NA			Wet	
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 6 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-12

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 7.5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 6 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/11/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL: Brown Fine to Medium SAND, Coarse GRAVEL, COBBLE, Concrete		
0-2	7.5					Backfilled with excavated material
2				Brown SILT and Fine SAND, some coarse Gravel	Moist	
2-4	9.0					
4				Coarse GRAVEL and COBBLE, some Silt		
4-6	0.0					
6					Wet	
6-7.5	5.7					

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 7.5 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-13

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: V. Maresco	Drilling Method: Excavator
Dates Drilled: 6/6/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Asphalt		
				FILL; Gray Fine GRAVEL		
	0-2	0.0		FILL: Black Medium SAND and Fine GRAVEL, some medium to coarse Gravel, Coal Ash and Slag, trace Silt	Coal Ash and Slag present	Backfilled with excavated material
				FILL: Brown Medium SAND and Fine GRAVEL,, some medium Gravel and Coal Ash, trace Silt and raw Coal pieces	Coal Ash present; Concrete at North end of hole	
2		0.0			Raw Coal pieces observed below 2 feet	
	2-4					
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, concrete floor footed at 4 feet; did not penetrate

Symbol Key:

Apparent Water Level

Lab Sample Location



TEST PIT LOG

ID NO. TP-14

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/5/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
	0-0.5		0.0	Brown Fine to Medium SAND and Coarse GRAVEL		
				Brown Fine SAND and SILT, some Gravel, trace Cobble		
	0.5-2		0.0			Backfilled with excavated material
2				Brown Coarse SAND and Coarse GRAVEL		
	2-4		0.0			
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.
3 inch conduit encountered on North Eastern side of Test Pit on concrete.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-15**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 0.6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/5/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-0.5	NC			Dark Brown Fine to Medium SAND and SILT, some Coarse Gravel		Backfilled with excavated material
0.6				Concrete encountered; Test Pit Abandoned		

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

1 foot wide Concrete encountered at 22 inches; Test Pit abandoned.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-15A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/5/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
	0-2		107	Brown Black Medium to Coarse SAND and GRAVEL		
					Shake Test negative	Backfilled with excavated material
2						
	2-4		1.3	Gray CLAY, some Gravel		
				Gray SILT and Coarse GRAVEL, some coarse Sand		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-16

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4.3 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: V. Maresco	Drilling Method: Excavator
Dates Drilled: 6/6/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Top Soil, Black Organic material	Odor	
	0-2	0.5		FILL: Black Ash, Cinders, Raw Coal	Brick fragments noted throughout Test Pit	Backfilled with excavated material
2				FILL: Brown Gray Ash, Cinders		
	2-4	471		FILL: Dark Gray SILT, some Ash, Cinders and medium to fine Sand	Shake Test negative	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4.3 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-17**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 2.58 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/5/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------

0				Brown Black Coarse SAND and Coarse GRAVEL		
	0-2		49.8			Backfilled with excavated material
2	2-2.58					

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

2 inch steel pipe running East West on North side of hole at 31 inches below ground surface
2 inch steel pipe running North South on East side of hole at 31 inches below ground surface
Test Pit abandoned at 31 inches

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-17A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/5/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Brown Black Coarse SAND and Coarse GRAVEL		
0-2						Backfilled with excavated material
2				Gray CLAY, some coarse Gravel		
2-4			19.8			
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-18

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/12/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	13.4		Brown Fine to Medium SAND and GRAVEL		
	0.5-2	1.4		Brown SILT and Fine SAND, some Clay, trace Gravel	Compact	Backfilled with excavated material
2	2-4	8.1		Tan Coarse SAND, some coarse Gravel	Loose, Moist	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-19

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	4.2		FILL; Brown Fine SAND, trace coarse Gravel		Backfilled with excavated material
	0.5-2	4.5		FILL; Slag and Fine SAND, trace coarse Gravel		
2	2-4	3.1		Gray CLAY		
				Tan Orange SILT, some Clay		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TP-20**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/11/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Brown Fine to Coarse SAND, some coarse Gravel, trace Cobble		
	0-2		6.1			Backfilled with excavated material
2				Brown Fine SAND and SILT, some coarse Gravel		
	2-4		10.2			
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TP-21**

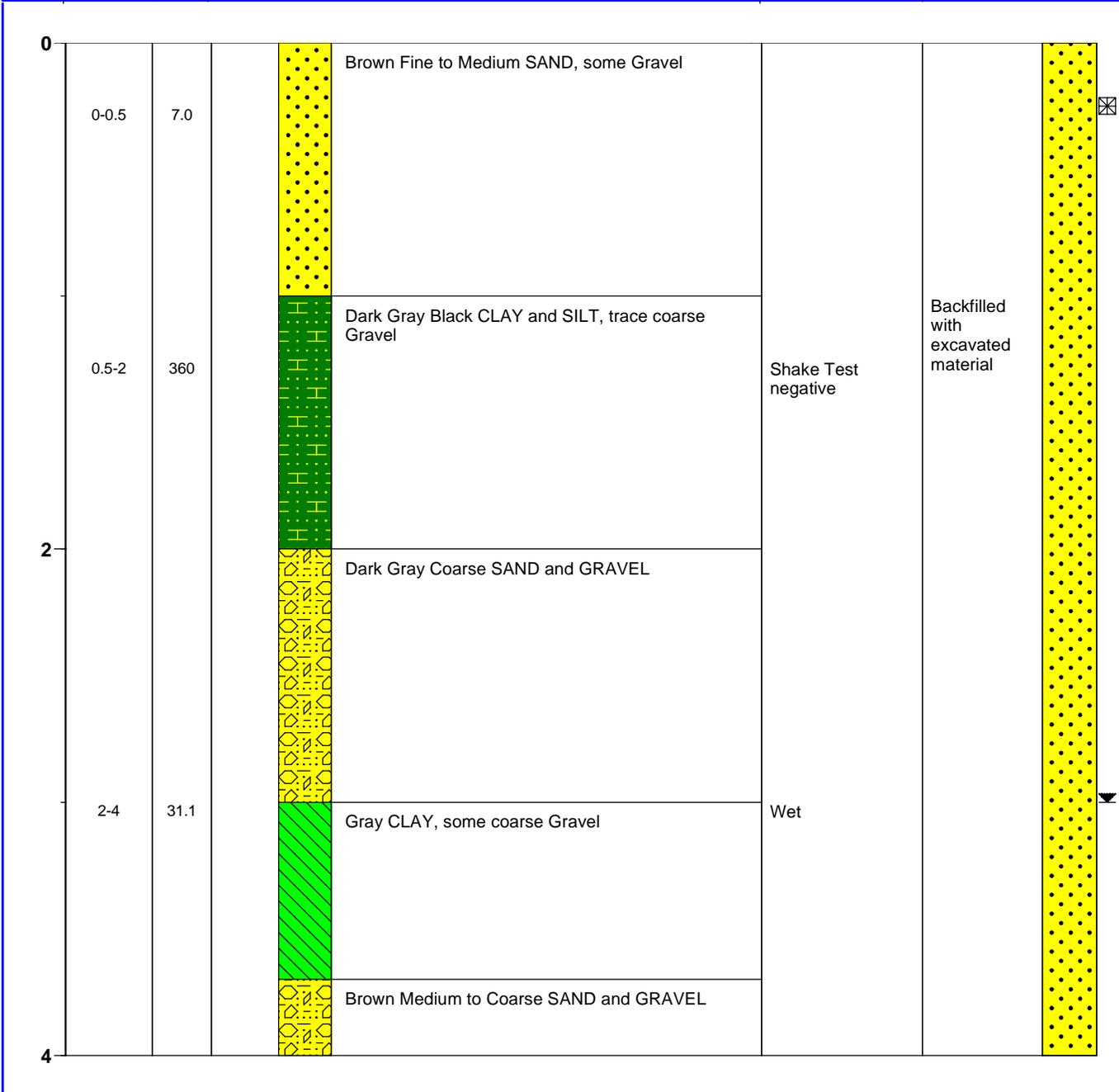
Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 3 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------



Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TP-21/W-6

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1424.4 feet	TOTAL DEPTH: 28 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 20 feet	CASING EL.: 1426.45 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/10/08; 7/24/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	7.0	NA	Brown Fine to Medium SAND, some Gravel		
2	0.5-2	360	NA	Dark Gray Black CLAY and SILT, trace coarse Gravel	ST = Neg	See attached Monitoring Well Design Plan for well construction details.
4	2-4	31.1	NA	Dark Gray Coarse SAND and GRAVEL	Saturated (perched)	
6	4-6	347	1.1 / 1.25	Gray CLAY, some coarse Gravel	Moist, Cohesive, Soft, ST = Neg	
8	6-8	89.8	0.7 / 1.25	Brown Medium to Coarse SAND and GRAVEL		
10	8-10	571	1.1 / 1.25	Gray SILT, some fine to medium Sand, little fine Gravel, trace Clay and coarse Gravel	ST = Neg	
12	10-12	56.1	0.5 / 2.0			
14	12-14	46.1	1.5 / 2.5			
16	14-16	89.2	0.9 / 1.75			
18	16-18	331	1.7 / 2.5		ST = Neg	
20	18-20	248	0.7 / 2.0		ST = Neg	
22	20-22	1346	2.0 / 1.5	Gray Fine GRAVEL, some Silt, little medium to coarse Sand	Saturated, Loose, Sheen, ST = Neg	
24	22-24	1165	2.0 / 1.5		Sheen, ST = Neg	
26	24-26	212	0.8 / <0.5	Gray SILT	Sheen, ST = Neg	
28	26-28	3364	1.7 / 1.5	Gray SILT and Fine GRAVEL, some fine Sand, little medium to coarse Sand, trace coarse Gravel	Loose, Sheen, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 28 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-22

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/9/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
	0-0.5	0.0		Brown Fine to Medium SAND and GRAVEL		Backfilled with excavated material
	0.5-2	0.0		FILL: Black Cinders, Slag and Coarse SAND, trace Gravel		
2				Gray CLAY, some coarse Gravel		
	2-4	0.0		Brown Orange Fine SAND and SILT, some coarse Gravel		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-23

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
	0-0.5		56.4	Brown Fine to Medium Coarse SAND and Coarse GRAVEL		
				FILL: Black Brown Coarse SAND, some Cinders		
	0.5-2		4.8			Backfilled with excavated material
2						
				Gray CLAY and GRAVEL		
	2-4		6.2	Tan Orange SILT, some Clay and Gravel		
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-24

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	28.9		FILL; Brown Fine to Medium SAND and GRAVEL		Backfilled with excavated material
	0.5-2	12.0		FILL; Black Coal and Cinders		
2				Tan Fine to Medium SAND and Coarse GRAVEL		
	2-4	9.7				
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TP-25**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Brown Fine to Medium SAND, some Gravel		
	0-0.5	14.2				
				Black SILT, trace coarse Gravel		
	0.5-2	9.8				Backfilled with excavated material
2						
	2-4	8.1				
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TP-26/W-11

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1424.5 feet	TOTAL DEPTH: 28 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH 18 feet	CASING EL.: 1426.61 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/10/08; 7/25/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parrott Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	4.1	NA	FILL; Brown Fine to Medium SAND and GRAVEL		See attached Monitoring Well Design Plan for well construction details.
2	0.5-2	5.8	NA	FILL; Black Medium to Coarse SAND and Coarse GRAVEL, some Ash		
4	2-4	4.9	NA	Tan SILT, some Clay and coarse Gravel		
6	4-6	9.0	0.6 / 0.75	Orange Medium SAND and SILT, some fine Gravel, trace Clay and coarse Gravel	Dry, Loose	
8	6-8	7.4	1.3 / 2.0		Moist	
10	8-10	8.0	1.4 / 1.75	Brown Medium SAND, some fine Gravel, little Silt, trace coarse Gravel	Dry, Loose	
12	10-12	5.5	1.5 / 1.5	Brown Medium SAND and SILT, some fine Gravel, trace coarse Gravel	Loose	
14	12-14	11.6	1.5 / 2.75			
16	14-16	16.3	2.0 / 2.25	Brown SILT and Fine GRAVEL, some fine Sand, trace coarse Gravel	Loose	
18	16-18	547	1.0 / 2.25	Gray SILT and Fine GRAVEL, some fine Sand, trace coarse Gravel	Moist, Wet around coarse grains, ST = Neg	
20	18-20	NA	NR	No Recovery; Rock lodged in Spoon Tip	Wet inside Spoon	
22	20-22	116	1.0 / 1.25	Gray Coarse SAND and Fine GRAVEL, little Silt, trace coarse Gravel	Saturated, Loose, ST = Neg	
24	22-24	401	1.3 / <0.50		Moist, Cohesive, ST = Neg	
26	24-26	215	1.3 / 2.5	Gray SILT, some fine Sand, trace fine to coarse Gravel	ST = Neg	
28	26-28	292	1.0 / <0.50	Gray Coarse SAND and Fine GRAVEL, little Silt, trace fine to medium Sand and coarse Gravel	Saturated, Loose, Sheen noted on coarse grains, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 28 feet, bedrock not encountered.
 ST = Shake Test, N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TP-27**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/10/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Fine to Medium SAND		Backfilled with excavated material
0-2	4.9			FILL; Brown Black Fine SAND and SILT, some Ash		
2				Gray CLAY, some coarse Gravel		
2-4	17.9					
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-30

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/19/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Topsoil, Roots, some coarse Gravel		
0-0.5	0.3	NA	NA	Light to Dark Gray SILT		
0.5-2	301	NA	NA	Brown Coarse GRAVEL, trace Silt	Dry, ST = Neg	Backfilled with excavated material
2						
2-4	376	NA	NA		Moist, ST = Neg	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-31

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/25/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	0.9	NA		FILL; Dark Brown Topsoil, some Roots and Ash	Dry	
				FILL; Brown Red Black Slag, some Sand, Roots and Wood	Wet	
0.5-2	76	NA				Backfilled with excavated material
2				Brown Tan CLAY, some Silt	Water seeping in excavation	
2-4	3.3	NA			Dry	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-32

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/23/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	3.2	NA		Brown Topsoil, some medium Gravel	Dry	
0.5-2	0.2	NA		Brown Fine to Medium SAND, some medium Gravel	Moist	Backfilled with excavated material
2				Gray Coarse SAND and Coarse GRAVEL		
2-4	144	NA			Moist, ST = Neg	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TP-33**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/23/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
	0-0.5	1.9	NA			
				FILL: Brown Fine Topsoil, some Medium to Coarse Gravel, some Roots	Dry	
	0.5-2	1.2	NA			Backfilled with excavated material
				FILL: Black, Red, Orange Coal Slag and Ash		
2				Brown Medium to Coarse GRAVEL, some Medium Sand, little Silt	Moist	
	2-4	1.7	NA			
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TP-34

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/23/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	1.9	NA		Fill: Concrete		
0.5-2	1.2	NA		Fill: Brown Fine to Medium SAND, some Medium Gravel	Dry	Backfilled with excavated material
2				Fill: Concrete Rubble and Pieces		
2-4	1.7	NA		Brown Fine to Medium SAND, some Medium Gravel		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TP-36**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/20/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Black Topsoil, some Roots, little fine to medium Gravel	Dry	Backfilled with excavated material
	0.5-2	0.0	NA	Brown Fine to Medium SAND, some fine to medium Gravel		
2	2-4	0.0	NA	Brown Fine to Medium SAND, some Silt and medium to coarse Gravel		
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-37

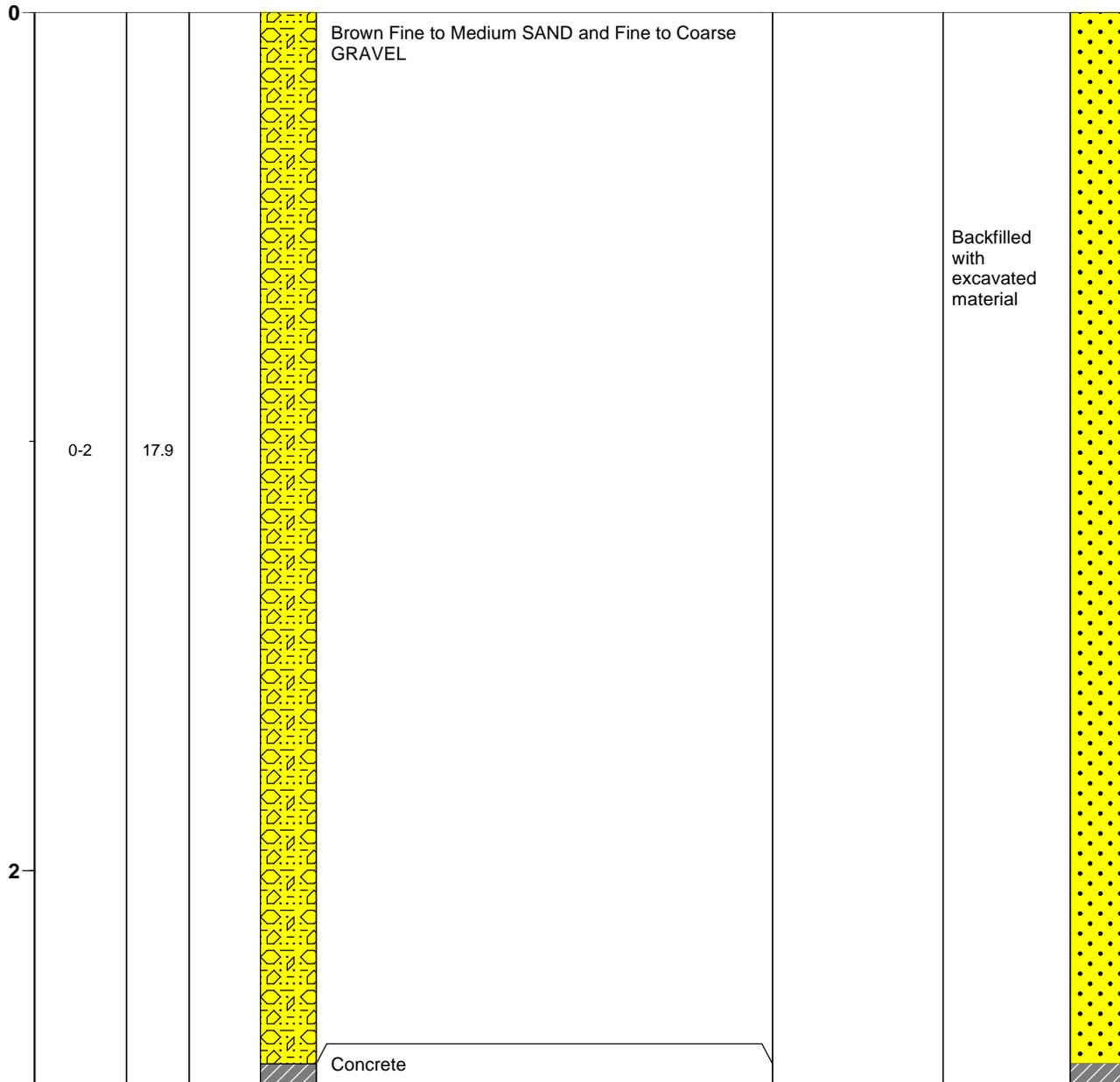
Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 2.5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/9/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------



Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Pipe encountered at 1.5 feet bg on East side of hole.
 Concrete encountered at 2.5 feet bg.
 Excavation abandoned.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TP-37A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/9/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Brown Coarse SAND and Fine to Coarse GRAVEL, some Ash		
	0-2		94.9			Backfilled with excavated material
2				Gray CLAY, trace coarse Gravel		
	2-4		180		Shake Test negative	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. DTP-1/TPSB-1/W-16

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1421.7 feet	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH 16 feet	CASING EL.: 1423.61 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/ R. Sickler/ E. Popken	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/13/08; 7/2/08; 8/1/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	0-2	5.0	NA	FILL; Brown Fine SAND, some Coarse GRAVEL and Brick		See attached Monitoring Well Design Plan for well construction details.
2	2-4	7.2	NA	FILL; Black Coal, Ash, Cinders, Coarse GRAVEL, some coarse Sand		
4	4-6	46.2	NA	FILL; Black Ash, Cinders, Clinkers and Coarse GRAVEL	Saturated (perched)	
6	6-8	183	NA	Gray SILT, some Clay	Wet, Cohesive, Sticky, Soft, Black Staining, ST = Neg	
8	8-10	441	NA		Moist, Black Staining, ST = Neg	
10	10-12	435	NA		Black Staining, ST = Neg	
12	12-14	23.4	0.5 / 0.5	Brown Fine to Coarse GRAVEL, little Silt, little to trace fine to coarse Sand, trace Clay	Wet	
14	14-16	382	1.8 / 0.5	Gray Fine to Coarse SAND, some to little Silt, little fine to coarse Gravel, trace Clay	SPH Blebs noted, ST = Neg	
16	16-18	225	0.5 / 0.5	Black Fine to Coarse SAND and Fine to Coarse GRAVEL, trace Silt	Saturated, Loose, Sheen and SPH Blebs noted, ST = Neg	
18	18-20	806	1.8 / 1.25	Gray Fine to Coarse SAND and Fine to Coarse GRAVEL, little to trace Silt	Wet, SPH Blebs noted, ST = Neg	
20	20-22	552	0.8 / 1.0	Gray Fine to Coarse SAND, little fine to coarse Gravel	SPH Blebs noted, ST = Neg	
22	22-24	240	1.0 / 1.5	Gray Fine to Coarse SAND and GRAVEL, some fine to coarse Sand, trace Silt	ST = Neg	
24	24-26	301	0.8 / 2.5	Gray Fine to Coarse SAND, little fine to coarse Sand, trace Silt	Saturated, ST = Neg	
26						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 ST = Shake Test, N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-2/W-17

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1423.0 feet	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 16 feet	CASING EL.: 1424.83 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: J. Vinci / J. Simms/ E. Popken	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/24/08; 7/29/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			Topsoil and Grass		
0.5-2	6.2	NA		Concrete		
2	2-4	78.5	NA	FILL; Black Fine to Medium SAND, little Gravel and Slag	Dry	See attached Monitoring Well Design Plan for well construction details.
4	4-6	0.0	0.3 / 1.0	Light Gray CLAY	Moist	
6	6-8	1350	1.0 / 0.5	Gray Coarse GRAVEL, some fine to medium Sand	Wet	
8	8-10	1295	1.25 / 0.75	Brown SILT and CLAY	Moist	
10	10-12	993	1.0 / 0.75	Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Sheen, ST = Neg	
12	12-14	1037	1.3 / 0.75	Gray Fine to Coarse SAND and GRAVEL, some Silt, trace Clay	Sheen, ST = Neg	
14	14-16	585	0.7 / 0.5	Gray Fine to Coarse SAND and GRAVEL, some Silt	Sheen, ST = Neg	
16	16-18	1521	1.75 / 0.5	Dark Gray Fine to Coarse SAND and GRAVEL, some Silt	Sheen, ST = Neg	
18	18-20	1667	1.2 / 1.5	Dark Gray Fine to Coarse SAND and GRAVEL, trace Silt	Sheen, ST = Neg	
20	20-22	619	1.0 / <0.5	Dark Gray Fine to Coarse SAND and GRAVEL, little Silt	Sheen, ST = Neg	
22	22-24	513	0.6 / 0.5	Dark Gray Fine to Coarse SAND and GRAVEL, little Silt	Sheen, ST = Neg	
24	24-26	16.2	0.5 / 0.5	Tan Brown CLAY and SILT, trace fine to medium Sand and fine to coarse Gravel	Sheen, ST = Neg	
26						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-2A

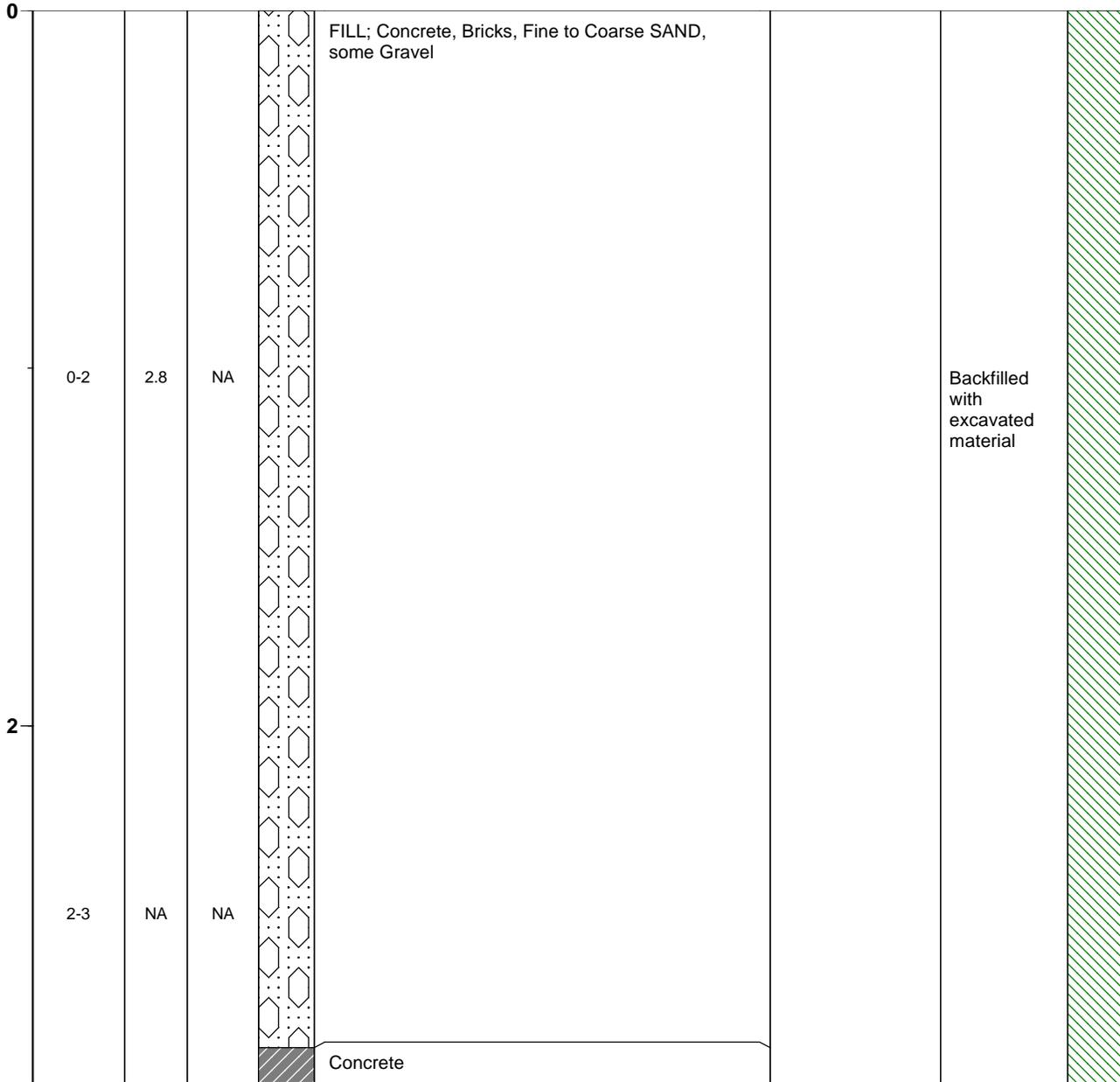
Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 3 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/13/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------



Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 3 feet, concrete encountered. Test Pit abandoned

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-2B

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/13/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Brown Fine to Medium SAND, some brick fragments and coarse Gravel		
	0-2	4.7	NA			Backfilled with excavated material
2				FILL; Black Fine to Medium SAND and SILT, some coarse Gravel	Moist, Pipe encountered at 2 ftbg on West side of Test Pit	
	2-4	218	NA		Pipe encountered at 4 ftbg, ST = Neg	
4						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 4 feet, pipe encountered. Test Pit abandoned.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-2C

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/9/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Dark Brown Fine to Medium SAND and SILT, some Bricks, Brick Fragments and Concrete Pieces	Dry to Slightly Moist, Loose	
0.5-1	0.0	NA	NA			
1-2	45.2	NA	NA	FILL; Black Fine to Medium SAND and SILT, some Ash and Cinders, trace Brick Fragments, fine to coarse Gravel and Cobbles	Dry, Loose	Backfilled with excavated materials
2						
2-3	59.9	NA	NA			
3-4	122	N	N		Dry, Loose, Sheen Observed in ST Bottle	
4						
4-5	208	N	N		Moist, Loose, Sheen Observed in ST Bottle	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of Test Pit at 5 feet. Bedrock was not encountered.
 ppm = parts per million; bgs = below ground surface; T8= Trench #8
 SHAKE TEST (ST) RESULT KEY
 NA = Not Applicable
 N = Negative
 P = Positive

Symbol Key:

Apparent Water Level
 Lab Sample Location



TEST PIT LOG

ID NO. TPSB-2D

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/9/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Brown SILT and CLAY, trace fine to coarse Gravel	Moist, Soft, Cohesive	
0.5-1	0.0	NA	NA			
1-2	0.0	NA	NA	FILL; Dark Brown Fine to Medium SAND, Brick and Concrete Fragments, trace fine to coarse Gravel and Cobbles	Dry, Loose	Backfilled with excavated materials
2						
2-3	0.0	NA	NA			
3-4	111	N	N	FILL; Brown and Light Brown SILT and Fine SAND, some Clay, trace Wood Pieces and Scrap Metal Shards	Moist, Soft, Cohesive, Sheen Observed in ST Bottle	
4						
4-5	165	N	N	Black and Gray SILT and CLAY, trace fine Gravel	Moist, Very Soft, Cohesive, Sheen Observed in ST Bottle	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 5 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-2E

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/9/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Black and Brown Fine to Medium SAND, some fine to coarse Gravel, little Silt, trace Cobbles and Organic Material	Dry, Loose	Backfilled with excavated materials
0.5-1	0.2	NA				
1-2	0.8	NA		FILL; Black Fine to Medium SAND, some Silt, Raw Coal, Ash and Cinders, trace fine to coarse Gravel		
2				FILL; Black Fine to Medium SAND, some Silt, Raw Coal, Ash, Cinders and Brick Fragments, trace fine to coarse Gravel		
2-3	1.7	NA				
3-4	0.0	NA				
4				FILL; Black and Gray Ash, Cinders and Slag, trace fine to coarse Sand and Silt	Wet, Loose	
4-5	1.6	NA				

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 5 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-2F

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/9/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Dark Brown and Tan Fine to Medium SAND and SILT, some Wood Pieces, Brick and Concrete Fragments, trace fine to coarse Gravel and Cobbles	Dry, Loose	Backfilled with excavated materials
0.5-1	3.8	NA				
1-2	44.0	NA				
2				FILL; Black Fine to Medium SAND and SILT, some Wood Pieces, Brick and Concrete Fragments, little Clay, trace fine to coarse Gravel and Cobbles	Moist, Loose	
2-3	13.2	NA				
				Black Fine to Medium SAND and SILT, trace fine to coarse Gravel and Cobbles	Moist, Loose, Sheen Observed in ST Bottle	
3-4	183	N				
4				Dark Gray Fine to Medium SAND and SILT, some Clay, trace fine to coarse Gravel and Cobbles	Moist, Soft, Semi-cohesive	
4-5	203	N				

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 5 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-2G

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 3 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/9/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Brown Fine to Medium SAND and Bricks, trace fine to coarse Gravel and Concrete Pieces; Refusal occurred at 3' below ground surface due to concrete footers and concrete sub-slabs encountered at multiple locations attempted to excavate below 3'. Test pits abandoned at 3' below ground surface.	Slightly Moist, Loose	
0.5-1	0.0	NA	NA			Backfilled with excavated materials
1-2	0.0	NA	NA			
2						
2-3	0.0	NA	NA			

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 3 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-3 / DTP-3

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci/R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/16/08; 7/2/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Grass, Topsoil		
	0.5-2	1024	NA	FILL: Dark Brown-Black Fine to Medium SAND and Coarse GRAVEL, some ash and coal	Moist, ST = Neg	Backfilled with excavated material
2				Dark Brown-Black Medium to Coarse Gravel		
	2-4	1311	NA		ST = Neg	
4				Gray Medium SAND and CLAY, some fine Gravel, trace Silt and coarse Gravel	Moist, Semi-Cohesive, Soft, Black Staining, ST = Neg	
	4-6	3083	NA			
6						
	6-8	3109	NA		Staining, ST = Neg	
8				Gray Medium SAND and Fine GRAVEL, little coarse Gravel, trace Silt and Cobbles		
	8-10	8250	NA		Loose, Staining, SPH blebs, ST = Neg	
10						
	10-12	1517	NA		Wet, Staining, ST = Neg	
12						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. **TPSB-4**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 2 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/17/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
				FILL; Concrete with Rebar, Bricks		
0-2	0.5		NA	FILL; Brown Fine to Medium SAND, some Ash and Gravel, trace Roots		Backfilled with excavated material
2				Concrete Slab	Concrete; Refusal	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 2 feet, concrete encountered. Test Pit abandoned

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-4A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 20 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 15.1 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Vinci/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/17/08; 6/24/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Gray Fine SILT, some medium to coarse Gravel	Moist	
0-2	2.9	NA				
2				Gray Medium to Coarse GRAVEL, some Cobbles	Pipe encountered at 2 ftbg	Backfilled with excavated material and drill cuttings
2-4	14.8	NA				
4				Brown Fine to Medium SAND and GRAVEL, little Silt, trace Clay	Moist	
4-6	0.0	0.6 / 0.5				
6				Dark Gray Fine to Medium SAND and GRAVEL, little Silt, trace Clay	Wet	
6-8	27.4	0.75 / 0.5				
8				Dark Gray Fine to Coarse SAND and GRAVEL, some Silt, trace Clay	Sheen, ST = Neg	
8-10	164	1.2 / 1.0				
10						
10-12	501	2.0 / 1.5			Moist, Sheen, ST = Neg	
12						
12-14	635	2.0 / 1.25			Sheen, ST = Neg	
14						
14-16	403	1.2 / 1.25			Wet, Sheen, ST = Neg	
16						
16-18	128	1.8 / 1.25			Sheen, ST = Neg	
18				Gray SILT and Fine to Coarse SAND	Saturated	
18-20	0.0	0.75 / <0.5				
20						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 20 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/17/08; Boring (4-20 ft) completed 6/24/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-5 / DTP-5

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 6 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci/R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/17/08; 7/2/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
				FILL; Dark Topsoil, Slag, Bricks and Concrete		
0-2	1.0	NA		FILL; Black SILT, trace white suspect Wax pieces	Moist, Cohesive	Backfilled with excavated material
2				FILL; Black Medium to Coarse GRAVEL, some Ash and Slag	Dry	
2-4	0.9	NA				
4				FILL; Black Gray Ash, Cinders and Coal, trace fine Gravel and Silt		
4-6	45.9	NA				
6				Gray SILT, some Clay, trace coarse Gravel	Saturated (perched), Staining, Loose	
6-8	74.3	NA			Wet, Soft, Cohesive, Sticky	
8				Black Medium SAND and Fine GRAVEL, little Clay, trace Silt, coarse Gravel and Cobble	Moist	
8-10	384	NA			Loose, Staining, ST = Neg	
10				Gray Medium SAND and Fine GRAVEL, little Clay, trace Silt, coarse Gravel and Cobble		
10-12	282	NA			Black Staining, ST = Neg	
12						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-6 / DTP-6

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci/R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/18/08; 7/2/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-2	0.3	NA		FILL; Brown Gray Black White Ash and Coal Slag		Backfilled with excavated material
2				FILL; Gray Ash and Slag		
2-4	0.0	NA		FILL; Yellow Tan SILT, some medium Sand, Coal Slag and Gravel		
4				Brown CLAY and Fine GRAVEL, trace coarse Gravel, Cobbles and Silt	Wet, Soft, Cohesive	
4-6	1.6	NA				
6						
6-8	216	NA		Gray SILT, some Clay, trace coarse Gravel	Moist, Soft, Sticky, Cohesive, Black Staining, ST = Neg	
8						
8-10	696	NA		Black Medium SAND and Fine GRAVEL, little Clay, trace Silt, coarse Gravel and Cobble	ST = Neg	
10					Loose, Staining, SPH blebs	
10-12	555	NA			ST = Neg	
12						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-7 / DTP-7

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci/R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/17/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-2	0.0	NA		FILL; Tan Brown SILT and Black Slag	Moist, Semi-Cohesive	Backfilled with excavated material
2	2-4	8.4	NA	FILL: Red Brown Organic Material, Wood fragments	Soft, Moist	
4	4-6	32.6	NA	FILL; Brown Peat, CLAY and Medium SAND, little Silt, trace fine to coarse Gravel, coal fragments, wood pieces and organic material	Moist to Wet, Semi-Cohesive, Staining	
6	6-8	1353	NA	Gray Fine SAND, some Silt, little Clay, trace fine to coarse Gravel	Wet, Black Staining, SPH blebs noted, ST = Neg	
8	8-10	1294	NA	Gray Medium to Coarse SAND, some fine Gravel, trace Silt, coarse Gravel and Cobble	Loose, Black Staining, ST = Neg	
10	10-12	1254	NA		Black Staining, ST = Neg	
12						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-9

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 5 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Vinci / J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/17/08; 6/25/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt-Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil		
	0-2	0.0	NA	Brown SILT	Dry, Lightly Cohesive	Backfilled with excavated material
2	2-4	0.0	NA	Light Brown SILT, some coarse Gravel	Moist, Slightly Cohesive	
4	4-5	NA	NR	No Recovery		

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Refusal at 5 ftbgs; Concrete and Rebar encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-9A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 24 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 20.6 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Vinci/ J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/26/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil		
0-2	0.0	NA			Dry to Moist	Backfilled with excavated material and drill cuttings
2-4	0.2	NA		Brown Medium to Coarse GRAVEL, some fine to coarse Gravel	Dry	
4-6	0.0	NA				
6-8	0.8	NA			Moist	
8-10	8.9	1.0 / <0.5		Brown Fine to Coarse SAND and GRAVEL, little Silt, trace Clay		
10-12	18.9	1.3 / <0.5		Brown Fine to Coarse SAND and GRAVEL, trace Silt		
12-14	4.4	1.8 / 1.0		Brown Fine to Coarse SAND and GRAVEL, some Silt		
14-16	6.7	1.2 / <0.5		Brown Fine to Coarse SAND and GRAVEL, trace Silt	Dry	
16-18	14.3	1.2 / <0.5		Gray Fine to Medium SAND, trace Silt	Moist	
18-20	73.1	1.5 / 0.75		Gray Fine to Coarse SAND and GRAVEL, some Silt, trace Clay		
20-22	74.0	1.3 / 3.0		Gray Fine to Coarse SAND and GRAVEL, some Silt, little Clay	Wet	
22-24	109	1.5 / 0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt	Saturated, Sheen, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 24 feet, bedrock not encountered.
 Test Pit (0-4 ft) and Boring (4-24 ft) completed 6/26/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-10/DTP-10

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/17/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Grass, Topsoil, Roots		
	0.5-2	0.0	NA	Dark Gray Brown Medium to Coarse GRAVEL	Dry	Backfilled with excavated material
2	2-4	0.0	NA	Brown, Red, Yellow Medium to Coarse GRAVEL	Moist	
4	4-6	3.2		Brown Medium SAND, some fine Gravel, trace coarse Gravel, Silt and Clay	Moist, Loose	
6	6-8	2.8	NA	Brown Medium SAND, some fine Gravel, little Clay, trace coarse Gravel and Silt		
8	8-10	2.4	NA	Gray Medium SAND, some fine Gravel, little Clay, trace coarse Gravel and Silt		
				Gray Medium SAND, some fine Gravel, trace Silt coarse Gravel and Cobbles	Loose	
10						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-11 / DTP-11

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/18/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil, Roots		
0-2	0.0	NA		Dark Brown Fine to Medium SAND and Medium GRAVEL	Dry	Backfilled with excavated material
2-4	0.0	NA		Brown Fine to Medium SAND, some Gravel		
4-6	1.2	NA		Brown Medium SAND, some fine Gravel, little Clay, trace Silt, coarse Gravel and Cobbles	Moist, Loose	
6-8	2.3	NA		Brown Medium to Coarse SAND and Fine GRAVEL, trace Silt, coarse Gravel and Cobbles	Wet, Loose	
8-10	3.2	NA				
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-12/W-13

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1429.2 feet	TOTAL DEPTH: 30 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH 20 feet	CASING EL.: 1431.14 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: J. Vinci / J. Simms/ E. Popken	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/18/08; 6/25/08; 7/31/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Topsoil and Grass		
2	0.5-2	0.0	NA	Brown SILT, some Gravel	Moist	See attached Monitoring Well Design Plan for well construction details.
4	2-4	0.0	NA	Brown Fine to Medium SAND and GRAVEL, some Silt		
6	4-6	52.8	1.0 / 1.0	Brown Fine to Coarse SAND and GRAVEL, little Silt		
8	6-8	141	.75 / <0.5	Gray Fine to Medium SAND and GRAVEL, little Silt	ST = Neg	
10	8-10	64.5	.75 / 0.5	Gray Fine to Coarse SAND and GRAVEL. some Silt		
12	10-12	58.6	1.2 / 0.5	Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay		
14	12-14	32.5	1.6 / 1.25	Gray Fine to Coarse SAND and GRAVEL, some Silt, little Clay		
16	14-16	53.2	1.3 / <0.5	Gray Fine to Medium SAND, trace Silt		
18	16-18	49.5	1.6 / 1.5	Gray Fine to Coarse SAND and GRAVEL, some Silt, trace Clay		
20	18-20	86.8	1.75 / 2.0	Gray Fine to Medium SAND, some Gravel, little Silt		
22	20-22	201	1.6 / 2.5	Gray Fine to Medium SAND and GRAVEL, trace Silt	Saturated, ST = Neg	
24	22-24	471	1.5 / 0.75	Gray Fine to Coarse GRAVEL, some fine to coarse Sand, trace Silt	Wet, Compact, SPH Blebs noted, ST = Neg	
26	24-26	317	1.1 / 0.5	Gray Fine to Coarse SAND, some fine to coarse Gravel, trace Silt	Saturated, Loose, SPH Blebs noted, ST = Neg	
28	26-28	175	0.8 / 0.5	Gray Fine to Coarse SAND, little Silt, trace Clay	ST = Neg	
30	28-30	50.7	1.2 / 2.5	Brown SILT, little fine Sand	Wet, SPH Blebs noted, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 30 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-13

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 22 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17.8 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Vinci/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/18/08; 6/20-23/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-2	0.4	NA		FILL; Bricks		
2				FILL; Dark Brown Fine SAND, some Gravel	Dry	Backfilled with excavated material and drill cuttings
2-4	0.1	NA		FILL and Rebar		
4				Brown SILT	Dry, Cohesive	
4-6	0.4	0.7 / 1.0		Brown Fine to Medium SAND, some Gravel, trace Silt	Moist	
6				Brown Fine to Coarse SAND and GRAVEL, little Silt		
6-8	0.0	1.2 / 0.5				
8						
8-10	0.0	1.2 / <0.5				
10						
10-12	0.0	1.0 / 1.0				
12				Gray Brown Fine to Coarse SAND and GRAVEL, little Silt	Dry	
12-14	1.2	1.3 / 1.0				
14				Brown Fine to Coarse SAND and GRAVEL, little Silt	Moist	
14-16	3.2	1.25 / 1.0				
16						
16-18	6.5	1.5 / 0.5				
18				No Recovery	Saturated	
18-20	NA	NR				
20				Gray Brown Fine to Coarse SAND and GRAVEL, little Silt		
20-22	75.6	1.3 / 1.25				
22						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 22 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/18/08; Boring (4-26 ft) completed 6/20-23/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-13A

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/12/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Fine to Coarse GRAVEL		
0-0.5	NA	NA	NA	FILL; Black and Dark Brown Fine to Medium SAND, Ash and Cinders, trace Silt, fine to coarse Gravel, Bricks, Cobbles, Concrete Pieces and Scrap Pipe Pieces	Slightly Moist, Loose	Backfilled with excavated materials
0.5-1	0.1	NA	NA			
1-2	0.1	NA	NA			
2				FILL; Black, Brown and Gray Fine to Coarse Ash, Cinders and Clinkers, trace fine to coarse Gravel	Dry, Loose	
2-3	0.2	NA	NA			
3-4	0.1	NA	NA	Light Brown Fine to Medium SAND and SILT, some Clay, trace fine to coarse Gravel and Cobbles	Moist, Soft, Cohesive	
4				Light Brown Fine to Medium SAND and Fine GRAVEL, some Silt, trace coarse Sand, coarse Gravel and Clay	Moist, Loose	
4-5	0.2	NA	NA			
5-6	0.1	NA	NA			
6						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
 ppm = parts per million; bgs = below ground surface; T8= Trench #8
 SHAKE TEST (ST) RESULT KEY
 NA = Not Applicable
 N = Negative
 P = Positive

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-13B

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/12/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Reading in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Black Fine to Medium SAND, some Ash and Cinders, little Silt, trace fine to coarse Gravel, Bricks and Brick Fragments	Dry, Loose	Backfilled with excavated materials
0.5-1	0.3	NA				
1-2	0.4	NA				
2						
2-3	0.3	NA				
3-4	0.2	NA		FILL; Dark Brown Fine to Medium SAND, some Ash and Cinders, little Silt, trace fine to coarse Gravel, Bricks and Brick Fragments	Moist, Loose	
4						
4-5	0.3	NA				
5-6	0.3	NA		Brown Fine to Medium SAND and Fine to Coarse GRAVEL, some Silt, trace Clay and Cobbles		
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-13C

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/12/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Black Fine to Medium SAND and Fine to Medium Ash and Cinders, trace fine to coarse Gravel	Dry, Loose	Backfilled with excavated materials
0.5-1	0.7	NA		FILL; Black Fine to Medium SAND and Fine to Medium Ash and Cinders, trace fine to coarse Gravel, Clinkers and Raw Coal		
1-2	0.5	NA				
2-3	0.6	NA				
3-4	5.4	NA		Brown Fine to Medium SAND and Fine to Coarse GRAVEL, little Silt	Moist, Loose	
4-5	1.0	NA		Brown Fine to Medium SAND and Fine to Coarse GRAVEL, little Cobbles and Silt		
5-6	0.9	NA				
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-13D

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/12/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Black Fine to Medium SAND, some Ash, Cinders, fine to coarse Gravel, trace Clinkers, Cobbles, Raw Coal and Silt	Dry, Loose	
0.5-1	0.1	NA				Backfilled with excavated materials
1-2	0.1	NA				
2						
2-3	45.7	NA			Moist, Loose	
3-4	20.6	NA		Brown Fine to Medium SAND and SILT, some Clay, trace fine to coarse Gravel	Moist to Wet, Semi-cohesive	
4						
4-5	2.5	NA		Brown Fine to Medium SAND, some fine to coarse Gravel and Silt, trace Cobbles	Moist, Loose	
5-6	0.6	NA				
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



BORING LOG

ID NO. TPSB-14

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 16.2 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: V. Maresco / J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/6/08; 6/18/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Asphalt	Pipe encountered on North edge of Test Pit.	
0-2	0.0	NA		FILL; GRAVEL		Backfilled with excavated material and drill cuttings
2				FILL; Black Coal, Ash, Gravel and Sand		
2-4	0.4	NA		Brown SILT and CLAY, trace fine Sand		
4				Gray Brown GRAVEL and SAND, trace Silt		
4-6	0.0	1.0 / 1.0		Brown Fine to Coarse SAND and GRAVEL, trace Silt	Moist	
6				Brown Fine to Coarse SAND and GRAVEL, little Silt and Clay		
6-8	0.0	0.66 / 0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt and Clay		
8				Gray Fine to Coarse SAND and GRAVEL, trace Silt	Wet	
8-10	0.0	1.0 / <0.5		Gray Fine to Coarse SAND and GRAVEL, trace Silt		
10				Gray Fine to Coarse SAND and GRAVEL, little Silt		
10-12	42.5	1.0 / <0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt		
12				Gray Fine to Coarse SAND and GRAVEL, trace Silt and Clay	ST = Neg	
12-14	164	1.0 / <0.5		Gray Fine to Coarse SAND and GRAVEL, trace Silt and Clay	ST = Neg	
14				Black Medium to Coarse SAND and GRAVEL, trace Silt	Saturated, ST = Neg	
14-16	84.1	1.5 / 1.25		Gray Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
16				Black Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
16-18	179	1.0 / <0.5		Black Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
18				Black Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
18-20	245	1.0 / <0.5		Black Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
20				Black Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
20-22	138	1.2 / <0.5		Black Fine to Coarse SAND and GRAVEL, little Silt	ST = Neg	
22				Black Fine to Coarse SAND and GRAVEL, little Silt	ST = Neg	
22-24	99.7	1.5 / <0.5		Black Fine to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
24				Black Fine to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
24-26	88.8	1.0 / <0.5		Black Fine to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
26						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/6/08; Boring (4-26 ft) completed 6/18/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-15/W-1

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1421.9 feet	TOTAL DEPTH: 28 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: 1424.93 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/11/08; 6/19 & 20/08; 7/16/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			FILL; Brown Fine to Medium SAND, some Brick and Concrete		
0.5-2	5.4	NA			Communications Line encountered at 1 ftbg. Concrete slab on SW side of TP at 2 ftbg.	See attached Monitoring Well Design Plan for well construction details.
2-4	4.1	NA		Gray CLAY, trace coarse Gravel		
4-6	2.4	1.0 / 1.25		Gray CLAY	Moist	
6-8	9.5	1.3 / 1.0		Gray CLAY, some fine to medium Sand, trace Gravel		
8-10	10.3	1.25 / 0.5		Gray Fine to Coarse SAND and CLAY, some Gravel		
10-12	24.5	1.0 / 0.5				
12-14	87.9	NA		Gray Fine to Coarse SAND and GRAVEL, little Silt and Clay		
14-16	182	1.8 / <0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt	Wet, ST = Pos	
16-18	78.6	1.25 / 1.0			Saturated	
18-20	59.1	1.2 / 1.0				
20-22	45.7	1.0 / 1.5				
22-24	44.3	1.25 / <0.5		Tan grading to Gray CLAY	Wet	
24-26	9.6	1.2 / 1.5				
26-28	0.0	1.1 / 0.5				

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 28 feet, bedrock not encountered.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level

Lab Sample Location



BORING LOG

ID NO. TPSB-16

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 16 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/5/08; 6/10-11/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	FILL; Dark Brown Medium to Coarse SAND and GRAVEL		Backfilled with excavated material and drill cuttings
0.5-2	0.0	NA	FILL; Brick Layer			
2-4	1.4	NA	FILL; Brown Medium to Coarse SAND, some Gravel			
4-6	0.0	0.5 / 0.5	FILL; Black Dark Brown Medium to Coarse SAND and GRAVEL	Moist, Very Soft, Cohesive		
6-8	3.0	1.0 / 0.5	FILL; Gray CLAY	Soft, Cohesive		
8-10	55.7	1.0 / 0.75	Brown CLAY and Medium SAND, trace Silt and coarse Sand	Soft		
10-12	86.6	0.5 / 0.5	Brown grading to Gray Fine to Medium SAND, some fine Gravel, trace Clay, Silt and coarse Gravel			
12-14	326	1.0 / 1.0	Gray Medium SAND and Fine GRAVEL, trace Clay, Silt and coarse Gravel; Lense of fine to coarse Sand at 20 - 20.5 ftbg	Wet, Loose, ST = Neg		
14-16	295	1.2 / 1.25		ST = Neg		
16-18	417	1.3 / 1.25		Saturated, ST = Neg		
18-20	511	1.2 / 1.5		ST = Neg		
20-22	484	1.5 / 1.5		Staining, ST = Neg		
22-24	507	2.0 / 1.25		ST = Neg		
24-26	241	1.0 / 1.0	Gray Medium SAND, trace Silt	Some Staining, ST = Neg		

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/5/08; Boring (4-26 ft) completed 6/10-11/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-17

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 22 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 4 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Simms	Drilling Method: Hand Auger/Hollow Stem Auger
Dates Drilled: 6/19/08	Sampling Method: Hand Auger/Split Spoon
Drilling Company: Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------

0				Brown Fine to Coarse SAND and GRAVEL, trace Silt	Moist	Abandoned with slurry grout to grade with tremie pipe
0-2	0.0	NA				
2						
2-4	0.0	NA				
4				No Recovery	Wet	
4-6	NA	NR				
6				Black Fine to medium SAND and GRAVEL, trace Silt		
6-8	68.5	1.0 / 0.5				
8				Black Fine to Coarse SAND and GRAVEL, trace Silt		
8-10	57.3	1.0 / <0.5				
10						
10-12	40.1	1.2 / 0.5				
12						
12-14	116	1.3 / 0.75			Sheen noted, ST = Neg	
14						
14-16	89.4	1.7 / 0.5				
16						
16-18	198	0.6 / 1.5			Sheen noted, ST = Neg	
18						
18-20	228	1.2 / 0.75			Saturated, Sheen noted, ST = Neg	
20						
20-22	239	1.3 / 0.5			Sheen noted, ST = Neg	
22						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 22 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-18

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 14 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 7 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago / J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/11/08; 6/17/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			Brown Fine SAND and SILT, some coarse Gravel		
	0.5-2	8.4	NA		Moist	
2	2-4	19.9	NA	Brown Medium to Coarse SAND, some medium to coarse Gravel		Backfilled with excavated material and drill cuttings
4	4-6	3.1	1.0 / 1.0	Olive Brown Fine SAND and GRAVEL, little Silt, trace Clay		
6	6-8	4.4	1.0 / 0.5		Wet	
8	8-10	3.6	1.0 / 0.25			
10	10-12	4.6	1.5 / 0.5	Black Fine SAND and GRAVEL, trace Silt		
12	12-14	12.3	NA/NA			
14						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 14 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/11/08; Boring (4-12 ft) completed 6/17/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-19

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17.5 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/5/08; 6/11/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			Dark Brown Fine to Medium SAND and SILT, some coarse Gravel		
0.5-2	5.2	NA		Gray CLAY, some coarse Gravel		Backfilled with excavated material and drill cuttings
2-4	71.3	NA		Brown CLAY, some medium Sand, trace fine to coarse Gravel and Silt	Moist, Cohesive, ST = Neg	
4-6	188	1.0 / 1.0		Brown grading to Gray Medium SAND, some fine Gravel, trace Clay, Silt and fine Gravel	Loose, ST = Neg	
6-8	138	1.3 / 2.0		Gray Medium SAND and Fine GRAVEL, trace Clay, Silt and coarse Gravel	Moist to Wet	
8-10	64.6	1.0 / 1.0				
10-12	64.7	1.0 / 1.5				
12-14	56.2	1.0 / 1.25				
14-16	179	0.8 / 1.25			ST = Neg Wet	
16-18	431	1.5 / 1.25			ST = Neg Saturated	
18-20	498	1.5 / 1.5			SPH observed around coarse grains from 18 to 26 ftbg; staining, ST = Neg	
20-22	406	1.5 / 1.25			Staining, ST = Neg	
22-24	295	2.0 / 1.25			3 mm thick layer of SPH noted; staining, ST = Pos	
24-26	288	2.0 / 1.5				

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/5/08; Boring (4-26 ft) completed 6/11/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-20

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: V Maresco/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/6/08; 6/11/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL: Black Ash, Bricks, Cinders, some Coal		
0-2	164	NA		FILL: Brown SILT and SAND, some Ash and Cinders	Dry, ST = Neg	Backfilled with excavated material and drill cuttings
2						
2-4	58	NA		FILL: Gray SILT and SAND, some Gravel, trace Ash; Red Cinder layer at 32 - 36 inches		
4				Brown CLAY, some medium Sand, trace fine to coarse Gravel and Silt	Mosit, Cohesive	
4-6	70.2	1.2 / 1.5				
6						
6-8	518	1.5 / 1.5		Brown grading to Gray Medium SAND, some fine Gravel, trace Clay, Silt and coarse Gravel	Loose, ST = Neg	
8						
8-10	488	1.3 / 1.25			Staining, ST = Neg	
10						
10-12	907	1.5 / 2.0			ST = Neg	
12						
12-14	659	1.5 / 1.0			Moist to Wet, ST = Neg	
14						
14-16	1822	1.5 / 2.5		Gray Medium SAND and Fine GRAVEL, trace coarse Gravel and Silt	ST = Neg	
16						
16-18	2505	1.7 / 2.25			Wet, ST = Neg	
18					Saturated	
18-20	1924	1.8 / 2.75			Moist, ST = Neg	
20						
20-22	1903	1.8 / 2.25			Saturated, ST = Neg	
22						
22-24	1226	1.5 / 2.0		Gray Fine to Coarse SAND, trace Silt	Black Staining, ST = Neg	
24						
24-26	1039	1.8 / 2.25		Gray Medium SAND and Fine GRAVEL, trace coarse Gravel and Silt	ST = Neg	
26						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/6/08; Boring (4-26 ft) completed 6/11/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-22

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 20 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/12/08; 6/13/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Brown Fine to Medium SAND and Coarse GRAVEL		
0-2	1.1	NA				Backfilled with excavated material and drill cuttings
2						
2-4	0.7	NA				
4				Brown Orange Medium SAND, little fine Gravel, trace coarse Gravel, Silt and Clay	Dry, Loose	
4-6	8.1	1.5 / 3.0				
6						
6-8	7.8	1.3 / 2.5				
8				Brown Orange Medium SAND, little fine Gravel, Silt and Clay, trace coarse Gravel		
8-10	6.1	2.0 / 2.75				
10					Moist	
10-12	9.9	1.7 / 2.0				
12						
12-14	29.8	0.8 / 1.75				
14				Brown Fine to Medium SAND and Fine GRAVEL, little Silt, trace coarse Gravel		
14-16	13.9	1.2 / 2.5				
16					Wet	
16-18	35.3	1.3 / 2.5		Gray Fine to Medium SAND, little fine Gravel, trace Silt	Saturated	
18						
18-20	48.0	0.8 / 3.25				
20						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 20 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/12/08; Boring (4-20 ft) completed 6/13/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-23/W-8

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1425.6 feet	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH 18 feet	CASING EL.: 1427.21 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/R. Sickler/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/9/08; 6/12/08; 7/18/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			FILL; Brown Fine to Medium SAND		
0.5-2	35.4	NA		FILL; Black Coarse SAND and GRAVEL, some Slag	Moist, Sheen, ST = Neg	See attached Monitoring Well Design Plan for well construction details.
2-4	69.9	NA				
4-6	108	1.2 / 3.5		FILL; Brown CLAY, Ash, Brick fragments and Black Tar	Moist, Cohesive, Staining noted, ST = Neg	
6-8	87.8	1.5 / <0.5		Organic Material (possible Sludge), trace Clay	Wet, Cohesive	
8-10	275	2.0 / 2.5		Light Brown CLAY, little Silt, trace fine to coarse Sand and fine Gravel	Moist, ST = Neg	
10-12	574	1.0 / 3.25		Light Brown grading to Gray Medium SAND, some fine Gravel, trace coarse Gravel, Clay and Silt	Dry, Loose, ST = Neg	
12-14	673	1.6 / >4.5			ST = Neg	
14-16	1117	2.0 / 2.75			ST = Neg	
16-18	633	1.2 / 1.75			Moist, Staining, ST = Neg	
18-20	616	1.2 / 1.75			Saturated, Staining, ST = Neg	
20-22	401	1.5 / 2.5		Gray Medium SAND and Fine GRAVEL, trace Clay, Silt and coarse Gravel	Staining, Black SPH blebs noted on water from 20 - 26 ftbg, ST = Neg	
22-24	846	2.0 / >4.5		Gray Medium SAND and Fine GRAVEL, little coarse Gravel, trace Clay and Silt	ST = Neg	
24-26	522	1.5 / 1.5			ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-23A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: 2"	WELL DIA.: NA

Logged By: Vin Maresco; L. Tuovila	Drilling Method: Bobcat 331 Excavator; Track-Mounted Geoprobe
Dates Drilled: 10/6/09; 10/29/09	Sampling Method: Excavator Bucket; 2" Diameter Macro-Core
Drilling Company: Cortland Pump & Equipment, Inc.;	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-0.5	NA	NA	NA	Grass and Topsoil		Grade to 6' bgs was backfilled with an excavator on 10/6/09
0.5-1	5.9	NA	NA	FILL, Black SAND and GRAVEL, trace Ash		
1-2	1.8	NA	NA	FILL; Black Coal, some Ash and Cinders, trace Sand and Silt		
2-3	2.2	NA	NA	FILL; Black, Red and Tan Ash and Cinders, Clinkers (maximum 4" in diameter) and trace Raw Coal		
3-4	2.2	NA	NA		Perched water with dark, opaque coal dust on surface noted at 3' bgs	
4-5	1.8	NA	NA			
5-6	3.9	NA	NA			
6						Grade to 10' bgs was backfilled with collected soil boring material on 10/29/09
6-8	2.0	NA	NA	FILL; Black Coarse SAND and Fine GRAVEL, some fine to medium Sand, trace medium to coarse Gravel and Brick Fragments	6' to 10'; bgs was samples with a Geoprobe on 10/29/09	
6-8	2.0	NA	NA	FILL; Black and Dark Brown SILT and CLAY, trace fine Sand	Moist	
8						
8-10	87.9	NA	NA	FILL; Black and Dark Brown SILT and CLAY, some fine Sand, trace fine to medium Gravel and Brick Fragments		
8-10	87.9	NA	NA	FILL; Black CLAY, some Silt and fine Sand, trace fine to medium Gravel, Tar-like Material and Brick Fragments	Moist	
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 10 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-23B

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: 2"	WELL DIA.: NA

Logged By: Vin Maresco; L. Tuovila	Drilling Method: Bobcat 331 Excavator; Track-Mounted Geoprobe
Dates Drilled: 10/6/09; 10/29/09	Sampling Method: Excavator Bucket; 2" Diameter Macro-Core
Drilling Company: Cortland Pump & Equipment, Inc.;	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	NA	NA	Gravel		Grade to 6' bgs was backfilled with an excavator on 10/6/09
	0.5-1	1.2	NA	FILL; Brown Brick Fragments, Fine to Medium SAND and trace Ash		
	1-2	1.6	NA	FILL; Brown Brick Fragments, Fine to Medium SAND and little Ash		
2	2-3	1.8	NA	FILL; Brown and Brownish Red SAND, some Ash, Brick Fragments and Slag		
	3-4	2.3	NA	FILL; Brown SAND and GRAVEL, some Ash, Brick Fragments and Slag		
4	4-5	1.4	NA	FILL; Brown SAND and GRAVEL, some Ash, Brick Fragments, Slag and Raw Coal		
	5-6	1.0	NA	FILL; Tan SILT and CLAY, trace Sand and Gravel		Grade to 10' bgs was backfilled with collected soil boring material on 10/29/09
6	6-8	1.3	NA	FILL; Dark Brown SILT and CLAY, some fine to coarse Sand, trace fine Gravel	6' to 10' bgs was sampled with a Geoprobe on 10/29/09	
	8-10	1.8	NA	FILL; Reddish Brown to Tan SILT, some fine Sand, trace fine to medium Gravel and Brick fragments	Moist	
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 10 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-23C

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: 2"	WELL DIA.: NA

Logged By: J. Siniscalchi; L. Tuovila	Drilling Method: Bobcat 331 Excavator; Track-Mounted Geoprobe
Dates Drilled: 10/6/09; 10/29/09	Sampling Method: Excavator Bucket; 2" Diameter Macro-Core
Drilling Company: Cortland Pump & Equipment, Inc.;	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	NA	NA	Gravel		Grade to 6' bgs was backfilled with an excavator on 10/6/09
	0.5-1	1	NA	FILL; Black Ash, Coal, some Slag	Dry	
				FILL; Black Coal		
	1-2	2	NA		Dry	
2				FILL; Dark Brown Brick, some Ash, fine to coarse Sand, Coal and Gravel, little Silt	Moist	
	2-3	2	NA			
	3-4	10	NA	FILL; Dark Brown Fine to Coarse SAND, some Ash, Silt and Gravel	Moist	
4				FILL; Brown Fine SAND and SILT, some Ash and Gravel	Moist	
	4-5	10	NA			
	5-6	10	NA	FILL; Brown fine SAND and SILT, Brick and Coal, some Gravel	Moist	
6				FILL; Dark Brown to Black SILT and CLAY, trace fine to coarse Sand and fine to medium Gravel	6' to 10' bgs was sampled with a Geoprobe on 10/29/09	Grade to 10' bgs was backfilled with collected soil boring material on 10/29/09
	6-8	3.8	NA		Perched water noted at approximately 7' bgs	
8				FILL; Dark Brown to Black Fine to Medium SAND, some Silt, trace coarse Sand, fine Gravel and Brick Fragments		
	8-10	1.5	NA		Wet	
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 10 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-23D

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: 2"	WELL DIA.: NA

Logged By: J. Siniscalchi; L. Tuovila	Drilling Method: Bobcat 331 Excavator; Track-Mounted Geoprobe
Dates Drilled: 10/6/09; 10/29/09	Sampling Method: Excavator Bucket; 2" Diameter Macro-Core
Drilling Company: Cortland Pump & Equipment, Inc.;	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-0.5	NA			Grass and Topsoil		Grade to 6' bgs was backfilled with an excavator on 10/6/09
0.5-1	0.7	NA		FILL; Black and Brown Coal, Ash and Slag	Dry	
1-2	0.8	NA		FILL; Brown Fine to Coarse SAND, little Silt, Brick and Gravel	Moist	
2-3	4	NA		FILL; Dark Brown and Black Coarse GRAVEL and Slag, some fine to coarse Sand	Moist to Wet	
3-4	7	NA		FILL; Fine to Coarse SAND, SILT, Ash and Wood	Moist	
4-5	NA	NA		FILL; Wood, Brick and Railroad Tie Material		
5-6	NA	NA				Grade to 10' bgs was backfilled with collected soil boring material on 10/29/09
6-8	7	NA		FILL; Black and Dark Brown SILT and CLAY, some fine to medium Sand, trace Sand, Brick Fragments and Wood Fragments	6' to 10' bgs was sampled with a Geoprobe on 10/29/09 Wet, Perched water noted at approximately 6' bgs	
8-10	18.1	NA		FILL; Black and Dark Brown SILT and CLAY, trace fine to medium Sand, Brick Fragments and Wood pieces		
				FILL; Brown Fine to Coarse SAND, some Silt, fine Gravel, trace Brick Fragments	Moist	
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 10 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-23E

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo Street., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: 2"	WELL DIA.: NA

Logged By: J. Siniscalchi; L. Tuovila	Drilling Method: Bobcat 331 Excavator; Track-Mounted Geoprobe
Dates Drilled: 10/6/09; 10/29/09	Sampling Method: Excavator Bucket; 2" Diameter Macro-Core
Drilling Company: Cortland Pump & Equipment, Inc.;	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-0.5	NA	NA	NA	Grass and Topsoil		Grade to 6' bgs was backfilled with an excavator on 10/6/09
0.5-1	0.3	NA	NA	FILL; Dark Brown Fine to Coarse SAND and GRAVEL, some tan Silt		
1-2	18	NA	NA	FILL; Dark Brown Fine to Coarse SAND and GRAVEL, some tan Silt, trace coal (single layer)		
2-3	13	NA	NA	FILL; Dark Brown Fine to Coarse SAND and GRAVEL, some Slag, Coal and tan Silt,		
3-4	54	NA	NA	FILL; Dark Brown and Gray Fine to Coarse SAND, SILT, GRAVEL and COBBLES		
4-5	44	NA	NA	FILL; Dark Gray Fine SAND and SILT, some fine to coarse Sand (single lense)		Grade to 10' bgs was backfilled with collected soil boring material on 10/29/09
4-5	44	NA	NA	FILL; Brown Fine SAND and SILT		
5-6	6	NA	NA			
6-8	8	NA	NA	Dark Gray Fine SAND and SILT, trace medium to coarse Sand and fine Gravel	6' to 10' bgs was sampled with a Geoprobe on 10/29/09 Wet Perched water noted at approximately 6' bgs	
8-10	1.5	NA	NA	Brown SILT, some fine to medium Sand, trace coarse Sand and fine Gravel		
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 10 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



BORING LOG

ID NO. TPSB-24

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/12/08; 6/13/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	10.5	NA		Brown Fine to Medium SAND, some coarse Gravel		Backfilled with excavated material and drill cuttings
2-4	2.5	NA		Brown Fine to Medium SAND, trace coarse Gravel		
4-6	0.7	1.0 / 2.25		Brown Orange Medium SAND, little fine Gravel, trace Clay, Silt and coarse Gravel	Dry, Loose	
6-8	2.3	1.5 / 1.25		Brown Fine to Medium SAND, some fine Gravel, little Clay and Silt, trace coarse Gravel	Moist	
8-10	5.1	1.3 / 1.75				
10-12	NA	NR		No Recovery	Rock fragment lodged in tip of Spoon	
12-14	55.6	2.0 / 3.75		Brown grading to Gray Medium SAND and Fine GRAVEL, trace Clay, Silt and coarse Gravel		
14-16	21.4	2.0 / 2.0			Moist, ST = Neg	
16-18	199	2.0 / 3.75			Wet ST = Neg	
18-20	69.4	1.0 / 1.5			Saturated	
20-22	84.0	1.0 / <0.5				
22-24	231	1.1 / 1.0		Gray Fine to Coarse SAND, some fine Gravel, trace coarse Gravel and Silt	ST = Neg	
24-26	928	1.5 / 1.0		Gray Fine SAND, trace medium Sand and Silt	ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/12/08; Boring (4-26 ft) completed 6/13/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-25

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/9/08; 6/12/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Brown Fine SAND and GRAVEL		Backfilled with excavated material and drill cuttings
2	0.5-2	10.8	NA	Dark Brown Yellow Coarse SAND and GRAVEL		
	2-4	7.8	NA	Gray CLAY, some coarse Gravel		
4	2-4	7.8	NA	Tan Orange Fine to Medium SAND and GRAVEL		
	4-6	3.5	1.8 / 1.25	Light Brown Medium SAND, little fine Gravel, trace coarse Gravel and Silt	Dry, Loose	
6	4-6	3.5	1.8 / 1.25			
	6-8	5.4	1.5 / 1.0			
8	6-8	5.4	1.5 / 1.0			
	8-10	7.3	2.0 / 1.25	Light Brown Medium SAND, little fine Gravel and Clay, trace coarse Gravel and Silt		
10	8-10	7.3	2.0 / 1.25			
	10-12	23.9	1.0 / 1.25			
12	10-12	23.9	1.0 / 1.25			
	12-14	21.9	2.0 / >4.5	Gray Medium SAND, little fine Gravel and Clay, trace coarse Gravel and Silt		
14	12-14	21.9	2.0 / >4.5			
	14-16	53.8	1.3 / 2.5	Gray Medium SAND and Fine GRAVEL, trace coarse Gravel and Silt		
16	14-16	53.8	1.3 / 2.5			
	16-18	1030	1.5 / >4.5		Moist, ST = Neg	
18	16-18	1030	1.5 / >4.5			
	18-20	1438	1.5 / 3.25	Gray Medium SAND and Fine GRAVEL, little Silt, trace coarse Gravel	Saturated, ST = Neg	
20	18-20	1438	1.5 / 3.25			
	20-22	2477	1.5 / >4.5	Gray Fine GRAVEL, trace medium to coarse Sand and Silt	ST = Neg	
22	20-22	2477	1.5 / >4.5			
	22-24	646	1.8 / 1.75	Gray Medium SAND and Fine GRAVEL, trace coarse Gravel and Silt	ST = Neg	
24	22-24	646	1.8 / 1.75			
	24-26	445	1.5 / 0.75	Gray Fine to Coarse SAND and Fine GRAVEL, trace Silt	ST = Neg	
26	24-26	445	1.5 / 0.75			
				Gray Medium SAND and Fine GRAVEL, trace coarse Gravel and Silt		

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/9/08; Boring (4-26 ft) completed 6/12/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. **TPSB-26**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 20 inches
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/4/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
--------------	-----------------	--------------	-----------------	------------------	----------	--------------------

0				FILL; Brown Fine to Medium SAND, some Coarse Gravel		
	0-2	NA	NA / NA			Backfilled with excavated material
				Concrete Slab		

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 20 inches, concrete encountered. Test Pit abandoned.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-26A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17.4 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/4/08; 6/16/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5			FILL; Brown Fine to Medium SAND, some Gravel		Backfilled with excavated material and drill cuttings
2	0.5-2	2.1	NA	FILL; Black Medium to Coarse SAND, some Coal		
4	2-4	3.2	NA	Orange Brown SILT and CLAY, some coarse Gravel		
6	4-6	1.4	1.25 / 2.0	Orange Brown Fine SAND and GRAVEL, trace Silt	Moist	
8	6-8	1.0	1.5 / 0.5			
10	8-10	1.9	1.5 / 1.25			
12	10-12	15.2	1.5 / 1.25	Orange Brown Fine SAND and GRAVEL, some Silt, trace Clay	Saturated (perched)	
14	12-14	88.7	1.25 / 1.0	Gray Black Fine SAND and GRAVEL, some Silt, trace Clay	Wet	
16	14-16	385	1.25 / 3.0	Gray Black Fine to medium SAND and GRAVEL	Sheen, ST = Neg	
18	16-18	352	1.0 / 1.25		Sheen, ST = Neg	
20	18-20	330	1.0 / <0.5	Gray Black medium SAND and GRAVEL, some Fine Sand, trace Silt	Saturated, ST = Neg	
22	20-22	332	1.5 / <0.5	Gray Black Fine to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
24	22-24	232	1.5 / <0.5		ST = Neg	
26	24-26	1124	1.5 / <0.5		ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/4/08; Boring (4-26 ft) completed 6/16/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-26B

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Siniscalchi	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/6/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Topsoil and Gravel		
0-0.5	NA	NA		FILL; Black Coal and Ash, some Slag	Dry	
0.5-1	2	NA		FILL; Black Coal and Ash, some Silt and fine to medium Sand		Backfilled with excavated materials
1-2	3	NA				
2				Black Fine to Coarse SAND, some Silt and Ash		
2-3	2	NA		Orange and Brown Fine to Coarse SAND, some Silt and Gravel	Moist	
3-4	2	NA				
4				Orange and Brown Fine to Coarse SAND and GRAVEL, some Silt		
4-5	2	NA				
5-6	2	NA				
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-26C

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Siniscalchi	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/6/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Topsoil and Gravel		
0-0.5	NA	NA		FILL; Black Coal and Ash	Dry	Backfilled with excavated materials
0.5-1	3	NA		FILL; Black Coal and Ash, some Slag		
1-2	2	NA				
2						
2-3	2	NA		Brown and Orange Silt and Fine SAND, little Gravel	Moist	
3-4	2	NA		Orange and Brown Fine to Medium SAND and SILT, some Gravel		
4						
4-5	2	NA		Orange and Brown Fine to Coarse SAND and SILT, some Gravel		
5-6	2	NA				
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-26D

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/7/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5				FILL; Black Fine SAND and SILT, little Ash and Cinders	Loose, Dry	
0.5-1	5.7	NA	NA			
				Brown Fine to Medium SAND and SILT, trace coarse Sand and fine to coarse Gravel	Sheen Observed in ST Bottle	Backfilled with excavated materials
1-2	854	N	N			
2					Moist, Loose, Sheen Observed in ST Bottle	
2-3	128	N	N			
3-4	146	N	N		Sheen Observed in ST Bottle	
4					Slightly Moist, Loose, Sheen Observed in ST Bottle	
4-5	123	N	N			
5-6	123	N	N		Sheen Observed in ST Bottle	
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



BORING LOG

ID NO. TPSB-27

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17.5 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/4/08; 6/17/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	3.3	NA		Brown Fine to Medium SAND and SILT, some coarse Gravel		Backfilled with excavated material and drill cuttings
2-4	2.9	NA		Dark Brown Fine to Medium SAND and Coarse GRAVEL		
4-6	NA	NR		No Recovery		
6-8	1.2	0.75 / 2.5		Brown Fine SAND and GRAVEL, little Silt	Moist	
8-10	2.1	1.0 / 0.5		Red Brown Fine to Medium SAND and GRAVEL, some Silt	Wet	
10-12	1.2	1.5 / 1.5		Brown Fine SAND and GRAVEL, some Silt and Clay		
12-14	1.0	1.5 / 2.0			Moist	
14-16	2.9	1.75 / 3.0		Brown Fine SAND and GRAVEL, little Silt, trace Clay		
16-18	3.4	1.0 / 1.0		Brown Fine to Medium SAND and GRAVEL, trace Silt	Wet	
18-20	18.4	1.0 / <0.5		Gray Fine to Medium SAND and GRAVEL, trace Silt	Saturated	
20-22	64.1	1.5 / <0.5		Gray Brown Medium SAND, trace Silt		
22-24	44.9	1.75 / <0.5		Gray Fine to Coarse SAND and GRAVEL, trace Silt		
24-26	64.5	1.5 / <0.5		Gray Fine to Coarse SAND and GRAVEL, some Silt		

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/4/08; Boring (4-26 ft) completed 6/17/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-27A

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 4 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/07/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5				Light Brown SILT, trace fine Gravel	Loose, Dry	
.5-1	NA	NA				Backfilled with excavated materials
1-2	NA	NA				
2					Moist	
2-3	NA	NA				
3-4	NA	NA		Brown Fine to Medium SAND, some fine to coarse Gravel and Silt, trace Clay and Organic Material	Loose, Moist	
4						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 4 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-28

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 19 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/10/08; 6/17/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	5.2	NA		FILL; Brown Black Fine SAND and GRAVEL		Backfilled with excavated material and drill cuttings
2				FILL; Coarse SAND, some coarse Gravel and Cinders		
2-4	3.5	NA		Gray CLAY, some coarse Gravel	Moist	
4						
4-6	6.4	0.5 / 0.5		Black Fine to Medium SAND and GRAVEL, some Silt	Wet	
6						
6-8	11.1	1.0 / <0.5				
8				Olive Black Fine to medium SAND and GRAVEL, some Silt		
8-10	9.4	0.75 / <0.5				
10						
10-12	13.0	1.0 / <0.5				
12				No Recovery		
12-14	NA	NR				
14						
14-16	24.6	0.5 / <0.5		Gray Fine to Coarse SAND and GRAVEL, some Silt		
16				No Recovery		
16-18	NA	NR				
18						
18-20	63.4	1.0 / 2.5		Gray Fine to Coarse SAND and GRAVEL	Saturated	
20						
20-22	236	1.0 / 1.5		Gray Medium to Coarse SAND, little Silt	ST = Neg	
22						
22-24	256	1.5 / 0.5		Gray Medium to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
24						
24-26	277	1.5 / <0.5			ST = Neg	
26						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/10/08; Boring (4-26 ft) completed 6/17/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-29

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 21.4 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/4/08; 6/17/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	4.9	NA	Brown Fine to Medium SAND, some coarse Gravel		Backfilled with excavated material and drill cuttings
2	0.5-2	1.9	NA	Black Medium to Coarse SAND, some coarse Gravel		
4	2-4	1.7	NA	Black Medium to Coarse SAND		
6	4-6	5.0	1.0 / 1.0	Black Fine to Medium SAND	Moist	
8	6-8	0.0	0.5 / <0.5	Brown CLAY		
10	8-10	0.0	0.5 / <0.5			
12	10-12	0.0	1.0 / 1.0	Brown Fine SAND and GRAVEL, some Silt and Clay	Dry	
14	12-14	14.3	1.0 / 1.0		Moist	
16	14-16	7.0	2.0 / 4.0			
18	16-18	5.1	1.5 / 1.5			
20	18-20	414	1.5 / 0.5	Gray Fine to Medium SAND and GRAVEL, some Silt	Wet, ST = Neg	
22	20-22	594	2.0 / <0.5		Saturated, ST = Neg	
24	22-24	789	2.0 / 1.0	Gray Fine to Coarse SAND and GRAVEL, some Silt	ST = Neg	
26	24-26	1170	2.0 / 0.5	Olive Gray Fine SAND and GRAVEL, little Silt	ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/4/08; Boring (4-26 ft) completed 6/17/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-30

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/3/08; 6/4/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	3.5	NA	Grass		
2	0.5-2	38.1	NA	FILL; Brown Fine to Medium SAND and Coarse GRAVEL, some Cobble		Backfilled with excavated material and drill cuttings
4	2-4	191	NA	FILL; Gray CLAY, some coarse Gravel	ST = Neg	
6	4-6	630	1.0 / 0.5	FILL; Black Coal, Cinders, Wood, Grease, Fine to Medium SAND	Wet, Very Soft, Staining, ST = Neg	
8	6-8	576	1.5 / 0.75	Gray CLAY and Coarse GRAVEL	Moist, Staining, ST = Neg	
10	8-10	556	0.8 / <0.5	Gray CLAY and SILT, trace fine to medium Sand and fine Gravel	ST = Neg	
12	10-12	3432	1.0 / <0.5	Gray Fine to Medium SAND, trace Silt, fine Gravel and coarse Sand	Wet, Loose, Sheen, ST = Neg	
14	12-14	813	1.0 / <0.5	Gray Fine GRAVEL, some fine to coarse Sand, trace coarse Gravel and Silt	Sheen, ST = Neg	
16	14-16	787	1.2 / <0.5		ST = Neg	
18	16-18	1697	1.0 / <0.5		ST = Neg	
20	18-20	849	1.3 / 0.75		ST = Neg	
22	20-22	1054	2.0 / 0.5	Gray Fine to Medium SAND, some fine Gravel, trace coarse Sand and Silt	Saturated, Sheen, ST = Neg	
24	22-24	575	1.2 / <0.5		Moist, Semi-cohesive, 4 inch Medium SAND layer, ST = Neg	
26	24-26	749	1.0 / 1.25		Wet, ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/3/08; Boring (4-26 ft) completed 6/4/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-31

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 3.0 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: P. Domago	Drilling Method: Excavator
Dates Drilled: 6/4/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Brown Fine to Medium SAND and SILT		Backfilled with excavated material
0-2	NA	NA				
2				FILL; Brick, Concrete, some fine to medium Sand		

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Pipe encountered at 3 ftbg.
Excavation abandoned.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-31B

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/4/08; 6/6/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Brown Medium to Coarse SAND		Backfilled with excavated material and drill cuttings
0-2	21.1	NA		FILL; Brick, Concrete, Fine to Medium SAND		
2				FILL; Black Medium to Coarse SAND, trace coarse Gravel		
2-4	82	NA				
4				FILL; Brown CLAY, some Silt, trace fine to coarse Sand and Brick fragments	Wet, Cohesive, Very Soft	
4-6	43.9	0.5 / <0.5				
6				Brown CLAY, some Silt, trace fine to coarse Sand and fine Gravel	Moist, Soft	
6-8	8.1	2.0 / 1.75				
8				Brown Medium SAND, some fine Gravel, little Silt, trace Clay and coarse Gravel	Wet, Loose	
8-10	50.4	1.8 / 2.0				
10				Brown grading to Gray Medium SAND and Fine GRAVEL, little coarse Gravel, trace Clay and Silt	ST = Neg	
10-12	147	0.8 / 0.75				
12					ST = Neg	
12-14	339	1.0 / 0.5				
14					ST = Neg	
14-16	221	1.2 / 2.0				
16					ST = Neg	
16-18	146	1.5 / 1.5				
18					ST = Neg	
18-20	298	0.8 / 1.0			SPH Blebs noted on water, Moist, ST = Neg	
20				Gray CLAY, some medium Sand, little coarse Sand, trace Silt and coarse Gravel	ST = Neg	
20-22	415	2.0 / <0.5				
22				Gray Medium SAND and Fine GRAVEL, trace Clay and Silt	Moist, ST = Neg	
22-24	322	2.0 / 4.0				
24					Wet, Loose, ST = Neg	
24-26	1057	1.5 / 2.0				
26	400	2.0 / 1.5			ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/4/08; Boring (4-26 ft) completed 6/6/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-31C

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/7/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA		FILL; Brown Fine to Coarse SAND and SILT, some fine Gravel, trace coarse Gravel, Cobbles and Silt	Moist, Loose	
0.5-1	1.4	NA		FILL; Brown Fine to Coarse SAND and SILT, some fine Gravel, little Ash and Cinders, trace coarse Gravel, Cobbles and Silt		Backfilled with excavated materials
1-2	2.6	NA				
2						
2-3	31.4	NA		FILL; Dark Gray SILT and Fine to Coarse SAND, some fine to coarse Gravel, trace Ash, Cinders and Brick Fragments	Wet, Soft, Cohesive	
3-4	41.3	NA				
4						
4-5	106	N			Wet, Soft, Cohesive, Sheen Observed in ST Bottle and around Coarse Grains	
5-6	140	N			Sheen Observed in ST Bottle and around Coarse Grains	
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-31D

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/7/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Brown SILT and Fine SAND, some fine to coarse Gravel, little Black Ash and Cinders, trace Clay	Moist, Loose	Backfilled with excavated materials
0.5-1	1.6	NA	NA	FILL; Black and Gray Ash and Cinders, little Silt	Slightly Moist, Loose	
1-2	1.7	NA	NA	FILL; Black Fine to Medium SAND, some Silt, trace Ash, Cinders, Brick Fragments and Wood Fragments	Dry, Loose	
2-3	2.4	NA	NA	FILL; Black Fine SAND (possible Coal Dust), trace fine Gravel and Brick Fragments	Moist, Loose	
3-4	51.1	NA	NA	Dark Gray SILT, trace fine Gravel	Wet, Soft, Sticky, Cohesive, Sheen Observed in ST Bottle	
4-5	187	N	N	Dark Gray Fine GRAVEL, some fine to coarse Sand and Silt, little coarse Gravel	Wet, Loose, Sheen Observed in ST Bottle	
5-6	524	N	N			
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-31E

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/7/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Brown Fine to Medium SAND and SILT, some fine Gravel, trace Clay	Slightly Moist, Loose	Backfilled with excavated materials
0.5-1	1.0	NA	NA	FILL; Black Ash and Cinders, little Raw Coal Fragments, trace fine to coarse Sand	Dry, Loose	
1-2	4.1	NA	NA			
2				FILL; Gray Fine to Coarse GRAVEL, little fine to coarse Sand and Silt, trace Cobbles and Clay	Moist, Loose	
2-3	108	N	N			
3-4	124	N	N			
4					Wet, Loose, Sheen Observed in ST Bottle and around Coarse Grains	
4-5	113	N	N			
5-6	102	N	N	FILL; Gray Fine to Coarse GRAVEL, some Ash and Cinders, trace Bricks, Cobbles, fine to coarse Sand and Silt	Wet, Semi-cohesive, Sheen Observed in ST Bottle	
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



TEST PIT LOG

ID NO. TPSB-31F

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 6 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH NA	CASING EL.: NA
JOB NO. 06-02166	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: R. Sickler	Drilling Method: Bobcat 331 Track-Mounted Excavator
Dates Drilled: 10/7/09	Sampling Method: Excavator Bucket
Drilling Company: Cortland Pump & Equipment, Inc.	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Shake Test	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass and Topsoil		
0-0.5	NA	NA	NA	FILL; Brown Fine to Coarse SAND and Coarse GRAVEL, some Silt, trace fine Gravel and Clay	Moist, Loose	
0.5-1	0.7	NA	NA	FILL; Black Ash and Cinder, some Brick Fragments, trace fine to medium Sand	Dry, Loose, Staining Observed at 1.5 feet below ground surface	Backfilled with excavated materials
1-2	28.2	NA	NA			
2					Dry, Loose, Sheen Observed in ST bottle	
2-3	129	N	N			
3-4	215	N	N			
4				FILL; Black and Gray Fine SAND and SILT, trace Ash, Cinders and Brick Fragments	Wet, Cohesive, Sheen and Black SPH Blebs Observed in ST Bottle, Sheen Noted around Coarse Grains	
4-5	256	N	N			
5-6	191	N	N	FILL; Black and Gray Ash and Cinders, trace fine to medium Sand	Moist, Loose, Black SPH Blebs and Sheen Observed in ST bottle	
6						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of Test Pit at 6 feet. Bedrock was not encountered.
ppm = parts per million; bgs = below ground surface; T8= Trench #8
SHAKE TEST (ST) RESULT KEY
NA = Not Applicable
N = Negative
P = Positive

Symbol Key:

Apparent Water Level
Lab Sample Location



BORING LOG

ID NO. TPSB-32

Groundwater and Environmental Services, Inc.

Page 1 of 2

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 17 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/3/08; 6/4 & 5/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	1.3	NA		FILL; Brown Fine to Medium SAND, some coarse Gravel, brick		Backfilled with excavated material and drill cuttings
2				FILL; Brick layer, Cinders, Wood		
2-3	4.0	NA		FILL; Gray CLAY		
3-4	2.8	NA		FILL; Brown SAND and SILT, some medium to coarse Gravel		
4-6	7.0	1.0 / 2.0		FILL; Brown Medium SAND, little coarse Sand, trace fine to coarse Gravel, Silt and Brick fragments	Dry, Semi-cohesive	
6-8	7.1	0.8 / <0.5			Loose	
8-10	8.3	1.5 / 1.0		Brown Medium SAND, some Silt, trace Clay, coarse Sand and fine to coarse Gravel	Slightly Moist, Cohesive	
10-12	8.8	1.2 / 1.5			Moist	
12-14	12.5	0.7 / 0.5		Gray Medium SAND, some Silt, trace Clay, coarse SAND and fine to coarse Gravel		
14-16	99.3	1.5 / 2.75		Gray Medium SAND and Fine GRAVEL, some coarse Sand, trace coarse Gravel and Silt		
16-18	261	1.5 / 1.0			Wet, Sheen, ST = Neg	
18-20	476	1.0 / 3.0			ST = Neg	
20-22	430	2.0 / 1.0			ST = Neg	
22-24	164	0.8 / 1.0		Gray Medium SAND, trace coarse Sand, fine Gravel and Silt	Loose, ST = Neg	
24				Gray CLAY, some Silt, trace coarse Gravel	Slightly Moist to Moist, Cohesive	
24-26	318	2.0 / 0.5		Gray Medium SAND and Fine GRAVEL, some coarse Sand, trace coarse Gravel and Silt	Wet, Loose, ST = Neg	
26	56.0	2.0 / <0.5		Gray CLAY, some Silt, trace coarse Gravel	Moist, Soft, Cohesive, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/3/08; Boring (4-26 ft) completed 6/4-5/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-33

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: P. Domago/R. Sickler	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/3/08; 6/5/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	7.8	NA		FILL; Brown Fine to Medium SAND and Coarse GRAVEL	Moist	Backfilled with excavated material and drill cuttings
2-4	20.6	NA		FILL; Gray Black SAND and SILT, some Brick, trace coarse Gravel		
4-6	0.1	0.5 / <0.50		Light Brown CLAY, some Silt, trace very fine Sand	Wet, Very Soft, Cohesive	
6-8	0.3	1.2 / 2.0		Light Brown CLAY, some Silt, little fine Gravel, trace coarse Gravel	Moist, Soft, Cohesive	
8-10	NA	NR		No Recovery	No Recovery; rock lodged in spoon tip	
10-12	0.5	1.2 / 1.5		Brown grading to Gray Medium SAND and Fine GRAVEL, little Clay and coarse Sand, trace coarse Gravel and Silt	Semi-cohesive	
12-14	154	1.0 / 1.5			Wet in Spoon at 14 ftbg, ST = Neg	
14-16	211	1.0 / 1.25			ST = Neg	
16-18	493	1.3 / 1.5			Wet, ST = Neg	
18-20	53.9	0.8 / 2.75			Saturated	
20-22	125	1.0 / 2.5			Sheen, ST = Neg	
22-24	96.3	0.8 / 1.25			Sheen	
24-26	110	0.8 / 1.75		Gray Medium SAND, some coarse Sand, trace Silt and fine Gravel	Loose, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 Test Pit (0-4 ft) completed 6/3/08; Boring (4-26 ft) completed 6/5/08.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-35/W-3

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1422.7 feet	TOTAL DEPTH: 26 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 18 feet	CASING EL.: 1424.64 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: P. Domago/J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/11/08; 6/18/08; 7/22/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	11.0	NA		FILL; Brown Medium to Coarse SAND, trace Gravel, Coal and Ash		See attached Monitoring Well Design Plan for well construction details.
2-4	9.1	NA		Tan Fine SAND and SILT, trace coarse Gravel		
4-6	0.0	1.0 / <0.5		Brown Fine to Medium SAND, some Gravel, trace Silt	Moist	
6-8	0.0	1.0 / <0.5				
8-10	0.0	1.0 / <0.5		Red Brown Fine to Coarse SAND and GRAVEL, trace Silt		
10-12	0.0	1.5 / 0.5		Red Brown Fine to Coarse SAND and GRAVEL, trace Silt and Clay		
12-14	48.9	1.0 / 1.75		Gray Black Fine to Coarse SAND, some Gravel, trace Silt		
14-16	97.4	1.2 / 0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Wet	
16-18	74.5	1.3 / <0.5		Gray Fine to Coarse SAND and GRAVEL, trace Silt	Saturated	
18-20	168	1.0 / <0.5		Gray Fine to Coarse SAND and GRAVEL, trace Silt	ST = Neg	
20-22	93.9	1.5 / <0.5		Black Fine to Coarse SAND and GRAVEL, trace Silt		
22-24	66.1	1.5 / <0.5				
24-26	51.9	1.5 / <0.5				

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of boring at 26 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



BORING LOG

ID NO. TPSB-36/W-24

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: 1431.1 feet	TOTAL DEPTH: 32 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 24.26 feet	CASING EL.: 1433.09 feet
STATION NO. 06-02025	BOREHOLE DIA.: 10.5 inches	WELL DIA.: 4 inches

Logged By: J. Vinci / J. Simms / C. Letts	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/19/08; 6/25/08; 8/4/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	FILL; Brown Topsoil, Organic Material, trace medium to coarse Gravel	Dry	See attached Monitoring Well Design Plan for well construction details.
2	0.5-2	1.6	NA	FILL; Wood, Concrete, Brown Fine SAND, some medium Gravel and Ash/Coal	Wet to Saturated	
4	2-4	0.3	NA	Brown CLAY, some Cobble, trace fine Sand	Wet	
6	4-6	0.0	0.3 / 0.5	Brown Fine to Coarse SAND and GRAVEL, some Silt, trace Clay	Wet	
8	6-8	0.0	0.9 / 0.5	Gray Fine to Medium SAND and GRAVEL, some Silt, trace Clay	Moist	
10	8-10	29.7	0.8 / 0.5	Dark Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Wet	
12	10-12	13.5	0.9 / <0.5	Gray Fine to Medium SAND, little Gravel, trace Silt		
14	12-14	21.7	1.25 / 0.5			
16	14-16	17.4	1.25 / 3.0	Brown Fine to Coarse SAND and GRAVEL, some Silt, trace Clay	Moist	
18	16-18	4.2	1.1 / 1.0	Gray Fine to Coarse SAND and GRAVEL, little Silt		
20	18-20	25.6	1.5 / 0.75			
22	20-22	94.9	1.8 / 2.0	Tan CLAY	Wet	
24	22-24	333	1.5 / 1.5	Gray Fine to Coarse SAND and GRAVEL, trace Silt	Sheen, ST = Neg	
26	24-26	297	1.5 / 1.5	Gray Fine to Coarse SAND and GRAVEL, little Silt and Clay	Saturated, Sheen, ST = Neg	
28	26-28	180	2.0 / 1.5	Gray SILT, some Gravel	ST = Neg	
30	28-30	527	2.0 / 1.5	Brown SILT, CLAY and GRAVEL	Dry, Very Stiff	
32	30-32	121	0.2 / 1.25	Gray SAND and GRAVEL, some Silt	ST = Neg	

Location:
 Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:
 Bottom of boring at 32 feet, bedrock not encountered.
 ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:
 Apparent Water Level
 Lab Sample Location



TEST PIT LOG

ID NO. TPSB-37 / DTP-37

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				FILL; Grass and Topsoil		
0-2	3.9	NA		FILL; Brown Fine to Medium SAND, some Topsoil and Roots	Dry	Backfilled with excavated material
2-4	3.1	NA		FILL; Brown Fine to Medium SAND, some coarse Gravel and Cobbles		
4-6	0.1	NA		FILL; Brown Tan CLAY, trace Silt, fine Gravel, Brick and Wood fragments, metal pieces	Moist, Soft, Cohesive	
6-8	5.1	NA		Brown Medium SAND, some fine Gravel, trace coarse Sand, Coarse Gravel, Silt and Cobbles	Loose	
8-10	1.8	NA				

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-38 / DTP-38

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	2.3	NA	Topsoil, Organic Material, trace fine Gravel	Dry	Backfilled with excavated material
	0.5-2	0.9	NA	FILL; Brown Fine to Medium SAND and SILT, little fine Gravel	Moist	
2	2-4	0.8	NA	FILL; Tan Brown Mottled CLAY, some Organic Material, trace Silt and Cobbles	Cohesive	
4	4-6	1.5	NA	FILL; Brown CLAY, little medium Sand, trace Silt, fine Gravel, Cobbles, Brick and Wood fragments, Coal pieces and Clinkers	Soft, Cohesive	
6	6-8	1.9	NA	Brown Medium SAND, some fine Gravel, little Clay, trace coarse Gravel, Silt and Cobbles	Loose, Iron Staining noted	
8	8-10	1.5	NA	Gray Medium to Coarse SAND and Fine GRAVEL, little coarse Gravel, trace Silt and Cobbles	Wet	
10						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-44 / DTP-44

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 7/1/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Topsoil		
0.2	68.3	NA		Gray Green Medium to Coarse GRAVEL, trace Silt	Moist	Backfilled with excavated material
2	2-4	66	NA	Gray Medium to Coarse GRAVEL, some Cobbles, trace Silt		
4	4-6	29.9	NA	Gray Fine GRAVEL and Medium SAND, some coarse Gravel, trace coarse Sand, Silt and Cobbles	Loose	
6	6-8	31.9	NA	Gray Fine GRAVEL, little medium Sand, trace coarse Gravel, Silt and Cobbles	Loose	
8	8-10	17.6	NA	Gray Fine GRAVEL and Medium SAND, some coarse Gravel, trace coarse Sand, Silt and Cobbles	Loose	
10						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-45 / DTP-45

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 6/30/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass		
0-2	203	NA		Black Coarse GRAVEL, some Clay, some to little Sand	Moist, ST = Neg	Backfilled with excavated material
2-4	187	NA		Black Coarse GRAVEL, some Cobbles and Clay, some to little Sand	ST = Neg	
4-6	959	NA		Gray Black Fine GRAVEL and Medium SAND, trace coarse Sand, coarse Gravel, Cobbles and Silt	Loose, Staining noted, ST = Neg	
6-8	1387	NA			Loose, Staining noted, ST = Neg	
8-10	1857	NA			Loose, Staining noted, ST = Neg	
10-12	1323	NA		Gray Fine to Coarse GRAVEL, some medium Sand, trace coarse Sand and Silt	Loose, Staining noted, ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.
ST = Shake Test

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-46 / DTP-46

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 6/30/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-0.5	0.8	NA		Grass, Topsoil, Organic Material, Brown SAND		
0.5-2	265	NA		Black GRAVEL, some Clay, little Sand	Moist, ST = Neg	Backfilled with excavated material
2-4	623	NA		Black Fine to Coarse GRAVEL, some Clay	ST = Neg	
4-6	2374	NA		Gray Black Fine GRAVEL and Medium SAND, trace coarse Sand, coarse Gravel and Silt	Loose, Staining noted, ST = Neg	
6-8	1243	NA			Loose, Staining noted, ST = Neg	
8-10	2390	NA			Loose, Staining noted, ST = Neg	
10-12	2623	NA			Loose, Staining noted, ST = Neg	
12						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.
 ST = Shake Test

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-47 / DTP-47

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 6/30/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil		
0-2	2.8	NA		FILL; Brown to Gray SILT	Dry, Cohesive	Backfilled with excavated material
2-4	140	NA		FILL; Olive Gray CLAY, some Gravel	Moist, Cohesive, ST = Neg	
4-6	248	NA		FILL; Brown CLAY, some fine to coarse Gravel, little medium Sand, trace Silt. Pieces of Wood Timber (planks) encountered at 7.5 ftbgs	Cohesive, Staining noted, ST = Neg	
6-8	879	NA			Staining noted, ST = Neg	
8-10	756	NA		Gray Fine GRAVEL, some coarse Gravel, little medium Sand, trace Silt	Loose, Staining noted, ST = Neg	

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.
 ST = Shake Test

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-49 / DTP-49

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 6/30/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil		
0-2	110	NA		FILL; Black Fine to Medium SAND, Concrete, Bricks and Ash	Dry, ST = Neg	Backfilled with excavated material
2-4	107	NA		FILL; Black Wood, Ash and Coal	ST = Neg	
4-6	72.6	NA		Gray Medium SAND and Fine GRAVEL, some Coarse Sand and Coarse Gravel, little Silt and Clay, trace Cobbles	Moist, Loose, ST = Neg	
6-8	7097	NA		Gray Medium SAND, some Fine Gravel, trace Coarse Sand and to Coarse Gravel	ST = Neg	
8-10	1809	NA		Gray Medium SAND, some Fine Gravel, trace Coarse Sand and to Coarse Gravel	Loose, ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.
ST = Shake Test

Symbol Key:

Apparent Water Level 
Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-50 / DTP-50

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 10 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 4 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci / R. Sickler	Drilling Method: Excavator
Dates Drilled: 6/19/08; 6/30/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0				Grass, Topsoil		
0-2	0.0	NA		FILL; Brown Medium to Coarse GRAVEL, some Silt, little Sand.		
2				FILL; Concrete encountered at 2 ftbgs. Location moved to the Southeast		
2-4	150	NA		FILL; Black Cinders and Coarse GRAVEL, some Clay	Dry	Backfilled with excavated material
4				Black Gray Fine to Coarse SAND, some Clay and Silt, trace fine to coarse Gravel, trace Cobbles	Saturated, Sheen	
4-6	226	NA			Wet, Soft, Cohesive, Staining noted, ST = Neg	
6				Gray Fine to Coarse SAND and Fine GRAVEL, some medium Gravel, trace Silt, coarse Gravel and Cobbles		
6-8	534	NA			Loose, Staining and SPH Blebs noted, ST = Neg	
8						
8-10	384	NA			Moist, Staining noted, ST = Neg	
10						

Location:

Northing/Latitude:
 Easting/Longitude:
 Horizontal Datum:
 Vertical Datum:

General Comments:

Bottom of excavation at 10 feet, bedrock not encountered.
 ST = Shake Test

Symbol Key:

Apparent Water Level 
 Lab Sample Location 



TEST PIT LOG

ID NO. TPSB-51 / DTP-51

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 12 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: NA	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: NA	WELL DIA.: NA

Logged By: J. Vinci	Drilling Method: Excavator
Dates Drilled: 6/20/08; 6/24/08	Sampling Method: Excavator Bucket
Drilling Company: Todd Company	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0	0-0.5	0.0	NA	Topsoil, Roots, little coarse Gravel	Dry	Backfilled with excavated material
	0.5-2	0.0	NA	Orange Brown Tan SILT and CLAY, little coarse Gravel	Moist	
2				Brown Fine to Medium SAND, little Gravel		
	2-4	0.8	NA			
4				Black Fine to Coarse GRAVEL, some fine to medium Sand		
	4-6	2642	NA		Moist to Wet, 4 inch pipe encountered, ST = Neg	
6				Black Coarse GRAVEL, some fine to medium Sand		
	6-8	3677	NA		Wet, ST = Neg	
8				Black Coarse GRAVEL, some fine Sand		
	8-10	3571	NA		Moist, ST = Neg	
10				Black Medium to Coarse SAND, some Cobbles		
	10-12	2766	NA		Wet, ST = Neg	
12						

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of excavation at 12 feet, bedrock not encountered.
ST = Shake Test

Symbol Key:

Apparent Water Level 
Lab Sample Location 



BORING LOG

ID NO. TPSB-53

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: Former Vacuum Oil Refinery	SURFACE ELEV.: NA	TOTAL DEPTH: 24 feet
ADDRESS: 1406 Buffalo St., Olean, NY	WATER DEPTH: 22 feet	CASING EL.: NA
STATION NO. 06-02025	BOREHOLE DIA.: 7.25 inches	WELL DIA.: NA

Logged By: J. Vinci / J. Simms	Drilling Method: Excavator/Hollow Stem Auger
Dates Drilled: 6/24/08; 6/30/08	Sampling Method: Excavator Bucket/Split Spoon
Drilling Company: Todd Company/Parratt Wolff	Soil Class. System: Burmister
	Field Screening: PID (Readings in ppm)

Depth (feet)	Sample Interval	Field Screen	Recovery (Feet)	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0						
0-2	1.4	NA		FILL; Black Dark Brown Topsoil, some Brick fragments, little medium Gravel	Dry	Backfilled with excavated material and drill cuttings
2-4	0.8	NA		Brown Very Fine to Fine SAND, some Silt, little medium Gravel	Moist to Wet	
4-6	18.6	0.7 / <0.5		Brown Fine to Coarse SAND, some Silt and Gravel, trace Clay	Moist	
6-8	13.9	1.1 / 0.75		Brown Fine to Coarse SAND and GRAVEL, some Silt, trace Clay		
8-10	13.9	1.2 / 1.0		Brown Fine to Coarse SAND and GRAVEL, little Silt, trace Clay		
10-12	12.1	1.5 / <0.5		Brown grading to Gray Fine to Coarse SAND and GRAVEL, little Silt		
12-14	16.1	1.3 / 0.75				
14-16	216	1.8 / <0.5			Sheen, ST = Neg	
16-18	327	1.4 / 0.5			Sheen, ST = Neg	
18-20	257	1.7 / 1.0		Gray Fine to Coarse SAND and GRAVEL, little Silt, trace Clay	Sheen, ST = Neg	
20-22	279	1.7 / <0.5		Gray Fine to Coarse SAND and GRAVEL, little Silt	Wet, Sheen, ST = Neg	
22-24	211	1.4 / 1.5			Saturated, Sheen, ST = Neg	

Location:

Northing/Latitude:
Easting/Longitude:
Horizontal Datum:
Vertical Datum:

General Comments:

Bottom of boring at 24 feet, bedrock not encountered.
Test Pit (0-4 ft) completed 6/24/08; Boring (4-24 ft) completed 6/30/08.
ST = Shake Test; N Value = Soil Strength in Tons/Square Foot

Symbol Key:

Apparent Water Level 
Lab Sample Location 